

*Full Length Research Paper*

# Determinants of internet use in Imo State, Nigeria

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The research was designed to determine the use of internet in Imo state, Nigeria with a view to enlighten societal stakeholders on their implications to development. Self designed questionnaire was distributed to users from five internet centers in the three local government areas of Imo State. 219 (73%) of the 300 distributed questionnaires were found useable on return. The results show that: there was no glaring difference between the female and male users though female users were found among the adults; young adults constituted the highest users; majority of users are unmarried with senior secondary school certificate as highest qualification.; users prefer regular visit and longer browsing hours; reasons for internet use follow the conventional trend including E-mail, academic/research, leisure, employment and e-commerce. It is recommended that: Government should encourage parents to provide internet facilities in their homes to checkmate anti-social behaviour; the society should avert any social barrier discouraging young female adults from maximizing use; Internet centers should regulate web sites accessed by users and government should develop information policy to address social aspect of internet use.

**Key words:** Internet use, Nigeria, sex, educational level, marital status, Impediments, determinants.

## INTRODUCTION

The information superhighway pinnacle as Internet has become the everyday word for different ages, sex, career, academic status etc. resulting in the world becoming a global village. Though, the technology and its use emanated from the United States, not the least global community can deny its services.

Its use is also narrowing down from public places to the comfort of peoples' homes especially as regards developing countries which use is still relatively new. However, recent study shows that 80% of internet users in Ibadan, Nigeria use cybercafé for their internet activities (Olasina, 2006). Furthermore observation shows that the use of cybercafé is still prevalent in many states in Nigeria despite the use of some wireless internet services like rainbow net etc. by a very insignificant population of the country.

In as much as different members of this information fascinating society use the internet, literature has shown that the characteristics of the users vary.

It is noted that age influences the use of internet (Pollock and Hockley, 1997). Thus, online resources were

indicated to be more accessible to older adults than younger ones (Mead et al., 2000). Contrary to this, survey has shown that internet users constitute mostly of young people with 93% in the 15 - 17 years age group and 85% being between 18 and 24 years old as against 19% of 2005/06 who were aged 65 and over (The Australian Bureau of Statistics, 2001-2005/2006). In another study of internet use in Owerri, Nigeria the highest percentage of internet users were (56.25%) aged 20 - 29 years, 15% fall between 30 - 39 years of age while 12.5% were in the age group of 10 - 19 years ( Amaeshi et al., 2006).

Again research shows variations in the percentage of male and female who use the internet. It was revealed that internet users are predominately male who are fairly young, university students, technical; professional or researchers (Larson, 1996). Furthermore, it was reported that the gap between male and female who use the internet is narrowing (Weiser, 2000). Confirming that, Australian Bureau of Statistics Multi-purpose Household survey (2004 - 2005) shows that men are slightly more likely to use the Internet than women in the percentage of 67 and 65% respectively. Globally, recent statistics shows that outside United States and Canada which 51% of their total users are female for the years 2001 and 2000, other countries' female internet users fall below 50%.

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South Africa which is the only African Country which statistics was presented has 40% of its internet users as female (Telecommunication Union, 2007).

There has also been survey to show the educational status of internet users. Miller (1996) noted that most the present day internet users possess high educational qualification which motivates them to explore the new technology before wider use. Following this views, the 1998 American National Election studies shows that more people with college degree (70%) had access to the internet than 20% of those with high school diploma or less education. Furthermore, Australian Bureau of statistics household survey (2005 and 2006) shows that 91% of internet users possess Bachelors degree and above while 83% have advanced diploma or diploma and 65% held ordinary certificate. Contrary to that, a survey in Imo state Nigeria shows that very low percentage of internet users (2.5 and 12.5%) hold Bachelors and HND degrees as well as 2.5% who possess Masters Degree. Majority of the users (56.25%) were undergraduates (Amaeshi et al., 2006).

