

How the millennial learn: The use of internet in the school library. The Case study in Al Kausar Boarding School and Santa Laurensia Junior High Schools in Indonesia

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Abstract

Students in secondary schools can be categorized as Millennial Generation. To be able to facilitate their learning better, we have to understand the character of this generation. This study aims to seek a better understanding of library and internet usage by students. The methodology employed in this study is the case study. Respondents of this survey are Grade 7 of SMP Internat Al Kausar and SMP Santa Laurensia. Data was collected using a close-ended questionnaire and analyzed with descriptive method. The result shows that students use the internet in the library for learning purposes. The student has characteristic of the millennial learner but they use mostly traditional features of the internet to finish traditional assignment such as worksheet. It is recommended that teacher change their teaching style and that school librarian should equip students with digital and information literacy.

Keywords: internet; learning; digital literacy; Millennials.

1. Introduction

Students in secondary schools are born after 2000. They can be categorized as Millennial Generation (Carter, 2009) Generation Z or Post-Millennial. They are the children of Generation Y or might have parents who are Millennial. Internet technology is available for them since the young age. Most of Post Millennial have interacted with the internet since very young and use technology comfortably. They use technology to interact with others through social media, to communicate with other through texting, instant message and email, to buy and sell through e-commerce channel and to search information with search engines.

To be able to facilitate their learning better, school librarians have to understand the character of this generation. This generation understands that technology has opened wider opportunities for them to learn about anything they like. They might still go to conventional school, although some of them choose home-schooling or other alternative education, but they learn many things independently. Information available on the internet, and the network they have help them to accomplish this.

One of the learning resources available for this generation is library. Indonesian education regulation mandates that every school should have a school library. In reality, not all school have a library and not all those

libraries in the school met the minimum standard of a good school library. The condition of school libraries in Indonesia can be grouped into 3 categories. The first category is school library with poor facilities, the second is school library with basic standard facilities and the third is school library with good and modern facilities equal to school libraries of the international school. Good school libraries usually belong to good and modern schools. These school might use international curriculum or "national plus" curriculum. The students come from a family with better social and economic status than most of the Indonesian society. They have more opportunity to learn more and better.

The current national curriculum requires the integration of technology in all subjects. Many teachers translate this into the use of internet in learning activities. Most of them assume that students are familiar with internet even more than themselves. They often let students search for information on internet without equipping them with proper information skills. Yet, sometimes they complain that students using too much time on internet only to produce a low-quality learning materials.

This research focuses on the use of internet in the library by 7th Grader in two secondary school libraries that represent the third categories of a school library in Indonesia. Both schools are equipped with adequate numbers of computers connected to the internet and provide internet service in the library. Learning resources in both schools are in printed formats and beginning to provide resources in digital formats. Qualified learning resources in Bahasa Indonesia available on the internet is still limited. For 7th Grader, this can be a challenge.

This study aims to seek a better understanding of library and internet usage by students of Post-millennial generation in order to facilitate their learning activities. This research will try to answer these following research questions:

- How students use the internet in the library?
- For what purposes do students use the internet in the library?
- How students use internet for learning?

2. Literature Review

2.1. Internet in library

Advancement in technology has required the integration of technology in teaching and learning activities. Along with the integration of technology in school, library as learning resources center become the vanguard in the use of technology. The Internet is used as both communication tools and information sources which librarian is best trained to use (Jurkowski, 2010).

Electronic mail or e-mail is the oldest feature of the internet for communicating with almost everyone around the world. In schools, the librarian is among the first in using it to communicate with other librarians. Teachers and students also use it to communicate with each other or experts. Later, the communication also came in form of a mailing list and instant messaging or chat facilities.

Internet as information sources is the most important feature for a library. A research in Greece reveals that internet is an essential tool for a librarian. They use internet for providing quick and quality reference services to users (Semertzaki, 2008). The Internet provides information for free and in paid services. Free information can be accessed in million websites without any organization and almost no regulation on its content. To access more authoritative and qualified contents, there are information databases to subscribe. Databases are familiar among academic and special libraries but not school libraries.

