The Effect of Learning Experience on the Information Literacy of Students in the Ri-Png Border During Covid-19 Period

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Abstract

The spread of the COVID-19 pandemic presents challenges for higher education institutions, especially in Indonesia's border areas. The transformation of face-to-face learning models to distance learning models impacts the learning experience of students, especially those who are completing writing research proposals and theses that require adequate information literacy skills. This study aims to explore the effect of student learning experiences on information literacy skills. The research data were obtained from respondents from four universities in Merauke. Purposive sampling technique is used with the criteria of students who have taken research methodology courses and are taking or have taken proposal seminar courses. One hundred respondents have filled out a questionnaire distributed online. Based on the data analysis, learning experiences contributed 17.60% to students' information literacy skills. Furthermore, each increase in student learning experiences will contribute to 0.40% of information literacy skills. These research findings can be valuable information to be developed to the next stage in making modules and learning media that can provide a good quality learning experience to improve student literacy skills, especially in writing research proposals/theses. With this module or learning media, it is hoped that it can prepare students to write research proposals and theses.

Keywords: Learning Experiences; Information Literacy; Academic Writing, COVID-19; Papua

1. Introduction

Policies in handling the spread of COVID-19 implemented in Papua have an impact on the world of academics. Higher education institutions are closed to prevent clusters of the spread of COVID-19. Students and academic staff must transform face-to-face learning patterns into distance learning models. The face-to-face learning migration policy to distance learning is pursued by almost all educational institutions worldwide (Chick et al., 2020; Iyer, Aziz, & Ojcius, 2020; Naciri, Baba, Achbani, & Kharbach, 2020). The migration of the learning model puts pressure on students who carry out the learning process and students who are compiling research proposals or are completing thesis writing.

The obligation to write a thesis as one of the requirements for graduating from an undergraduate level presents challenges for students, especially students in Indonesia's eastern border areas. The ability of students in writing theses cannot be separated from their mastery of academic writing skills. Writing a thesis is a task that takes a relatively long time and is the most difficult thing for students to do (Paltridge & Starfield, 2013). In an academic context, students are also faced with the challenge of writing a thesis without the availability of a stimulus or material for writing, which is usually in the form of reading sources (Hyland & Shaw, 2016). Moreover, students have the pressure to defend their research results in front of the examiners after completing thesis writing (Paltridge & Starfield, 2013). Without adequate academic writing skills, students will experience obstacles in writing their thesis.

Academic writing skills are a part of the English for Academic Purposes (EAP) (Swales, 2019). EAP aims to equip students to do assignments so that they can succeed in academics (Norland & Pruett, 2006; Paltridge & Starfield, 2013). In EAP learning, reading skills have a crucial role, increasing attention and interest by academics today (Hyland & Shaw, 2016). Mastery of reading skills is considered an indicator of success for academic achievement (Shaw & Pecorari, 2013). Moreover, the ability to read for writing reading for writing (RFW) will be used by students to acquire the knowledge and skills needed to write effectively (Hyland & Shaw, 2016). In addition, Artero, in Hyland & Shaw (2016), in developing RFW capabilities in this decade, information literacy skills are seen as an urgent ability to master because students are required to be able to apply these abilities in the digital era. In particular, information literacy skills are the foundation of academic writing skills, which are very urgent for students to master, especially during the COVID-19 pandemic, where students have to do physical distancing.

During this period, there was an increasing interest in the study of information literacy, especially at the higher education level. White (2019) emphasizes that information literacy has a close relationship to fostering students' critical thinking skills. Meanwhile, Dolničar & Podgornik (2018) identified that information literacy relates to student motivation and confidence in searching for information using the internet. On the other hand, De Meulemeester et al. (2018) underlines the importance of applying information literacy to the higher education curriculum. Furthermore, Novo & Bastos (2018) identified that there are still problems at the university level to understand the concept of information literacy. There is less awareness of the importance of information literacy. However, so far, no studies have attempted to examine the effect of information literacy skills on student learning experiences, especially in tertiary institutions on national borders that have limited infrastructure and scientific reference sources.

This prospective study was designed to evaluate whether information literacy is affected by student learning experiences. This study is urgent to do because, with the existence of empirical data from this study in the future, it can be used as a basis for providing action to improve information literacy skills through learning methods and media. With future actions to improve information literacy skills, it is hoped that this can improve students' academic writing abilities so that they have sufficient abilities to write theses. In addition, with adequate information literacy skills, students who have graduated from college will have the ability to adapt to the world of work.