There have also been studies on the number of visit to the internet and the length of time spent surfing. In some cases people's priority determines their use of time. In effect, younger Internet users have more time at their disposal than those in their 30s and 40s who could not use much of the time for social activities online. Those aged 50 and older have more free time than the middle age and therefore can also use it for online social activities (Miller, 1996). Studying the rate of internet use by students in Nigerian Universities, it was found that more people 38.24 and 22.06% use it on weekly and daily basis respectively than 11.76% who used it on monthly and bi-monthly basis (Jagboro, 2003). However, the rate of use of Internet has increased rapidly since mid 1990s (Savolainen and Kari, 2004). In their study, the finding was that the amount of use varied from two to three hours per week to five hours a day. Again contrary to findings of Jagboro (2003) and Amaeshi et al. (2006) found that most people (41.25%) use the internet when the need arises, 25% use it once a week, 12.5% use it once a month while a very low percentage (6.25%) use it daily.

People's reasons for using the internet vary though many people use the internet variously especially for e-mail and World Wide Web (Savolainen and Kari, 2004). Three goals for searching the internet were identified as situational, specific and formal goals. Situational goals are the most common and include educational, recreational, job-related and personalized purposes (Slone, 2003). Elaborating more on situational goals, Miller (1996) identified three reasons for using the internet as business, personal and academic purposes. The reasons were also presented to be for entertainment, socials, e-commerce (e-marketing, e-shopping etc.) and games (Olasina, 2006).

Despite the general use, different occupational groups use the internet for different reasons. Palesh et al. (2004)

discovered that 60% of college students use internet for school related activities. Other uses of internet by the students are e-mail (55%) entertainment (50%) and chatting (24%). Along the same line, in Nigeria students use of Internet was revealed to include for knowledge improvement, search for materials need for assignment and for research (Anunobi, 2006). Faculties in academic institutions use the internet for research, teaching, class work and knowledge improvement (Nwogu and Anunobi, 2007). Earlier, Awake (1997) indicated how different occupational groups put the internet to use, a father communicates with the daughter in far country, a teacher acquires course materials, a house wife entertain herself with scientific research, a farmer acquires agricultural information while a library and information scientist have access to a large quality of graphic information.

Further to that, motive for using internet varies also with age. The young and older people use the internet for communication while the middle aged uses it to seek information. 60% of adult respondents in his study in America used the Internet for business and personal activities (Miller, 1996). Although his finding indicated that young ones use the internet more frequently, it is applied for experimental and entertainment purposes. Middle age users (30 to 49 years) employ the internet for online shopping which young adults are not likely to engage in since they have less money. Confirming young people use of internet for entertainment, Slone (2003) observed that 50% of 13 - 17 years age group use internet to address recreational goals while the remaining 50% use it for educational purposes.

### **Statement of the problems**

There have always been concerns on the users of the internet globally. This is unconnected with its implication to the global development. These concerns were often focused on who, how, why and when of the Internet use. Part of the response to the later is the identification of the determinants of internet use. Though such characteristics have been identified and available for many international communities not much has been done in some local communities in places like Nigeria irrespective of many internet centers available to the communities. As a result of that, internet stakeholders in the community may not appreciate the implication of such service vis-à-vis the economic, social, political and education development of the users. Thus, it is imperative to fill this gap by identifying the characteristics of internet users in Owerri capital city of Imo State, Nigeria.

### **Objectives of the study**

The study aims to identify the characteristics of internet users in Owerri, Nigeria. Specifically the study was carried out to:

1. Find out the age and sex of Internet users in the area.
2. Determine their marital status and educational level.
3. Ascertain the frequency of Internet use by the respondents.
4. Identify their reasons for using the Internet.

### Research questions

#### The following research questions guided the work:

1. Is there any difference in the number of male and female who use the Internet?
2. Which age group uses the Internet most?
3. What is the marital status of Internet users?
4. Is there any difference in Internet use based on educational level of users?
5. What variables affect the rate of Internet use?
6. What are the reasons for using the Internet by the various occupational and age groups?

### Significance of the study

The determinants of internet users when elucidated will aid the state and the local community in influencing the present and future effect of such service on the different members of the society. Stakeholders on the internet will fully appreciate the gains and pains of this technology vis-à-vis the global, economic, socio-political and educational development of the community.

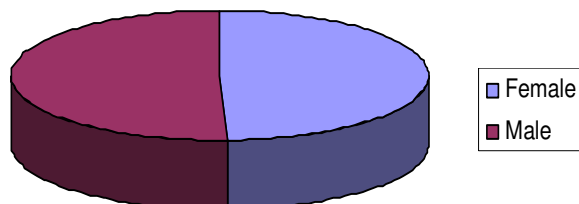
### MATERIALS AND METHODS

This is a descriptive survey which employed questionnaire to collect data from the internet users in Owerri. A self designed questionnaire was distributed to users of five purposively selected internet centers in the three local government areas that makes up Owerri urban centre. Three centers were sampled from Owerri Municipal in view of the number of internet centers (10) located there while one each was sampled from Owerri North and South respectively as none has more than 3 internet centers serving the public. The five centers were sampled because they provide regular (24 hours) internet services with not less than thirty computers or workstations.

