



PERSPECTIVE ON...

• Internet Use Habits of Students of the Department of Information Management, Hacettepe University, Ankara

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The frequency and other characteristics of Internet use of students studying at the Department of Information Management at Hacettepe University in Ankara, Turkey, are examined. According to the findings, students prefer electronic media to printed media, they find the easy accessibility of the information more important than the other qualities, and they regard search engines as the most important means of information retrieval.

INTRODUCTION

Today the Internet, which is an important means of accessing information, is becoming more and more common. Students, especially, take advantage of the Internet in a multi-functional way and are using the information they access via the Internet in their homework ever more frequently. It is important to explore the information behaviors of the students who are being educated in the field of information management since the role they are going to play in establishing connections between information sources and users is crucial. For this reason, in our study, we explore the characteristics of information management students' use of the Internet, including the purposes for which students use the Internet, which search engines they prefer, and their Internet skills.

LITERATURE REVIEW

There have been many studies undertaken in recent years concerning how and for what purpose individuals use the Internet. The most comprehensive is the OCLC Market Research report prepared in 2005. In this report, 3300 persons from Australia, India, Canada, Britain, the United States, and Singapore were questioned about Internet and electronic resource usage and how they perceive both the library and the Internet. The aim was to determine personal ideas, habits, attitudes, and comments on the Internet and the library. College students were also included in this study, and it was found that this user group prefers the Internet over library resources. Findings indicate that young users use search engines more than they use libraries and that they prefer electronic resources to printed ones because of their additional features.¹

Although there has been much research about Internet use in the literature, relatively few studies have focused on university students. There has been almost no research on students studying in the field of information management and librarianship. When we look at the studies on the information-seeking behaviors of undergraduate students, we see that these studies are generally related to their information-seeking behavior in conjunction with the use of the university library.² Some other studies examine the effect of different disciplines on students' information-seeking behavior. Kerins, Madden, and Fulton tested the information-seeking behaviors of law and engineering students in Ireland with an experimental study and

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compared the results with the information-seeking behavior characteristics defined by Leckie, Pettigrew, and Sylvain.³ In his study, Heinström tested the effect of students' personality traits and methods of study on information-seeking behavior with 305 graduate students from different disciplines.⁴ Callinan pointed out the need for bibliographical education after he compared the information-seeking behaviors of first year biology students and last year biochemistry students, identifying the sources of information they use for their homework, their library using characteristics, and the kinds of problems they face in accessing the information.⁵ In his examination of the contributions of bibliographical education provided to undergraduate students studying geography, Fescemyer researched what kind of sources they use and how much they use them, analyzing the references in the students' assignments.⁶ In a similar study by Carlson, undergraduate students' assignments were examined and the factors affecting the references were specified.⁷

While these studies discuss broad areas of students' information-seeking behaviors, it can be observed that other studies focused on the Internet and World Wide Web. Van Scoyoc and Cason, who studied students' library use habits, showed that undergraduate students use the Internet and online education modules but do not use university libraries' Web pages and sources.⁸ Armstrong et al. indicated that students' information-seeking processes centered around locating electronic resources, that the Internet is used more than other information channels, and that very few differences can be seen among student groups in the use of electronic sources of information.⁹ In a study conducted with undergraduate and graduate students, Aiken, Martin, Ray, and Vanjani tried to identify students' purposes in using the Internet.¹⁰ In studies investigating the effect of the Internet and Web on students' term projects, it has been understood that students are referring to electronic sources more but that they need training on documentation processes and format.¹¹ Oppenheim and Smith, of Loughborough University, conducted a similar study on information science students.¹² They analyzed the types and years of materials these students used in the bibliographical references in their assignments and dissertations. Again, the result indicates a gradual increase in the number of references to Internet sources in student projects, but it is difficult to generalize these results to all students. The results of a questionnaire conducted by Majid and Tan in order to identify information source preferences of computer engineering students indicate that the students primarily use books with the Internet as the third important source of information.¹³ According to another study carried out by Alur, Maheswarappa, and Tadasad in India with engineering students, the students use the Internet primarily for general and entertainment purposes and are not aware of its use as an educational tool.¹⁴ It can be inferred that the facilities available in different countries contribute to the different results of research on students' Internet habits even though the students may be in the same academic discipline. The results of another study conducted in Nigeria—again on engineering students—indicate that the university does not have sufficient Internet connections, that students do not have adequate skills although they believe in the importance of the Internet as a source of information, and that the facilities of the university affect students' use of the Internet.¹⁵ A significant portion of Internet use studies focuses on students in the health sciences. In such studies, it has been

stated that the students are eager to use the Internet for health topics, gender and experience affect Internet use characteristics, and computer-aided education is effective in student success.¹⁶ Of the few studies conducted in Turkey, two pertaining to graduate students' Internet use are related to students in the health sciences.¹⁷ In these studies, the purposes, frequency, and places the students use the Internet; the effect of gender on use of the Internet; and the contribution of the Internet to education were examined. Another study examining the effect of gender on Internet use by library science students concluded that there is no significant difference between male and female subjects' rate of Internet use, but their Internet skills do affect whether or not they find the Internet useful.¹⁸ In addition to studies related to students' general Internet use characteristics, there are studies about their Web usage characteristics. Hsieh-Yee's review is one of these and is important in terms of introducing related literature since it is comprised of studies conducted between the years 1995–2000.¹⁹ In addition to this review, there are other studies in the literature—such as Fidel et al.—examining students' information-seeking behavior on the Web: Markland's study of search engine preferences, and Hess, Kyung-Sun, and Nahl's, study of the effect of students' experiences and cognitive structures on browsing.²⁰

THE METHOD

This research has been conducted for the purposes of identifying the information-seeking behaviors and especially the Internet-use characteristics of the undergraduate students of the Information Management Department, Hacettepe University, and to discover what kinds of differences in these behaviors and characteristics may exist between different class ranks. In this study, a questionnaire was given to fifty students from each grade level, 200 students total. The questions were designed to solicit information about the purposes for which they seek information, how they meet their informational needs, their frequency of use and the purposes for which they use the Internet, where they can access the Internet, the qualities they look for in the information they find, which search engine they use most frequently, and, finally, their knowledge and skills in relation to the Internet. The obtained input data were then evaluated using SPSS, and the findings have been interpreted.

