The European Area of Higher Education (EAHE)<sup>1</sup>, Information Literacy<sup>2</sup> and Learning & Research Resource Centers: a triangle of excellence for the development of library services in spanish universities.

Aurora Cuevas Cerveró. Associate Professor. Library & Information Science Department.

Universidad Complutense. Madrid. macuevas@ccinf.ucm.es

Josep Vives i Gràcia. Government of Catalonia. Ministry of Culture Culture and Media. Subdirection of Libraries. josepvives@gencat.cat

### 1. The European Area of Higher Education (EAHE), an educational project in progress.

The Spanish universities are now carrying out reforms arising from the new European Area of Higher Education (EAHE). These reforms have to do with a re-structuring of academic curricula, but they also affect the aims and methods of higher education in Europe, as the history of this endeavor clearly shows:

The Sorbonne Declaration (1998) It promotes convergence of different systems of higher education, emphasizing the outstanding role of universities in European culture. It also provides for the establishment of a European area of higher education as a key instrument for citizen mobility and the establishment of a unified labor market.

The Bologna Declaration (1999). It aims to establish a system of comparable degrees by means of a European Degree Supplement; a degree structure based on graduation and postgraduation; a European credit system (ECTS); the promotion of free circulation of students and professors; the cooperation for the establishment of systems of quality certification; and the promotion of a European model of higher education.

The Lisbon European Council (2000). It is an initiative of the European Union aiming to establish a knowledge-oriented Europe with a more competitive and dynamic economy based on knowledge.

The Prague Declaration (2001). It promotes an active role of universities and students in the drive towards convergence, the development of a machinery for quality certification, accreditation. It also provides for permanent learning as an essential tool in competition, social cohesion and quality of life.

<sup>&</sup>lt;sup>1</sup> "European Area of Higher Educaction"

<sup>&</sup>lt;sup>2</sup> Information literacy (IL) corresponds to the Spanish Alfabetización en información (ALFIN).

The construction of the EAHE looks for a quality new model of university, both in teaching and in research. It also aims to a new model of learning, which responds to the need citizens have of critical tools for interpreting a constantly changing information, and capable of generating knowledge (Orera, 2007) This European model will especially benefit from the combination of a university library as a Learning & Research Resource Center (LRRC), and schooling in information literacy.

The new European Area of Higher Education aims to meet the following challenges (Martinez, 2004)

- 1. To substitute learning for teaching in the education paradigm
- 2. To substitute electronic information for printed information and documentation.
- 3. To substitute a enter of learning resources for the classic university library.

In order to meet these challenges an relationship seems necessary between the European convergence and new methods of teaching and learning within the EAHE; convergence in information technology, where information technology new formats and platforms are proposed; and organization convergence, where new structures of management are proposed (Balagué Mola, 2003)

The combination of these three challenges appears in a new model of university library, the Learning & Research Resources Center (LRRC)

University libraries have always accompanied the work of the universities. In fact it would be impossible to conceive a university without a library. But, what type of library? It is certainly the type of teaching imparted by the university which ends up determining the type of collection and services offered by a specific university library. It could not be otherwise. If the European university changes the university library must likewise change and adapt its functions to the new reality.

But again, must the Spanish university change? From the restoration of democracy in Spain and the establishment of a State formed by self-governing regions <sup>3</sup>, the successive central and regional governments have allocated massive resources for the development of a solid university system. But this system has been pestered by several problems arising from overcrowding in the 1970's and 1980's, and from a military dictatorship which expelled or sent to exile the most excellent among academicians.

It is true that most often the Spanish university is geared towards the use of memory rather than practical experience. Its curricula, too, are designed to impart contentsoften irrelevant to the needs of the student. To sum up, it emphasizes "knowledge" over "learning"

<sup>&</sup>lt;sup>3</sup> A process in which the central government transfers several jurisdiction to the different regions.

At the end of the 1990s the number of students started to decrease, the Spanish society fully entered the society of information and knowledge and the European Union started to demand changes in the organization of higher education. Will now be the right moment? Can we think of "other" university and "other" way of doing things? How should librarians get involved in those changes?

The need for "new" aims and methods in Spanish higher education is not surprising. In Spain there hace been several atempts at "reform". One of the most interesting happened in 1933 at the time of the short-lasting Spanish Republic. The State Minister, Fernando de los Rios justified the university reforms his government promoted by the need for a *civis academicus* (Gracia, 2006)

- o A citizen with a unversity degree must also know the culture of his own times.
- o The university must train scientifically the professionals society needs.
- o Higher education must train researchers for creative ability.

