THE CORRELATION BETWEEN INTERNET LITERACY AND PASSIVE VOCABULARY SIZE

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ABSTRACT

This research aimed at describing the correlation between students' internet literacy and their passive vocabulary size. The findings of this research were expected to predict how much the two variables correlate. This research was beneficial as inter internet users in Indonesia were growing in numbers (55 billion users in 2011), and most of them were students. Their intensity in using internet would affect on education, later. Thus, it was important to see whether there was a strong positive correlation between students' internet literacy and their passive vocabulary size. Passive vocabulary became the limitation of this research as it could explain how big students' 'vocabulary reservoir,' and thus, it could predict the active vocabulary size. This was a correlational research involving randomly 81 senior students of English Education Department. The instruments used were a set of vocabulary test, and a questionnaire on internet literacy. Using two-tailed significant level, it is found that the result of rho is -0,001 with 0,993 of significant level. Therefore, there is no correlation between students' internet literacy and their passive vocabulary size. It can be concluded that there are other factors which affect students' passive vocabulary.

Keywords: internet literacy, passive vocabulary, vocabulary size

INTRODUCTION

Vocabulary size still becomes an important part in determining the success of learning both first and second language. Several researchers state that there is a strong mutual correlation between vocabulary learning and second language learning (Koizumi & In'nami, 2013). Other researchers, further, mention that vocabulary mastery is crucial because it covers all words that students need to comprehend to access background knowledge, express ideas, communicate, and learn new things (Rupley, Logan, & Nichols in Davoudi & Chavosh, 2016). When a student communicates using ungrammatical sentences, the interlocutor might try to guess the intended meanings. Yet, when he does not have an adequate 'vocabulary reservoir' in his memory, he barely cannot access any idea in his head to be spoken out.

As 2.0 technology emerges in education, students get abundant access to absorb information. Simultaneously, this information might enrich their vocabulary size. Thus, it can be predicted the depth and width of someone knowledge by analyzing their vocabulary size (Dale in Ahmadi, Ismail, & Abdullah, 2012). Thus, the term internet literacy is first introduced by the California Department of Education in 1996 (Wulandari, 2013). She summarizes that internet literacy is captured by someone when she can combine technology literacy and information literacy. Technology literacy means the ability to use a computer, software application, database, and other technologies for educational, working, or privative goals. Meanwhile, information literacy is defined as the ability to identify when certain information is needed, and the ability to search, evaluate, arrange, and use the information effectively.

Vocabulary size is usually connected with reading skill, in which it will determine whether students academically succeed or not. Wanzek, Al Otaiba, and Petscher in Almumen (2015) claim that one of the big reasons a student is dropped out of school is their poor reading skill. This poor reading skill is probably caused by a poor academic vocabulary teaching (Alemi & Lari, 2012). Laufer (1997) and Nation (2001) in Ahmadi, Ismail, and Abdullah (2012) add that in order to have successful teaching, students ought to understand and know the vocabulary of the text.

Generally, there are two types of the word; oral and print. Words that are spoken out called oral words, meanwhile words that are understood or got from reading called print words (Beck, McKeown, & Kucan in Ahmadi, Ismail, & Abdullah, 2012). Luckily, Indonesian students have no significant difficulty, as Japanese and Arabic, as

English oral orthography words have similarities with its written words. Oral words are basically productive, while print words are receptive.

Productive vocabularies are vocabularies that students use to speak and write ideas, meanwhile, receptive vocabularies are vocabularies used to help them understand a passage and understand a conversation. Mokhtar, Rawian, and Fauzee (2013) call these as active and passive vocabulary. Understanding both active and passive vocabulary is important in communication. Mokhtar, Rawian, and Fauzee (2013) state that modern global communication, mainly using the internet, need a good understanding of both vocabulary. Students do not only read and listen to information from the internet, but they also respond to them written and oral. Passive and active vocabulary size is not constant. It means there are moments when someone tries a new word, or stores certain words that are less favorable or revise stored words, and others.

Mokhtar, Rawian, and Fauzee (2013) define passive vocabulary as a vocabulary that is needed to process text or a conversation. Further, they classify the depth and width of vocabulary size that someone has into five levels; 2.000 words, 3.000 words, 5.000 words, university level (above 5.000 words), and 10.000 words. Each level indicates a certain teaching-learning objective. Nation (in Mokhtar, Rawian, & Fauzee, 2013) mentions that level 2.000 – 3.000 contains words that are most frequently used in daily communication. Level 5.000 words are the minimum limit for students to understand daily communication in the classroom. Further, university-level indicates vocabulary size that students must master to help them understand academic texts and talks.