THE RESULTS

Of the 200 students who participated in the research, 115 (57.5 percent) were female, 85 (42.5 percent) were male. For both the first and second year students, the number of females is thirty-four and the number of males sixteen. For the third year students, there are twenty-nine female students and twenty-one male students, and for the fourth year the number of females is eighteen and the number of males is thirty-two. When we look at all four levels, the rates of female and male students are very close. In the study, results regarding the gender of the participants are given as data although the effect of gender on behaviors is not examined.

The Need for Information

The students were asked to list in order of importance their top three purposes for seeking information. The need for information for the purpose of homework rated 30 percent (fifteen) for the first and second years, 34 percent (seventeen) for those in the third year, and at the top of the list with 36 percent (eighteen) for fourth year students. When we add up the

first three preferences, this number increases to 54 percent for first year students, 68 percent for second year students, 78 percent for third year students, and 86 percent for fourth year students. Information seeking for the purpose of homework is followed in second place by information seeking to trace “the latest developments in an interest area.” Twenty-eight percent of the students who indicated as their first choice seeking information to trace the latest developments on the area of interest are in their first year, the same rate as indicated by third year students; 30 percent are second year students; and 22 percent are in their last year. Among the fourth year students, the second most important information-seeking purpose is doing research for their courses (24 percent). This comes in the third place (24 percent) among the second and third year students and in the last place (18 percent) for the first year students. Hobby, entertainment, and interest-related research is in third place with 24 percent for first year students whereas for the second (16 percent), third (14 percent), and fourth year students (16 percent), it is the least important (see Table 1).

Ways Used in Meeting the Need for Information

The students were asked how they meet their need of information. In response to this question, the top choice of all classes was the Internet. Thirty-eight percent (nineteen) of the first year students, 66 percent (thirty-three) of the second and fourth year students (the same rate for each), and 56 percent (twenty-eight) of the third year students said they use the Internet to meet their need for information. The Internet is followed in second place by the university library. Twenty-eight percent of the first and third year students, 18 percent of the second year students, and 12 percent of the fourth year students selected the university library as the first place they refer to in order to meet their need for information. In comparison, the number of students who meet their need for information by consulting their own libraries, their teachers,

the libraries of other institutions, and their friends is very low compared to these choices (see Table 2).

Information Media Preferences

The students were asked which information media they prefer. The majority of the students prefer electronic media to printed media. Among the first year students, the rate of those who prefer electronic media is 54 percent (twenty-seven), in the second year 78 percent (thirty-nine), in the third year 74 percent (thirty-seven), and in the fourth year 76 percent (thirty-eight). Printed media preference is higher among first year students than for the other class levels (see Table 3).

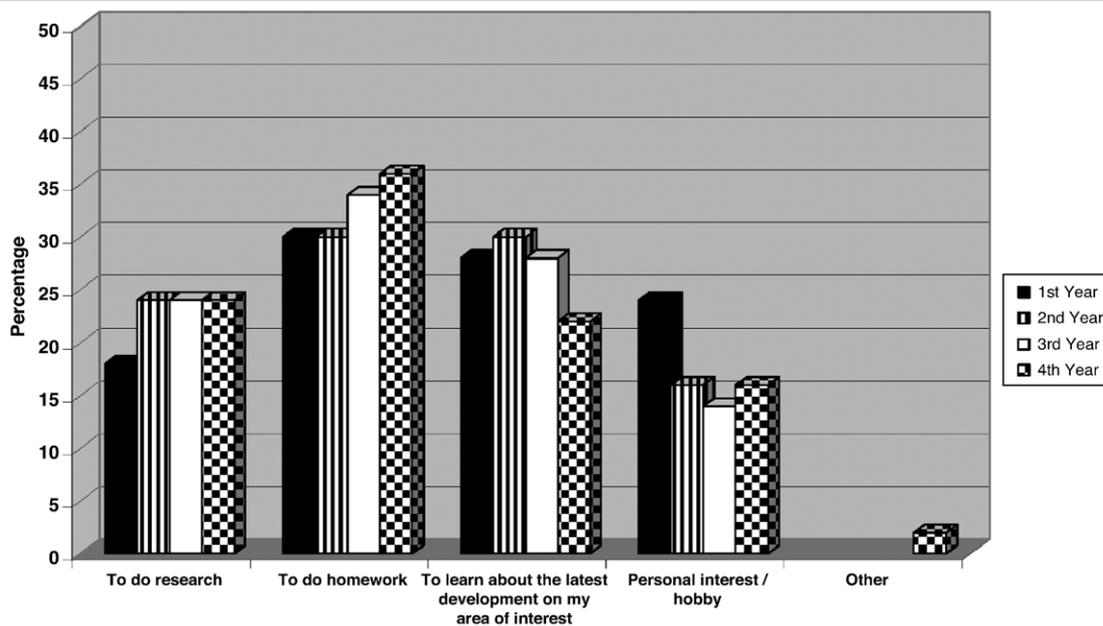
Frequency of Internet Use

The study revealed that most of the students use the Internet every day. While the students in the second year are at the top of the every-day list with 58 percent (twenty-nine), they are followed by the fourth year students with 56 percent (twenty-eight), third year students with 40 percent (twenty), and the first year students with 32 percent (sixteen). In the several-times-a-week category, the third year students are at the top of the list with 52 percent (twenty-six); then come the first year students with 50 percent (twenty-five), the fourth year students with 42 percent (twenty-one), and the second year students with 36 percent (eighteen). While there are no students who never use the Internet, the rate of the students who use the Internet several times or less a month is also very low (see Table 4).

