

To build upon solid rock or to build upon sand: the challenge of information literacy in the school library

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Starting with a rereading of the information literacy theories, we characterized the development of this concept, distinguish it and relate it with associated terms. After this theoretical framing, we focused on the role of the information literacy in the school context. We present our study based in the analyses of information behaviour, reading habits and information practices of students in Vila do Conde municipal area, using the school library collections and technological resources, considering also the location, access and use of information.

We do a brief general view over this group of school libraries in this municipal area, but we focused our analysis of the research universe in three schools of 1st level, one E.B. 2,3 and another secondary school, using an inquiry by a questionnaire. To better contextualise our study we also make the characterization and framing of each school library in its surroundings (city, rural and piscatorial) in order to allow a comparative analysis of the results.

New challenges in the information access

On the XX century during 70s/80s, in the industrialized western countries, although obliged scholarship was long, there was a significant rate of population that showed difficulty or even was unable to read, write or make calculations. Being literate, they were able to read, write and calculate, they were unable to use those skills (Benavente, 1996). The expression “functional literacy” appears defined by UNESCO (1978) as: «a person is functionally literate who can engage in all those activities in which literacy is required for effective functioning in his group and community and also for enabling him to continue to use reading, writing and calculation for his own and the community’s development». In this perspective, literacy, which is above alphabetization, begins to be measured according to the individual context and presents its vocation eminently utilitarian, in collective and individual terms. Focused on the ability to apply for reading, writing and calculate skills, it has subjacent the ability of using those skills and not to obtain it, which is encharged by the alphabetization. Nevertheless, with the happening and expansion of the information technologies, starting on the 60s/70s, also emerged new needs which made insufficient the traditional skills of reading,

writing and calculate, making appear the “multiple faces of literacy” and, in particular, the information literacy, frequently presented as XXI century literacy.

The information literacy expression might had been firstly used in 1974 by Paul Zurkowski in a document presented to the National Commission on Libraries and Information Science, in the USA, in which he considered that information literacy corresponded to a correct use of the information resources by the workers in their professional context (Bawden, 2001). In this sense, the access to the adequate information was presented as the solution for most part of the problems, though it would be necessary knowing the available information resources and locate them through efficient search strategies. So, the access, evaluation and use of information, with origin in different sources, were since the beginning implied in the information literacy definition.

Information literacy: multiple definitions

In the beginning of the 1990s, Christina S. Doyle defines an information literate person as the one that: recognises that correct and complete information is the basis of taking intelligent decisions, recognises the need of information, makes questions based on the information needs, identifies potential information resources, develops with success research strategies, accesses information resources, evaluates and organises information for practical use, matches new information with pre-existing knowledge and use them to make critics and solve problems (Doyle, 1992). In this perspective, information literacy meant the ability to access, evaluate and use information proceeding from several sources in order to allow the formulation of individual and independent solutions or opinions suitable to its context.

It was also taking into attention the context specifications that Christine Bruce evoked the seven faces of information literacy, based on a study made with the purpose of knowing and perceiving the information use. Each of these faces, that are complementary and interdependent, shows the possibility of understanding the information literacy concept. The information technology conception faces information literacy as the use of technology for information research and communication. In this sense, information is seen as something objective, external to the individual, having technology the main role to permit access. This supports the dependence of the individual regarding technology to have access to the information. The second face corresponds to the information sources conception which considers information literacy as dependent of knowing those sources. It is that knowledge that allows recovering information when the sources are in a variety of media, including people and electronic. The third face is the information process conception and it is focused on the user's strategies to face a situation of information or knowledge lack. In that way, information literacy is seen as the ability to face new situations to solve problems or to take decisions. We also have the information control conception focused on the information organization for easy recover. In this sense, users are trained to recover information according to established organised schemes. The fifth conception is the knowledge construction conception and it concentrates its attention on the critical use of information. The target is the construction of personal knowledge that analyses and evaluates information. The knowledge extension information gives value to the creativity based on the use of changed information by intuition and personal knowledge gathered by personal experience. The wisdom conception is different from the previous ones by the application of personal values in the use of information. The knowledge involves the information in its context (historical, social-cultural and economical) together with the individual experienced life and ethical values (Bruce, 1997).

This multiplicity of the information literacy is well exposed in some official documents. That is the case of the information literacy model of *The Australian and New Zealand information literacy framework* (2004) that identifies a group of six basic competences defining an information literate person. So, the information literate person: recognises the information needs and determines the extent of information needed; access information efficiently; critically evaluates information and its sources; classify, store, manipulate and redraft information collected or generated; incorporate selected information into its own knowledge making new ideas and new understandings (solving problems and taking decisions); understands the economic, legal, social, political and cultural issues in the use of information; access and use the information understanding and respecting the legal, ethical, cultural economical and social aspects. Each skill results from several learning that the document systematises with examples. In this perspective the information literacy as underlining by Bawden (2001), in his literature review about the subject, keeps a close relationship with other kind of literacy as library literacy, media literacy, computer literacy, (synonym of information technology literacy, electronic literacy or electronic information literacy), network literacy (synonym of Internet literacy or hiper-literacy) or with digital literacy (synonym of digital information literacy). The same author defends that to deal with an environment in which information is continuously growing and complex it is necessary to develop “skill-based literacies” as library literacy, media literacy or computer literacy. In his opinion it is necessary a wider and more complex concept of literacy, while a group of skills, knowledge and behaviours, including literacies based on skills but not confined to them or to any other particular technology. We can talk, so, about information literacy or digital literacy.