Today, students are called millennial generation, as they are born and raised surrounded by 2.0 technology. Presky in Liu (2010) also agrees with this statement as he calls today's students as digital natives, as they spend almost their lives surrounded by computer, video games, iPod, smartphones, and other digital devices. McCorkindale (2010) adds that social media sites are reaching their popularity, and one of them is Facebook. He cites Facebook website which states that there are 300 thousand active users on September 2009 and this shows 70% inclination compare to six months earlier. Today, there are more than 45 thousand active group users and more than 10 thousand active users join various pages each day. Tess (2013) summarizes from various researches on the Facebook statistic that 94% of university students are Facebook users and spend 10-30 minutes a day and have 150-200 friends. Harvard in Tess (2013) mentions that 90% of undergraduate students have a Facebook account in 2011.

Presky in Walker and White (2013) states that a generation raised and grows surrounded by computer have the ability to use digital devices that earlier generation may reluctant to it. This kind of ability is called internet literacy. However, Walker and White (2013) warn that this concept might mislead to an assumption that all young generation is interested in, motivated to, and keen on digital technology. Brown and Czerniewizc (in Walker & White, 2013) argue that this assumption is over generalized. This statement goes hand in hand with Alemi and Lari (2012) findings in their research. It concludes that both learning vocabulary media used by the students, either SMS or conventionally printed vocabulary, both their reading achievements are increasing.

There are some studies have reported the use of the internet in English teaching, including vocabulary which indicates that millennial students are able to boost their vocabulary size using digital technology. Abidin et al. (2011) conclude that electronic glossary is more effective to help students increase their vocabulary size. Bataineh (2014) also underlines the use of an electronic dictionary is very helpful to help students learn vocabulary. However, the settings of the reported researches mostly regard English as the second language, such as Malaysia and Jordan. However, teaching English in the Indonesian context is regarded as a foreign language. Both Malaysia and Jordan also have higher Human Development Index. Thus, this research is imperative to investigate the correlation between internet literacy and passive vocabulary size in a different perspective, specifically in view of English as a foreign language. In other words, although young students already mingle with the internet; expose to English vocabulary still becomes another challenge for them.

This research lies in the fact that almost all senior students are already equipped and familiar with how to use the search engine on a computer. Lecturers are also a lot of exploration on how to 'live' the internet both in and out of the classroom. Lecturers demand many things that push students to acquaint with the internet, such as download teaching materials on campus repository site, send tasks through email, search teaching techniques, and further do thesis consultation through WhatApps. However, the fact that English is regarded as a foreign language will give more interesting data.

This research aims at investigating whether there is a correlation between internet literacy and passive vocabulary size. The findings of this research will give beneficial information for students, on how they should use the internet, for teachers, on how they should use internet for teaching vocabulary and how far they should go on it. Based on previous researches by Abidin et al. (2011) and Bataineh (2014), the hypothesis for this current research is:

H1 = There is a positive significant correlation between senior students' internet literacy and their passive vocabulary size.

This research takes senior students from a private university as the subject of the research, in which there are only a few of them are in advance level of English proficiency. This research also limits the discussion on passive vocabulary.

METHODS

This is correlational research. It aims at describing the correlation between students' internet literacy and passive vocabulary size. Therefore, the continuous variables in this research are internet literacy and passive vocabulary size. This research focuses on passive vocabulary as it can determine the 'vocabulary reservoir'. By knowing students' passive vocabulary size, the active vocabulary can be predicted.

This research takes randomly 81 out of 136 senior students of English Education Department. Most of them come from East of Indonesia, such as Adonara, Manggarai, Sumba, Ende, Lemabata, and few come from West Kalimantan, and Java.

In order to answer the research question, the researcher develops two instruments. The first instrument aims at measuring students' internet literacy through the questionnaire. They are asked to choose how good they use

internet, under four spectrums: Exactly Know and Mostly Use (SM), Know and Frequently Use (M), Barely Know but Rarely Use (CM), Not Really Know and Not Use (KM), and Not Know and Never Use (TM). The second instrument is the Passive Vocabulary Test (PVT). This is a multiple choice test, covering vocabulary, collocation, and lexicon.