Are not these also the foundations that the EAHE promotes?

The European Area of Higher Education entails the beginning of a profound transformation in the university educational model. In this model three types of competence are looked for: competence in knowledge (cognitive), competence in the way to acquire them (procedural) and competence to be a person and a professional (attitudinal)

This focus of education on competences is not guided by a merely intrumental mentality, as it is evidenced by a reflection on curricular design, teaching practices and, especially, types of evaluation.

A competence-based formation focuses on understanding and on acting resposibly in daily life. Competences form a recognizable and evaluable set of knowledge, attitudes, values and skills related to one another (Cuevas y Vives, 2005)

The scientific literature on competences has lately increased substantially, but the different ways of classifying competences include at least three groups: basic competences, which determine the necessary profile to access higher or professional education, and are the foundation for more complex competences which will be developed later: the cross competences, required in a wide range of studies, which furnish tools required for analysing problems, evaluate strategies and provide relevant solutions in new situations; and specific competences, needed to perform a specific function, which are mostly related to a job.

The educational changes generated by competence-oriented education, such as new learning environments, permanent, active and cooperative learning or problem-solving, open new possibilities to teaching work: flexibility, individualization and adpatability. But they also present new challenges, such as the ethical dimension of knowledge, educational integration, the emotional dimension of learning, or the need to improve learning motivation in a global conext.

In our view one of the most relevant aspect is the introduction of university studies which prepare the citizen for continuous education along the entire span of life. This is the most important goal in the educational transformation promted by the EAHE. It is basically a model of "learning to learn": to present the student with basic knowledged to be later supplemented with a set of skills which, along with a set of concrete atitudes, will enable the student, after finishing his higher education, to exercise his knowledge and put them to work.

Continuous learning makes it possible to acquire and update knowledge, competences and capacities. It is therefore the best way to avoid labor exclusion due to social, cultural, and technological changes. It is a way to guarantee equal opportunity, since the capacity of dissmenitation of the TICs helps to balance inequalities. Even if continuous learning is a responsibility of society as a whole, the universities have a fundamental role, due to their capacity to work out varied educational possibilities, adapted to different situations, characteristics and needs of the population (Moscoso, 2003)

In this context the search, use and communication of information appears to be an essential task that every academic program must undertake. In this task information literacy seems an indispensable instrument.

#### 2. Information Literacy as a holistic competence in the EAHE.

The skills the EAHE demands from students require an excellent level of technological and information skills. This in its turn demands from the students: implication, critical and research ability, handling of original sources, capacity to relate different contents, a personal judgment, capacity for synthesis and for learning beyond the academia. We propose the paradigm of *Information Literacy*<sup>4</sup> to achieve all these different competences. Information Literacy should be understood as a set of competences which enable to search, retrieve, evaluate and adequately use information, such as it is provided for in the *Prague Declaration: Towards an information literate society*<sup>5</sup>:

<sup>&</sup>lt;sup>4</sup> This paradigm enjoys an important international development, as the large amount of publications in recent years show, especially in the United States and the European Union. It is also obvious from the attention rendered by the main library science associations, ALA, IFLA and UNESCO, among others.

<sup>&</sup>lt;sup>5</sup> Prague Declaration is available in: <<http://www.melangeinfo.com/Doc/Prague\_Declaration2003.pdf >. [visited: 1-01-2008].

"Information literacy includes knowledge of one's needs and problems by means of information, and the ability to identify, locate, evaluate, organize and create, use and communicate information efficiently, in order to confront sets problems or questions; it is a pre-requisite to an efficient participation in information society; and is a part of the basic human right to learning through one's entire life"

Information Literacy, according to this definition, is made up of as set of skills and competences closely linked to educational competences. Information Literacy, therefore, shall function as an organizing element in learning; it is therefore essential to have *competence models*<sup>6</sup> of information literacy, which envision a multi-dimensional reading, digital and hypertextual reading, along with other competences associated with the search, retrieval, evaluation and communication of information, which are competences proper to supporting presential education, open or distant learning.

The new university pedagogical model arising from the coordination of degrees in the European Area of Higher Education, and based on competence acquisition, implies a need for information literacy; and a university library in its new dimension as Learning& Research Resource Center becomes the right place in which to acquire those competences.