Information literacy efficiently combines knowledge and skills. Ragnar Audunson and Ragnar Nordlie emphasize three components of the information literacy: technical skills related with computer literacy, intellectual skills which takes the traditional literacy and communication skills, obliging technical and intellectual skills but surpasses them. In this way, we can understand information literacy as the sum up of different literacies (Audunson; Nordlie, 2003).

For better understanding of the information literacy definition we can distinguish two associated concepts: information needs and information use. Information needs can be defined as the lack of certain elements and, in this specific case, what the individual must have to finish a task or formulate an opinion. Naturally, this concept involves several personal options, having a strong subjective and contextual position, once that, in a certain moment, might produce relevant information for one person but not for another one. Besides that, one of the problems associated to the idea of information needs is the ability to formulate that need by the individual. In fact, sometimes, individual mix wishes and needs of information. The wish concept involves how the user expresses his will to satisfy a need, several factors interfere from personal characteristics of the individual to his cultural and social profile. It becomes fundamental distinguish information wishes from information needs once that users can be aware of their wishes but not of their needs. Information wishes are based on the perception of the reality by each individual, which involves that having a limited group of elements to perceive that reality, wishes of information will be “poor”. It will be very important to work the aspects related to the real information needs, going further than the presented wishes, so these won’t be only a part of the needs indicators. It must be distinguished, after, the information use, this is the effective application of information to something immediate and concrete (Sanz Casado, 1994). As we will see, these differences will be essential to better understand information literacy definitions.

Some studies emphasize the role of different kinds of information availability (namely the change of importance between impressed documents and digital documents) in the way of they influence the formulation of wishes and the awareness of information users needs. In fact, information needs had changed with the happening and expansion of electronic information. However, these resources are only used if users have the ability to work with them which involves, in what concerns libraries, the knowledge of the skills and needs of users to select the information resources (Kebede, 2002).

Learning and literacy

Information literacy presents a close relationship with learning, once that an information literate person is the one that learnt learning, knows how to find, use and organize information. So, information literacy is the basis of lifelong learning and can not be seen as an isolated skill but in a transversal position able to make individuals efficient information users (Lenox; Walker, 1992).

This emphasis on literacy is framed in the change of the teaching-learning methods. Students are asked to make their own researches instead of just doing readings indicated by teachers. On the other hand, teachers must promote the use of ICT to diversify teaching strategies and enrich student experiences. Students need to be more information literate mainly using WWW, demanding more autonomy in information search and recovery, with exact definition of the interest subjects, the ability to identify valid sources as well as the ability to transform the new results in new knowledge and communicate them in a clear and exact way (Correia; Teixeira, 2003).

Having these points into consideration, there has been some growing concern on the professionals related to teaching and to information about information literacy. Since 1990 some standards and models have been appearing to establish information literacy parameters. The first was published by American Library Association (ALA) in 1989 and it was the basis for most references that appear after. The same Association together with the Association for Educational Communications and Technology prepared, in 1998, the *Information literacy standards for student learning*. In 1997, in France, the FADBEN (Fédération des enseignants documentalistes de l'Éducation nationale) had published a specific referential to help teachers and library managers to create teaching situations to develop information research skills. In 1999, The Standing Conference of National and University Libraries (SCONUL) published a model to identify the information literacy skills from novice to information literacy expert. In 2004, was published the second edition of the already referred *The Australian and New Zealand information literacy framework*.

All of them show, implicit or explicit, the importance of the relationship between the information literacy and the lifelong learning. This idea was recently emphasized by *Alexandria Proclamation on Information Literacy and Lifelong Learning* (2005) which states «information literacy and lifelong learning are the beacons of the Information Society, illuminating the courses to the development, prosperity and freedom». This document presents information literacy as crucial to face the new technological, economic and cultural challenges allowing surpass structural deficiencies and promoting progress. Stimulating governments and other organizations to promote actions to develop informational skills to all, including insert information literacy programmes in school programmes.

The target is to form citizens and professionals able to assume their responsibilities and rights. They will be able to become active part of the Information Society. Information literacy is an irreplaceable operational way to permit the effective universal access – it will be the touch point to create the learning society. In this sense, information literacy is the mean to fix the digital divide that can not be solved only by what is related to the technological infrastructure access. As Michel Menou states, the ICT infra-structures aren't of much use if they aren't used by qualified individuals able to take advantages of them (Menou, 2002).

An interesting point is related to the diversity of learning of information literacy. In school terms, this can be integrated in the curriculum of other disciplines but can also be an autonomous course. In any case, it is demanded a restructure of the teaching-learning process, refocusing on the student and on the development of skills in order to solve problems, which also involves the teachers training reformulation and their options in teaching strategies.

Another aspect to consider is the role of teachers and librarians in information literacy teaching. In what concerns library managers we can evoke, among others, two reasons to their active participation in this mission. Nowadays librarian can not only be a book keeper but it is essential to its professional survivor to have an active and dynamic role in the teaching-learning process, showing that way the added value of its activity. On the other hand, considering the low rate of library managers per student, those have to teach students to become autonomous and self-sufficient in the information access process. Naturally, the most desirable and profitable will be the cooperation between teachers and librarians. School library offers resources and information that teachers and students need, supporting their teaching-learning activities in a way that promote literacy levels and reading habits. Library should create a stimulating learning environment, transversal to all school and all actors in it.

