Access and Use of Traditional and Internet Media by Secondary School Children in Mumbai, India

Akhilesh K.S. Yadav
Tata Institute of Social Sciences, India

Poonam M. Kharate
Tata Institute of Social Sciences, India

The purpose of this paper is to investigate the pattern of access and use of different conventional and Internet media by senior secondary students. This survey study on access and use of media by students is the first of its kind in Mumbai. The respondents were from 9th grade to 12th grade students of 4 different schools in the city. Results suggested that most of the students use Internet for searching information related to their subject curriculum. Education-related issues were the highly discussed topic in chat rooms and discussion forums followed by entertainment and health issues. For educational purposes, students preferred to use textbooks, followed by computers and newspapers. Results of the present study indicate that both print and non-print media were very popular among school children, a finding quite different from other developed counties where non-print media are more popular and highly used by school children.

Introduction

Media can be defined as "communication channels through which news, entertainment, education, data, or promotional messages are disseminated. Media includes every broadcasting and narrowcasting medium such as newspapers, magazines, TV, radio, billboards, direct mail, telephone, fax, and Internet. Media is the collective communication outlets or tools that are used to store and deliver information or data. It is either associated with communication media or the specialized communication businesses such as: print media and the press, photography, advertising, cinema, broadcasting like radio and television and publishing (Goede, 2010)". Traditional media are media that have been in existence before the initiation of the Internet, whereas new media is any digital media that can be accessed through the Internet (Nieman, 2003).

New media are also presented as blogs, social networking sites, electronic newspapers, video games accessible through digital devices (Jiang, 2014). This information is easily accessed, shared, fetched, and stored. Use of information technology has shown a very rapid growth during the last decade almost all over the world. Increasing computer ownership and access to the Internet have changed the lives of millions of people all over the world who get online on a daily basis at home, at school, at work and other locations such as Internet cafes (Ruzgar, 2005). Through Internet-enabled devices students increasingly access new media to get information they need easily and quickly (D'Ambra & Wilson, 2004). Because patterns of Internet use and new media access varies from person to person, it is important to understand how students use both traditional and new media, for what purpose, and with what frequency.

Statement of Purpose

The purpose of this study was to understand how students of senior secondary classes access and use the new and traditional media for educational purposes. The target group for survey was students in grades 9-12. Presently, use and access of both traditional media and Internet media has

increased among students, but reasons behind accessing these media may be different, depending upon student needs. In this paper, we explored five research objectives:

1. What is the importance of the different media for students' educational purposes;
2. From where students get Internet access and how often do they accessing Internet services;
3. Which social networking sites are highly used by students;
4. What do students know about online content or electronic resources; and
5. After using or watching media, what topics are students discussing in chat rooms and forums and with whom are they discussing those topics.

Literature Review

Media technology has become a very important part of students' life in digital era (Prensky, 2001). The use and access of electronic as well as traditional media is also changing dramatically (Althaus, & Tewksbury, 2000). Previously, television, newspapers, magazines, radio, and books were the only media through which people were getting information. Presently, people also use numerous tools, (e.g., smart phones, laptops, desktops, tablets) and platforms (e.g., video games, instant messaging, social networking sites) to access a variety of information. A number of researchers (e.g., Selwyn, 2009; Livingstone, & Bovill, 2013; Pea, Nass, Meheula, et. al., 2012; Lenhart, Purcell, Smith, & Zickuhr, 2010) have confirmed that school students continue to use both traditional and electronic media. By using both media, students have the potential to access the useful information they need.

Researchers have shown that even school-aged children now learn important skills outside school curricula through interactive technologies such as computers, Internet and video games (Ayyad, 2011). Moreover, technology-driven learning is purported to be more engaging and motivating than traditional classroom learning (Chu, et. al., 2016). Through customization, interactivity and user control, new technologies are able to teach the thinking skills that school children need in the digital era (Helsper, 2007; Collins, & Halverson, 2009). The endless advantages of electronic resources have tended to have a positive effecton student performance, but there are potential disadvantages (Hanushek, 1997; Ellison, Steinfield, & Lampe, 2007; Jones, 2002).

