

INTERNET USAGE AND DIGITAL DIVIDE AMONG SPANISH UNIVERSITY STUDENTS

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Abstract

Information and Communication Technologies (ICTs) have altered and become an important part of habits and customs within all social environments. This is no less true for Universities. Since the mid 90s, the spreading of the Internet has caused changes in all aspects of University life. The ways in which we learn, teach, research, read and communicate have all changed; and of course, ICTs have also made accessing knowledge and information easier.

In this sense, the main aim of this study was to gain a full understanding of the habits and uses (Teo, 2001) of university students as regards ICTs, with particular emphasis on their use of the Internet.

The results of this study were obtained through an investigation between the students of the University of Alicante (Spain) during 2005. The research technique used to obtain data were an electronic survey, and the final sample consisted of 5.169 cases, from a population of 29.657 students.

The results show that the effects of the digital divide are minimal within the university population and the digital illiteracy amongst students is minimal but in spite of that the majority of users only display passive uses of the Internet. A more plausible reason of these results would seem to be that large multinationals aim to control an open space such as the Internet, establishing their own use agenda and indicating how the Internet should be used and with which content.

Keywords

Internet, Students, Knowledge, Information.

Aims and Methodology

Since the mid 90s, the spreading of technologies such as the Internet, e-mail and mobile phones has caused changes in all aspects of University life. The ways in which we study, learn, teach, research, access Universities, read and communicate have all changed; and of course, ICTs have also made accessing knowledge and information easier.

As regards communication methods, it is clear that the relationship between students and lecturers has changed both quantitatively and qualitatively. The same has occurred with the access to and use of information (Nasir, 2003). It is therefore essential to understand how information is accessed from a sociological point of view (Martínez Gras, 2003). It is important to try and better the understanding of the digital divide (Norris, 2001) that exists among University students within a public Spanish university. It is fundamental to understand whether the digital divide exists due to a lack of Internet access facilities or whether it is linked to a lack of education and training in the use of ICTs (Chinn and Fairlie, 2007). It should also be noted that the digital divide could be a result of inadequate or insufficient use of these technologies. It would, therefore, also be useful to find out how University students use these ICTs, differentiating between non-interactive or passive use, in other words, searching, consulting and using online products; and interactive use, better known as Web 2.0, which, for example, enables the ordinary user to upload all kinds of content (Beer and Burrows, 2007).

The research was undertaken with the objective to take a first look at how University students really make use of ICTs. As regards future research however, it would be advisable to carry out a more in-depth study from both a qualitative and quantitative point of view in order to fully understand this issue.

The main aim of this study was to gain a full understanding of the habits, uses and opinions of University students as regards ICTs, with particular emphasis on their use of the Internet and their related habits.

In terms of methods used, the self-administered e-survey was used for data collection. The population under study was made up of students enrolled at the University of Alicante during the 2004-2005 academic year. The final sample of student participants in the survey totalled 5169. Rodolfo Martínez Gras was in charge of the technical management of the study and received technical support from the University of Alicante Computer Service and institutional support from the University of Alicante Provice-chancellor's offices of both Technology and Institutional Relations.

Some key results

As regards the habits of university students concerning Internet use, it is important to mention that almost all students (97.5%) have more than one year's experience using the Internet. Likewise, it is interesting to highlight that more than 75% of them have been surfing the Internet for more than five years.

	%
Before 1997	14,7
1997	9,7
1998	14,0
1999	16,1
2000	20,0
2001	10,1
2002	7,8
2003	4,4
2004	2,4
2005	,0

TABLE 1 – IN WHICH YEAR DID YOU START TO USE THE INTERNET
(ANY KIND OF USE: WWW, MAIL, FTP...)?

In terms of how often they use the Internet, around 80% of those polled access the Internet every day or almost every day. Also, almost all of the university students surveyed own a personal computer and mobile phone, and the majority also have Internet access.