Before distributing the instruments, the researchers do validity and reliability test. An expert on vocabulary and communication are asked to validate the instruments based on four criteria: (a) suitability with the aim of the research, (b) clarity and format, (c) level of difficulty, and (d) appropriateness. Meanwhile, to test its reliability, the researcher uses Cronbach Alpha. This has done by having a pilot testing to 21 students who do not belong as the subject of this research. Then, it is analyzed to answer the question. Some statistic components, such as frequency, mean score, and the percentage will be used to get Mean Percentage Score (MPS). Further, to test the hypothesis, the researchers apply a Pearson Product Moment coefficient to determine the correlation.

RESULTS AND DISCUSSIONS

Before the researcher does correlational testing between students' internet literacy and passive vocabulary size, the researcher does descriptive test for the distributed questionnaire. The questionnaire contains four aspects of testing internet literacy; the ability to use the various search engine, the ability to access various information, the ability to validate information gathered, and the ability to use online news. The respondents of this questionnaire will be categorized into three groups; novice user, intermediate user, and advanced user. It is found that 75,3% respondents are novice users, 24,3% are intermediate users, and the rest 9,8% are advanced users.

Further, the researchers also do a descriptive test for the second instruments by calculating the mean score of students' result in the vocabulary test. It is found that the mean score from 81 students is 44,57 from range 0–100 score. Also, the researcher has five classifications of vocabulary size. It is found that none of the students has an excellent vocabulary size, but most of them (37%) have a fairly good vocabulary size. It can be seen in Table 1.

Table 1 Frequency and Percentage of Vocabulary Size

Category	Range Score	Frequency (F)	Percentage (%)
Excellent	100 - 80	0	0
Good	79 - 60	15	18,52
Fairly Good	59 - 40	37	45,68
Fair	39 - 20	28	34,57
Poor	19 - 0	1	1,23
Total		**81**	**100**

The researchers use internal consistency reliability. Internal consistency reliability is reliability that is got from testing between item test consistency which shows subject consistency in responding to a test in one shot testing. Reliability testing towards vocabulary test becomes utmost necessary as in correlational research; the result of the coefficient correlation is based on the sufficient instrument.

In other words, research which uses an instrument with low reliability and a questionable validity will result in a useless finding for knowledge (Ary et al., 2010).

Thus, the researchers use Cronbach Alpha to measure the reliability of vocabulary test. The coefficient range is divided into:

Alpha < 0,7: inadequate f
Alpha > 0,7: good f
Alpha > 0,8: excellent

It is found that the alpha for the instrument is 0,724. It can be said that the test used by the researcher has good internal consistency reliability. Thus, the researcher is allowed to use the test as it meets the requirement of a good instrument to gather data.

In order to answer the research question, whether students who belong to advanced users of the internet also have high passive vocabulary size, the researcher uses Pearson Product Moment. The researcher sets the significant level at 0,05 of two-tailed measurement. It is found that rho (r) is -0,001 in 0,993 significant level. It can be seen in Table 2.

Table 2 Correlation Test

		Passive Vocabulary	Internet Literacy
Passive Vocabulary	Pearson Correlation	1	-0,001
	Sig. (2-tailed)		0,993
	N	81	81
Internet Literacy	Pearson Correlation	-0,001	1
	Sig. (2-tailed)	0,993	
	N	81	81

By looking at rho (r = - 0,001), it can be concluded that there is no correlation between students' internet literacy and their passive vocabulary size, and vice versa. Although it is not absolute zero, it indicates there might be a slight correlation that it is not moving quite farther from zero. Thus, the null hypothesis of this research, there is no correlation between students' internet literacy and their passive vocabulary size, cannot be tackled, as Ary et al. (2010) explain. Rho which is farther from zero indicates a stronger correlation, and the other way around, rho which is closer to zero indicates a weaker correlation. In other words, it can be concluded that there are other factors affect students' passive vocabulary size.

The emergence of technology affects the growth of a language. The use of digital communication for the past 20 years affects the way people communicate. People start to use social media, such as Facebook, Twitter, Path, or others as a way of communicating. In a research done by BMI (Wulandari, 2013) mentions that Indonesia is one of the countries which consumes internet browsing with high intensity in 2009, including 661 pages each month per person. This high number affects the growth of new vocabularies among internet users (Walker & White, 2013).

For example, the word *googling* as a verb in English emerges as the synonym of a search engine on the computer in the 2000s or the word *vlog* as a coinage for video plus blog. These words spread among digital technology users and most teachers cannot understand as fast as young students can. Teachers, who are grown up one generation earlier before Web 2.0 era comes, get vocabulary through

reading books and attending conventional classes. It differs from today's students who can absorb new vocabulary as easy as clicking the play button. In fact, the term technolect comes to describe a language which is created for a certain technology.