Roberts and Foehr (2008) conducted a survey on trends in media use among children aged between 8-18 years. The survey questioned focused on electronic media: television, video players, audio media (radio, tape, and compact disc players), video games (both console-based and handheld), computers, and new digital media as cell phones, personal digital media players (PDMPs), personal digital assistants, and handheld Internet devices. The researchers found that "the recent emergence of digital media such as personal computers, video game consoles, and portable music players, as well as the media multitasking fact they facilitate, has increased young people's exposure to media messages while leaving media use time largely unchanged (p. 11)." Ruzgar (2005) found that in terms of online activities, sending/receiving e-mail topped the list, followed by reading news and finding sports information, research for school-related work, chat, research for products and services, and downloading images. Because of their more online activities, students watched less television.

A survey conducted Madden, Lenhart, Duggan, Cortesi and Gasser (2013) on teens of the age 12-17 found that home, teens continuously used Internet based media. Teens were just as likely to have a cell phone as they were to have a computer, thus ensuring constant Internet access. In 2011, 37% of American youth ages 12-17 had a smartphone (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). Wanajak (2011) found that 3.7% of Thai secondary school students were classified as constant Internet media users.

As Internet usage among students has increased, so also has their online social networking. Media and education researchers have explored the educational potential of these interactive

media technologies (Anderson, 2001; Budden, Anthony, Budden, & Jones, 2007). Social networking services can provide young people with opportunities to learn how to function successfully in a community, navigating a public social space and developing social norms and skills as participants in peer groups (Al-tarawneh, 2014). Since students often learn from others, having students share their questions, insights, or experiences with a topic can expand learning for other students. In short, social media has the potential to extend the classroom discussion beyond the classroom. Students can learn more about what is happening in the world around them. They can use this information in a variety of class discussions, research, and writing projects, such as posting photos of items related to their favourite book or historical figure (Aslanbay, Aslanbay & Cobanoglu, 2009).

Schmidt and Vandewater (2008) studied links between various types of electronic media and the cognitive skills of school-aged children and adolescents and found that one central finding of studies to date was that the content delivered by electronic media was far more influential than the media types. The researchers concluded that media producers and parents can take steps to maximize the positive effects of content and minimize the negative effects. They noted that research on children's television viewing can inform guidelines for producers of children's media to enhance learning.

Chan and Fang (2007) compared young people's use of traditional media to Internet use in Hong Kong. Data were collected from 405 persons aged 15 to 24. The researchers found a majority of respondents aged 15 to 24 spent one to three hours per day in the Internet listening to music and having fun. The Internet was also their preferred media choice for information-driven activities. Magazines retained importance for entertainment and shopping activities while the television retained importance for news and current affairs.

Henderson, Snyder and Beale (2013) reviewed the empirical research literature on school contexts and concluded that in the majority of studies, students enjoyed working with social media in their schools even when teachers or researchers considered the outcomes to be unsuccessful. The review also clearly indicated that teachers were central to the effective implementation of social media in school curriculum.

In contrast, Andersson, Hatakka, Gronlund and Wiklund (2014) found that concerns related to how social media use makes students less social, how weaker students are more likely to get distracted, how teachers lack strategies for tackling the problem and how the responsibility of the use is delegated to the students. Westerman, Daniel and Bowman (2016) examined students' attitudes toward both social media and face-to-face communication. Their college age survey respondents reported positive attitudes toward social media but even more positive attitudes toward face-to-face communication. It was found that teachers and mass media were the biggest sources of negatives of social media.

Holloway, Green and Livingstone (2013) investigated children's Internet use, focusing on the benefits and risks. They found that children under nine years old enjoyed a variety of online activities including watching videos, playing games, searching for information, doing homework, and socializing within virtual worlds. The range of activities increased with age. Blair, Millard and Woollard (2015) surveyed 384 secondary school pupils in the UK (aged 11-17) over a 12 week period. Results showed that low level social media uses (e.g., chatting to friends or relatives) were seen as the most important aspects over more complex uses such as arranging events or sharing content.

