Internet access and use among Nigerian dental students

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Abstract

Objective: The aim of this study was to determine access to internet /e-mail and its usage among Nigerian clinical dental students in year 4 to year 6.
Methods: This is a cross-sectional study involving clinical dental students in year 4 to year 6 of the College of Medicine, University of Lagos. Information obtained from the students include demographic data, access to computers, access to the internet, internet usage, attitude to internet as a supplemental resource in dental education.
Result: Only 35% of the students in this study owned a personal computer presently. Other sources of computer access were at home (35.6%), roommates (21.8%), dental school/college library (7.9%) . Only 35.6% of the respondents had access to the internet at home, with majority (60.4%) accessing it from cyber cafés. Twenty-five per cent used the internet more than once a week while 43.4% accessed it only once a week. Nearly 30% rarely accessed the internet. Eighty-eight per cent used the internet for sending e-mails while only 38% used this facility for literature search(i.e. academic purposes). Students in higher levels of study significantly used the internet often especially for literature search ($p< 0.05$). Nearly all students (95%) possessed e-mail addresses though only 26% accessed it more than once a week. About 90% would like the internet used as a supplement in dental education.
Conclusion: There is a need to improve internet usage for academic purposes for our students .The availability of computers and unhindered access to the internet by clinical students in Nigeria would be beneficial to update their knowledge and share experiences with their global peers.

Keywords: Internet access, Nigerian dental students.

Introduction

The internet is a worldwide network of computer and represents one of the fastest growing areas in network technology[1]. Since its origin in the sixties[2], it has become a growing and popular medium for circulation and delivery of information and educational materials. There has been a shift in the system of medical and dental education from the traditional didactic teaching to a more student active role in which computer and internet-mediated education is gaining popularity[3-7]. The internet is a useful and powerful tool for both communication and expansion of knowledge which makes information very accessible to people throughout the globe. While the most common use of the internet presently is the e-mail[1, 8], it provides a myriad of opportunities for medical and dental education. These include dentist and patient education, communication between dental practitioner, information on new developments and products as well as access to research findings[9, 10].
The most common access point for the internet in most developed countries is the home[11]. A study in the UK revealed that 61% of people accessed the computer at home compared to 32% from work[11]. Internet use in Nigeria has also become increasingly popular although there is no data on number of persons who access the internet from home or elsewhere. At the time the study was conducted, the access points available to the College of Medicine, University of Lagos dental students within the college environment include cybercafes and rarely from the college library and the five departments in the dental school. Presently, there is no internet access in the departments or college library. With increased access and availability of computers and internet for medical and dental education particularly in developed countries, it has become imperative to determine access to information, attitude and use of the internet by our dental students.

Materials and Method

The study was conducted as a cross-sectional design to determine internet/e-mail usage among year 4 to year 6

dental students of the College of Medicine, University of Lagos. A self-administered questionnaire was used to collect data. The study was conducted between May and June 2006. Participants were assured of confidentiality of response. The questionnaire was distributed to students at the end of a lecture period and the filled questionnaires were collected immediately. The questionnaire consisted of mostly close-ended questions on demographic data, internet/e-mail use as well as suggestions for improvement of use. Data was analysed in a compatible computer using the software EPI INFO version 6.046(CDC). Chi squared test was used to assess differences amongst the variables. While statistical significance was inferred at P levels less or equal to 0.05.

Results

One hundred and one dental students out of a possible 125 from year 4 to year 6 responded to the questionaire in this study indicating a response rate of 80.8%. Fifty-five per cent were male and 45% female. Majority (66.3%) were less than 25 years in age. (Table 1).

Access to a computer
Thirty-five (34.7%) students owned a personal computer . Among those who did not possess a personal computer, 35.6% reported having access at home while others access at the school library (7.9%) and roommates (21.8%) (Table 2).

Table 1. Demographic distribution of respondents

Age Group (Years)	no	(%)
< 25 years	67	66.3
> 25	34	33.7
Sex		
Male	56	55.4
Female	45	44/6
Years of Study		
Year 4	30	29.7
Year 5	35	34.7
Year 6	36	35.6

Table 2. Access to computer

Where do you have access to Computer?	no	(%)
At home	36	35.6
At School /Library	8	7.9
Room mates	22	21.8
Self Possession	35	34.7

Access to internet
Only 36 students (35.6%) had access to the internet at home. Majority of the respondents (60.4%) accessed the internet from cyber cafés while a lot less (4%) used the college library. None accessed the internet from the departments within the dental school. (Figure I).

Frequency of internet use
Forty-four students (43.4%) claimed they accessed the internet about once a week, while 26 (25.2%) used the internet more than once a week and 31 (29.3%) rarely used the internet. There was a statistically significant association between respondents who possessed a personal computer and the frequency of usage.
In addition, those who had a personal computer were also more likely to access the internet more than once a week (p=0.02) (Table 3).

Uses of the internet
Eighty-six (88.7%) students used the internet for sending e-mails while only 37(38.1%) used this facility for literature search (Figure 2). While age and gender had no statistically significant correlation with pattern of internet usage, students in higher levels of study used internet facility more often especially for literature search. This relationship was statistically significant (P<0.05) (Table 4).