	%
Mobile phone	90.5
PC – Desktop	84.1
Internet	79.8

TABLE 2 – ICTS AT HOME

	%
Several times a day	41,3
Every day or almost every day	38,2
Several times a week	16,9
Once a week	2,2
Two or three times a month	,8
Once a month or less	,1
Less than once a month	,0
Never or almost never	,1

TABLE 3 – REGARDLESS OF WHERE YOU ACCESS THE INTERNET, HOW OFTEN DO YOU USE IT?

The data shows that the student body is used to and familiar with using the Internet, SMS / MMS messaging (mobile phone text messaging service) and e-mail, indicating that university students have acquired at least the basic skills, experience and training, to varying degrees, to be able to use the ICTs. Therefore the Internet, as an information tool, is well-known and commonly used. Another issue is how they use it, which will be explained later on.

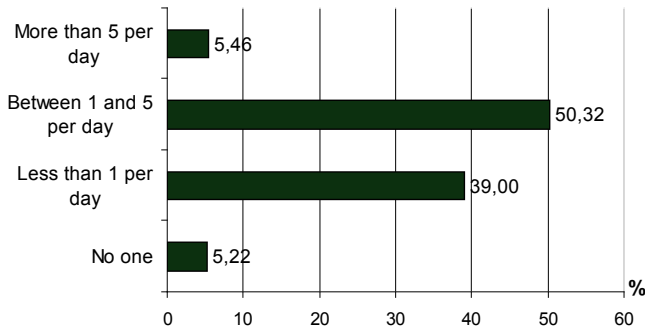


FIGURE 1 – SMS MOBILE PHONE MESSAGES - SENDS / DAY

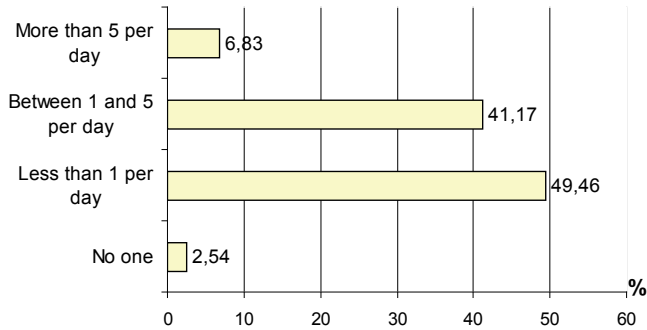


FIGURE 2 – E-MAILS - SENDS / DAY

In terms of the use of services offered by the Internet, it can be seen that the most frequently used services are websites, followed by email and the downloading of audio, video or software files. It is interesting to note that those services that require you to take part in or to publish or share personal content, such as blogs, forums or news services are not as frequently used by students as other aforementioned services.

	%
Web pages	91.7
E-mail	91.1
Audio, video or software downloads	48.8
Interactive chats, IRC, Messenger	29.9
Forums, news services, blogs, Usenet	5.2

TABLE 4 – FROM THE FOLLOWING LIST OF INTERNET SERVICES, WHICH THREE DO YOU USE MOST OFTEN?

As regards activities undertaken by the students on the Internet, it can be seen that the majority use the net to search for information or data (93.1%). This result is particularly important, as given that the study deals with University students only, it could be assumed that all students search for information and this is not the case ac-

ording to our results. The second most frequently undertaken Internet activity by university students is searching for information concerning leisure or free time (69.2%). Finally, it is important to indicate that relatively few students use the Internet to keep themselves up to date with current affairs, only 57.4% state that they use the Internet to read the news.

	%
Search for information or data	93.1
Queries concerning leisure or free time	69.2
Reading the news	57.4

TABLE 5 – FROM THE FOLLOWING LIST OF ACTIVITIES,
PLEASE SELECT THE ONES YOU USUALLY USE THE INTERNET FOR

In relation to student Internet use and as regards the question on how much use they make of the university bibliographic catalogue, it is particularly significant that most students (62%) do not know of it, have never used it or use it very little. It is important to note that the university bibliographic catalogue is the only catalogue through which students can access information on the bibliographic resources available at the different libraries on campus.