While many studies have been conducted on how Internet media used and accessed by school students and how it affects students, researchers have not extensively compared students' Internet use to their use and access of traditional media.

Method

We conducted a survey to examine the use and access of Internet and traditional media among senior secondary students (9th to 12th grade) in Mumbai. The permission was sought from the school's principal before conducting the survey study. The researchers conducted a briefing session with the respondents about the objectives of the study and the exact meanings of the questions. All the questions in the questionnaire were close-ended. The questions mainly focused on traditional and Internet media with respect to Internet usage, places of accessing Internet and device use for accessing media, frequency of accessing Internet services, discussion topics in chat room, how and from whom they come to know about these Internet resources. Respondents were requested to complete the survey questionnaires by themselves.

To check the reliability and effectiveness of the instrument featured in the Appendix, the researchers piloted the survey with eight students. Results showed that there were some problems in the questionnaire, e.g., very broad and lengthy question, syntax problems, and unsystematic organisation of questions. The questionnaire was then reviewed and necessary changes made.

Survey Population and sample

Data were collected from students of four grades at four different schools. We received 197 responses out of total 553 distributed questionnaires, for survey response rate of 35.62%. Responses were were organized and analyzed with SPSS. Table 1 depicts an overview of the population and sample.

Table 1. Population and Sample (N=197)

Grade	Male		Female	
	Population	Sample	Population	Sample
9	83	24(28.91%)	67	48(71.64%)
10	71	33(46.48%)	64	25(39.06%)
11	76	18(23.68%)	71	25(35.21%)
12	68	11(16.17%)	53	13(24.53%)
Total	298	86(28.86%)	255	111(43.53%)

As Table 1 showed, of the 197 responses, 111(56.3%) respondents were female and 86 (43.7%) respondents were male. Out of the total male respondents, 24(12.2%), 33(16.8%), 18(9.1%) and 11(5.6%) responses were from male of a class 9th, 10th, 11th, and 12th respectively. Out of the total female respondents, 48(24.4%), 25(12.7%), 25(12.7%) and 13(6.6%) responses were from females. The majority of respondents (n=72) were from 9th grade. Fifty-eight surveys were received from 10th grade students, 43 from 11th grade students, and 24 from 12th grade students.

Results

Media Importance for Education Purposes

Students had different perceptions regarding importance of different types of media for education purpose. Respondents evaluated the importance of media for education purposes on a 5-point Likert scale: extremely important (5), very important (4), quit important (3), somewhat important (2) and unimportant (1). Table 2 illustrates students' ratings of media for educational purposes.

Table 2. Importance of Media for Educational Purposes (N=197)

Medium	Mean (Std. Deviation, Std. Error)
Textbooks	4.61 (.680,.048)
Computer	4.15 (.981,.070)
Mobile	3.23 (1.144,.082)

Newspaper	3.68 (1.239,.088)
Magazine	2.75 (1.275,.091)
Television	2.89 (1.285,.092)
Radio	2.62 (1.250,.089)
Other	2.30 (1.428,.102)

As Table 2 showed, students considered textbooks as the most important media for educational purpose (Mean=4.61), and computers (Mean=4.15) as the second most important media for educational purposes. Newspapers were the third most important media for educational purposes (Mean= 3.68), while is mobile media was ranked fourth (Mean=3.23). Television (Mean=2.89) was still important for students' educational purposes. Magazines (Mean=2.75) and radio (Mean=2.62) had the least value for students' educational purposes.

Internet Access Locations

The next section of survey questions asked the places students accessed the Internet. Table 3 depicts the results.

