

The Improvement of Students' Information Literacy-based on the Association of College and Research Libraries (ACRL) using Empowering 8

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Abstract

The result of a preliminary study conducted by the researcher showed that the information literacy of students at the Elementary School Teacher (PGSD) Program was low. Therefore, this research was done to understand the effect of Empowering 8 model application in improving students' information literacy. This research used the quasi-experimental method with a pretest-posttest control group design. The research participants were 66 students, consisting of 33 students in the experimental class and 33 students in the control class. This research utilized some instruments, including pretest, posttest, questionnaires and observation sheets. The results obtained were: the students' information literacy ability based on ARCL experimental class was in the high category. It revealed that application of Empowering 8 model had a positive effect on the students' information literacy.

Keywords

Empowering 8; Information Literacy; ACRL



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INTRODUCTION

Nowadays, various educational institutions ranging from primary education to higher education started establishing, are establishing, and have established information literacy programs. Information literacy is defined as the ability to know when there is a need for information. Mastery of information literacy is viewed as very important in the learning process so that it becomes a part

of the educational program. Information literacy is awareness and skills to identify/search, evaluate, organize, create, use and convey information to solve problems (Boeriswati, 2012).

Zurkowski (1974) suggests that information literacy is the ability to use various information tools and primary sources to solve problems. In searching for accurate and good information, someone needs to master information literacy

because the information obtained can determine a decision to solve a problem. So, using information literacy, students will know when and why information is needed, where to find, and how to evaluate, use and even how to communicate it ethically. This is information literacy (Inskip, 2015).

The results of a preliminary study investigating the information literacy of PGSD students using Information Literacy Standards of Association of College and Research Libraries (ACRL) showed a low level in the ability to determine the nature and scope of information needed, to access the required information effectively and efficiently, to evaluate information and sources critically, and to use information to accomplish specific goals. The mastery of information literacy owned by PGSD students was 47.4%, included in the low category (Saputra, Rahman & Agustin, 2018).

The educational condition in Indonesia, which is more or less scattered in nearly 300 thousand schools throughout Indonesia has a total of 3.4 million teachers and 49 million students. It shows real diversity and a severe challenge in increasing Indonesia's human development index which is currently in the 113rd rank of

188 countries. Other challenges can be seen from the global competitiveness index which is ranked 41st of 138 countries, from the corruption perception index which is ranked 88th of 176 countries, from the economic growth which is 5.04% - 5.18%, from the happiness index of Indonesian people which is ranked 79th of 157 countries, as well as from various cases of violence, intolerance, radicalism, terrorism, drugs, pornography, cyberspace crime, sexual deviations, and personality crises that happen in Indonesia. The problems are our responsibility to overcome together.

The digital revolution has provided convenience and comfort for human life, which has changed human life, culture, and society. It is marked by the birth of the creative century phenomenon (21st century), which puts information, knowledge, creativity, innovation, and networking as strategic resources that are not only potentially positive, but also negative. Internet service association of Indonesia in 2016 released data that 65% of 132.7 million internet users were in Java and 69.8% of internet users were students who also had the potential to access harmful content and features. The data obtained show that 40% of internet users

access the internet more than three hours per day. The data also indicate that accessing the internet has become a primary need that is almost as important as eating and drinking.

THEORETICAL PERSPECTIVES

Data on reading interest and illiteracy levels affect the position of Human Development Index (HDI) in Indonesia, as measured by life expectancy (health level), economic growth, and quality of education. Based on 2014 BPS data (Statistics Indonesia), the HDI value slightly increased from 68.40 to 68.90 in 2013. Data released by the United Nations Development Program (UNDP) revealed that Indonesian HDI in 2013 was ranked 108th from 187 countries. It shows that Indonesia is far below other ASEAN countries. Another survey of literacy was conducted by Central Connecticut State University in 2016 in New Britain, Conn, United States, which showed that Indonesia was in a dangerous position, ranked in 60th of 61 countries. (GLN, 2017)

The survey results indicate that the reading and literacy interest of Indonesians is an issue that must urgently be solved. Our nation's literacy and reading interest should be equal and even higher than

other developed nations so that Indonesians can play a more significant role in the global era. Nowadays, literacy is not only understood as the ability to read and write, but also as the ability to use the reading results as life skills. Therefore, reading and writing literacy becomes one of the needs that must be met and cannot be separated from daily life. This concept is in line with the concept of literacy according to Mustafa (2014: 7) which explains literacy as reading, writing, and critical thinking. Literacy will trigger critical awareness to learn something new or assimilate it with prior knowledge. Literacy functions as an influence to add critical culture to give birth to an intelligent and competitive society.

Information literacy is awareness and skills to identify, to search, to evaluate, to organize, to create, to use, and to convey information to solve problems (Boeriswati, 2012). The activities of searching for information include identifying, finding, evaluating, organizing, creating, using and conveying information carried out systematically to get the right solution in problem-solving. By Johnston & Webber (2003), information literacy is the adoption of information behavior that is obtained accurately through any channel or media,

and the information that matches the information needs with critical awareness of the importance of using information wisely and ethically in the society.

