The use of Internet by students in Portuguese schools

Sofia Viseu

Faculdade de Psicologia e de Ciências da Educação

Universidade de Lisboa

sviseu@fpce.ul.pt

Abstract

Two national programmes were developed during the 90' in order to provide ICT equipment to Portuguese schools: Internet in School and Information and Communication Technologies in Education- Nónio Sec. XXI. Through the first programme a PC was given to all schools along with an Internet connection to be installed in school libraries.

The fact that the Internet became available to students in non-supervised contexts, such as school libraries, brings new challenges both to school organization and students themselves. On the one hand, the school needs to develop a new social system for the Internet supply, on the other hand, students have a new powerful resource for theirs school tasks.

In order to study this process in greater depth, research was developed in three Portuguese, secondary schools using various data collecting techniques (questionnaire, observation and interview).

The results reveal a lack of educational use of the Internet by the students in these contexts. We find four dimensions to explain this phenomenon: Internet characteristics; Internet supply options; the teachers' work; the students' perspective about their role at school. Yet, some other results yield new, future possibilities for the educational use of the Internet through the potential of school libraries and the students' active role in the process.

Keywords

Internet, Internet school supply, student strategies, case study

Introduction

The use of information and communication technologies (ICT) in schools is a rising concern in our society.

From the political point of view, there is a growing effort to improve the access to TIC in all European countries, in the last two decades. In Portugal, in eight years the number of families with a PC with Internet access doubled (INE, 2003).

The development of such an expansion is also evident in education. In Portugal, during the 90's two programmes, supervised by national bodies, were developed in order to promote the access to ICT in Portuguese schools: Internet in School (uARTE, 2001) and Information and Communication Technologies in Education- Nónio Sec. XXI (DAPP, 1996). Together, the programmes had joint objectives to provide ICT equipment to schools, as well as teacher training projects. Through the first programme a PC was given to all schools along with an Internet connection to be installed in school libraries.

According to Eurydice, we almost double the number of computers with Internet connections in schools attended by pupils aged 15 between 2000 and 2003, even if we still fall below the EU average (EURIDYCE, 2004).

Through these national programmes, the Internet connections become available in the school libraries. These structures are characterised by more informal educational practices than the classroom, and are also less supervised contexts of students' activities. So, what are students doing with the Internet in school libraries?

To try to shed some light on this question, a study was developed in three secondary schools around Lisbon, using a multiple-case study, using several data collecting techniques (Yin, 1989):

- A brief questionnaire to all Internet users containing questions about the time, activities, objectives and initial intention of using the Internet;
- Observation of the social context in which the Internet utilization occurred during a week in each school;
- Interviews with students (from secondary studies), teachers and the teachers responsible for the school library.

The use of several techniques allowed data triangulation as a method to validate the procedures and analyze the information.

1. How students use the Internet?

At this point, we will present the times, activities and objectives that student have when using the Internet. For that, in data collecting techniques we used the observation and the questionnaire to all Internet users.

1.1. When and to do what?

The study revealed that a small number of students use the Internet in school libraries (between 5,4% e 9, 2%). This is interesting data considering that:

- 25,5% of the Internet users in Portugal are students (Cardoso e Firmino da Costa, 2004);
- 56,9% of the 15-year-old pupils claim to have a computer at home and 24,3% Internet connection (EURYDICE, 2004).

Students tend to use the Internet at the end of the day, after classes or during lunch times. We also find that must of the students don't use the Internet more than once a week (between 80% and 65%).

Within this scenario, it seems that the internet use in the schools libraries is not greatly wanted by the students, who either prefer other places or don't use the Internet at all.

When analysing students' activities, we conclude that they are related to communication and searching for information, namely the checking of "my favourites".

Table 1. Students' activities in the Internet

Activities / School	1	2	3
My favourites	27,5%	50,6%	43,1%
WWW research	9,4%	17,1%	36,9%
Create a web page	2,2%	1,8%	1,5%
E-mail	16,0%	28,0%	8,5%
Discussion groups	0,7%	0,0%	0,0%
IRC	42,8%	0,7%	Not available
Downloads (games, music …)	1,4%	1,8%	10,0%
Total	100,0%	100,0%	100,0%

We also note that the production or publication of information or knowledge occupy a very small percentage of Internet activities.

1.2. To what end?

The use of the Internet for school activities by students' initiative revealed very low activity.

	Educational use
School 1	7,7%
School 2	9,7%
School 3	26,8%

However, a national study showed that more than 50% of the Internet users (aged up 15) search for information and new knowledge related with their jobs or studies (Cardoso e Firmino da Costa, 2004). So, this data indicate a lack of educational use of the Internet in school libraries. Internet is used by a low number of students, mainly for their own personal interests and hobbies. The Internet educational potential is being undervalued. But why?

2. What explains the Internet use?

In order to understand this data, we interviewed the librarians and 7 students from the different schools. We find two major factors to explain this data: the organization of school libraries and the students' strategies.