The European Area of Higher Education offers an excellent opportunity for the full integration of university libraries in the process of university teaching, learning and research; they should offer Information Literacy as one of their main services. The role that LRRC can perform in the society of knowledge - as producers, transmitters and disseminators of knowledge - grants them a key role in student formation and development, assuming at the same time a great responsibility in confronting the changes entailed in the European Area of Higher Education.

Training in the use of information is nothing new or alien to the professionals of documentation in our country. Besides guiding users in using libraries, there is the precedent of "information pedagogy", first coined by Francisco Javier Bernal in 1985 (Gómez-Hernández, 2003). Such training was already provided for in the first Plan Nacional de Documentación para la Documentación Científica y Técnica (PLAN IDOC, España, 1985)

About the competence model most widely used by university libraries in Spain, it should be mentioned that they are just like those used in the rest of Europe. They are referenced to the ACRL

-

<sup>&</sup>lt;sup>6</sup> Tunning Project web site available in : <a href="http://www.rebiun.org/Contents.aspx">http://www.rebiun.org/Contents.aspx</a>. [visited : 1-01-2008]. DeSeco web site available in : <a href="http://www.portal-stat.admin.ch/deseco/index.htm">http://www.portal-stat.admin.ch/deseco/index.htm</a>. [visited : 1-01-2008].

or SCONUL, although those of BIG 6 skills are used at times. These models are usually adjusted to the needs of the students in the specific university or degree where they are taught. This adjustment entails, in any case, that each library personalizes its offer, emphasizing those competences and knowledge idiosyncratic to their situation.

# 3. The university library as it turns into a LRRC, and Information Literacy as a catalyst of educational change.

The university library, in its innovative dimension as a Learning & Research Resource Center (LRRC) is a priviledged space, an environment suitable to promote teaching innovation, open learning through life, and the right to information for all.

The LRRC supplements the traditional idea of a university library, when it conceives it as a dynamic educational space where all university services are concentrated that support learning and research based on the world of information and technology. It also offers services that meet the cultural and leisure needs of its users. The LRRC provides the classroom - as a learning space- with innovative material resources, as well as qualified professionals who co-operate in the process, such as librarians, computer experts, paedagogues and teachers.

One of the present challenges that the university faces is the planning and management of services that the university offers to the community, mainly in the area of teaching, research and traning throughout life. In order to pursue this goal, universities look for improvement strategies, invent new organizational proposals and start programs and projects to maximize the efficiency of resources (Martínez, 2003)

REBIUN<sup>7</sup> (Red Española de Bibliotecas Universitarias, Spanish Network of University LIbraries), in devising strategies to bring university libraries to a level of excellence, is supporting the process of transformation of university libraries; its strategies are in fact affecting directly the very process, as they include in their strategic plan I (2003-2006), the strategic guideline 1: Promote the construction of a new model of university library, *conceived as an active and essential part of a Learning & Research Resource Center (LRRC)*. The idea of REBIUN is a presentation of tendencies, conditions and expectations which form the environment of Spanish university libraries, a goal pursued by all efforts and actions included in the II Strategic Plan, 2007-2010. The challenge for 2010, a key date for the implementation of the European Common Area of Education and Research, is to consider libraries as agents of the new educational model and providers of key

<sup>&</sup>lt;sup>7</sup> Institutional web site available in : <a href="http://www.rebiun.org/Contents.aspx">http://www.rebiun.org/Contents.aspx</a>. [visited : 1-01-2008].

services for that new model present in the European Area of Higher Education and meet the challenges implied in the new European framework of research.

In strategic line I<sup>8</sup> dof REBIUN 2010 the first strategic goal proposed is *to continue promoting* the new model of university library as a Learning & Research Resources Center, LRRC, and it offers the following guidelines to libraries:<sup>9</sup>

- To adjust facilities, spaces and furnishings so they offer students and professors confortable areas where they can work and learn in groups.
- To offer new library services, especially those related to learning processes: a good information service integrated in the university, and state-of-the-art TIC,
- Internet access from any place in the library etc.
- To organize and promote training of students in information skills, so they progressively acquire core competences that are valuable for their entire life.
- To create and design an excellent digital library, taking into account the real needs of the uers, and adapat it to the new proposals of the digital library 2.0.
- To integrate the digital libray in the university virtual, promoting on-line learning by professors and students.
- To develop institutional deposits both to preserve the university electronic information and to increase the visibility of the research performed by the professors.
- To progressively develop new university services and projects that meet thereal needs of the university in the new framework of EAHE and ECAER.