Table 3. Internet Access Locations (N=197)

Location	Male	Female
Home	50(25.4%)	64(32.5%)
School's Computer Room	43(21.8%)	79(40.1%)
Internet Cafe	56(28.4%)	42(21.3%)
Other Places	29(14.7%)	32(16.2%)

As Table 3 showed, 64(32.5%) female and 50(25.4%) male students accessed Internet from home; 79(40.1%) female and 43(21.8%) male students accessed Internet from school's computer room; 42(21.3%) female and 56(28.4%) male students accessed Internet from Internet cafe. Very few students (n=61) accessed the Internet in other places.

Frequency of Internet Access by Device

We also asked survey respondents to examined the frequency of Internet accessing different devices like computer/laptop, tablet, smart phones, and game console. Table 4 shows the results.

Table 4. Frequency of Internet access by device (N=197)

Frequency	Computer	Tablet	Smartphone	Game Console	Other Devices
	N (%)	N (%)	N (%)	N (%)	N (%)
Daily	48 (24.4)	42 (21.3)	80 (40.6)	46 (23.4)	17 (8.6)
2-3 times a week	34 (17.3)	17 (8.6)	23 (11.7)	25 (12.7)	19 (9.6)
Weekly	4 (2.0)	9 (4.6)	10 (5.1)	11 (5.6)	5 (2.5)
Every 2 or 3 Weeks	28 (14.2)	7 (3.6)	15 (7.6)	22 (11.2)	17 (8.6)
Once a Month or Less	18 (9.1)	11 (5.6)	11 (5.6)	14 (7.1)	17 (8.6)
Rarely	27 (13.7)	31 (15.7)	16 (8.1)	23 (11.7)	13 (6.6)
Never	38 (19.3)	80 (40.6)	42 (21.3)	56 (28.4)	109 (55.3)
Total	197 (100)	197 (100)	197(100)	197(100)	197(100)

As shown in Table 4, most students accessed the Internet on a daily basis by computer (48 or 24.4%), by smartphone (80 or 40.6%), by game console (46 or 23.4%), or by other device (17 or 8.6%). The fewest number of students accessed the Internet only on a weekly basis by computer (4 or 2.0%), by smartphone (10 or 5.1%), by game console (11 or 5.6%), or by other device (5 or 2.5%).

Tablet Internet access demonstrated a different pattern with most students (80 or 40.6%) never or rarely (31 or 15.7%) using this device to access the Internet as opposed to the 42 (21.3%) of students who accessed the Internet daily by tablet.

Purpose of Internet Usage

Questions in the next section captured information relating to the purposes of students' Internet use. As Figure 1 shows, results indicated Students used various media for different purposes. These purposes were for education, general awareness, entertainment, and gaming purposes.
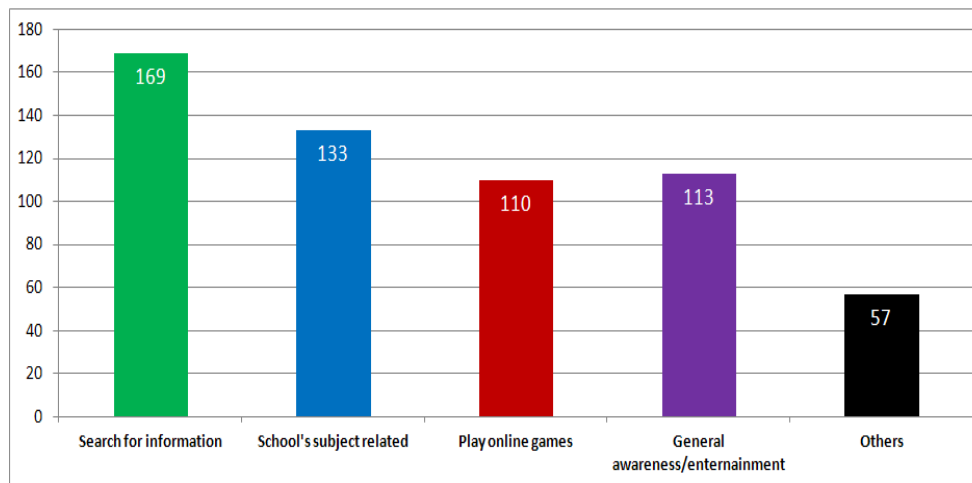