Dictionary for Library and Information Science by Reitz (2015) defined information literacy as a skill of finding the needed information, as an understanding of how information is organized, about the familiarity with the provided resources (including information formats and automatic search tools), and the knowledge of the commonly used techniques. This concept also includes the skills needed to critically evaluate information content and to use it effectively, also as an understanding of the technological infrastructure on which information transmission is based, involving its social, political, and cultural contexts and impacts. Information literacy was initially described from a skill-based perspective (Zurkowski, 1974), the research and practice over the past 40 years have produced a description that has taken up awareness, socio-cultural, cognitive, and behavioral perspective that adopts experience variations (Bruce, 1997; Gross & Latham, 2012; Lloyd, 2003, 2006, 2010; Kuhlthau, 1991; Mackey & Jacobson, 2014). Meanwhile Paul G. Zurkowski (1974)

suggested that information literacy is the ability to utilize various information tools and primary sources for solving any problems. In searching for the accurate and right information, someone needs to master information literacy because the obtained information can determine a decision to solve a problem. With information literacy, students can know when and why information is needed, where to find, and how to evaluate, use and communicate it ethically. This is an information literacy (Inskip, 2015)

Based on the experts' understanding, Information Literacy, according to the Association of Colleges and Research Libraries (ACRL) is a series of abilities to recognize when information is needed and the ability to search, evaluate and use information effectively. Those who are good at information literacy will not only have the ability to recognize when they need information, but they also can find information, evaluate, and use it to make precise decisions.

The researcher used an experimental method that is utilized to test or to look for the influence of cause and effect relationships in a study. This research aimed to investigate the possibility of a causal relationship. The method was done

by giving a treatment condition to an experimental group, which then the results of the treatment were compared with a control group results that did not receive any treatment.

This research used a quasi-experimental design with *non-equivalent group pretest-posttest*. In this design, students were not randomly placed in a class, but the researcher used all students in a class as the research participants (McMillan & Scumacher, 2009). The design described further as follows:

Table 1. Quasi Experiment Design of *non-equivalent groups pretest-posttest*

Group	Pre-test	Treatment	Post-test
Experiment	Q ₁	X	Q ₃
Control	Q ₂		Q ₄
Time			

Notes:

A = Experiment class

O₂ = *Pretest* in experiment class

B = Control class

X = giving treatment

O₁ = *Pretest* in experiment class O₃

= Effect after treatment

O₄ = effect without treatment

This research was done in Elementary School Teacher Education Program from the Department of Pedagogics of Faculty of

Education at Indonesia University of Education. Sampling was conducted using nonprobability sampling technique. McMillan and Schumacher (2009: 253) state that this technique does not use any random sampling, so researchers usually use existing and easily accessed subjects, for example, using one class in a specific study program.

FINDINGS AND DISCUSSION

The differences between Information

Literacy in Experimental Class and Control Class based on ACRL. The test is done to identify the increase differences in students' information literacy between the experimental class and the control class was based on the ACRL standard, which was carried out by analyzing the results of the questionnaires. The first step was the process of testing data normality.

Table 2. Normality Test of Information Literacy ACRL in Experimental Class and Control Class

	Kolmogorov-Smirnov ^a		Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.
LI_Experiment	.120	33	.200*	.967	33	.394
LI_Control	.125	33	.200*	.965	33	.355

Based on the table, it can be seen that a Kolmogorov-Smirnov test on the data shows 0.200 significance, which is higher

than $\alpha = 0.05$. According to data analysis, it can be concluded that the initial data measurement (pretest) and final measurement (posttest) are typically distributed. Because the data were normally distributed, the next step was the homogeneity test. Homogeneity test results can be seen in the following table,

Table 3. Homogeneity Test Result in Experimental Class and Control Class

Levene Statistics	df1	df2	Sig.
1.465	1	64	.231

Based on Table 4.15, the identified significance value is $0.231 > \alpha = 0.05$, so the data variance is homogeneous. After knowing that the information literacy based on ACRL in the experimental class and control class was normally distributed and homogeneous, the data were then analyzed using t-test with the hypothesis as follows:

H_0 : there is no difference in student's information literacy based on ACRL standards between the experimental class and the control class.

H_1 : there is a difference in students' information literacy based on ACRL standards between the experimental class and the control class.

The significance level used was 0.05 with the test provision that if the value of the t-test is higher than 0.05 then H_0 is accepted, and if t-test is less than 0.05 then H_1 is accepted. By using SPSS 17.0 software, the comparative test results for the experimental class and the control class are presented in the following table:

Table 4. Comparative Test Results in ACRL Information Literacy between Experimental Class and Control Class

T	Df	Sig (2-tailed)	Summary
2,771	64	0,007	H_0 rejected

In the output table, the significance value for the students' information in the experimental class and control class is 0.007, less than 0.05. In summary, H_0 is rejected, and H_1 is accepted. This indicates that there is a significant difference between the experimental class and the control class.

To get insights from various sources, this research also concerned with the awareness that has implications for habituation in everyday life. According to Boeriswati (2012), "information literacy is awareness and skills to identify, search, evaluate, organize, create, use, and communicate information to solve problems," in addition to skills, awareness

can be tested by questionnaire data. The results of the questionnaire data about the students' information literacy based on the standards of the Association of College & Research Libraries (ARCL) showed significant differences in the students' information literacy between students in experimental class and control class.

The findings of this research which showed improvement of information literacy using a habituation in the learning process were supported by the *Final Report on the National Forum on Information Literacy* (NFIL) in 2015, stating that many studies on the *Journal of Information Literacy*, concerning with concept, context, and the practice of literacy were supported by purposeful efforts done by relevant institutions.

CONCLUSION

The application of *Empowering 8* model in the learning process had facilitated students to be more familiar with the actual problem solving through the use of credible and transparent information, which can be scientifically proven, and through always searching for information from relevant sources, applying academic measures. The application of *Empowering 8* model also

stimulated students to work and to reach achievements in the form of educational products. There was a significant difference in information literacy of students who applied *Empowering 8* model (experimental class) with those who did not apply *Empowering 8* model (control class), based on the Association of College & Research Libraries (ARCL) standard.

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