The second strategic goal refers to Information Skills (a program of Information Literacy)<sup>10</sup>. It seeks to promote action towards the development and implementation of Information Skills, as cross competences in the new teaching model. Its main proposals are.

- To promote and give political support so that this typology of Information Literacy is imparted in a professional way in all curricula to be modified by 2010.
- To coordinate and create joint projects related toi communication and dissemination of virtual training (virtual courses, virtual campus, etc), virtual materials and tutorials (guides, orientations, programs, etc) related to training and learning in Information Literacy
- To include training projects for librarians in non-presential teaching.

<sup>&</sup>lt;sup>8</sup> Line 1: REBIUN in the sphere of Learning,. To orient and give support to university libraries in the new challenges of the European Area of Higher Education and in changing the teaching model focusing on learning by the student.

<sup>&</sup>lt;sup>9</sup> The Document II of the REBUIN strategic plan can be visited in <a href="http://www.rebiun.org/doc/plan.pdf">http://www.rebiun.org/doc/plan.pdf</a>. [visited : 1-01-2008].

<sup>&</sup>lt;sup>10</sup> The Strategic plan 2007-2010 of REBIUN. Available in <a href="http://www.rebiun.org/doc/plan.pdf">http://www.rebiun.org/doc/plan.pdf</a>>. [visited: 1-01-2008].

- To create and maintain a sub-site of REBIUN about Information Literacy in order to inform about resources in information on already existing "Information Skills" (teaching materials data bank, bibliography on Information Literacy, projects, etc)
- To promote the participation of REBIUN in Information Literacy projects both in Spain and abroad, guiding and dissmeninating innovative proposals and objectives in this direction by university libraries

Another important drive to the convergence between LRRC and Information Literacy was Alfinred<sup>11</sup>, a network of information literacy porofessionals in Spain.



[ Alfin Red Forum for information literacy

Project Documents]

Alfinred is a co-operative project sponsored by the Spanish Ministry of Culture, resulting from the conclusions rerached in the first specific seminary<sup>12</sup> on information literacy carried out in Spain in 2006, in order to promote work in this field. Previously to this project mention should be made of the distribution list Alfincat<sup>13</sup>, created by a work force on information literacy within the Col·legi Oficial de Bibliotecaris-Documentalistes de Catalunya<sup>14</sup>, one of the professional associations with a wider reach within Spain. There is also another distribution list on these topics, Alfainfor<sup>15</sup>, chaired by the group DOTEINE<sup>16</sup>, that mostly addresses the Spanish-speaking community interested in this field.

## 4. Development of training plans in information literacy in Spanish university libraries.

It can be safely said that in Spain it is in university libraries where the skills in the use of information have reached the maximum development. This is due to several reasons. In all probability the most important is that these are libraries that offer the highest level in electronic

<sup>&</sup>lt;sup>11</sup> Available in: <a href="http://www.alfinred.org/">http://www.alfinred.org/</a>>. [visited: 10-01-2008].

<sup>&</sup>lt;sup>12</sup> Available in : <a href="http://travesia.mcu.es/S\_ALFIN/index.html">http://travesia.mcu.es/S\_ALFIN/index.html</a> [visited : 10-01-2008].

<sup>&</sup>lt;sup>13</sup> Available in : <a href="http://groups.yahoo.com/group/alfincat">http://groups.yahoo.com/group/alfincat</a>. [visited : 10-01-2008].

<sup>&</sup>lt;sup>14</sup> Available in : <a href="http://www.cobdc.org/grups/alfincat/index.html">http://www.cobdc.org/grups/alfincat/index.html</a>. [visited: 10-01-2008].

<sup>&</sup>lt;sup>15</sup> Available in: <a href="http://www.rediris.es/list/info/alfainfor.es.html">http://www.rediris.es/list/info/alfainfor.es.html</a>. [visited: 10-01-2008].

<sup>&</sup>lt;sup>16</sup> Available in: http://doteine.uc3m.es. [visited: 10-01-2008].

resources. It is well known that in the last years the scientific and technical information is basically electronic information: data bases, scientific journals, e-books, etc. The Spanish university libraries allocate a large amount of their resources to offer these resources on-line.

Digitalizing information makes it rather easy to access patents, studies, conference papers and many other types of information with an academic or scientific interest. The electronic ionformation offered by university libraries (through subscription or free access) could certainly be much more exploited by its potential users; but either the ignorance of their existence or the lack of information skills, or even simply the university pedagogical model, do not allow for a an intensive use of all these resources.