Ten questionnaires were distributed to users of each internet centre on daily basis for six consecutive days and no user was allowed to complete the instrument twice. The essence was to capture users who may be visiting on a specific day of the week. Of the three hundred (300) questionnaires distributed, 219 (73%) which are useable were returned. The quantitative data gathered were collated, organized and analyzed with frequency tables, percentages and graphs.

### RESULTS

The results are based on the objectives and presented to unveil the age and sex of internet user in the state capital, their marital status, educational level and frequency of Internet use. Results were presentation on their reasons for using the internet with reference to the different occupational groups.



**Figure 1.** Disposition of male and female internet users in Owerri.

### Age and sex of users

Responses by users of the various internet centers visited reveal their sex as shown in Figure 1. It shows that though there is a difference between the male and female who use the Internet centers in the capital city, it is not very glaring.

Additionally, the age of internet users were grouped based on the UNAIDS (2004) grouping of children as aged between 0 - 14 years and adults from 15 years and above. However, further grouping of the adults were made where the age of 15 - 30 are taken as younger adults, 31 - 40 as middle age group and above 40 as older ones. The result as show in Figure 2 reveals that the younger adults (15 - 30) constitutes 73.97% of internet users, the middle group (31 - 40) was represented by 16.43%. Only 2.73 and 6.84% of children and older adults use the internet respectively. Relating the age to sex of internet users, the figure shows that more male children and male younger adults (32.77 and 88.33%) use internet than their female counterparts (2.70 and 64.86%). Conversely more middle age and older adult female (24.32 and 8.10%) use the Internet than their male counterparts (8.33 and 5.55%) respectively.

### Marital status and educational level

Responses on marital status and educational attainment of internet users as shown in Table 1 reveals that majority of Internet users were single (77.46%) as against 22.53% who were married. Among these majority (single) users, greater number of them had senior secondary certificate (94.73%), 85.71% had National Certificate/ Higher National Diploma while 70.83 and 50% had Bachelors and PhD degrees respectively. All the respondents with Masters Degree were married.

### Frequency and duration of internet use

Internet users' response on the frequency and duration of use is presented in Table 2. From the table, it is evident that majority of them (108) use the internet when they have need for it and above one hour. This is followed by those browsing on daily basis (57) and for one hour duration (81). Weekly (33) and monthly (21) use as well

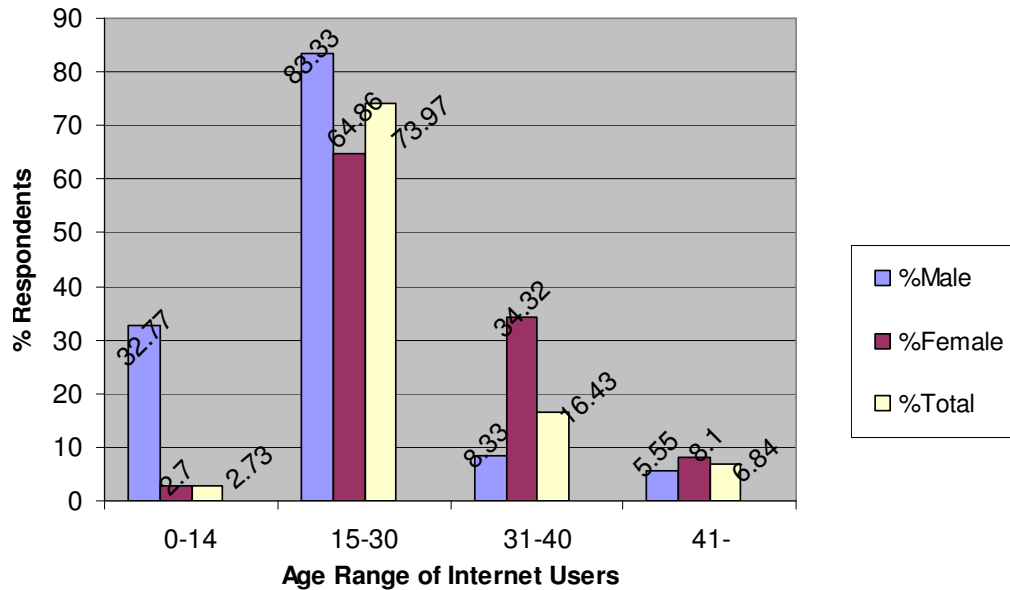


Figure 2. Relationship between the age and sex of internet users.