Access to the Internet

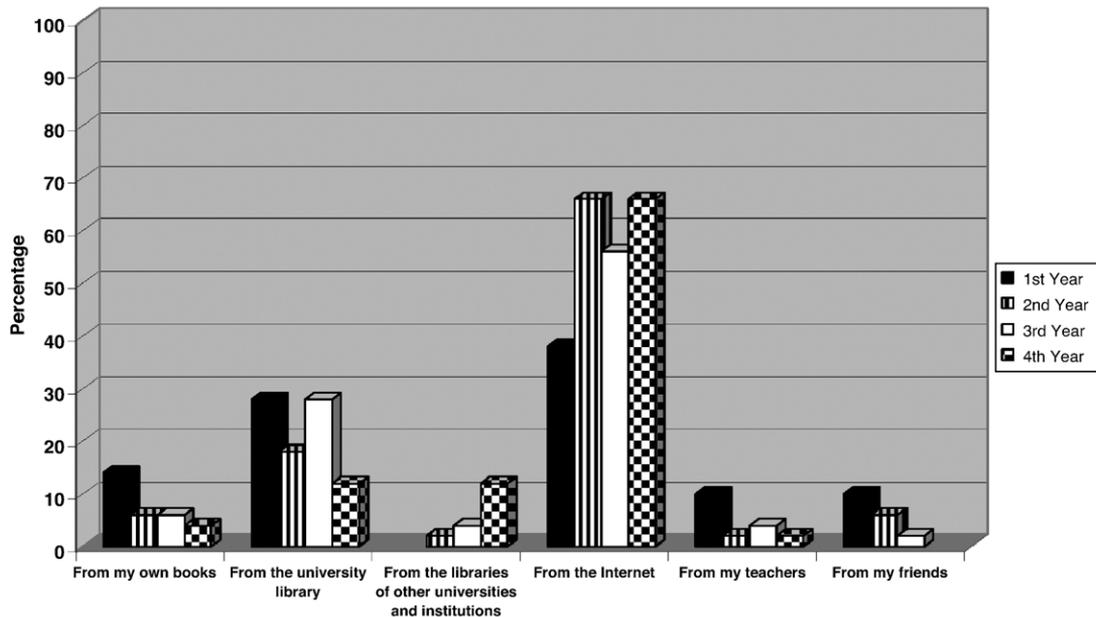
The students were asked where they accessed the Internet. According to the results, the majority access the Internet from their department’s computers. The rate of the first year students who access the Internet from their department is 56 percent (twenty-eight), for second year students 50 percent (twenty-

Table 1
What Purposes Do You Mostly Have While Seeking for Information?



N=200.

Table 2
How Do You Meet Your Need of Information?



N=200.

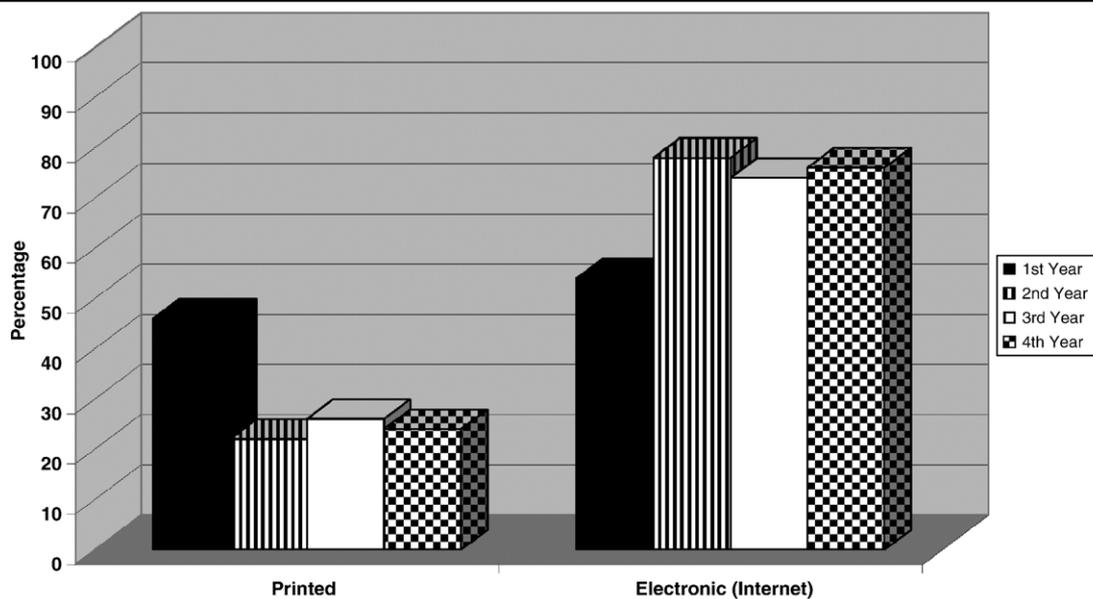
five), for third year students 72 percent (thirty-six), and for fourth year students 60 percent (thirty). This means of access is followed by those who access the Internet from their home. Of those who access the Internet from their home, 40 percent (twenty) are fourth year students (at the top of the list), 34 percent (seventeen) are first year students, 32 percent (sixteen) are second year students, and 18 percent (nine) are third year students. The rate of access from Internet cafes and the library is low. That the library does not have enough facilities to provide

Internet access to the students is a contributing factor for the library's being at the bottom of the list (see [Table 5](#)).