In academia, EAP requires mastery of reading and writing skills (Hyland & Shaw, 2016). Hinkel (2011) adds that EAP has grown to be broader and more complex from its inception in the past few decades, adapting to the various needs of its different learners, especially in the academic field. EAP has a development with its segmentation that differentiates its users from ESP. For two decades, EAP has grown massively because of its importance through global developments that require the use of English in both the academic and work sectors (Paltridge & Starfield, 2013). EAP equips students with learning English with practical applications tailored to student needs (Hyland & Shaw, 2016). EAP is a discipline that develops to equip students for success in university, specifically preparing students with academic writing skills.

Hyland & Shaw (2016) added that EAP curriculum stakeholders must understand the features of discourse in certain academic contexts and instructors have an important role to play following these

features. Moreover, especially for users in the academic world, EAP focuses on research and teaching English to help complete academic tasks (Paltridge & Starfield, 2013). Meanwhile, Charles (2013) adds that EAP today has a relationship with research and teaching English needed by those who use language to obtain information for carrying out academic tasks. EAP plays an important role for students by being used to help complete assignments and being used by students to write a thesis that is closely related to research.

EAP aims to provide academic writing skills that cannot be separated from the need to master RFW skills. Flower in Hyland & Shaw (2016) states that RFW has two important abilities, namely a receptive process to support academic literacy skills and a transformational process to support the acquisition of critical literacy skills. On the other hand, Hirvela (2004) explains that RFW has two approaches: input-based, which requires learners to use reading skills for knowledge acquisition, and output-based. Students can transform content from the source they read into the descriptions they write. Information literacy skills are crucial in reading skills in RFW. Then, RFW is related to academic writing skills, which are used to equip students in thesis writing. It can be concluded that with information literacy skills, students have one important element of RFW, namely reading, which will help them obtain the reference sources needed in writing their thesis. With adequate information literacy skills, students can obtain and use reference sources appropriately to write theses effectively.

There are several views on defining the concept of literacy skills. College and Research Libraries (ACRL) and the American Library Association (ALA) provided an information literacy framework in 1989. A human who has information literacy skills required the ability to identify the information needed and the ability to search, evaluate, and use the information needed. (Albitz, 2007; Eisenberg, 2008; Henkel, 2019). Orey, Jones, & Branch (2012) underline the importance of information literacy skills to succeed in the future. Moreover, information literacy skills are a primary need for individuals in an educated society (Henkel, 2019). Literacy skills are an essential requirement for every individual who will be used as a provision for success in the future, which requires several components of ability to be mastered.

In detail, Beutelspacher at Henkel (2019) provides details of the stages of the information literacy component in the form of:

1. Identify the information needed
2. Search and find information
3. Evaluating information
4. Using information
5. Organizing information
6. Communicating and publishing information
7. Handling information responsibly

On the other hand, Coonan et al. (2018) underlined that information literacy skills require thinking critically and providing a balanced assessment of the information found and used. Moreover, Henkel (2019) emphasizes the relationship of information literacy skills, which requires mastery of information, communication, and technology (ICT) skills and focuses on the tendency to write research results and find references in the form of books or digital books.

Information literacy is part of literacy in general. Information literacy is defined globally as the ability to manage information in general (Machin-Mastromatteo, 2012), which develops within the 21st century learning framework, including digital, financial, cultural, and ICT literacy (Dede, 2010). In an academic context, understanding specific literacy practice patterns in a discipline is a major factor in students' ability to face academic and professional obligations in the disciplines successfully they work on (Klinger & Murray, 2012). Reading comprehension included in literacy will mature with appropriate and continuous training that goes hand in hand with the growth of knowledge, experience, and motivation

(Howard, Gorzycki, Desa, & Allen, 2018). Moreover, literacy skills will increase students' success rate in college (Wyatt, Kobrin, Wiley, Camara, & Proestler, 2011).

Research exploration on information literacy in the context of higher education has been carried out by previous researchers (Dolničar & Podgornik, 2018; Kovářová, 2018; De Meulemeester et al., 2018; Novo & Bastos, 2018; White, 2019). In general, the previous research results have identified information literacy as having a relationship with critical thinking skills, motivation, and self-confidence in using the internet, and the relationship between information literacy skills and the type of assessment carried out. In addition, there is an affirmation that to improve literacy skills, integration with the curriculum at the tertiary level is necessary because the majority of academicians do not know the importance of information literacy skills. However, previous studies have not explored the relationship between information literacy and student learning experiences. Exploring whether there is a relationship between information literacy and learning experiences will add new information related to studies in information literacy. Student learning experiences are seen to be important with the hypothesis that student learning experiences affect information literacy skills. Moreover, this study provides a different point of view from previous studies by expanding the research context by taking research locations in border areas that have the characteristics of limited infrastructure and access to information. Previous research took the context of research that was limited to urban environments, the findings of which could not be generalized to the context of students in rural areas. By investigating regional contexts with different characteristics, they will add new information, especially on information literacy.