Table 1. Relationship between marital status and educational attainment of internet users.

Marital status	Educational attainment									
	SSC		NCE/OND/HND		Bachelors		Masters		PhD	
	Frq.	%	Frq.	%	Frq.	%	Frq.	%	Frq.	%
Married	3	5.26	9	14.28	21	29.76	9	100	6	22.5
Unmarried	54	94.73	54	85.71	51	70.83	0	00	6	77.46
Total	57	100	63	100	72	100	9	100	12	100

Table 2. Cross tabulation of frequency and duration of use of internet.

Frequency	10 min n = 3	30 min n = 15	1 h n=81	Above 1 h n = 117	Total number
Daily	0	3	15	39	57
Weekly	0	0	6	27	33
Monthly	0	3	18	0	21
When need arise	3	9	42	41	108
Total	3	15	81	117	219

as 30 min (15) and 10 min (3) duration had low representation.

Furthermore those who use internet weekly and when the need arises prefer one hour browsing. Those who use it daily and weekly prefer above one hour browsing duration. Furthermore result on the frequency and duration of use for the various age groups is presented in Figure 3. The result shows the highest users (15 - 30 age groups) to use it most when the need arises and above

one hour. Down the line they also use more than all the groups on daily, weekly and monthly. The next group that compares with them are the 31 - 40 who use it most when the need arises and above one hour. However weekly use is found more in the 41 - above group than the 31 - 40 age group. Short-term use is championed by the youngest group (0 - 14). All the groups are likely to spend more than one hour using the Internet. For each of the groups, their least interest falls on 10 min.

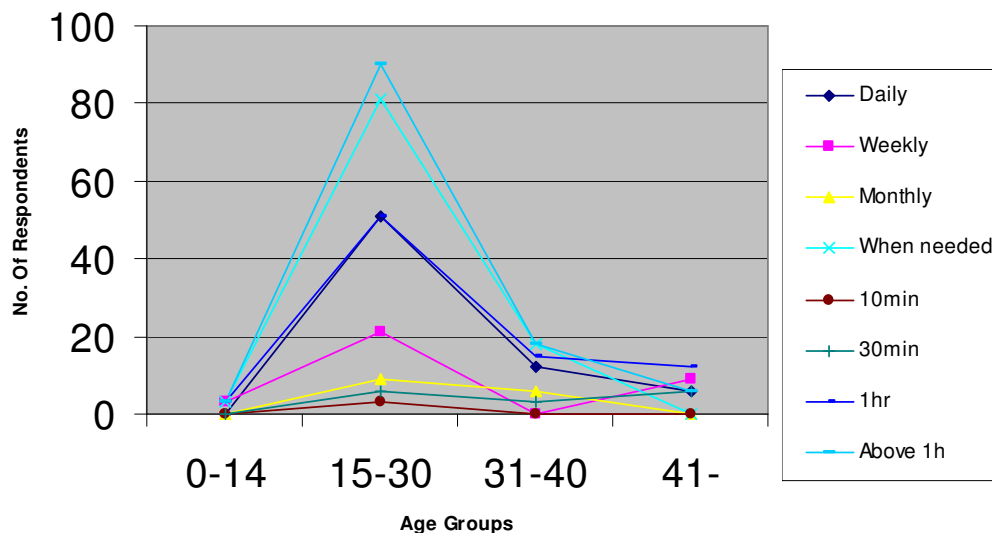


Figure 3. Frequency and duration of internet use for the various age groups.

### Reasons for using internet

The respondents were required to indicate their reasons for using the Internet. 72.60% of them informed using the internet for academic/research purposes, 41.4% used it for e-mail purposes while 13.69% browse for employment opportunity. Very low response of 9.58 and 5.47% were returned for e-commerce and leisure purposes respectively.