Purposes for Using the Internet

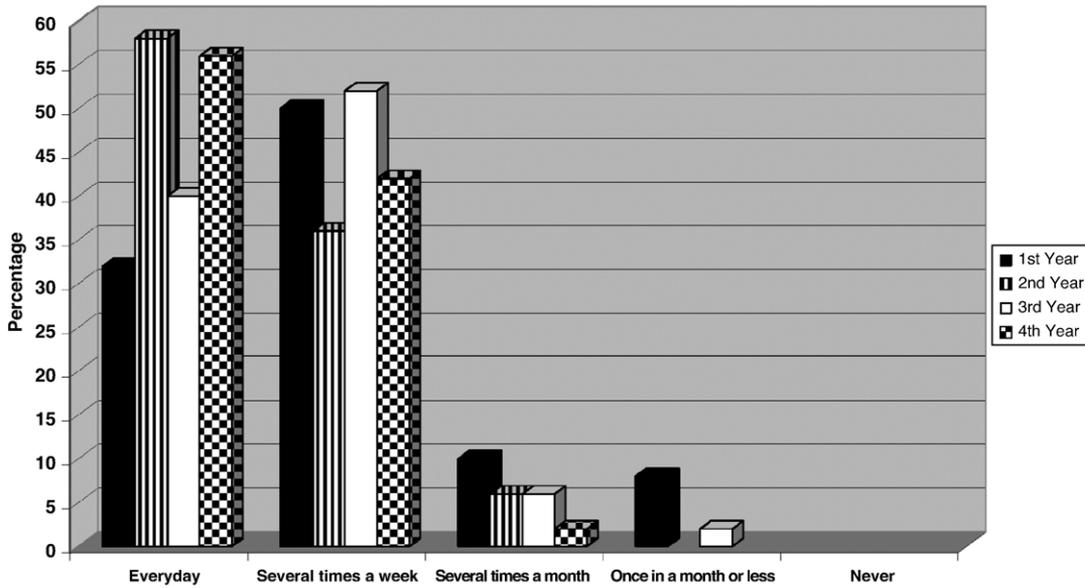
The students were asked for what purpose they use the Internet, and the results show that a vast majority of the students use the Internet for their courses and homework assignments. Fifty percent (twenty-five) of the fourth year students, 48 percent (twenty-four) of the third year students, and 40 percent

Table 3
Which Media of Information Do You Prefer?



N=200.

Table 4
How Often Do You Use the Internet?

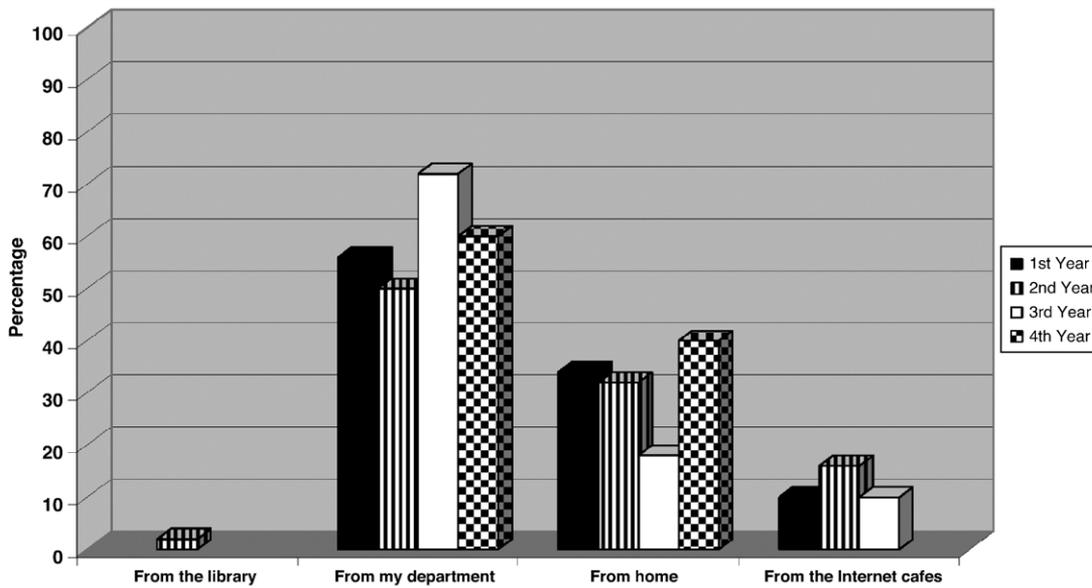


N=200.

(twenty) of the first and second year students have marked using the Internet for the assignments and courses option as their first preference. This preference is followed by the options of using the Internet for personal interest and for e-mails. While the first year students are in the first place in using the Internet for personal interest with a rate of 36 percent (eighteen), the rates of the other three student levels using the Internet for this purpose are close to each other. Using the Internet for e-mail is the third important purpose for the students. The group who found e-mail to be their most important purpose in using the Internet were the

second year students with a rate of 26 percent (thirteen). Those who found this choice the least important were the first year students. A mere 10 percent (five) of the first year students chose e-mail as their first purpose in using the Internet. Since it is possible to access library resources via library Web sites, the answer of “to access the library Web site” is included among the answers to the question “For what purpose do you use the Internet?” The results, however, indicate that “accessing library Web sites via Internet” option is still among the ones least picked. Considering the first three choices, we can see

Table 5
Where Do You Get Access to the Internet?



N=200.

that the first and second year students do not often use the Internet to access the library while the third and fourth year students marked this choice more frequently. In the fourth place among the purposes of using the Internet come the music, games, and entertainment option. Chat comes in the last place (see Table 6).

Qualities Sought in Information Reached via the Internet

When looking for information on the Internet, the students consider most how easy it is to access with 32 percent (sixteen) of the first year students, 34 percent (seventeen) of the second year students, 36 percent (eighteen) of the third year students, and 30 percent (fifteen) of the fourth year students choosing the easy access as the first option. While all students find easy access to be the most important quality of the information, their second option varies. While 28 percent (fourteen) of the second year students think the second most important quality of information is that it should be complete and well directed, 24 percent (twelve) of the first year students find its being accurate and certain as the second important one, 18 percent (nine) of the third year students think that information should be new and up-to-date, whereas 22 percent (eleven) of the fourth year students think that the second most important quality should be its relevance to the topic. Audio-visual effects are the least considered feature for all the classes (see Table 7).