2.1. The Internet school supply in the school libraries

The librarians at school 3 believe that ITC and the Internet in particular, are fundamental tools for a better learning process. So, they decided to promote their use inside the library, expecting soon that the school will be overrun with ICT activities. There are organized activities for the use of ICT and the Internet in particular: a journal, a web page, training for students and teachers, contests, etc.

As a result, we observed a higher Internet use for school activities. The students, through their own initiative, go to the library to develop school activities knowing that they will find support.

The other two libraries still have yet to find a way to promote Internet use in a more pedagogical way. In this case, the students find new entertainment value and without any support search the Internet as a means of escaping the school routine.

2.2. The students' strategies

Even with the different scenarios of how libraries are organized, in the 3 cases the use of the Internet is still low for school activities. Therefore we asked the students to explain this data.

The interviewed students point out four main dimensions that they carefully consider when deciding whether to use the Internet or not for educational objectives: the Internet characteristics, the library policy and rules, the teachers, and finally the role that students think they have in school.

The Internet characteristics

Students named various advantages for the educational use of the Internet: quantity and quality of the information, interactivity and communication possibilities. As they state,

"Through the internet I can get information from all over the world, which is impossible to fit into a library"; *"first I use the encyclopaedia, but then I search for the new discoveries on the internet"*; *"we can ask an expert questions   "*; *"it helps in school interchanges"*.

However, they find some problems in using the Internet for educational proposes: *"we find a lot of garbage"*; *"we have to be patient and read everything. And much of the information is only in English"*; *"if we try to find something, everything will pop up!"*

The library- Internet school supply options

The library's organization and the way the Internet is available is also an important aspect for students' strategic balance. In fact, students alleged that the way libraries are managed and the way the Internet is available for users is a determinant factor in explaining why students don't use it a great deal for school tasks.

The quality of Internet connections is a real problem; 41% of the students claim to have technical difficulties in using the Internet, namely because of the slow connection and deficient PC maintenance.

The rules for Internet access can also become a problem. First, students said that they can only use the Internet for 30 minutes which is not enough to *"search, read the information, select the information…"*; *"to produce a school paper in very sort time because we have to consult at least 10 pages to produce good work"*. And this fact produces a perverse effect because some students confessed that the sort time available ends up being a stimulus to use the internet for purely personal proposes: *"I'm not going to use the limited time I have for school work! I'll use it for finding what I want, for my personal interests"*.

Another aspect mentioned by the students is related to the insufficient know-how of the teachers that are responsible for the libraries, who cannot always provide the necessary support for student's searches.

Teachers work

The teachers' role also seems to be an important factor in students' strategic balance. Firstly, because only 3% to 5% of the teachers asked the student to use the internet for school work. A student justified: *"teachers don't advise us to consult the Internet"*. This seems to confirm other study results which point out that teachers are not expected to have any knowledge of which services and sites on the net are of interest and of use to youngsters (BJØRNSTAD, and ELLINGSEN, 2004).

And why does this happen? For students, teachers still have no training for ICT and they also prefer not to bored by introducing changes into their work: *"to prepare classes it is easier to use a book than to go surfing on the Internet, finding the right material…"*; *"the teacher has his work, thinks his methods are ok, he is accustomed to his methods, why change?"*. An additional reason is related to the teachers distrust in losing control over students work: *"teachers don't know much and so they don't know if they are being deceived, which is stupid. I can also go to books and copy everything"*.

The students' role

Finally, to explain the lack of Internet educational use, it is important to address the students role in school and how do they perceived it. It was possible to identify two dimensions that are pondered upon by students.

In some cases, students tend to use the Internet in order to make their work easier or their school life more pleasant. Copying contents and using them in school papers, or using the internet for personal proposes are good examples of a certain "facilitator vision" described by some students.

In other cases, students are concerned with improving their role in school and they use the Internet as a way to diversify their school experience. The fact they appreciate the autonomy and a more active role in the learning process by using the Internet was also mentioned as an advantage.

The use of typologies is very typical in ethnographical studies as a result of the analysis of the data procedures (Hammersley & Atkinson, 1992). And in this study the analysis of the students' strategic balance leads us to a typology of strategic Internet utilization with educational objectives.

- The net experts are students that are regular Internet users because they enjoy it personally, but they also use the Internet for school activities as a way of improving their results. In doing so, they combine two experiences: on the one hand the typical good student activity, of using several ways in order to get better grades and on the other hand the integration experience, by mobilizing their personal interests for the school work (Dubet, 1994).
- The net survivors are the students that ponder the use of the Internet in very particular circumstances: it depends on the subject, the teacher, the time they have, etc. This kind of student tends to balance, at each moment, their personal interest with the school work and needs.
- The net opportunists are the students that search the Internet to make their school life easier. They just want to escape from school tasks and they use the Internet to help themselves to make their work both easier and faster (copying of contents is a typical activity) without trying to improve their results (Perrenoud, 1994).

3. Final note

The study showed the importance of addressing social context and personal perspectives for the use of ICT in schools. Even if it was centred only on three schools, it is a good example of what might happen when the ICT and the Internet are simply put into schools without attending to the local needs and the schools own ability in dealing with it.

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