Figure 1. Purpose of Internet Usage (N=197)

As Figure 1 indicated, most of the students 169 (85.8%) used the Internet for general information searching; 133 (67.5%) students used the Internet for school subject related searches; 110 (55.85%) students used the Internet for playing online games, 113(57.4%) students using for other entertainment, and 57 (28.9%) used the Internet for other purposes.

Social Media Used by Students

The next set of questions asked respondents which social network sites they used, as Table 5 indicates.

Table 5. Social Media Used by Students (N=197)

Social Medium	Male	Female	Total
Facebook	59(29.9%)	40(20.3%)	99(50.3%)
Twitter	17(8.6%)	11(5.6%)	28(14.2%)
What's App	57(28.9%)	61(31.0%)	118(59.9%)
Other Social Media	39(19.8%)	31(15.7%)	70(35.5%)

As Table 5 showed, out of total 197 respondents, 99 (50.3%) students used Facebook, out of which 59(29.9%) were male students and 40(20.3%) are female student; only 28(14.2%) students used Twitter, with 17 (8.6%) males and 11 (5.6%) females reporting being Twitter users. Most students preferred to use WhatsApp, an instant messaging application. A total 118 (59.8%) students used WhatsApp, out of which 57(28.9%) were male and 50(25.2%) were female. About 70(35.5%) students said that they used other social networking sites such as Hike, Viber, or Google Hangouts, out of which 39(19.8%) were male and 31(15.7%) were female.

Online Content Sources

The next survey question documented the sources from which students learned about online content. Table 6 depicts the results.

Table 6. Recommend Sources of Online Content (N=197)

Sources	Male	Female
Teacher	27(13.7%)	50(25.4%)
Librarian	34(17.3%)	48(24.4%)
Family	62(31.5%)	73(37.1%)
Friend	75(38.1%)	91(46.2%)
Television	46(23.4%)	66(33.5%)
Radio	34(17.3%)	38(19.3%)
Other	25(12.7%)	18(9.1%)

As Table 6 indicated, students (N=197) found online content from different sources as follows: 27(13.7%) of male students and 50(25.4%) of female students found online content with the help of teachers; 34(17.3%) of male students and 48(24.4%) of female students find online content with the help the librarian. Many respondents (62 or 31.5% of male students and 73 or 37.1% of female students) said that they learned about online information sources from family members. A high percentage of students (75 or 38.15% male and 91 or 46.2% female) also received recommendations friends for sources of online content. Television and radio is very good recommend source of online content. Students heard about websites on TV programs. Forty-six (23.4%) males and 66 (33.5%) females student said that they found online content after watching television.

Students have also given their preferences of online sources after getting recommendations from various traditional sources. Search engines were very popular among students to find online information. Fifty-nine (29.9%) males and 68 (34.5%) females used search engines to locate information. YouTube was second popular source of online content for education related topics; fifty-five (27.9%) males and 66 (33.5%) females said that YouTube helped to find online content. Fifty-two (26.4%) males and 56 (28.4%) females said that they found information by using Wikipedia. Students rarely used Facebook and other media sources to find online resources.

Chat Room and Forum Discussion Topics

The next question pertained to chat room and discussion forum activity and the topics discussed in these venues. Respondents evaluated the importance of discussion topics on a 5-point Likert scale: extremely important (5), very important (4), quit important (3), somewhat important (2) and unimportant (1). Table 7 summarizes the results.