How Do You Reach Information on the Internet?

“Search engines” is picked as the answer to this question by the vast majority of the students. Eighty-four percent (forty-two) of the first year students, 94 percent (forty-seven) of the second year, 92 percent (forty-six) of the third year, and 88 percent (forty-four) of the fourth year students prefer use of a search engine to reach the information. While the rate of the students who use the Web sites they already know is very low, it

is sad and thought-provoking that only one student from the third year and one from the fourth use the library’s Web site to access the information (see Table 8).

Search Engine Preferences

Students who selected search engines as the most important means of information retrieval were asked to record the three search engines they use most frequently. Almost all the students marked the Google search engine as their first preference, 98 percent of the first and second year students and 96 percent of the third and fourth year students. Google is followed by Yahoo. MSN and Alta Vista are preferred in third place but with a very low rate. Netbul.com, which is a Turkish search engine, is preferred by the third and fourth year students in the second and third places, respectively, with very low numbers. HostBul.net and Dogpile are preferred by only one student each (see Table 9).

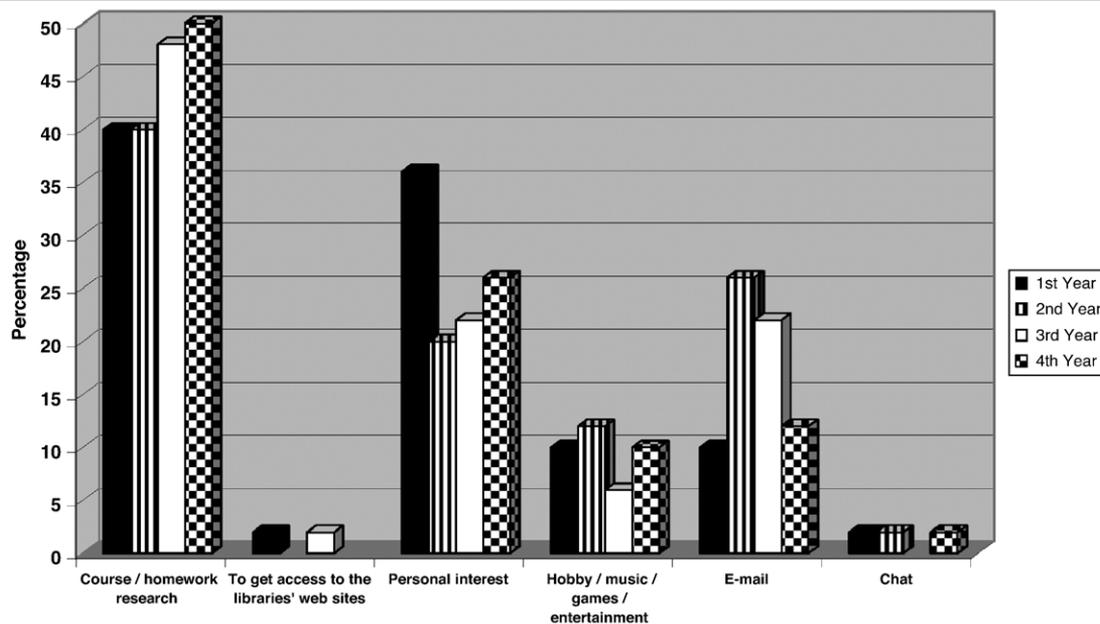
How Much Do Search Engines Meet Information Needs?

The study asked students if search engines meet their information needs. Twenty percent (ten) of the first year, 18 percent (nine) of the second year, 22 percent (eleven) of the third year, and 12 percent (six) of the fourth year students said that search engines meet their information needs. Eighty percent of the first and second year students, 78 percent of the third year students, and 88 percent of the fourth year students said that search engines meet their information needs partially. Only one second year student said that search engines do not meet his/her information needs (see Table 10).

Internet Skills

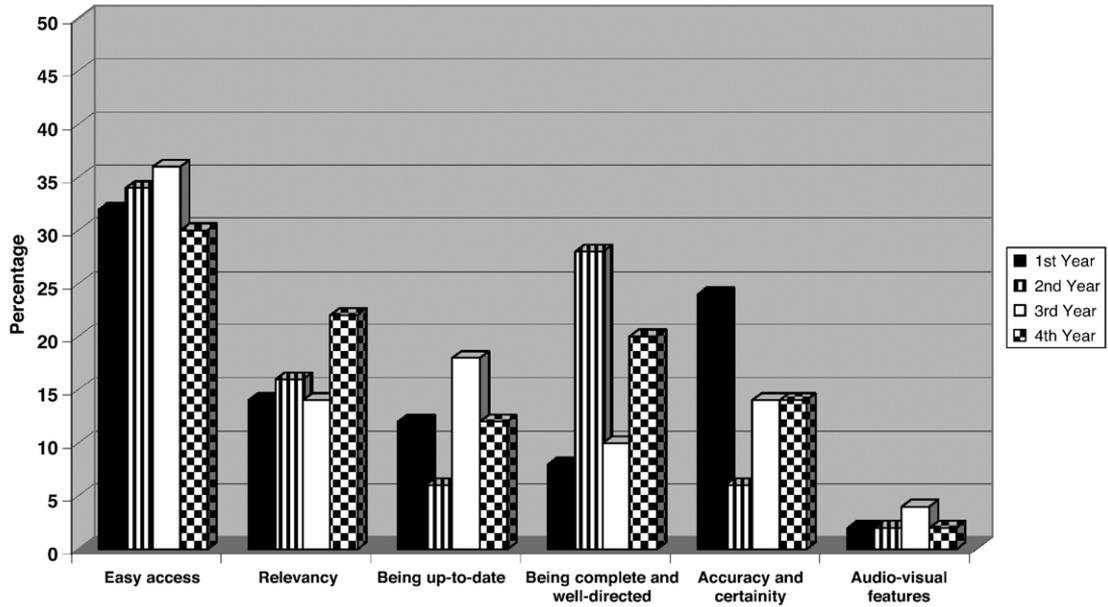
Data obtained regarding how the students gained Internet skills indicate that almost all learned these skills on their own. Sixty percent (thirty) of the first year, 76 percent (thirty-eight) of the second year, 60 percent (thirty) of the third year, and 54

Table 6
For What Purposes Do You Use the Internet?