In Indonesia, technology integration in school libraries has become one of the indicators of school library performance. It can be assessed at least in two aspects. One, through the hardware availability, i.e. the number of computers connected to the internet for students 'use and digital collection such as an e-book. Two, through information service using digital or electronic devices, both online and offline. The use of subscription databases is not familiar in school libraries. It is because of its high price and the because of the language barrier for most of its content in English. In the early 2000s, some locally-made learning contents in CD formats were produced, but now they're beginning to disappear in the market along with the vast growth of free content on the internet. Since 2010, The National Library of Republic Indonesia (PNRI) subscribe to several databases and make them available freely for its member. PNRI also launched Indonesia One Search (IOS), a portal that enables us to search information

from all libraries in Indonesian who join the network. It provides metadata of collection of the library member as well as full-text or abstract of academic digital resources.

Library collection and service aim to fulfill the need of its users. The availability of internet in a school library is inevitable. Pew Internet Survey shows that 77% of the respondents said that free access to the computer and the internet is "very important" service of a library (Zickuhr, Rainie, & Purcell, 2013). Internet service is also needed to facilitate 21st-century learning. Among the characteristics of 21st learning are active learning and collaboration among learners in their own classes and with others around the world (Wisniewski, 2010). This is where internet plays its role.

2.2. Internet use behavior

As the internet is primarily about information, to understand its uses it will be best to understand in term of information behavior. Bates defined information behavior as:

"The many ways in which human beings interact with information, in particular, the way in which people seek and utilize information..." (Bawden & Robinson, 2012: 188).

However, information behavior covers not only the active seeking of information but also a much wider range of activities (Davis & Shaw, 2011) or as Wilson defined it:

"The totality of human behavior in relation to sources and channel of information including both active and passive information seeking and information use. Thus, it includes face-to-face communication with others, as well as the passive receptions of information as in, for example, watching TV advertisements, without any intention to act on the information given". (Bawden & Robinson, 2012: 188).

To study youth information behavior, Agosto (2011) suggested to involves identification of their information needs, which includes:

- peer, family, and other relationships
- Popular culture
- Emotional needs
- Physical health and safety including sexuality
- Consumer needs
- Academics and college
- Leisure activities and interests
- Careers

To satisfy their information need, youth will seek within their information literacy comfort zone (Farmer, 2016) such as from family and friends. When searching for more quality information, they often experience difficulties in comprehending the information they find, to evaluate the sources and to understand the ethics of information use.

Based on their research Buente and Robin (2008) classified the use of internet into four dimensions. These dimensions are information, communication, leisure and financial transactions. Activities that represent those dimension are described in Table 1 below:

Table 1. Dimension of Internet Use

The dimension of internet use	Activities
Information	Get news online
Communication	Send and receive emails, Instant Messaging and chatting
Leisure	Go online just for fun, watching films, listening to music
Financial transactions	Buy or sell a product online

Internet in school library serves as information seeking facilities in connection with learning activities in school. Studies done in some schools in Indonesia shows that students use the internet mostly for doing school assignment, log into social media account, looking for information related to their interest and communicating through emails

and instant messengers (Driani, 2009; Qomariyah, 2009 and Ilmi, 2014). A survey in India also shows that students in secondary schools use the internet mostly for information searching and school's subject related searches.

In seeking information from the internet, children or young adult might found a barrier to the right information. Nolan (2003) studied the internet and library usage among secondary school students in Ireland and found that without proper guidance school children have difficulty using the internet effectively as an information retrieval tool. It might lead to plagiarism and believe that internet is superior to print media.

2.3. *How millennial learn*

The use of technology since the young age by the millennial generations affects the development of their intellectual competences and cognitive skills. Pedro (2006) lists characteristics of millennial learning behavior as follows:

- a) Accessing information mainly on non-printed, digital sources.
- b) Giving priority to images, movement, and music over text.
- c) Feeling at ease with multi-tasking processes.
- d) Gaining knowledge by processing discontinued, non-linear information.