Now, we will, analyse the information literacy levels of students that use regularly school libraries in the municipal area of Vila do Conde.

Study objectives

This case study intends to analyse information behaviour, reading habits and informational practices of the municipal area of Vila do Conde students, based on the use of available collections on the school library and the technological resources, namely location and use of free access documents as well as search on the catalog. We want to verify if school libraries are active mean on the teaching-learning process and if they fulfil its role on training and students growing skills, helping them to find and use effectively information and orientating them to the autonomous search.

Methodology

To take this study forward we distributed questionnaires by enquiry in a students sample in three schools in the municipal area of Vila do Conde. We followed a common methodology of this kind of studies once that as Emílio Delgado López-Cózar (2002) affirms «el método de encuesta es claramente el preferido por todos aquellos profesionales que desean estudiar el comportamiento, el uso y necesidades de los usuarios potenciales o reales de los distintos servicios y programas bibliotecarios (...). Seis de cada diez estudios de usuarios e necesidades emplean la encuesta».

These means of data gathering were applied by teachers during school schedule, in February. We used the standard enquiry in all three levels, making some punctual changes only to adapt the enquiry to the school level when applied. The sample is made of 231 students, range of age are between 8 and 20 years, in several school levels, starting at 1st level till secondary school. The research universe was focused on the choices of three schools of 1st level, one EB 2,3 and one secondary school. [Table 1, Table 2]

To diversify and enrich the sample of this study we choose schools implemented in different environments. Though, EB1 Caxinas and EB2,3 Frei João are in a piscatorial and city area. EB1 Correios, is also on a city context, but not piscatorial, as it is the secondary School of Afonso Sanches. EB1 Guilhabreu is part of a village in the interior of the municipal area, though in a rural context.

Scools	Total Students	Sample	Sample Percentage
EB1 Caxinas	714	65	9%
EB1 Correios	420	26	6%
EB1 Guilhabreu	100	43	43%
EB2,3 Frei João	1000	48	5%
Secundária Afonso Sanches	540	49	9%

Table 1: Universe of the sample

Schools	School level	Ages
EB1Caxinas	3 rd e 4 th class	8-12
EB1 Guilhabreu	4 th class	8-11
EB1 Correios	4 th class	9-10
EB2,3 Frei João	9 th class	14-19
Secundária Afonso Sanches	12 th class	17-20

Table 2: Distribution of the school class and age range

In this sample female elements are predominant, once that in exact numbers on the 1st level of elementary school we have 68 female students and 65 male students, on the 3rd level of elementary school 27 female students and 21 male students and on the secondary 29 female students and 20 male students. One of the sample participants did not identify the gender.

We noticed that as the school level goes up the difference between boys and girls increase, the second ones become predominant what might induce to the conclusion that the school abandon by male is bigger.

Characterization of the school libraries network in the municipal area of Vila do Conde

In 2001, Vila do Conde was selected to participate in the school libraries network (Rede de Bibliotecas Escolares – RBE), a Project of the Education Minister which involved the municipal management.

This initiative wants to allow all schools to have a library, no matter the grade that the school teaches, but creating on students reading and access to information habits since juniors.

It is a Project of several phases and at the moment 15 schools are already part of that network: Secundária José Régio, Secundária Afonso Sanches, EB2,3 D. Pedro IV, EB2,3 Júlio Saúl Dias, EB2,3 Dr Carlos Pinto Ferreira, EB2,3 Frei João, EB2,3 Ribeirinha, EB1 Quinta - Fajozes, Facho - Vila Chã, Guilhabreu, Caxinas, Benguiados, N°1- Correios, Mindelo and Gião. The target is to achieve the total coverage of the municipal area.

In the cooperation protocol is established that municipal management supports technically secondary schools and 2nd and 3rd levels elementary schools sharing software and library registers. For 1st level elementary school municipal management had further responsibility like adapting or building an area for school library, as well as the acquisition of furniture, equipment, bibliographic background and multimedia, financially participated by Direcção Regional de Educação do Norte.

In this context, the Public Library José Régio of Vila do Conde (with Serviço de Apoio às Bibliotecas Escolares – SABE) create a public catalog together with all the several schools of Vila do Conde and the Centro de Ciência Viva and the Centro de Actividades. The municipal management have been investing so, in short-term, all local libraries and institutions can share bibliographic records in the way that can have an effective cooperation between libraries with a true work of partnership and resources rentability.

Schools	Total Area	Sitting Places	Service Schedules	Integration year at RBE	Specific qualifications of the library school coordinator
EB1 Caxinas	150 sqm	50	8.00-18.00	2001	No
EB1 Guilhabreu	100 sqm	12	9.00-15.00	2002	Yes
EB1 Correios	48 sqm	12	8.30-17.30	2004	Yes
EB2,3 Frei João	145 sqm	43	8.25-13.25 13.30-18.30	2001	Yes
Secundária Afonso Sanches	173 sqm	54	9-13 14.30-17.30	2004	Yes

Tabela 3: Characterization of school libraries

All schools have their own area for library settled with physical resources to create a cosy environment. Except one case, in all there is a coordinator trained specifically, which allows a defined and wide attendance schedule as well as a regular organization of activities to incentive students to go to the library. [Table 3]

Schools	Information Resources	Information Organization	Domiciliation borrow (1 st trimester)	Computer Places
EB1 Caxinas	5300 Items	Library School + SABE	3480	3 PCs with broadband
EB1 Guilhabreu	1380 Items	SABE	267	2 PCs with broadband
EB1 Correios	1303 Items	SABE	1200	2 PCs with broadband
EB2,3 Frei João	5132 Items	Library School + SABE	1056	8 PCs with broadband
Secundária Afonso Sanches	1813 Items	Library School + SABE	200	6 PCs with broadband

Table 4: Library existing resources

All libraries have diversified information resources in different kind of supports, having great concern about increasing the multimedia documents, which are much solicited and make available the domiciliary borrow, for the other kinds. There are PCs, all of them with broadband connections. Regarding information organization there is a close cooperation between Public Library (SABE) and all the school libraries.