On the other hand, the exponential increase in the information available means that, theoretically at least, a student, professor or researcher has today at their hand massive amounts of information beyond what can be found in paper.

Likewise, the intensive use of information resources and of information technologies has reveals some information deficiencies by students at the time of communicating the results of academic research (course papers, scientific participation in universities, etc). They mostly arise from lack of training in the methods of scientific work. Thus, a large part of the student papers are but copy and paste what they found on the web, making plagiarizing a common habit. They hardly cite, and when they do cite, they do it wrongly. In the worst cases they deliberately hide the original source.

The Spanish university libraries, well aware of all these problems, have for some time introduced training in the use of information, starting with the classic courses of introduction to the library and to its sources of information. A very recent study (Somoza-Fernández, 2007) shows the findings of a poll carried out in the seventy Spanish universities. The rate of responses to the poll was 68%, which provides a very interesting global perspective as to the policies in information literacy of Spanish university libraries.

The study found that 92% of the universities that responded to the poll has some kind of activity related to user training But a difference should be ascertained how far the professional differentiate between classic bibliographic instruction and presentations of services and library collections from training in information literacy. This ambiguity is debated not only in Spain. The conceptual controversy over what "information literacy" is may be encountered in the professional literature of Europe or the United States.

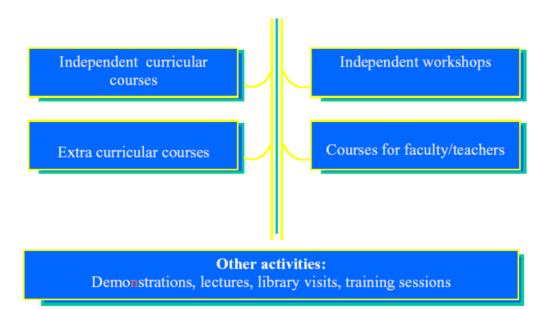
Similar studies, like the one carried out in France (Noel, 1999), where the information literacy level reaches a 43%, reveal a tendency to increase the interest university libraries have in developing information literacy training. Comparison with the situation in other European

countries, as it appears in the professional literature (Virkus, 2003) ensures that information literacy in Spanish libraries is more or less at the same level than other countries of their area. Its further development, however, seems hindered by the very structure of the university and by its methods, such as the excessive presence of the "master class" and reliance on memory learning.(Gómez-Hernandez, 2003)

The establishment of information literacy activities in Spain has started from its basis- that is, the university libraries themselves, which assumed the need to carry out this training Gradually they have been defining the necessary actions in their sphere. It can be seen from the study mentioned above, where we find that 73% of the Spanish universities participating in the poll declared that they had increased their information literacy activities during the last two years. (Somoza-Fernández, 2007)

An extended and standardized training is not inserted in Spanish higher education. That is why libraries take advantage of all the possibilities at hand to impart training within the legal and academic framework in which they operate. Training in our libraries is therefore imparted in the modalities stated in international suggestions (Lau, 2004):

- Courses organized by the library, of different periods, with or without granting of credit.
- Training modules, imparted within the standard university courses, on request by professors.
- Optional courses within a major, or degree.
- University Extension courses.



Fuente: Lau, Jesús. International guidelines on information literacy: a draft proposal.

Taking into consideration the needs each library has observed, different training plans have been designed which are not nowadays centralized, and can only be called "example good practice"

## 5. Examples of good practice in Spanish universities.

Just as we said, information literacy in our libraries has not resulted from a planned effort but from the sum of individual initiatives of the libraries. These actions have generated an intense exchange of a tendency experience in conferences and professional gatherings of a substantial number. It may be said there is on the rise to promote plans of training in information literacy skills

Almost all the Spanish universities - as we said before- has some activity or other which may be described as training in the use of information. Those programs range from the most basic (consult the catalogue, library services, etc) to full courses in information literacy, with intermediate levels in between, like introduction to information sources (Pasadas, 2005)

Not all those experiences have found a place in writing, with due circulation in professional journals and conferences. Consequently, in this paper we must restrict ourselves to those experiences adequately described

One of the universities which pioneered the adoption of information literacy was the Universitat Politècnica de Catalunya (Mestre; 2004). Its libraries <sup>17</sup> have been implementing a training plan in information literacy for years. Culminating this process, and anticipating the establishment of the EAHE, this library has developed a strategic plan. One of its strategic guidelines is precisely acquisition of competences in the use of information by memebrs of the university community. This strategic guideline says literally "we will promote learning in cross competences in information skills by students and professors". The guideline sets five main goals:

1. Information skills for undergraduates and master degree students.

To develop, with granting of academic credit, of a training plan in information competence for undergraduate and masters degree

2. Information skills for the PDI and PAS.

<sup>. -</sup>

<sup>&</sup>lt;sup>17</sup> Available in: <a href="http://bibliotecnica.upc.es">http://bibliotecnica.upc.es</a>>. [visited: 1-01-2008].