The term digital natives is defined by Prensky (in Walker & White, 2013) as a generation who has a natural ability to interfuse with technology. These digital natives are demanded to comprehend digital competence (Walker & White, 2013). There are four important elements that should be comprehended: procedure competence, socio-digital, digital discourse, and strategic competence.

First, procedure competence is the ability to use technology both hardware and its application. This sounds that this competence deals with simply how to turn on a laptop, press delete button, or search for news on YouTube. However, students are expected to comprehend how, when, and why they choose a certain device, not only doing grammar-translation from a various button on the laptop.

The second competency is socio-digital. This can be defined as the ability to make a decision on what is the appropriate things to do in various social contexts, both the choice of device and language. In order to invite a professor as a speaker in a conference, for instance, students must decide to use email rather than Facebook to show polite intension.

Third, digital discourse competence is defined as the ability to be creative in developing tasks given, for example, videotaping, editing, or publish a video. This competence sounds to be technical, but communicative discourse competence is needed to type texts, giving a correct title for the picture, choose correct connecting words or write subheadings.

The last competence is strategic competence. It is defined as the ability to solve problems using knowledge on technology and language. For example, when students have got problems dealing with academic matters, they can browse the information, validate with other information, ask friends in the Facebook group, send email, and other ways.

The term digital natives sometimes is connected with the term internet literacy. Internet literacy is defined as the ability to use the internet effectively and efficiently for learning purpose. Being effective can be achieved when students want to seek certain information. They know the correct keywords while being efficient means are able to find information fast and cost-efficient.

Internet is one of the good resources to help students enrich their vocabulary size. Internet provides many features for its users, such as download, upload, blogging, tag links, video call, game consoles, or online peer-editing. This wide opportunity should help many learners when they have sufficient internet literacy.

However, it can be generalized that all of today's students can use the internet optimally. There are only 9,8% students in this research are categorized as advanced users, in which later it is found that there is no correlation between students' internet literacy and their passive vocabulary size. Adegoke and Osokoya (2015) also summarize from their research that easy access towards the internet does not affect students' academic achievement. Further, they mention that information gathered from the internet does not directly correlate with their educational needs at school. In other words, they tend to use the internet to do non-educational purposes, such as watch film, play games, surf social media, then search for information on their major.

Adegoke and Osokoya (2015) state students tend

to browse for entertainment seems to also happen in Indonesia. Communication and Information Affairs (in Wulandari, 2013) confirms that most of the internet users use the internet to access social media. In 2011, Indonesia was the second largest rank of Facebook users in the world, and the third rank of Twitter users (Wulandari, 2013). This might cause the result of this research, in which there is no correlation between internet literacy and passive vocabulary size. Students spend more time to chat and check friends' statuses, which are written in Indonesian, rather than read a journal article or listen to BBC online or CNN live streaming or subscribe to online magazines, such as *Reader's Digest* or *The Jakarta Post* to enrich vocabulary. It can be seen in Table 3.

Table 3 Online Newspaper and Magazine

Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
I subscribe to any online newspaper or magazine, such as *The Jakarta Post, Reader's Digest, The New York Times*, etc.	0%	8%	82%	10%

Table 3 indicates that although the internet gives easy access globally, not all students can wisely take benefit of it. Nugroho in Wulandari (2013) warns that the euphoria of the internet has been shaped on social media as a new trend in society. People tend to jump into their social media account, such as Instagram, WhatApps once they are connected to the internet.

The use of social media pushes language acquisition because it provides a pleasing informal environment for students to learn the language. Various facilities provided by the internet, specifically the internet, give a bigger space to all students equally. It provides more opportunities for students to communicate, explore their imagination, as well as learn anytime and everywhere. However, the subject of this research seems cannot explore themselves more than they think. The result shows that students do not use the facilities provided by the internet for their academic purpose.

CONCLUSIONS

The development of technology is so fast that it seems to push everyone to evolve, including how teachers and students use technology. Digital era proposes a solution towards time and space boundary by open access information. Moreover, it proposes easy access for learning, including learning vocabulary. This current research correlates passive vocabulary size of senior EFL students and their ability to use the internet. The finding of this research is limited on discussion of passive vocabulary, and thus another research on other vocabulary coverage will complement this finding. Younger subjects are suggested for further research to precisely represent the 'technology-literate' students. Moreover, other learning environment context, ESL for example, might give different result.

Based on the calculation using Pearson Product Moment, it is found that the result of rho is -0,001. Thus, it can be concluded that there is no correlation between

students' internet literacy and passive vocabulary size. Thus, there might be other factors which affect students' passive vocabulary size.

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