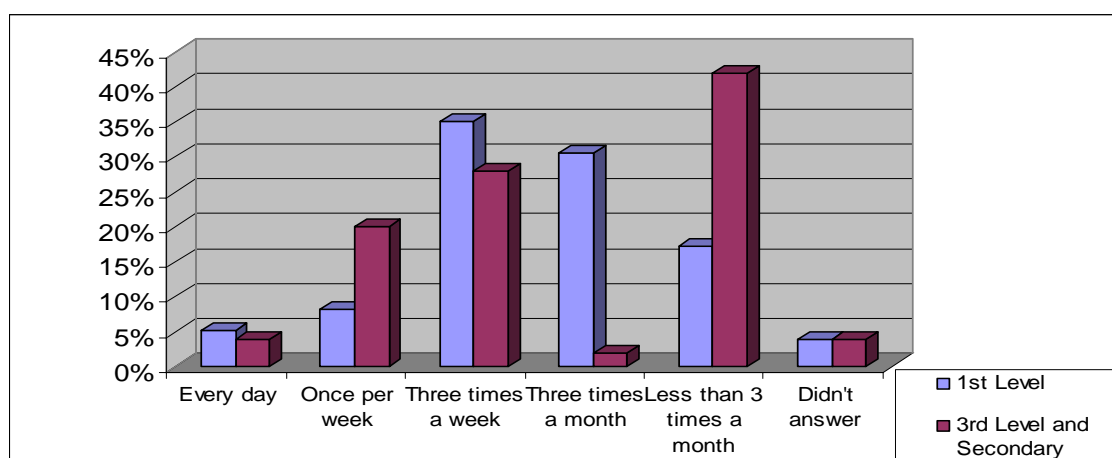
Análise dos resultados

We are now presenting some results given by the applications of the inquiry, analysing some data that we consider more relevant.

EB1 Caxinas	80%
EB1 Correios	88%
EB1 Guilhabreu	95%
3º Ciclo	48%
Secundário	39%

Table 5: Library inscriptions

Regarding students inscriptions in a Library (school, public or other) we verify that as the school level grows this number decreases. On the 1st level teachers take students to the library during school schedule, promoting this contact since early. On the 3rd level inscriptions decrease because students expand their interests to other areas and, usually, there is no time to go to library during school schedule. This situation persists and become worse during secondary school. [Table 5]



Graphic 1: Library frequency comparison

Regarding library frequency, 1st level goes more times, and in shorter terms to school library. Go to the library 3 times a week is a routine of 35% of 1st level students due to the fact that it is regularly promoted animation activities in the library, namely the story tell time and the regular visit of the class with its teacher to renew the domiciliary borrow. For 3rd level and secondary students go to the library is not a routine for more than 40% once that the visits to this space are less than 3 times a month. [Graphic 1]

	1 st Level	3 rd Level and Secondary
Search by Subject	43%	82%
Search by Author-Title	34%	51%
Search by Title	34%	54%
Search by Author	50%	76%

Tabela 6: Search criteria Choice

We also intended to verify the student's ability in what concerns options of research criteria. So, in one of the questions they had to indicate the research criteria to know if in the library existed books on a specific subject, a CD which title and author were given, a film which title was given and books of a specific author. Regarding 1st level the research by author was easier and was the one that more students choose once that 50% answered correctly and it is the higher percentage with more correct answers because search by subject only 43% made correct choices, while by Author-Title and only by Title 34% had it correct. However, even on the Author search we verify that many students opted by not answering (33%) and (24%) had it wrong what shows great deficiencies on basic search.

On the 3rd level and secondary, we verify that the search option that students more easily apprehended was by subject, with 82% of correct answers. This can show that conventional search elements, Author and/or Title, are not the most relevant information to their searches which means that they don't give much importance to the information origin. When the search by Author/Title and only by Title are the correct we come to low percentages with adequate options like 50%. [Table 6]

	EB1 Caxinas	EB1 Correios	EB1 Guilhabreu
Search by Subject	62%	42%	16%
Search by Author-Title	45%	38%	16%
Search by Title	52%	38%	5%
Search by Author	69%	54%	19%

Table 7: Comparing the adaptation of search criteria on the 1st level

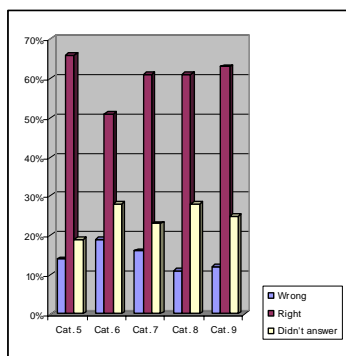
The ability to formulate search strategies able to solve the information needs are basic skills of information literacy. In our study we verify that students from different social and geographic areas show different behaviour to solve the same problem. Though, students from EB1 Caxinas showed high ability to apply research by Author and by Subject, becoming more evident regarding average value of this level. The percentage of correct results is only negative on the cross search, more complex, by Author and Title. However, this result is considerably superior comparing the other two schools of 1st level. We should also take into account that we are working with students of 1st level where search strategy is less frequent because difficulty is higher. [Table 7]