Learning takes place in several processes. Student has to become aware of the content and be stimulated to pay attention, comprehend, make meaning, relate and integrate into the existing knowledge and use or communicate it (Farmer, 2016). These processes might vary among different students because of their personality, biology or learning habit (Farmer, 2016; Thompson, 2012).

When asking how they learn, millennial learners say that they learn best through active participation and group work. They love to learn by doing and interacting. Seeing visual examples helped them to learn. They will remember what they have learned if the knowledge is applied in a real-world setting. The least effective way to learn is when teacher reading off a PowerPoint presentation or out of a book. It doesn't stimulate learning as is the case of long lecture and memorization (Wisniewski, 2010).

3. Methodology

This study employs the case study method to describe the usage of internet by Secondary School students in the school library. The population of the study is the students of Grade 7 of SMP or secondary school in Al Kausar Boarding School and Santa Laurensia School. Both schools have good internet facility in their school library. They are religious-based schools, one is Islamic school and the other is Catholic. Al Kausar is boarding school where students rely heavily on school library to access internet whereas Santa Laurensia is a regular school where students can access the internet at home.

The instrument to collect data from the students is a closed-ended questionnaire. The questionnaire consists of 22 questions divided into three sections with a caption on the top of each section:

1. Respondents data
2. Use of internet in the school library
3. Use of internet for learning activities

Some questions provide answer options on a scale of frequency ranging from 1(never) to 4 (always). 217 valid responses were received out of 235 questionnaires distributed. Data is organized and analyzed using MS Excel.

4. Findings

4.1. *Use of internet*

Students 'use of the internet was explored through several questions. On the frequency of using the internet, 69% of students occasionally use computers and access internet when they visit the library and 28% of students often use it. Only a few use internet on both extreme scale (always and never). The mean or average of the

frequency of internet usage in the library is not high, only 2,29 (on scale 1 to 4). Table 2 shows there's not much difference between girls and boys in the frequency of using the internet.

Table 2. The frequency of internet access

	Always	Often	Occasionally	Never	Total
Boys	4	35	83	3	125
Girls	1	25	66	0	92
	5 (2%)	60 (28%)	149 (69%)	3 (1%)	217
	Mean = 2,29 ; SD = 0,526				

In question 5, students were asked about the location of internet access. Besides school library, 96% (208) of student access internet from their home. They also access internet in other places such as in school (other than school library) and public places. Respondent access internet using more than one devices. 126 respondent use a cellphone to access the internet, 61 uses their own laptop or PC. This finding explains why the frequency of internet usage in the library is not high.

Question 4 is about the duration of the internet in a week. Almost a half (48%) of students access the internet more than 5 hours in a week, a quarter (25%) access it between 4 to 3 hours, 17% access in 2 to 1 hours, and 9% access internet less than 1 hour, as shown in Table 3 below:

Table 3. Duration of internet access in a week

Hours of access	N	%
More than 5 hours	104	48 %
4 to 3 hours	55	25%
2 to 1 hours	37	17%
Less than 1 hour	20	19%

The purpose of internet access is asked in Question 7. Table 4 shows the frequency of each purpose use of the internet. 54% of students use the internet in library frequently for searching for information related to school works. 43% often use the internet to learn something new. 77% never use internet for a financial transaction and 59% never use the internet to download the game. The most frequent use of internet is for subject-related information seeking (mean = 3,074) and less frequents use is for financial transaction (mean = 1,244).

Table 4. Purpose of internet use

Purpose	Frequency				Mean	SD
	Always	Often	Occasionally	Never		
Financial transaction	0	6	44	167	1,244	0,48
Subject-related information seeking	61	117	34	5	3,074	0,721
Entertainment information seeking	29	49	47	92	2,074	1,086
Learning how-to	25	94	78	20	2,565	1,086
Communicating with family	32	56	23	106	2,065	1,154
Communicating with friends	36	50	35	96	2,106	1,148
Listen to music	30	48	30	109	1,911	1,132

Playing games	30	32	44	111	1,908	1,099
Social media access	39	34	28	116	1,982	1,187
Download (music, movie, game)	16	28	45	128	1,797	1,028
Reading news	7	27	92	91	1,785	0,786

Respondents were asked to indicate the frequency of use of different internet features such as email, web pages, search engines, chat facilities, and forum. Out of 217 students, 52% occasionally uses email; 49% often go straight to the websites; 32% often use search engines before going the websites. The most internet feature used is web pages (mean = 2,88) and the least is forum (mean = 1,838). Table 5 below describes internet feature usage.