Table 7. Topics Discussed in Chat Rooms and Forums (N=197)

Discussion Topic	Mean (Std. Error, SD)
Education	4.02 (.084, 1.178)
Movies	3.60 (.083, 1.159)
Health	3.53 (.099, 1.391)
Arts and Fashion	3.51 (.094, 1.323)
Game	3.28 (.094, 1.310)
Environment	3.09 (.092, 1.289)
Other	2.47 (.116, 1.624)

Education related topics were frequent chat rooms and discussion forums, with a mean rank of 4.02. Movies were the second most important topics for discussion in chats and forums, with a mean rank of 3.60. Health was ranked an average of 3.53 among chat room discussion topic importance; Arts and Fashion was ranked nearly the same with a mean rank of 3.51. Students least valued discussed Games (3.28 average rank) and Environment (3.09 average rank).

Topics Discussed After Using or Watching Media

It is revealed from the survey that most of the students discuss with their friends, peers, family members and teachers after using and watching media. Respondents ranked the frequency with which they engaged with others to discuss media on a 5-point Likert scale: extremely frequently (5), very frequently (4), quit frequently (3), somewhat frequently (2) and infrequently (1). Table 8 explains total numbers of responses, minimum and maximum rating given by respondents.

Table 8.Discussions After Using or Watching (N=197)

Discussant	Mean Rank (Std. Deviation, Std. Error)
Friends	4.29 (1.103, .079)
Peers (Classmates)	3.92 (1.294,.092)
Family	3.65 (1.262,.090)
Teachers	3.01 (1.475,.106)
Others	2.42 (1.304,.095)
Librarians	2.10 (1.248,.090)

As Table 8 showed, discussions with friends had the highest average rank. Students preferred to discuss with their friends and peers followed by family members and teachers. Other people with having common interests librarians were least frequently sought for discussion.

Discussion

The main purpose of this research study was to explore access and use of various media by school children. The researchers collected information from grade 9-12 students, most of whom were female. Results allowed researchers to see differences by age and gender.

Students used various sources for educational purposes like textbooks, computers, newspapers, and magazines Survey result suggested that most students considered textbooks to be extremely important information sources, as compared to sources newspapers, magazines, television, and radio. This finding suggests that in contrast to studies that conclude that young people only use electronic media, traditional media is still valued.

While all respondents preferred accessing the Internet from home, more females than males reported going online in the school's computer room, whereas males appeared to prefer accessing the Internet from an Internet café. Respondents most commonly used smartphones for their Internet access. Our results suggested that most students used the Internet for information searching, playing online games and entertainment.

Survey findings indicated that most of the students used the Internet for searching for information related to their course and entertainment. Students used various social networking and social media tools for school information, news, and current affairs. Almost all students got information about online content from friends. Frequently discussed topic among students in chat rooms or in discussion forums is education and it is very rarely discussed on any other issues rather than education, movies, health, art and fashion, games and environments. Students also discussed those topics with different people. It is found that only few students discuss with their friends after using and watching social media. It is clear from this research study that use of Internet is becoming very popular among school children. They seem to enjoy playing with digital tools e.g. mobile, laptop and desktop etc. They seem to enjoy reading and writing by using different tools and media.

The majority of respondents also reported using social networking sites. Students preferred to use instant messaging through WhatsApp, but also used Facebook and Twitter to a lesser extent.

Conclusion

The Internet has changed greatly the way people interact and communicate with their friends and colleagues. It has also provided a great scope for school children to access and use of

electronic resources for their educational purpose. There are numbers of traditional and Internet media available and for many purposes it has been used not only by students but the individuals of all age groups. These media useful in education, skill development, social development, interaction among student relating different educational topics, getting information relating to different topics. It also helps students in their education because both these media have different information resources.

The results of this study suggest that school librarians have an opportunity to start user education programs as well as to provide workshops, seminars, and meetings for students to train them in using social media tools to maximize utilization of new media resources and services.

References

Althaus, S. L., & Tewksbury, D. (2000). Patterns of Internet and traditional news media use in a networked community. *Political Communication, 17*(1), 21-45.

Al-tarawneh, H. A. (2014). The influence of social networks on students' performance. *Journal of Emerging Trends in Computing and Information Sciences, 5*(3), 200–205.