	1 ^o Level	3 ^o Level	Secondary
To colouring space	1%	0%	1%
To organise documents by subject	92%	83%	78%
To locate documents by subject	84%	98%	82%
To organise books by date	9%	0%	4%

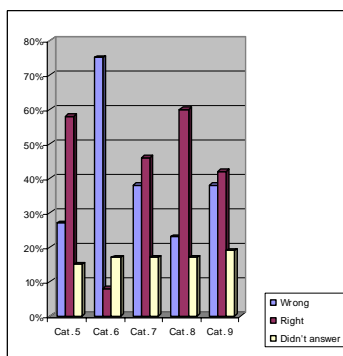
Table 8: UDC functions on the library organization

Regarding Table 8 we wanted to know if students understand the utility of the application of Universal Decimal Classification (UDC) on the library. Students should understand the double function of organization and location of this classification. We verify

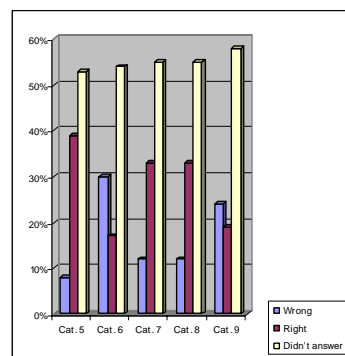
that students did not perceive the double function once that they don't choose both options that translate this idea. Even, students of 1st level see classification mainly to organize the library while on the 3rd level and secondary location function is predominant. Nevertheless, comparatively to the 1st level, there is a bigger percentage of secondary students that can not identify correctly these two functions. We should also pay attention to the fact that wrong alternatives are completely out of sense when giving an explication of UDC function what might have helped in the choice of correct options by the enquired.



Graphic 2: Location of subject category – 1st level



Graphic 3: Location of subject category – 3rd level

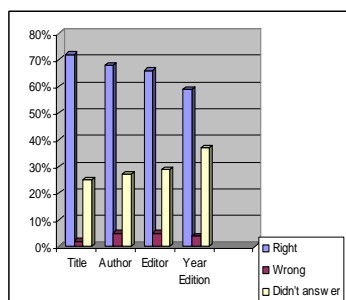


Graphic 4: Location of subject category – Secondary

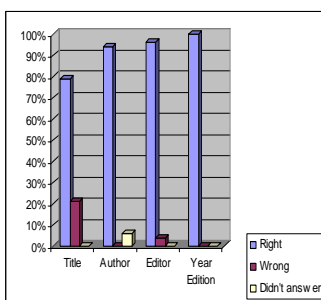
Understanding the general functions of UDC, when faced with its use students show great difficulties to associated the document to the correspondent category, as we can verify by the obtained results on the question where students had to identify categories of five subjects. On the 3rd level the percentage of students that made the correct match between document and class only in two exercises was superior to 50%. On the secondary, most students opted not to answer, having in all cases percentage of correct answers inferior to 50% and in two exercises percentage of wrong choices is superior to the correct ones.

To the exercise of category 6, it was given an example with a subject about planes, in this case most students opted by category 0, on the 3rd level were 46% and 29% on secondary. This can mean a lack of knowledge of category 0 content and the difficulty in associate transports to Applied Sciences (category 6).

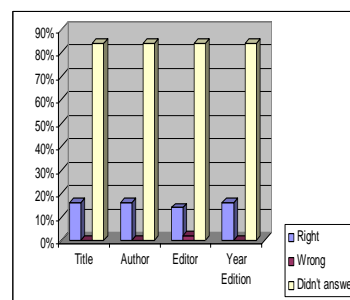
Students of 1st level are the ones that showed more knowledge about the use of UDC once that the correct answer is superior to 50%. The verified results must be related to the way that library is organized at this school level. Here it is related a colour to several categories and symbols to its subdivision, which helps to memorize the organized structure and makes easier its use and searching. [Graphics 2, 3, 4]



Graphic 5: Settling bibliographic reference – 1st level



Graphic 6: Settling bibliographic reference – 3rd level



Graphic 7: Settling bibliographic reference – Secondary

Graphics 5, 6 and 7 show the results of exercise about bibliographic reference, this exercise was different in each level. On 1st level, students were asked to build the identity card of a book, indicating title, author, editor and edition year. On the 3rd level, students should identify title, author, editor and edition year, according to the bibliographic reference presented. On the secondary, students had to choose a book and make its bibliographic reference. In this way, it was tried to combine the difficulty level grade to the school level.

In the result analysis, we perceived a total reluctance by secondary students in doing this exercise, once that 90% did not answer, that can induce that elements that take part of bibliographic reference and its organization are unknown. Notice that in one of the enquiry questions, there was a bibliographic reference that could be used as an example.

Regarding 1st and 3rd levels, it was stated that most students distinguish basic elements that take part of the bibliographic reference. So, on the 3rd level the percentage about correct answer are always above 70% and on the 1st level are between 50% and 70%.