Table 3. Possession of a computer with frequency of access to the Internet

Possession of Computer	Once a month n (%)	Alternate days n (%)	Rarely n (%)	TOTAL n (%)
Yes	19 (52.8)	11(30.6)	6(16.7)	36(35.6)
No	30(46.2)	10(15.4)	25(38.5)	65(64.4)
Total	49(43.5%)	21(20.8%)	31(30.7%)	101(100.0%)

X^2=7.08, P=0.02

Table 4. Level of study and frequency of Internet use Frequency of Internet Use

Level of Study	Once a week n (%)	More than once a week n (%)	Rarely n (%)	TOTAL n (%)
400	9 (30.1)	4 (13.3)1	7 (56.7)	30 (29.7)
500	16 (45.7%)	11(31.4)	8 (22.9)	35(34.7)
600	19 (52.8)	11 930.6)	6 (16.7)	36 (35.6)
Total	**44 (43.6%)**	**26 (25.7%)**	**31 (30.7%)**	**101 (100.0%)**

X^2=1.75 P=0.0193

Attitude to e-mail/internet use
Nearly all the students (95%) have e-mail addresses but only 26 (25.70%) accessed them more than once a week. Most of the respondents 46 (45.6.0%) accessed their mails once a week while 29 (28.7.0%) rarely checked their mails. More than 90% of the students would like to use the internet for distance learning and be able to ask their lecturers questions. When asked which area they would like to improve their skills in, only 24% responded in the affirmative regarding internet-related training (Table 5).

Discussion

The present study focuses on a population of clinical dental students unlike earlier reports on internet usage among dental students in developed[12,-14] and some developing countries including Nigeria [15,16]. Contrary to other studies[12, 14,15] only 38% of our respondents accessed the internet for a dentally related issue (i.e. for literature search) as compared to 57% and 56% of their British[12] and Turkish[15] counterparts respectively. Furthermore, majority of our respondents (88.7%) used the internet for sending e-mail. This finding is similar to both Turkish and Chilean studies where 79% and 92.2% of their students did the same[15, 17]. This indicates the high non-academic use of the internet of our students when compared to their British peers[12]. However, the frequency of utilisation of the internet by our subjects was better than their Turkish counterparts but lower than their European peers[14,15]. In this study, 44% of the respondents used the internet once a week compared to 32% of the Turkish and 60% of European students [14,15].

Table 5. Attitude to e-mail and internet use

Possession of e-mail addresses	**n**	**(%)**
Yes	93	92.1
No	6	7.9
Questioning of Teachers via e-mail		
Yes	95	94.1
No	6	5.9
Increase in training- Internet Related skills	24	23.8
Frequency of access to e-mail		
Once a week	46	45.6
Every alternate day	26	25.7
Rarely	29	28.7

Non-availability and lack of access to internet facilities is probably responsible for our students not using the internet as often as their European counterparts within the dental school or college library. Presently, there is only one computer available with internet connection in each of the 5 departments allocated to students, academic and non-academic staff. This is often not reliable and non-functional. Furthermore, the college library internet points are also few and frequently non- functional due to the epileptic power supply and poor funding by the government for internet connectivity through a service provider. This limited access in the dental school and college library may be the reason why internet cafes are preferred. Although the internet cafés are located near the halls of residence with extended opening hours, the internet is often used more for non-academic purposes as demonstrated in the present report where only 38% used this medium to search for academic information.

Though the internet cafes are relatively reliable in terms of access, the fee for this service is $1 (N 150) per hour which is considered expensive for this environment. In addition, contrary to a British and Chilean study, where 53% and 73.4% respectively of their students had access to the internet at home, only 36% of our respondents had this type of access[12, 17]. Indeed, Walmsley et al[12] had reported that without access to the internet at home, people were less inclined to use it as an information resource as it is not always available to them, an observation in concordance with our finding.

There was no age or gender association with frequency of internet use which was in contrast to some studies in which male students tended to use the internet more than females[14, 15]. Similar to findings in Finland and Turkey, internet usage increased with year level of study [13, 15]. This may be due to the need for background literature for various term papers and dissertations in the final year.

There was a positive attitude towards the potential application of the internet/e-mail as a supplement in dental education as nearly all students (95%) were willing to receive education or training via the internet. A similar enthusiasm was expressed by their British couterparts[17]. We agree with some (24%) of our respondents requesting for more training in internet use and its application in dental education. This training could be introduced early in the dental curriculum. However, there is a need to improve on the infrastructural facilities available in the college for such a laudable programme to be effective and efficient. These should be in the area of uninterrupted power supply, provision of computer facilities with internet connectivity that will be available and accessible to both students and staff for 24 hours.

Conclusion

There is a healthy enthusiastic attitude towards the use of the internet by our respondents though it was used mostly for non-academic purposes. The pre-clinical years would be a good period to introduce, encourage and train dental students on the use of the internet for dentally related activities in order to support lifelong learning. The use of the internet will enhance the acquisition of current information related to dentistry and the exchange of ideas with their global peers. It is our hope that the educational reforms being carried out by government will positively impact on computer usage and internet resources in the college. We therefore recommend a structured training programme on the use and benefits to our dental students as well as the provision of an adequate number of computers with free or subsidised access to the internet possibly through a public-private partnership so that it is sustainable.

There is a need to improve internet usage for academic purposes for our students .The availability of computers and unhindered access to the internet by the Nigerian government would be beneficial to update their knowledge and share experiences with their global peers.

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