A contingency table was designed to determine the relationship among the different occupational groups with respect to reasons for using the internet. This is presented in Table 3. It shows that among the 72.60% who use the Internet for e-mail, 67.74% are students, 12.90% are lecturers while the very low percent are represented by the other occupational groups. Students also dominate other reasons for using Internet but for e-commerce which attracted no response from students. The use of internet for leisure was responded by only students and the self employed. The highest response for e-commerce came from businessmen though none of the students, teachers, lecturers, civil servants or public servants responded to that. Browsing the internet for employment was responded to by students (40%), lecturers (10%), self employed (30%) and the unemployed (20%).

Also the reasons for Internet use were differentiated among the different age groups as shown in Figure 4. All the groups used the internet for correspondence purposes but were used most by the 15 - 30 years group. They group also constitute the highest user for all purposes. The group 0 -14 years use it only for e-mail purposes. The 15 - 30 years groups were not only the highest users but also are most likely to use it mainly for academic and research purposes. The 31- 40 years age groups are likely to be the second highest user for acade-

mic and research purposes. It is likely that the only 15 - 30 years and 41 and above groups use the internet for leisure purposes. In like manner only 15 - 30 years and 31 - 40 years groups used the Internet for e-commerce. Also age groups 0 - 14 years and 41 and above do not use the internet for employment purposes too.

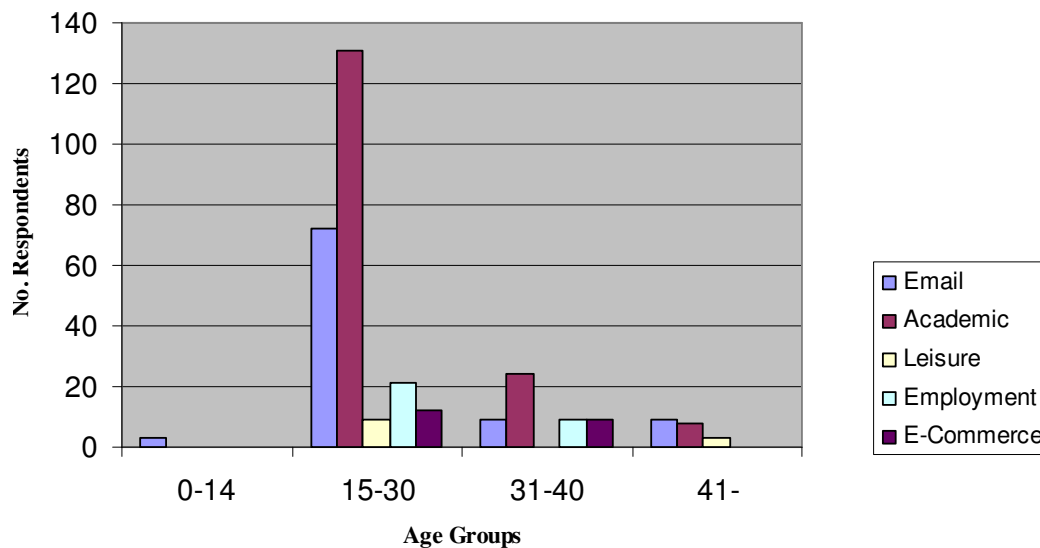
### DISCUSSIONS

The results so presented have revealed varying determinants of internet use. The little difference in the number of male and female internet users (Figure 1) could mean that the alleged avert to such technology by females is being diffused. This runs contrary to the presentation by International Telecommunication Union (2007) with respect to South Africa with only 40% of Internet users being represented by female. Furthermore, the nature of the environment which is predominately literate could have contributed to females living up to the challenges of internet use. This reduction confirms the views of Weiser (2000) that the gap in internet use between male and female is rapidly diminishing.