What's the capital of Netherlands?	1st Level	3rd Level and Secondary
Local Newspaper	1%	2%
Weekly magazine	1%	1%
TV	8%	8%
Internet	49%	62%
Encyclopaedia	34%	48%
Poetry (1 st level) Romance (3 rd level and secondary)	0%	1%
Dictionary	0%	1%
Teletext	5%	1%

Table 9: Source adaptation

What's the weather for tomorrow?	1st Level	3rd Level and Secondary
Local newspaper	13%	32%
Weekly magazine	0%	7%
TV	41%	33%
Internet	10%	21%
Encyclopaedia	2%	2%
Poetry (1 st level) Romance (3 rd level and secondary)	0%	1%
Dictionary	0%	2%
Teletext	34%	53%

Table 10: Source adaptation

What's the meaning for prejudice? – 1st level What's the plural for citizen? – 3rd level and secondary	1st Level	3rd Level and Secondary
Local Newspaper	1%	4%
Weekly magazine	1%	2%
TV	1%	5%
Internet	13%	21%
Encyclopaedia	9%	13%
Poetry (1 st level) Romance (3 rd level and secondary)	0%	3%
Dictionary	77%	80%
Teletext	0%	2%

Table 11: Table 10: Source adaptation

What are the most important news of Vila do Conde during last week?	1st Level
Local newspaper	75%
Weekly magazine	12%
TV	4%
Internet	5%
Encyclopaedia	1%
Poetry (1 st level) Romance (3 rd level and secondary)	0%
Dictionary	0%
Teletext	4%

Table 12: Table 10: Source adaptation

What are the most important news of Portugal during last week?	3rd Level and Secondary
Local newspaper	35%
Weekly magazine	48%
TV	23%
Internet	21%
Encyclopaedia	1%
Poetry (1 st level) – Romance (3 rd level and secondary)	1%
Dictionary	1%
Teletext	4%

Table 13: Table 10: Source adaptation

At what time does your favourite program pass on TV ?	1st Level	3rd Level and Secondary
Local newspaper	1%	19%
Weekly magazine	26%	15%
TV	36%	24%
Internet	4%	1%
Encyclopaedia	0%	18%
Poetry (1 st level) – Romance (3 rd level and secondary)	0%	1%
Dictionary	0%	1%
Teletext	32%	74%

Table 14: Table 10: Source adaptation

One of the most important parts of information literacy is the use of several resources, in any support, adapted to the problem and context. Though, it is necessary too use skills to select and interact with the most proper resources to solve all kind of information needs. In this sense, a group of questions were made according to what students would select as information source that they consider more pertinent, to solve a specific information need. The choice could be one of the following sources: Local Newspaper, Weekly Magazine, TV, Internet, Encyclopaedia, Dictionary and Teletext. There was also the possibility to choose two sources completely inadequate (Poetry for 1st level and Romance for 3rd level and secondary), which permit to verify the veracity of the given answers.

Regarding the ability to adapt the information source to the identified need students of 3rd level and secondary showed results truly positives. They reveal proper use of Teletext, Dictionary and Internet. On 1st level even if students concentrate most of their answer on the correct option, there is a significant percentage that gives incorrect answers. In this sense, reveal that they don't understand the function of information source. [Tables 9, 10, 11, 12, 13, 14]

Regarding Teletext students of 3rd level and secondary use it better than 1st level students. [Tables 10, 14] The Encyclopaedia choice is in direct competition with Internet. [Table 9]

	1 st Level	3 rd Level	Secondary
Fun	31%	35%	27%
Information search	70%	79%	84%
Work/Study	83%	79%	76%
Meet people	3%	2%	0%

Table 15: Book use

We also tried to know the function of books for students. We verified that the use of books is mainly associated to utilitarian practices once that all levels of students privilege search of information or work/study as a motif to access these documents. On the other hand, the use of books for leisure time is less considered, once that the percentage is about 30%. It should be enhanced that students don't associated book to socialize, because they don't consider that they could establish social relationships by changing experiences around them. [Table 15]

	1 st Level	3 rd Level	Secondary
Fun	33%	79%	43%
Information search	55%	73%	86%
Work/Study	52%	54%	49%
Meet people	7%	42%	16%

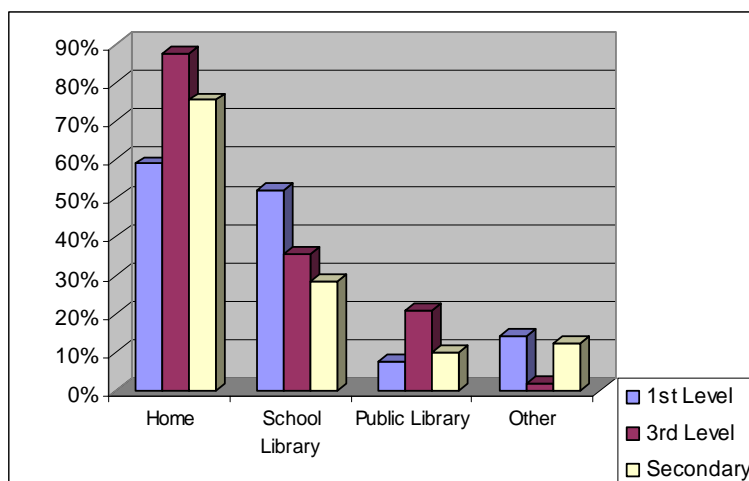
Table 16: Internet use

Following this, we also intended to know the Internet utility for students. In all levels most students declare using Internet to search information, complementing this access with work/study intentions. Only 3rd level use Internet mainly for fun (79%) and to meet people (40%), this last option is almost insignificant to 1st level and very low for secondary. [Table 16]