With this data, we can state that university students use the Internet to search for information, although, funnily enough, very few use the university’s bibliographic catalogue, which offers access to resources that have been reviewed in some way or another, either by publishers, lecturers or technical librarians. This supports the theory that students prefer to access public content and texts on the Internet, regardless of whether they have been reviewed or not.

As has been seen up to now, university students use Internet resources passively. Therefore it can be expected that they visit websites to consult information and download files, but not to publish content on the Internet. This is reflected in the low number of students who use blogs or post comments in forums. Furthermore, this attitude is supported by the fact that only 11% of students have their own webpage published on a free site that the university offers to all students.

In sum, from the results obtained in this research, the following facts can be drawn:

Almost all of the university students surveyed own a personal computer and the majority also have Internet access. It should be noted that the university itself offers the use of computers and free Internet access to all its students. Thus from an infrastructural point of view, the effects of the digital divide are minimal within the university population. Therefore, difficulties in accessing infrastructures cannot be considered to be a factor in the social divide amongst the university population that we have analysed, as regards access to knowledge.

University students have experience in using the Internet, given that the majority have been familiar with the tool for more than three years. Furthermore, records show that they access the Internet on a daily basis. As a result, it can be clearly stated that possible digital illiteracy amongst students is minimal (Hargittai, 2002). This data also shows that knowledge of ICTs is not a conclusive criterion that may help to explain the divide in access to knowledge, at least not in the population group that is under study here.

However, it should be highlighted that, despite dealing with a university population, use of ICTs is very limited (Underwood, 2007). In general, the opportunities offered by the Internet, such as a new environment in which to mix, interact and communicate with others, are not taken advantage of, given that the majority of users only use the Internet passively, in other words, they only use it to search for information. There are relatively few students who use the Internet to publish their own content using any of the options on offer through this technology (blogs, personal web pages, forums, etc.). In sum, the usage gap is related to the evolution of the information society (Van Dijk & Hacker, 2003).

Conclusions

Perhaps we should be considering the reasons why a segment of the population that is educated in and familiar with the use of ICTs, and that is traditionally critical, non-conformist and, in general, highly dynamic, uses this tool so passively when the Internet is potentially such an active and revolutionary tool.

The Internet is essentially used to search for academic, informative and commercial information; in the same way that encyclopaedias, commercial directories and

newspapers or the specialised press have been traditionally used. The Internet is also used as a form of entertainment (Espinar, *et al.*, 2006); in the same way that the television has been traditionally used. Furthermore, the Internet is also used as a content supplier, just as people have traditionally used offline suppliers. It is true that space and time restrictions are overcome, but the Internet is still used in an extremely limited manner.

It could be that we are still at a primitive stage as regards Internet use and consequently, the tool has not yet blossomed in pursuit of a more egalitarian, participative and critical Internet. It seems that Web 2.0 is not achieving this either. In addition, we have precedents, such as the television, a medium about which much has been written and which, on more than one occasion, has been set up as the world's democratizing element or the tool that was going to spread and disseminate education and knowledge throughout the world. However, the reality is that with the 21st century in full swing, content offered by network television is controlled by a few multinational companies (Warf, 2007) and is more closely linked to a numbing of and an acculturation of the masses rather than to training and educating the population. It seems that the Internet is going down the same path.

It is however necessary to continue researching, both from a quantitative and qualitative point of view, how ICTs are used and especially how the Internet is used. We should aim to study why a characteristic user profile, such as that of students, uses the Internet in such a limited, passive, standard and superficial way when it is potentially a great revolutionary environment. It could be that society is still not yet ready to make optimum use of the Internet. A more plausible reason however, would seem to be that large multinationals aim to control an open space such as the Internet, establishing their own use agenda and indicating how the Internet should be used and with which content. If this is the case, it seems that we are witnessing a programme of content on a few web portals that have been established by multinationals, thereby undertaking something akin to Internet agenda setting, which could cause, in the medium and long term, a great knowledge gap between the majority of Internet users, who use the Internet passively and focussing on entertainment; and a small elite, who provide Internet content and take advantage of all aspects of the Internet.

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