To plan, organize and impart training in information skills for the PDI (faculty and research staff) and PAS (administration and service staff) in cooperation with the ICE (Instituto de Ciencias de la Educación), the OFA (Oficina de Formación) y and other units of the UPC.

3. Conversion to virtual, learning programs and other didactic materials.

To work out, update and disseminate didactic materials (learning programming, user's guides, etc) in order to develop and extend formation to all other libraries and develop self-tutoring among users.

4. Specializing of librarians in charge of tutoring.

To promote recognition for the tutoring librarian at the UPC, and develop the knowledge, necessary skills and abilities to carry out the tutoring activities.

5. Cooperation and leadership.

To promote, plan and coordinate actions and connections with other university libraries, consortia and networks so that learning in information skills is a key cross competence for the development of university studies within the EAHE.

To reach those goals, the library of that university has already a specific plan for implementing -in those new courses arising from the EAHE- a design of tutoring based on the new university degrees: degree, master and doctorate) The plan was presented to the corresponding faculty members. It should be mentioned that, as far as the master's degree, a majority accepted to include 1 or 2 credits ECTS in information skills. That university has likewise developed its virtual platform for education in information literacy through Moodle

The Universidad de la Laguna (Tenerife) is another university which takes full advantage of Moodle That university, besides offering traditional user tutoring (like presential courses, etc) has opened an intersting path in the conversion of its tutoring to virtual. Conversion to virtual tutoring requires offering a complete set of on-line tutorials, as well as distant tutoring through Moodle. The courses compose an introduction to the main information sources in those degress imparted by the university.

The activities carried out by the library of the Universidad de Sevilla should also be highlighted.<sup>19</sup> It offers its users a wide variety of courses in information literacy. It should be mentioned that its courses are presented to the user structured and organized in academic cycles, which allows the student to choose the course most suitable to his particular needs in a specific

<sup>18</sup> Available in: <a href="http://www.bbtk.ull.es/servicios/formacion/fenlinea.asp">http://www.bbtk.ull.es/servicios/formacion/fenlinea.asp</a>. [visited: 1-01-2008].

<sup>&</sup>lt;sup>19</sup> Available in: <a href="http://bib.us.es/aprendizaje\_investigacion/formacion/index-ides-idweb.html">http://bib.us.es/aprendizaje\_investigacion/formacion/index-ides-idweb.html</a>. [visited: 1-01-2008].

academic year. Three-credit courses<sup>20</sup> offer a complete t raining, including aspects as necessary as ethical considerations (plagiarizing, etc) or the use of bibliographic managers (Procite). This training is offered through the platform WebCT. All those new activities require adequate spaces within the library in order to effectively carry out the tutoring. An example could be the specific spaces already provided for tutoring in the new building of the library in that university (Celestino, 2006)

The University of Málaga considers it strategic to have a training plan in information skills, if they are to offer quality services according to the needs of EAHE. To this end it implements its Plan de Formación de Usuarios (Plan FORUS) (García, 2006) in order to develop several initiatives. One of them is a tendency common to other universities, namely, the promotion of a virtual platform for learning through Moddle.

A project designed by the University of Granada should also me mentioned: the educational portal *e-COMS* (*Electronic Content Management Skills*)<sup>21</sup>. The creators of this website offer an on-line tutorial of public access which allows the information user to acquire different basic competences in the search for information (Pinto, 2007) Also from the same university we hear of a complete course in information literacy at the Psychology Department.

Other places where different experiments in information user training have been carried out are the Universitat Pompeu Fabra, Universidade de Vigo, Universidad de Murcia or the Universidad Nacional de Educación a Distancia.

Information literacy is therefore a very extended service in Spanish universities. It now waits to be inserted formally among the contents in university degrees which are now transforming in the direction of securing for university students the acquisition of these skills so necessary for developing in a highly technological information environment.

#### **REFERENCES**

Barnett, Ronald. Los límites de la competencia. El conocimiento, la educación superior y la sociedad. Barcelona: Gedisa, 2001.