Sites	1 st Level	3 rd Level	Secondary
Games	64%	48%	27%
Mail	16%	48%	73%
Study	52%	50%	71%
Chat	4%	46%	22%
Artists	8%	29%	12%
Sports	22%	44%	24%
Movies/Music	35%	60%	53%

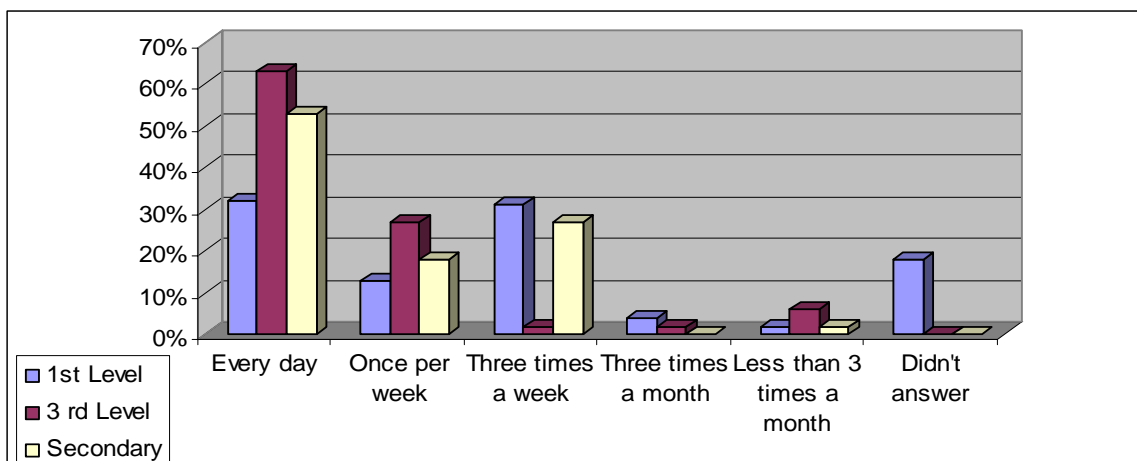
Table 17: Most visited sites

Crossing information about the kind of use that students declare to do on Internet and sites there are incoherencies. In fact, affirming that they use Internet mainly to search information and work/study, students when answering about sites they access they choose those directed for leisure. Though, 1st level students prefer Games sites (64%), Movies/Music (35%) and Sports (22%), sites about study come in second place with (52%). About 3rd level these are the ones that most use Internet, showing visits percentages superior to the other two levels in all kind of sites, except games, the most visited by students of 1st level and also for mail and study for which secondary students have higher percentages. Students of 3rd level reveal higher rate of chat use than the other two levels showing coherence with the given answer about Internet use in which 42% affirmed using it to meet people. [Table 16]



Graphic 8: PC places of use

Regarding places where PC is used, more than half of students, of all levels have PC at home and because of that it is the privileged place to access it. However, for 1st level students school library is still the opportunity to contact with a PC for almost 52%. [Graphic 8]



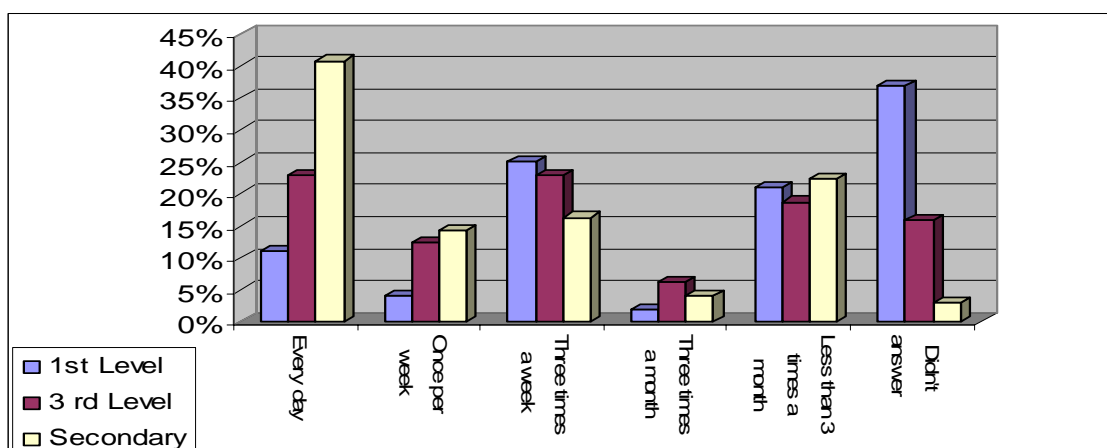
Graphic 9: PC use frequency

On the other hand, in what concerns the PC use frequency only students from the 3rd level and secondary (63% and 53%) declared use it everyday once that only 32% of 1st level students use it with that frequency. [Graphic 9]

	PC at home and Internet connexion
1 st Level	32%
3 rd Level	33%
Secondary	55%

Table 18: Students percentage with PC at home and Internet connexion

Regarding Internet connexion most of students at secondary can Access from home (55%) while only 33% of 3rd level students can do it. At 1st level also only 32% have PC at home with Internet connexion. [Table 18] Note that being the 3rd level the one that shows higher percentage of students with PC at home (88%) only 33% of these have Internet connexion.