2. Methodology

This research approach uses a quantitative approach with a survey strategy. The data are obtained from four universities located on the Indonesia-Papua New Guinea border, namely in the Merauke district. Samples from the four universities can represent the student population in Merauke. The four colleges selected as respondents were Musamus University, Christian Religious College, Yakobus Catholic College, Karya Darma Merauke College of Administrative Sciences. The purposive sampling technique is applied with two criteria: students who have taken research methodology courses and are taking or have taken proposal seminar courses. The selection of criteria is based on the high need for information literacy skills to prepare thesis writing.

The research instrument in this study aims to explore information literacy skills and learning experiences. The instruments used in this study were adapted from previous research (Anwar & Wardhono, 2019; Pinto, 2010). The questionnaire to explore information literacy skills contains 73 statements that explore aspects of motivation, abilities, and literacy sources. The questionnaire to explore the learning experience consists of 15 statements. The instrument was translated into Indonesian and then validated by three Indonesian lecturers to assess the instrument's quality of the question items. Then the researcher was conducted a pilot test to test the reliability and validity of the questionnaire. The questionnaire contains two variables: information literacy (motivation & ability variables) and learning experience using a Likert scale 7. The questionnaire is distributed using the google form application with filling times starting from August-September 2020.

The data obtained were processed using SPSS 23. Descriptive statistics were used to describe the patterns of the data obtained. Then the normality and homogeneity tests are carried out on the data obtained before testing the hypothesis. Furthermore, the data is processed using a simple linear regression model to see the influence of learning experiences on students' information literacy skills.

3. Result and Discussion

The implementation of research in 2020 focuses on learning experiences on information literacy skills in online learning during the Covid-19 pandemic among students at the Indonesia-Papua New Guinea border. The data in this study came from students at several universities in the Merauke district. This data collection was carried out during the Covid-19 pandemic so that the questionnaire was filled by students using the Google Form application. Still, researchers also conducted limited observations and interviews with related parties, such as lecturers and college managers. The following are the results of filling out the questionnaire on several student learning experience indicators using a 1-7 Likert scale.

Table 1. The results of filling out the questionnaire based on student learning experiences

Indicators	Disagree – Agree (%)						
	1	2	3	4	5	6	7
online information literacy experience	7,67	11,83	10,68	15,63	12,40	19,21	22,58
online learning experience	9,68	8,23	9,68	13,71	12,26	16,13	30,32
online learning achievement motivation	27,35	0,52	18,45	3,61	13,16	3,74	33,16

Table 1 shows that 33.16% of respondents scored seven on the online learning achievement motivation indicator. The obtained values mean that students strongly agree that online learning achievement motivation plays an important role in producing a good learning experience. They think that their motivation to get high achievement encourages them to be more serious in completing the lecturer's assignments in online learning. In addition, the existence of competition among students in obtaining achievements makes students challenged in doing their assignments in the best way. Persistence and hard work can provide a better learning experience. However, in achieving this high achievement, as many as 30.32% of students thought fraud by students to gain high achievement, for example, copy-paste, copying, or entrusting names. For this reason, 0.52% of students stated that they were less interested in getting good online learning achievements.

The following are the results of filling out the questionnaire on several indicators of student information literacy skills using a 1-7 Likert scale.

Table 2. Questionnaire Filling Results Based on Student Literacy Ability

Indicators	Disagree – Agree (%)						
	1	2	3	4	5	6	7
Information searching	10,32	13,33	7,742	18,49	11,4	18,06	20,65
Information evaluation	12,9	9,35	9,35	13,55	16,77	15,48	22,58
Information processing	8,06	11,61	10,97	17,74	15,16	16,13	20,32
Information communication and dissemination	15,81	18,39	11,94	14,52	7,74	13,23	18,39

The table above shows that 22.58% of respondents gave a score of seven on the ability to evaluate information. The value means that students strongly agree if evaluating information is an important part of information literacy skills. They think that scientific information sources such as books or research journals obtained from the internet are quality materials to support student theses. It is not difficult for students to find sources of information relevant to the theme of their thesis. But on the other hand, students have difficulty identifying text structures and processing information from books or research journals to become a thesis writing framework/plan. The value implies the low percentage of communication indicators and information dissemination skills; namely, 7.74% of respondents gave a score of five.

The research data contains two variables. The independent variable is a learning experience (X), and the dependent variable is information literacy (Y). The researcher measures the influence of the learning experience variable (X) on the information literacy variable; simple linear regression can be used. As a requirement for compliance with simple linear regression, the data normality, and homogeneity tests were carried out. The normality test aims to confirm whether the data is normal or not. The researcher assesses the normality of the research data used Kolmogorov Spirnov.