Table 5. Use of internet features

Internet features	Frequency				Mean	SD
	Always	Often	Occasionally	Never		
Email	17	81	112	7	2,498	0,686
Web pages	47	107	54	9	2,88	0,788
Search engines	61	69	58	29	2,751	1,019
Chat facilities	63	75	39	34	2,751	1,062
Forum	9	43	79	86	1,838	0,859

On the question of internet skills, of 120 students (55%) think that they are quite capable in using the internet, 74 (34%) are competent, 19 (9%) are highly competent and no one stated that he/she doesn't know how to use the internet. Students acquired the internet skills mostly (59%) by learning on their own, 39% learn from home (from the family member) and only 28 students learn it from school.

Table 6 shows that the biggest problem in accessing the internet is the slow connection (mean = 2,556). 47% of students often face poor signal when accessing the internet and 44% said that internet connection often slow. Price and facilities never become problems for most students. 57% of students never think that facilities affect their access. For 54% students, internet skill is not a problem and 53% never think that internet is expensive. Table 6 shows the barriers to internet access by students.

Table 6. Barriers to using the internet

Internet access problems	Frequency				Mean	SD
	Always	Often	Occasionally	Never		
Not enough time	8	47	140	22	2,192	0,66
Discouragement from parents/teacher	8	34	111	64	1,935	0,773
Lack of funds	9	17	76	115	1,642	0,799
Slow connection	21	96	86	14	2,556	0,759
Too much information	15	43	96	63	2,037	1,572
Inadequate skills	3	14	83	117	1,567	0,685

On the quality of information found on the internet, of 80 students chose the information based on its convenience (easy access), 76 chose for the accuracy and 65 chose information they consider as complete. A small number of student chose information based on currency, relevancy and visually.

4.2. Use of internet for learning

The next section of the survey is on the usage of internet for learning. Table 7 depicts the result.

Table 7. The frequency of internet use for learning

	Always	Often	Occasionally	Never	Total	Mean
Boys	16	71	38	0	125	2,823
Girls	13	56	23	0	92	2,901
	29 (13%)	127 (59%)	61 (28%)	0	217	
	Mean = 2,856 ; SD = 0,626					

Of 127 students (59%) often use internet for learning and 61 (28%) use it occasionally. Girls have a slightly greater frequency (mean = 2,9) than boys (mean = 2,8)

Question 15 probes what students learn from the internet. 146 of students use the internet to learn subject-related content and 87 students also use it to learn thing related to their personal interest such as a hobby. Students give more than one answer to the question. Table 8 shows illustrate the responses.

Table 8. What students learn

	N
Subject-related content	146
Personal interest (hobby)	87
Popular issues among students	15
Popular issue	17

On the question how students learn from the internet, 138 students stated that they learn through website and blog, 104 students learn by watching YouTube, 40 students learning things from social media and 20 students learn from the various forum they joined. Only 11students learn things from e-book they read or downloaded from the internet. 53% of the respondents join a community of their interest in the internet or social media.

Table 9. Subjects assigned to use the internet

Subject	Always	Often	Occasionally	Never	Mean
Bahasa Indonesia	6	44	157	10	2,214
English	11	70	117	19	2,340
Biology	19	116	80	2	2,693
Religion	2	20	120	75	1,757
Physics	9	59	125	24	2,237
Economics	12	40	102	63	2,005
History	13	45	92	67	2,027

Respondents' responses to question 18 on what subject that assigns the student to use the internet, are shown in Table 9. Biology is the subject that assign students to use internet the most frequent (mean = 2,69) and

the least is religion (mean = 1,757). The most common assignments are in the form of answering questions in a working sheet (by seeking information in the internet) (mean = 2,708), then in form of writing assignment (paper or report) (mean = 2,678), creating a PowerPoint presentation (mean = 2,621), creating a poster (mean = 2, 333) and the least is making a short video (mean = 2,085).