Graphic 10: Use of PC with Internet connexion frequency

Taking this into account, we understand that students at secondary are the ones that use, in percentage, more the PC with Internet connexion everyday. However, the Internet access seems to be for most students a casual practice that still not be a part of study or leisure habits [Graphic 10]

Final Notes

The results here presented show that, in general, students that made part of our sample had reasonable skills for information search.

The schools libraries that we studied had an enormous potential to create conditions to support the multiple practices of literacy and, consequently, the acquisition and development of several knowledge. However, it was stated as the school level of the students grows the magic and joy of the contact with books decrease and, consequently, don't profit of all the opportunities offered by the library. Truly, students of 3rd level and secondary, the target of this inquiry, prove this trend, once that going to the library is no longer frequent and there is who states that had never read a book.

The raised question: to built upon solid rock or to built upon sand has a positive answer in the Vila do Conde municipal area. This is only possible when all the intervenient: schools, teachers and school librarians, Educational Minister and Municipal responsible through SABE work together in order to allow school libraries to produce context and practices of literacy to permit students access to new worlds and new languages and becoming active members of the Information Society.

Bibliography

- American Library Association (ALA) (1989). *Final Report, American Library Association Presidential Commission on Information Literacy* [on line] available at: <http://www.ala.org/ala/acrl/acrlpubs/whitepapers/presidential.htm> (accessed 17 March 2006).
- American Library Association; Association for Educational Communications and Technology. Information literacy standards for student learning: standards and indicators [on line]. In *Information Power: Building Partnerships for Learning*, available at: http://www.ala.org/ala/aasl/aaslproftools/informationpower/InformationLiteracyStandards_final.pdf (accessed 17 March 2006).
- Audunson, Ragnar; Nordlie, Ragnar (2003). Information literacy: the case or non-case of Norway?. *Library Review*, 52 (7), 319-325.
- Benavente, Ana; coord. (1996). *A literacia em Portugal: Resultados de uma pesquisa extensiva e monográfica*. Lisboa: Fundação Calouste Gulbenkian; Conselho Nacional de Educação.
- Baró, Mónica; Maña, Teresa (2002). *La formación de usuarios en la biblioteca escolar: educación infantil y primaria*. Málaga: Ediciones Seyer.
- Bawden, David (2001). Information and digital literacies: A review of concepts. *Journal of Documentation*, 57 (2), 218-259.
- Bundy, Alan; ed. (2004). *Australian and New Zealand information literacy framework: principles, standards and practice*. Adelaide: Australian and New Zealand Institute for Information Literacy.
- Bruce, Christine (1997). *Seven faces of information literacy in Higher Education* [on line] available at: <http://sky.fit.qut.edu.au/~bruce/inflit/faces/faces1.php> (accessed 17 March 2006).
- Correia, Ana Maria Ramalho; Teixeira, José Carlos (2003). Information literacy: na integrated concept for a safer Internet. *Online Information Review*, 27 (5), 311-320.

- Doyle, Christina S. (1992). *Outcome measure for information literacy within the National Educational Goals of 1990: Final Report to the National Forum on Information Literacy*. [on line] available at: http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/23/4a/12.pdf (accessed 17 March 2006).
- Fédération des Enseignants Documentalistes de l'Éducation Nationale (FADBEN) (1997) *Compétences en information-documentation: référentiel*. Paris: FADBEN.
- UNESCO (1978) *The Organization's literacy programme: conclusions and recommendations of the Director-General to the Executive Board and to the General Conference on ways and means of implementing 19 C/Resolution 1.192*. Paris: UNESCO.
- Kebede, Gashaw (2002). The changing information needs of users in electronic information environments. *The Electronic Library*, 20 (1), 14-21.
- Lenox, M.F.; Walker, M.L. (1992). Information literacy: challenge for the future. *International Journal of Information and Library Research*, 4 (1), p. 1-18.
- López-Cózar, Emílio Delgado (2002). *La investigación en biblioteconomía y documentación*. Gijón: Trea.
- National Forum on Information Literacy (2005). *The Alexandria Proclamation on Information Literacy and Lifelong Learning* [on line] available at: <http://sky.fit.qut.edu.au/~bruce/inflit/faces/faces1.php> (accessed 17 March 2006).
- Menou, Michel (2002). *Information Literacy in National Information and Communications Technology (ICT) policies: The Missed Dimension, Information Culture* [on line]: White Paper prepared for UNESCO, the U.S. National Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts, Prague, The Czech Republic. available at: <http://www.nclis.gov/libinter/infolitconf&meet/papers/menou-fullpaper.pdf> (accessed 17 March 2006).
- Sanz Casado, Elías (1994). *Manual de estudios de usuarios*. Madrid: Fundación Germán Sánchez Ruipérez; Pirámide.
- Standing Conference of National and University Libraries (SCONUL) (1999). *Information skills in higher education* [on line] available at: http://www.sconul.ac.uk/activities/inf_lit/papers/Seven_pillars2.pdf (accessed 17 March 2006).
- Soto Alfaro, Francisco (2005). *La formación de usuarios y el uso de la información: una experiencia didáctica en la biblioteca del Colegio Público de Falces (Navarra)*. Navarra: Gobierno de Navarra; Departamento de Educación.
- Virkus, Sirje (2003). Information literacy in Europe: a literature review. *Information Research*, 8 (4).

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