<sup>&</sup>lt;sup>20</sup> It refers to the present value of the credit, not ECT. 1 credir equals 10 hours.

<sup>&</sup>lt;sup>21</sup> Available in:< http://www.mariapinto.es/e-coms/#>. [visited: 1-01-2008].

Celestino, Sonsoles (2006). "Un proyecto de Zaha Hadid para la Biblioteca de la Universidad de Sevilla". *IV Jornadas CRAI*: experiencias en el ámbito de la organización y la convergencia de servicios. Available in: <a href="http://www.ubu.es/biblioteca/crai/ponencias/6\_Sonsoles\_Celestino.pdf">http://www.ubu.es/biblioteca/crai/ponencias/6\_Sonsoles\_Celestino.pdf</a>. [visited: 10-01-2008].

Cuevas Cerveró, A. (2005). Políticas de Alfabetización en Información en la Unión Europea. *Incluçao Social*, vol. 1, n. 1. Available in: <a href="http://www.ibict.br/revistainclusaosocial/viewarticle.php?id=13&layout=html">http://www.ibict.br/revistainclusaosocial/viewarticle.php?id=13&layout=html</a> >. [visited: 10-01-2008].

Cuevas Cerveró, A. y Vives i Gràcia. (2005). La competencia lectora en el estudio PISA: un análisis desde la Alfabetización en Información. *Anales de documentación*. Nº. 8, 2005, pags. 51-70. Available in: < http://www.um.es/fccd/anales/ad08/ad0804.pdf >. [visited: 10-01-2008].

García Reche, Gregorio (2006). "Nuevas estrategias sobre alfabetización informacional en la Biblioteca de la Universidad de Málaga". *IV Jornadas CRAI : Experiencias en el ámbito de la organización y la convergencia de servicios*. Available in <a href="http://www.ubu.es/biblioteca/crai/ponencias/13\_Gregorio\_Garcia.PDF">http://www.ubu.es/biblioteca/crai/ponencias/13\_Gregorio\_Garcia.PDF</a>>. [visited: 10-01-2008].

Gómez Hernández, J. A. Espacio Europeo de enseñanza superior y alfabetización informacional en bibliotecas universitarias. Available in:

<a href="http://www.um.es/gtiweb/jgomez/publicaciones/gomezalfinyeeesjaab2004.pdf">.\_[visited: 10-01-2008].

Gómez Hernández, J.A., Pasadas Ureña, C. (2003). "Information literacy developments and issues in Spain", *Library Review*, Vol. 52 No.7, pp.340-8.

Gracia Alonso, Francisco; Fullola i Pericot, Josep Maria (2006). El Sueño de una generación: el crucero universitario por el Mediterráneo de 1933. Barcelona: Publicacions i Edicions de la Universitat de Barcelona. ISBN 84-8338-483-3

Lau, Jesús. International *guidelines on information literacy : a draft proposal*. Available in: <a href="http://bivir.uacj.mx/DHI/DoctosNacioInter/Docs/Guidelines.pdf">http://bivir.uacj.mx/DHI/DoctosNacioInter/Docs/Guidelines.pdf</a>>[visited: 10-01-2008]..

Martínez, D. (2004). El Centro de Recursos para el aprendizaje CRAI. El nuevo modelo de biblioteca universitaria. Jornadas organizadas por la BUC. Los recursos electrónicos en la colección de la biblioteca, Biblioteca de la Universidad Complutense de Madrid, 2004. Available in: <a href="http://www.ucm.es/BUCM/jornadas/bcauniv/nuevo\_concepto\_bu.pdf">http://www.ucm.es/BUCM/jornadas/bcauniv/nuevo\_concepto\_bu.pdf</a>>. [visited: 10-01-2008].

Marzal García-Quismondo, M.A. (2007). CRAI para la Educación en la Sociedad del Conocimiento: modelos ALFIN para la función educadora de los bibliotecarios. *IV Jornadas CRAI*, REBIUN. Universidad de Burgoa, 10-12 Mayo 2007. Available in: <a href="http://www.ubu.es/biblioteca/crai/programa.htm">http://www.ubu.es/biblioteca/crai/programa.htm</a>. [visited: 10-01-2008].

Marzal García-Quismondo, M.A. et all (2006). La Alfabetización en Información en la formación universitaria: instrumentos para la evaluación y diagnóstico de competencias informacionales sobre contenidos educativos virtuales. *4º Simposium Internacional de Bibliotecas Digitales "Información al servicio de la sociedad"*, Málaga, 21-23 de junio. Available in: <a href="http://doteine.uc3m.es/docs/Present\_SIBD2006.pdf">http://doteine.uc3m.es/docs/Present\_SIBD2006.pdf</a>>. [visited: 10-01-2008].