N=200.

Table 7
What Qualities Do You Look for in the Information You Reached via the Internet?



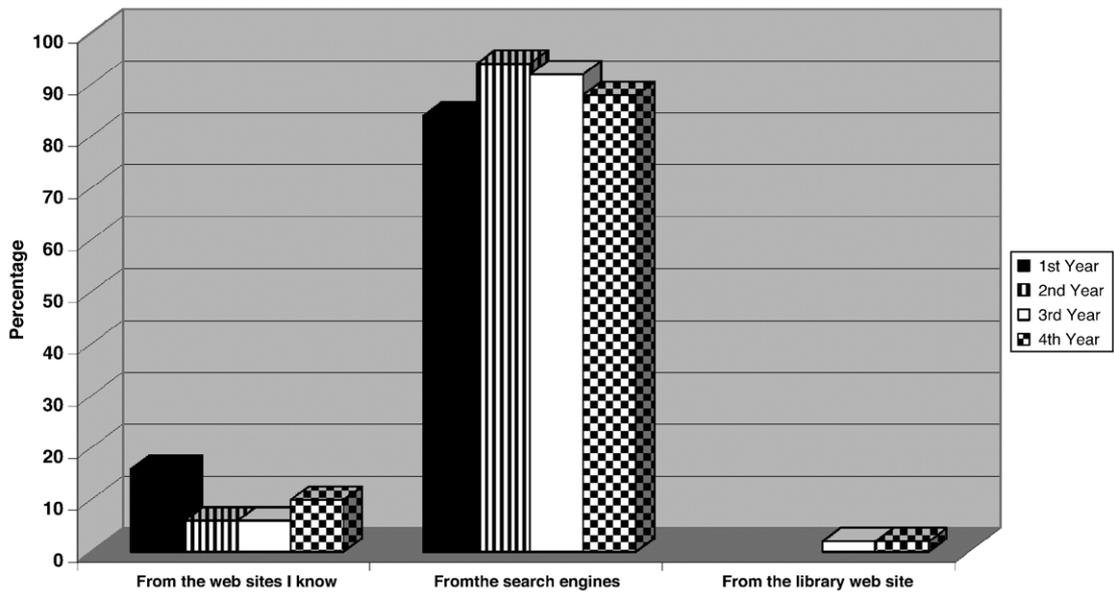
N=200.

percent (twenty-seven) of the fourth year students learned how to use the Internet on their own. Twenty-six percent (thirteen) of first year, 14 percent (seven) of second year, 16 percent (eight) of third year, and 30 percent (fifteen) of fourth year students learned how to use the Internet by the help of courses. Help from friends comes in third place, and help from family comes in last place. The number of students who learned to use the Internet with the help of librarians is one, which is the lowest (see Table 11).

Competency of Students in Using the Internet

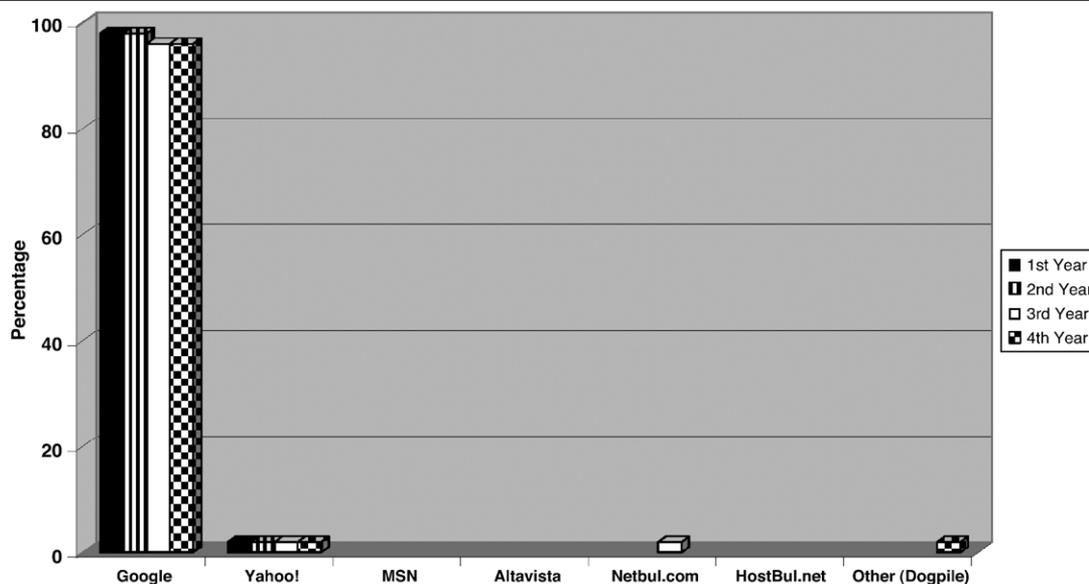
As a result of the answers given to the question asked to help determine how competent the students consider themselves in using the Internet, we can see that the first and second year students see themselves competent at about the same rate, 26 percent (thirteen). This rate drops to 22 percent (eleven) with the third year students and rises to 32 percent (sixteen) with the fourth year students. The majority of the students see themselves as partially competent in using the Internet. Fifty-two

Table 8
How Do You Reach the Information in the Internet?



N=200.

Table 9
Which of the Following Search Engines Do You Prefer?



N=200.