The domination of internet centre by young adult (15 - 30 years) which is made up of young boys and girls who were still of school age still confirms the findings of Amaeshi et al. (2006) that age bracket between 20 - 29 use the Internet most and findings of Australian Bureau of Statistics (2001 - 2005/2006) that young adults (18 - 33 years) are more at home with internet. Thus, countering the position of Rogers et al. (2000) that older adults have more access to internet than the younger ones. The high concentration of internet users on the young single adult group (Table 1) is a confirmation of Larson (1996) and that of Jagboro (2003) findings that internet use is dominated by those belong to university age bracket. This

**Table 3.** Contingency table showing relationship in the reason for using internet among different occupations.

Occupation	Reason for using internet				
	E-mail	Research/academic matters	Leisure / entertainment	Employment	E-commerce
Students	67.74	62.26	50	40	0
Teachers	0	1.88	0	0	0
Lecturers	12.90	9.43	0	10	0
Civil Servant	0	5.66	0	0	0
Public Servant	6.45	3.77	0	0	0
Businessmen	6.45	7.54	0	0	71.42
House Wife	3.22	1.88	0	0	0
Self Employed	3.22	1.88	50	30	14.28
Unemployed	0	5.66	0	20	14.28
Total	100	100	100	100	100

**Figure 4.** Purpose of internet use among various groups compared.

could be due to the active nature of this group and their technology friendliness. Contrary to the views of Miller (1996) that the present day internet users possess higher educational qualification, majority of the users in Owerri are secondary school students. This could mean that they have not been able to gain admission into institutions of higher learning hence using internet as escape root or they are attending secondary school at advanced age. Also this later group high representation on daily to monthly basis and minutes to hourly basis still confirms the views of Miller (1996) that they have more time which could be used anytime and anywhere.

The use of internet by more male children and young adults than their female counterpart and vice versa for middle age and older adults (Table 2) implies that the gap between male and female in the use of Internet may be closing with maturity in age and probably education.

The indication that highest numbers of internet users

browse the internet for above one hour and visit on weekly basis (Table 3) followed by those who visit on daily basis and browse for an hour implies that the users are more at home with regular visit and staying for longer period in the centers. Thus, confirming the findings of Jagboro (2003) that users prefer weekly and daily use of Internet to monthly and bi-monthly use. Even when the visit is less regular, users are more interested in spending more time up to one hour and above. This is synonymous with the findings of Savolainen and Kari (2004) who maintained that the rate of use of Internet has increased rapidly since mid 1990s from two hours per day to five hours per day. The spread of responses on when the need arises could be as a result spontaneous need to pick information or respond to mails within the shortest possible time. The use of Internet for e-mail, academic and job related matters aligned with views of Slone (2003) that most use of internet is for situational goals of

which the above belong. The highest use of internet for e-commerce by businessmen is expected since electronically business today is more effective, lucrative and profitable than before.

### Summary of findings

Survey on the determinants of Internet use in the capital city of Imo state, Nigeria produced the following results:

- i) The gap between the female and male users of internet is small though more male children and male younger adults use the Internet than the female counterpart.
- ii) Young adult aged 15 - 30 constitute the highest users of the internet. On the other hand more middle aged and older adult female use the Internet than their male counterparts.
- iii) Majority of Internet users are unmarried many of which possess senior secondary school certificate as highest qualification. However all the respondents who have Masters Degree are married.
- iv) Internet users prefer more regular visit and longer browsing hours .Young adults take the lead in Internet use for all periods.
- v) Reasons for internet use follow the conventional trend which include for E-mail, academic/research purposes, leisure, employment and e-commerce. Though students are leading in the use of Internet for all purposes, they have no representation for e-commerce which use is lead by businessmen.

### Recommendations

Determinants of internet use are essential for the socio-political, educational and economic wellbeing of a community. Hence based on the out come of this research it is recommended that:

- a) Government should encourage parents to provide Internet facilities in their homes with a view to monitoring the young adults closely during Internet use. By so doing unacceptable use could be averted.
- b) The society should guide against any social barrier which may have discouraged young female adults from maximizing Internet use.
- c) Internet centers should regulate web sites which could be access by users to avert illicit Internet behaviour related with young adults.
- d. Government should consider as a matter of urgency development of information policy that will address freedom of information with respect to social aspect of Internet use.

### Conclusion

The use of internet in Imo state, Nigeria is variable with reference to who uses it, for how long and why. Hence

the following conclusive evidences have arisen from the research:

1. Internet centers in Imo state is dominated by young male adults majority of which are unmarried and of secondary school age. The bachelors and higher degrees users though few are married.
2. Internet is used as the need arises and for more than one hour in each case though weekly and short term use (10 min) are preferred by older adults and children respectively.
3. Majority of the users even with bachelors and higher degrees use the Internet for correspondence and educational matters while its use for e-commerce is prominent among businessmen.

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