Anderson, K. J. (2001). Internet use among college students: An exploratory study. *Journal of American College Health, 50*(1), 21-26.

Andersson, A., Hatakka, M., Gronlund, A., & Wiklund, M. (2014). Reclaiming the students–coping with social media in 1:1 schools. *Learning, Media and Technology, 39*(1), 37-52.

Aslanbay, Y., Aslanbay, M., & Cobanoglu, E. (2009). Internet addiction among Turkish young consumers. *Young Consumers*, *10*(1), 60-70.

Ayub, A. F. M., Hamid, W. H. W., & Nawawi, M. H. (2014). Use of Internet for academic purposes among students in Malaysian institutions of higher education. *The Turkish Online Journal of Educational Technology, 13*(1), 232-241.

Ayyad, K. (2011). Internet usage vs traditional media usage among university students in the United Arab Emirates. *Journal of Arab & Muslim Media Research*, *4*(1), 41–61.

Blair, R., Millard, D., & Woollard, J. (2014). Perceptions of school children of using social media for learning. Paper presented at the E-Learn 2014 - World Conference on E-Learning, New Orleans, LA, USA. Retrieved from http://eprints.soton.ac.uk/369632/

Budden, C. B., Anthony, J. F., Budden, M. C., & Jones, M. A. (2007). Managing the evolution of a revolution: Marketing implications of Internet media usage among college students. *College Teaching Methods & Styles Journal*, *3*(3), 5–10.

Chan, K., & Fang, W. (2007). Use of the Internet and traditional media among young people. *Young Consumers*, *8*(4), 244-256.

Chu, S.K.W., Lau, W.W.F., Chu, D.S.C., Lee, C.W.Y., & Chan, L.L.H. (2016). Media awareness among Hong Kong primary students. *Journal of Librarianship and Information Science, 48*(1), 90-104.

Collins, A., & Halverson, R. (2009). *Rethinking education in the age of technology: The digital revolution and schooling in America.* New York, NY, USA: Teachers College Press.

D'Ambra, J., & Wilson, C. S. (2004). Explaining perceived performance of the World Wide Web: uncertainty and the task-technology fit model. *Internet Research, 14*(4), 294-310.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143-1168.

Holloway, D., Green, L., & Livingstone, S. (2013). Zero to eight: Young children and their Internet use. LSE, London, England: EU Kids Online. Retrieved from http://eprints.lse.ac.uk/52630/1/Zero_to_eight.pdf

Goede, M. (2010). Media, democracy and governance. In R. Veld (Ed.). *Knowledge democracy: Consequences for science, politics, and media* (pp.113-124). Berlin, Germany: Springer,

Hanushek, E. A. (1997). Assessing the effects of school resources on student performance: An update. *Educational Evaluation and Policy Analysis, 19*(2), 141-164.

Helsper, E. J. (2007). Internet use by teenagers: Social inclusion, self-confidence and group identity (Doctoral dissertation, London School of Economics and Political Science). Retrieved from http://core.ac.uk/download/pdf/4187491.pdf

Henderson, M., Snyder, I., & Beale, D. (2013). Social media for collaborative learning: A review of school literature.

Australian Educational Computing, 28(2). Retrieved from
http://journal.acce.edu.au/index.php/AEC/article/view/18/PDF

Jiang, Q. (2014). Internet addiction among young people in China: Internet connectedness, online gaming, and academic performance decrement. *Internet Research, 24*(1), 2-20.

Jones, S. (2002). *Internet goes to college: How students are living in the future with today's technology*. Washington, D.C.: Pew Internet and American Life Project. Retrieved from
http://files.eric.ed.gov/fulltext/ED472669.pdf

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social media & mobile Internet use among teens and young adults. Washington, D.C.: Pew Internet & American Life Project. Retrieved from
http://files.eric.ed.gov/fulltext/ED525056.pdf

Livingstone, S., & Bovill, M. (Eds.). (2013). *Children and their changing media environment: A European comparative study.* New York, NY: Routledge.