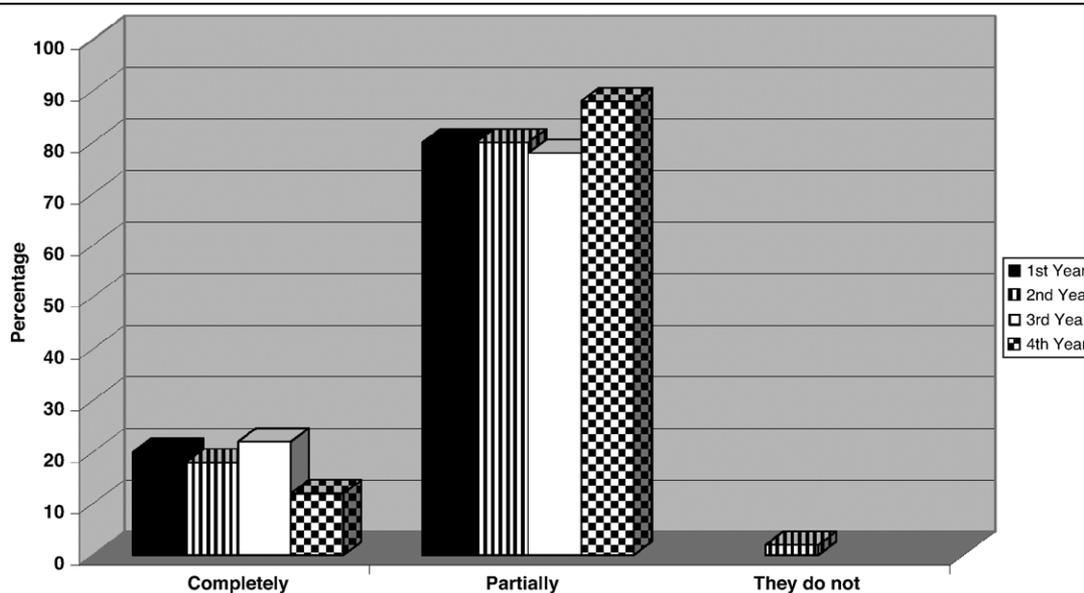
percent (twenty-six) of the first year students, 64 percent (thirty-two) of the second year students, 72 percent (thirty-six) of the third year students, and 66 percent (thirty-three) of the fourth year students accept that they do not have all the necessary skills and knowledge and consider themselves partially competent. The group who believes they are least competent in using the Internet is the first year students. Twenty-two percent (eleven) of the first year students, 10 percent (five) of the second year students, 6 percent (three) of the third year students, and 2 percent (one) of the fourth year students find

themselves incompetent in terms of skills and knowledge (see Table 12).

EVALUATION

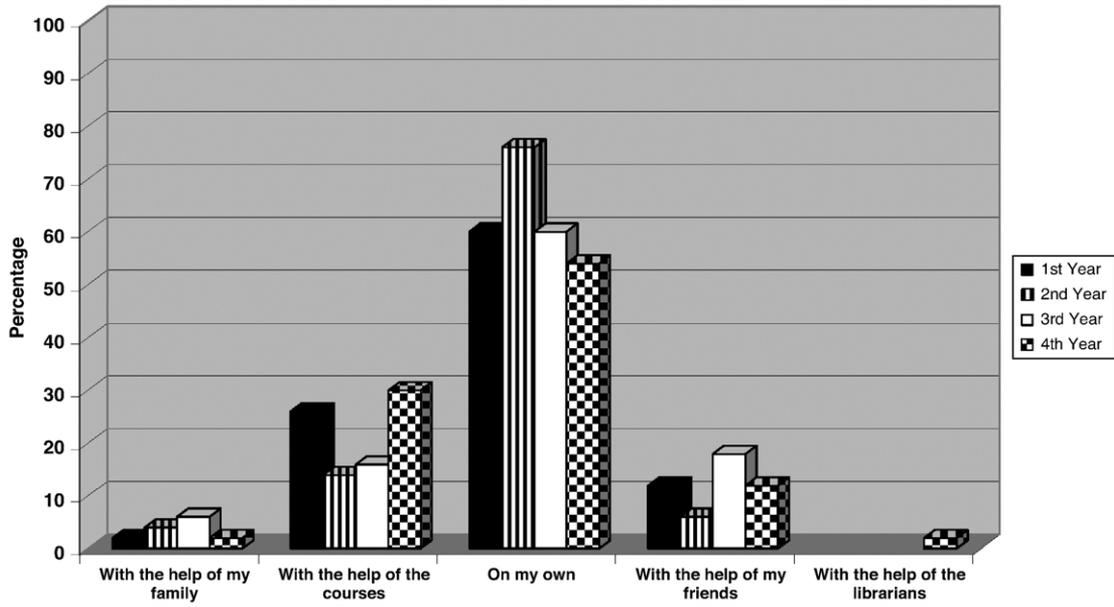
The data obtained from this research indicate that students use the Internet to complete homework assignments. That this need increases after the second year and peaks in the last year may be connected to the increase in practical homework assignments during the last two years. The data obtained also indicate that students prefer electronic media to printed media and that they

Table 10
Do the Search Engines You Use Meet Your Needs of Information?



N=200.

Table 11
How Did You Learn How to Use the Internet?