The issue of multitasking learner is probed in question 20. Students were asked what they are doing when using internet for learning. They were free to choose more than one options that apply. Out of 217 students, only 22 (10%) focus on their work. The rest do other things simultaneously. Table 10 describes what students doing while learning with the internet.

Table 10. Activities while learning on the internet

Number of other activities	N	%	Type of activities	N
0 (Focuses)	22	10%	Listen to music	134
1 other activity	93	43%	Access social media	81
2 other activities	62	29%	Browsing other things	82
3 other activities	23	11%	Access email	47
4 other activities	14	7%		

Yet, only 4 students (2%) said that they always need additional time to finish their work, 74 students (34%) said they always finish their work on time and the majority (64%) said that sometimes they can finish on time, sometimes not.

Upon question about their learning style, nearly a half of students (48%) stated that they are visual learners. Of 64 students (29%) stated that they are auditory, 48 (22%) are kinesthetic and 23 students (11%) are not sure of their learning styles. Table 11 below shows the result.

Table 11. Student learning style

Learning style	N	%
Visual	82	48 %
Auditory	64	29%
Kinesthetic	48	22%
Not sure	23	11%

5. Discussion

The main purpose of this study is to find out how students learning when using internet in the library. The frequency of internet use in the library is moderate with duration more than 5 hours in a week. This indicates that students have limited access to the internet. Students in both schools spend 8 hours in school and during school hours they can only access internet in the library or in their laptop under teacher supervision.

Most access to the internet is primarily for educational purposes. This is in line with the previous studies on students in secondary schools in Indonesia. The current curriculum known as Kurikulum 2013 requires students to be more active in learning by finding their own sources in various information resources. The Internet is the easiest and most convenient information resources for them. They go straight to websites or using a search engine to find the needed information and use and chose the easiest information to find.

The frequency of subject that assigned students to use the internet is also moderate. The assignment was in the traditional format such as completing a worksheet that has been prepared by teachers or write a short report. For 7 graders students, this could be the suitable assignment considering their age and intellectual maturity. This kind of

assignment also supports their choice of internet features they used. This also explains why the respondent mostly used website and blog for their learning resources. They can easily cut and paste the content into their assignment.

Although teachers have incorporated technology into their teaching, the assignment that teacher gave to students didn't support the characteristics of the millennial learner. The study reveals that students are multitasking and visual learners. Only a small amount of students focus on their work when using the internet. Most of them do other things such as listening to music, browsing around, logging into their social media account or checking their emails. These findings are in line with other studies. These practices lead to insufficient time for finishing their work on time or meeting the requirement that teacher gave. Teachers must prepare their teaching carefully so the teaching is more effective

6. Conclusion and Recommendation

Based on the study, it can be concluded that 7 Grader students are using internet service in the school library moderately for the learning purpose. Despite their nature as millennial learners who prefer image, movement, and music over text, they still use traditional features of the internet in learning to easily finish their assignment on time. Students are still lack of information and digital literacy.

Recommendation for library and school librarian:

- Teacher librarian should be information and digital literate
- Teach students information and digital literacy.
- Make sure students have adequate comprehension on digital content.
- Library should develop digital collection.

Teachers are recommended to be more aware of the characteristics of millennial learners, as Prensky suggest to do the following:

- Educators should embed digital and technological content in their teaching.
- Educators should learn new content and teach it using new technologies that Digital Natives are familiar with and that make sense to the Digital Natives.
- Educators should think deeply and research into how to use computers and electronic, digital tools in teaching in ways that help our learners to instill knowledge that needs to be internalized.
- Use the skills of our Digital Natives to guide our search for Digital Native methodologies that can help us improve our effectiveness in the teaching of all subjects and at all levels. (Kivunja, 2014)

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