Table 3. Tests of Normality

Variables	Kolmogorov-Smirnov (a)		
	Statistic	df	Sig.
Information literacy	0,064	155	0,200(*)
Learning experience	0,057	155	0,200(*)

* This is a lower bound of the true significance.
a Lilliefors Significance Correction

Look at table 3 above, the Kolmogorov-Spirnov significance value is 0.200> 0.005. The obtained value means that the data is normally distributed. Next, do a homogeneity test to determine whether the variants come from the same group. Consider Table 4 below.

Table 4. Test of Homogeneity of Variances

Levene Statistic	df_1	df_2	Sig.
1,174	25	115	0,278

Based on table 4 above, it is known that the significance value is 0.278> 0.05. This means that information literacy based on learning experiences has the same variance. After ensuring that the data is normal and homogeneous, then create a simple regression equation with the formula $Y = a + bX$. The value of the regression coefficient can be seen in Table 5 below.

Table 5. Coefficients (a)

Variable	Unstandardized Coefficients
(Constant)	18,933
Learning experience	0,403

a Dependent variable: information_literacy

The constant value of unstandardized coefficients (a) is 18.933. The obtained value means that if there is no learning experience, the consistency value of information literacy skills is 18.93. Furthermore, the regression coefficient (b) is 0.403. The value means that for every 1% increase in the learning experience, students' information literacy skills increase by 0.403. The regression coefficient value is positive, so it can be said that the direction of the effect of learning experiences on information literacy is positive. Thus the simple regression equation is $Y = 18.933 + 0.403X$.

The significance of the regression coefficient can be determined by conducting an effect test (hypothesis testing). The following hypotheses are proposed to be proven in this study.

Ho: There is no effect of learning experience on students' information literacy skills

Ha: There is an effect of learning experience on students' information literacy skills

The effect test can be done using the t-test. By using the basis of decision-making t value > t table, then Ho is rejected. On the contrary, if t value < t table, then Ho is accepted. Note the results of the t-test in Table 6 below.

Table 6. Coefficients (a)

Model	Unstandardized Coefficients	T value	T table
(Constant)	18,933	5,718	1,976
learning_experience	0,403		

a Dependent variable: information_literacy

The value of 5.718> 1.976, then Ho is rejected, meaning that there is an effect of learning experience on students' literacy skills. Furthermore, to find out how much influence the learning experience has on students' literacy skills, it can be seen from R Square's value.

Table 7. Model Summary

Model	R Square
The effect of learning experience toward information literacy	0,176

The value of 0.176 means that the effect of learning experience on students 'literacy skills is 17.60%, while other factors influence 82.40% of students' literacy abilities.

This study aimed to determine the effect of learning experiences obtained by students on information literacy skills. Based on data analysis, on the learning experience variable, students generally believe that achievement motivation is an important part of the learning experience. Besides that, the atmosphere to compete also contributes to the online student learning experience. There are interesting findings from this study where to get good grades, and not all students must have academic ethics. They feel they are allowed to cheat in the form of plagiarism, cheating, or cheating in authorship for their tasks. Self-efficacy plays a role in shaping pleasant learning experiences (Zimmerman, 2000; Zusho, Pintrich, & Coppola, 2003).

On the other hand, on the variable of information literacy ability, some respondents stated that they had to evaluate the sources of information they made for writing materials. Respondents have sufficient confidence in finding information from the internet. Furthermore, the data shows that students have obstacles in recognizing and identifying the structure of research articles so that it impacts the low ability of students to reproduce this information into a writing product. Based on previous research, information literacy plays an important role for students to access the information they need to complete academic assignments. In addition, information literacy affects the critical thinking skills that students will use in the academic world (Kinengyere, 2007; Saglam, Çankaya, Üçer, & Çetin, 2017).

Furthermore, this study examines the effect of the learning experiences that respondents have on information literacy skills. Based on data analysis, there is a positive relationship between learning experiences and information literacy skills. Student learning experiences contribute to information literacy skills by 17.60%. In addition, an increase in the quality of the learning experience by 1% will affect information literacy skills by 0.403%. This study's findings are consistent with the findings of previous studies that learning experiences also have a positive influence on student learning outcomes (Lizzio, Wilson, & Simons, 2002; Zeegers, 2004).

Conclusion

This study shows that there is an effect of learning experiences on students' literacy skills. In preparing students to carry out assignments to complete research proposals and thesis writing, students must have adequate information literacy skills. Information literacy skills are used to find, evaluate, process, and produce information closely related to writing a research proposal or thesis. Furthermore, these research findings can be valuable information to be developed to the next stage in making modules and learning media that can provide a good quality learning experience to improve student literacy skills, especially in subjects related to writing research proposals/theses.

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