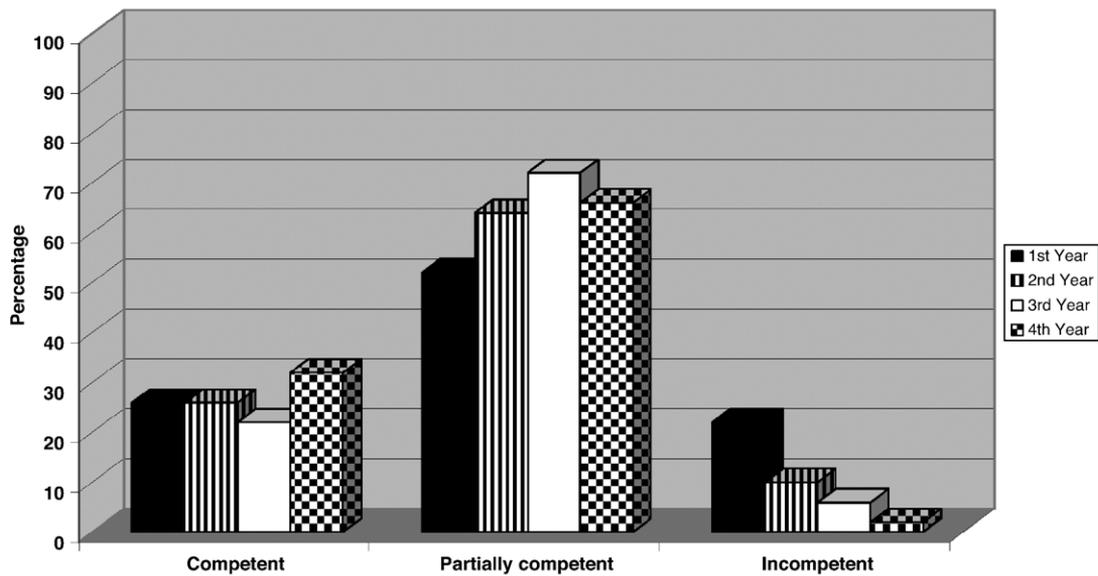


N=200.

get information mostly from the Internet. The rates of electronic media preference are close to each other among the second, third, and fourth year students whereas this rate is lower for first year students. Although “preferring the Internet as a means of information” option is at the top of the list of options for all four years, when compared to each other it can be seen that the first year students choose this option less than the upper grades. This difference may be explained as the effect of the “Introduction to Computer” course taken in the first term and “Internet and Accessing the Information” taken in the second term. Similar

results are observed in the answers given to the question of Internet use frequency. The majority of the students use the Internet daily. This is followed by the students who use the Internet several times a week. Comparing by the year level of the students, we can see that the frequency of Internet use increases remarkably among the second year students and that the most significant difference in frequency of use is between the first and the second year students. These data strongly indicate that the information-media preference, finding the Internet important in meeting their information needs, and the

Table 12
How Competent Do You Think You Are in Seeking Information in the Internet in Terms of Skills and Knowledge?



N=200.

frequency of Internet use increase significantly for students when their second year starts due to the courses they take and the facilities of the department.

The majority of the students gain access to the Internet from their department's connections. It is clear that this is because their department has computer labs connected to the Internet and designed for the use of students. Likewise, we can explain the low number of students gaining access to the Internet from the library due to the library's limited facilities.

When we look at the students' purposes in using the Internet, we see that it is used mostly for homework assignments. Reviewing the data obtained, we see that using the Internet for homework assignments increases among the third and fourth year students. Using the Internet for personal interest is seen mostly among first year students. Although much research in the literature related to the use of the Internet indicates that the Internet is mostly used to check e-mail, contrary to our expectations, the results of our research show that the students do not regularly use the Internet to check e-mails or chat. Similarly, using the Internet for music-games-entertainment is in the fourth place among the alternatives. Our results can perhaps be related to the students in our study getting Internet access from their department's computers. Considering the high usage and overcrowding of the computer labs in the department, we can understand these results better.

As is widely known, the Internet is not only an important tool for e-mail, chat, and entertainment purposes but also for research and accessing library Web sites. It is possible for students to have access to bibliographic and full-text databases relevant to their discipline through their university library Web site. Consequently, it is surprising that using the library's Web site constitutes the smallest percentage among the purposes for using the Internet. It is discouraging that using the Internet with the intention of reaching the library Web sites is this low, especially when students primarily need information for their homework assignments and the Internet is used mostly to conduct research for courses and homework assignments. These results accord with the answers given to the question "how do you reach information?" It is worth the attention that almost all the students prefer search engines for reaching information and that there is only one student from the third and the fourth years who accesses information using the library Web site. This is especially worth investigating since these students, who are getting library science education, are reluctant to use the university library which has a rich electronic collection and a good Web site. It is possible to explain these results to some extent with the results obtained from the answers given to the question related to "qualities looked for in information." That all four classes prefer easy access as their first choice shows that students evaluate information in terms of this quality rather than in terms of accuracy, reliability, relevancy, appropriateness, completeness, and actuality. This situation is thought-provoking as it shows the habits of "students as future information managers."

Although search engines are the preferred first choice and used most frequently in reaching information, the number of students who say that search engines completely meet their information needs is very low. The majority of the students say that they meet their information needs partially. Almost all the students prefer Google as their first choice among the search engines. Google is followed by Yahoo. Netbul.com and

HostBul.net are not among the preferred search engines although they are in Turkish.

As for the questions related to how students learned to use the Internet and if they find themselves competent or not, it is seen that most of the students learned how to use the Internet on their own, followed by those who have learned the Internet with the help of the courses. The first and the fourth year students constitute the majority of those who say that they have learned how to use the Internet with the help of the lessons. The rate of students who have learned the Internet from their families is very low, and there is only one student who learned the Internet with the help of a librarian. This condition shows that the activities of the library on this subject are not at the desired level. In fact, most of the students see themselves as only partially competent in using the Internet. That most of the students who think they are the least competent in using the Internet are first year students and that the fourth year students are prevalent among those who consider themselves competent in using the Internet indicate that training, indirectly at least, affects the use the Internet.

CONCLUSION

According to the results of this study, the students prefer electronic media to printed media in seeking information and they use the Internet mostly to do homework and prepare for their lessons. The students find the quality of easy access of information more important than its other features and they use search engines most in seeking information. The most frequently used search engine is Google. While most of the students say that they have learned to use the Internet on their own, the majority regard themselves as only partially competent in using the Internet. There are differences between the first year and the other years in terms of the need for information and the ways to reach it, electronic media preference, and the purpose and the frequency of using the Internet. Besides this, there are no important differences in terms of the answers given to the questions related to how they reach the information through the Internet, the search engines they prefer, and to what extent search engines meet their information needs.

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