Madden, M., Lenhart, A., Duggan, M., Cortesi, S., & Gasser, U. (2013). Teens and technology 2013. Washington, DC: Pew Internet & American Life Project. Retrieved from
http://www.pewinternet.org/~/media//Files/Reports/2013/PIP_TeensandTechnology2013.pdf

Nieman, P. (2003). Impact of media use on children and youth. *Paediatrics & Child Health, 8*(5), 301-306.

Pea, R., Nass, C., Meheula, L., Rance, M., Kumar, A., Bamford, H., ... & Zhou, M. (2012). Media use, face-to-face communication, media multitasking, and social well-being among 8-to 12-year-old girls. *Developmental Psychology, 48*(2), 327-336.

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon, 9*(5), 1-6.

Roberts, D. F., & Foehr, U. G. (2008). Trends in media use. *The Future of Children, 18*(1), 11-37.

Ruzgar, N. S. (2005). A research on the purpose of Internet usage and learning via Internet. *The Turkish Online Journal of Educational Technology, 4*(4), 27-32.

Schmidt, M. E., & Vandewater, E. A. (2008). Media and attention, cognition, and school achievement. *The Future of Children, 18*(1), 63-85.

Selwyn, N. (2009). The digital native-myth and reality. *Aslib Proceedings, 61*(4), 364-379.

Wanajak, K. (2011). Internet use and its impact on secondary school students in Chiang Mai, Thailand (Doctoral dissertation, Edith Cowan University). Available at:
http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.459.8427&rep=rep1&type=pdf

Westerman, D., Daniel, E. S., & Bowman, N. D. (2016). Learned risks and experienced rewards: Exploring the potential sources of students' attitudes toward social media and face-to-face communication. *The Internet and Higher Education, 31*, 52-57.

Author Notes

Akhilesh K.S. Yadav is an Assistant Professor in Tata Institute of Social Sciences at Mumbai. He teaches school library system, information retrieval, and text mining to postgraduate students.

Poonam M. Kharate is a graduate of the Centre for Library and Information Management Studies, Tata Institute of Social Sciences, Mumbai, India Her interest areas are in knowledge management, digital communication and information retrieval.

Appendix. Survey Questionnaire

Name of School: ....

Name :...(Optional)

Gender: Male   Female

Age:................Years

Standard:..

Please indicate how important the following are for your educational purpose:

Medium	Extremely important 5	Very important 4	Quite important 3	Somewhat important 2	Not important 1
Textbooks					
Newspaper					
Magazine					
Mobile					
Computer					
Television					
Radio					
Other					

Place of Internet Access (Mark multiple if applicable)

Home	School's Computer Room	Internet Cafe	Other Places

Frequency of accessing internet services

Devices	Daily	2-3 times a week	Weekly	Every 2 or 3 weeks	Once a month or less	Rarely	Never
Computer							
Tablet							
Smartphone							
Games console							
Other devices							

Purposes of Internet usage

a) Search for information
b) School's subject related
c) Play online games
d) General awareness/entertainment
e) Others

Which Social Networking sites do you use?

Social Network	Yes
Facebook	
Twitter	

WhatsApp	
Other Social Media	

Who do you recommend for online content?

Recommend Sources	Yes
Teachers	
Library	
Family	
Friends	
Other	

What are the sources you used for online content?

Sources of online content	Yes
YouTube	
Search engines	
Wikipedia	
Social media (Facebook, twitter etc.)	
Other	

What topics are discussed in Chat Rooms/Forums?

Discussion Topic	Always	Most of the time	Sometimes	Rarely	Never
Education					
Game					
Health					
Arts and Fashion					
Environment					
Movies					
Other					

To whom you discussed most after using or watching these media?

Discussant	Always	Most of the times	Sometimes	Rarely	Never
Family					
Teachers					
Friends					
Peers (Classmates)					
Librarians					
Others					