Mestre, Mercè; Nieto, Pilar; Roca Lefler, Marta; Vives-Gràcia, Josep (2004). "La Formació en l'ús de la informació a l'ensenyament superior". *Proceedings Jornada de Reflexió i Debat sobre el model docent de la UPC en l'Espai Europeu d'Educació Superior*, Barcelona (Spain). Available in: <a href="http://eprints.rclis.org/archive/00001499/01/Comunicaci%C3%B3\_escrita\_EEES.pdf">http://eprints.rclis.org/archive/00001499/01/Comunicaci%C3%B3\_escrita\_EEES.pdf</a>. [visited: 10-01-2008].

Moscoso, Purificación. (2003) "La nueva misión de la biblioteca universitaria ante el espacio común de enseñanza superior". *Jornadas Rebiun*, 2003. Los Centros de Recursos para el aprendizaje y la investigación en los procesos de innovación docente, Palma de Mallorca, 2003. Available in: <a href="http://www.aab.es/pdfs/gtbu\_nueva\_mision.pdf">http://www.aab.es/pdfs/gtbu\_nueva\_mision.pdf</a>>. [visited: 10-01-2008].

Noël, Elisabeth (1999). « Les formations à l'information en bibliothèque universitaire: enquête nationale 1997-1998». *BBF*, jan, v. 44, n. 1, pp. 30-34. Available in: <a href="http://bbf.enssib.fr/sdx/BBF/pdf/bbf-1999-1/04-noel.pdf">http://bbf.enssib.fr/sdx/BBF/pdf/bbf-1999-1/04-noel.pdf</a>>. [visited: 10-01-2008].

Pasadas Ureña, C. (2004). *La Alfabetización Informacional y las Bibliotecas Universitarias*. *Universidad de Verano Adeje 2004*. Available in:

<a href="http://www.bbtk.ull.es/Servicios/Formacion/CLE/Adeje2004/Resumenes/Resumen%20Cristobal%20Pasadas.pdf">http://www.bbtk.ull.es/Servicios/Formacion/CLE/Adeje2004/Resumenes/Resumen%20Cristobal%20Pasadas.pdf</a>. [visited: 10-01-2008].

Pasadas Ureña, C. y Gómez Hernandez, J. A (2005). "Alfabetització informacional i biblioteca pública: bases i tasques per a una agenda de desenvolupament". *Anuari Bibliodoc*. Available in: <a href="http://www.raco.cat/index.php/Bibliodoc/article/view/40885/83062">http://www.raco.cat/index.php/Bibliodoc/article/view/40885/83062</a>. [visited: 10-01-2008].

Pinto, M.; Doucet, AV (2007). "An Academic Portal for Higher Education Information Literacy: The e-COMS Initiativ." *The Journal of Academic Librarianship*, 33 (5), 604-611.

Somoza Fernández, Marta and Abadal, Ernest (2007). "La formación de usuarios en las bibliotecas universitarias españolas". *El profesional de la información* 16(4):pp. 287-293. Available in: <a href="http://eprints.rclis.org/archive/00011294/01/epi2007164.pdf">http://eprints.rclis.org/archive/00011294/01/epi2007164.pdf</a>>. [visited: 10-01-2008].

Virkus, S. (2003). "Information literacy in Europe: a literature review." *Information Research*, 8(4), paper no. 159. Available in: <a href="http://informationr.net/ir/8-4/paper159.html">http://informationr.net/ir/8-4/paper159.html</a>>. [visited: 10-01-2008].

Vives-Gràcia, Josep (2004). "Formación en el uso de la información en las bibliotecas de la Universitat Politècnica de Catalunya". *Proceedings Biblioteca y Sociedad : experiencias de innovación y mejora*. Murcia (Spain). Available in: <a href="http://eprints.rclis.org/archive/00002485/01/Formacion\_en\_el\_uso\_de\_la\_formacion\_UPC\_Murcia.pdf">http://eprints.rclis.org/archive/00002485/01/Formacion\_en\_el\_uso\_de\_la\_formacion\_UPC\_Murcia.pdf</a>. [visited: 10-01-2008].

Zabalza, M. La enseñanza universitaria. El escenario y sus protagonistas. Madrid: Narcea, 2002.