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Exchange Students' Basic Literacy Analysis

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Abstract

This study aimed to describe the analysis of basic literacy abilities in students as participants in the Student Exchange Program. The method used is descriptive qualitative. The subjects in this study consisted of 70 students at a public university in Banten, Indonesia. The data collected is in the form of basic literacy tests, interviews, and photos as documentation. Then the data was quantified and analysed to obtain the results of students' basic literacy skills of 81.6% in the good category. These findings showed that the Student Exchange Program is one of the activities that can develop students' basic literacy skills.

Keywords: Basic Literacy, Indonesian Students, *Merdeka Belajar-Kampus Merdeka* (MBKM), Student Exchange Program

INTRODUCTION

Merdeka Belajar-Kampus Merdeka (MBKM) in Indonesia aims to improve graduate competencies in soft skills and hard skills to produce graduates who are ready and relevant according to the times and prepare them as leaders with superior personalities. The MBKM activity in the form of experiential learning activities is expected to develop students' potential according to their passion and talent. One of the MBKM programs is the Independent Student Exchange Program. Activities in the independent student exchange program are for students to have the opportunity to study outside the study program and/or higher education. This activity will provide experience for students and develop students' self-competencies, such as the ability to think critically, think creatively, collaborate, and communicate (Faiz and Purwati, 2021, Saprudin et al., 2020). Based on the results of research from Suryanto et al. (2022) and Andari et al (2021) show that there are benefits for students after carrying out an international student exchange program; students can make friends and actively participate in the culture of the community around their campus so that they can develop students' communication skills and creative thinking. In addition, students' English skills and self-confidence have increased because students learn directly from language experts.

Literacy is the ability to see, read, listen, speak, and think (Hayat and Yusup, 2010; Kuder and Hasit, 2002). The literacy skills in question are numeracy literacy, scientific literacy, language literacy, digital literacy, cultural and civic literacy, and financial literacy. According to Kapur (2023), basic literacy skills are the abilities to read, write and count, which are very important to be mastered by everyone to carry out various tasks and activities and maintain the

individual's living conditions correctly. The research results of Susanti and Krisdiana (2021) show that literacy skills have a positive correlation with students' critical thinking skills of 80%. This can happen because, in critical thinking, things happen, such as sharply differentiating, thinking carefully, choosing the best, identifying, evaluating, and developing ideas or ideas for the better. Meanwhile, Johnson (2007) argues that critical thinking is a process of brain activity or mentality that aims to solve problems, make decisions, invite, or persuade, analyse assumptions, and conduct scientific research. Literacy activities are the ability to identify, determine, find, evaluate, create effectively and in an organized manner, and use and communicate information to solve various problems. Literacy skills will significantly grow in critical thinking skills (Kong, 2014). In addition, basic literacy skills need to be owned by everyone to participate in the information society, which is part of human rights regarding lifelong learning (Susanti and Krisdiana, 2021).

This student exchange program activity is expected to develop students' basic literacy skills because students' study in a different learning atmosphere from their home campus. According to some researchers, the development of basic literacy skills can be influenced by the learning process that has been carried out. This is supported by the results of research from Marlina et al. (2020) concerning the Implementation of Problem-Based Learning (PBL), which can support students' mathematical literacy skills, which include the ability to understand problems, define models, use mathematics, and explain solutions. There are also research results from Sakti and Swistoro (2021): student scientific literacy can be increased by implementing project-based learning. In addition, Jayanti's research (2021) results, namely applying the PBL model combined with a jigsaw, can improve students' information literacy skills in identifying, evaluating, and using information effectively to formulate solutions to existing problem-solving. Basic literacy is very important for students to master. Therefore, this study aims to analyse basic literacy skills in students participating in the independent student exchange program.

METHOD

The research was conducted at a state university in Banten, Indonesia. The time for implementation is April-December 2022. The population in this study is all students at the university. The sample in this study was 70 exchange students from state universities in Banten, Indonesia. This qualitative descriptive research aimed to make a systematic, factual, and accurate description, picture, or painting of the facts, characteristics, and relationships between the phenomena investigated (Nazir, 2005). The research method is a survey method.

Data collection techniques were in the form of tests to determine students' basic literacy abilities in the aspects of numeracy literacy, scientific literacy, and digital literacy. At the same time, the non-test is in the form of interviews. The data obtained will be analyzed quantitatively and qualitatively. Quantitative data will be analyzed using the Excel program to determine the very good, good, sufficient, poor, or very poor categories (Sirkin, 2006). The technique of checking the validity of the data will be carried out using data triangulation techniques.

RESULTS AND DISCUSSION

The results of this study are in the form of basic literacy of students at a state university student in Banten, Indonesia who participate in the Independent Student Exchange Program of 81.6% in the good category. The basic literacy in question is numeracy, scientific, and digital. The percentage score for students' numeracy literacy skills was 77.5% in the good category, students' scientific literacy skills were 75% in the sufficient category, and students' digital literacy skills were 92.3% in the very good category.

Table 1. The results of a student survey on basic literacy

Basic Literacy	Indicator	Percentage	Category
Numeracy Literacy	Number concept skills and arithmetic operations	7.7	Enough
	Ability to use symbols and numbers	77.7	Good
	Analyse tables	81.1	Good
Science Literacy	Science knowledge ability	73.7	Enough
	Identify statements	76.6	Good
	Inference ability	74.9	Enough
Digital Literacy	Ability to operate computers and publications	89.1	Very good
	Ability to construct information	93.1	Very good
	Take advantage of internet access	93.7	Very good
	Present information	91.4	Very good
	Ability to communicate	94.3	Very good
	Mean	81.6	Good

Table 1 shows that some of the indicators that are considered in looking at numeracy literacy skills include 1) number concept skills and arithmetic operations with a percentage score of 73.7%, including the sufficient category, 2) the ability to use symbols and numbers with a percentage score of 77.7% with good category, 3) Analysing tables with a percentage score of 81.1% in a good category, where these skills are usually indicated by students' abilities in integer counting operations, interpreting mathematical terms, concepts, and principles, and determining formulas or theorems to answer a problem (Anugrahana, 2020; Winarso & Toheri, 2021). Students get sufficient categories on indicators of number concept skills and arithmetic operations. This shows that students are quite capable of mastering the concept of mathematical numbers and can perform calculation operations. An example of a numeracy literacy test with indicators of number concept skills and arithmetic operations is shown in Figure 1.

The following table shows the demand for new students in several study programs at Untirta in the last three years.

Program studi	Daya tampung	Peminat		
		2019	2020	2021
PGPAUD	75	950	1150	1020
Science Education	80	1020	930	1300
Economy	60	950	975	890
Law	55	750	790	745
Agriculture	40	510	620	650

The competitiveness of the study program affects the capacity and the number of applicants. The percentage level of competitiveness of study programs can be seen through the CAPACITY formula divided by the NUMBER OF INTERESTS and multiplied by 100%. The smaller the percentage, the greater the level of competitiveness. The order of study programs with the highest competitiveness to the lowest competitiveness in 2020 is. . .

A. Science Education – PGPAUD – Law – Agriculture – Economics
B. Economics – PGPAUD - Law – Agriculture - Science Education
C. Economics – Agriculture – Law - PGPAUD - Science Education
D. Science Education – Agriculture - Law – PGPAUD - Economics
E. Science Education – Agriculture - PGPAUD – Economics - Law

Figure 1. Literacy test questions on indicators of number concept skills and arithmetic operations.

Figure 1 shows questions about number concept skills and arithmetic operations. Namely, students must be able to read tables, select and determine numbers or mathematical numbers, calculate using simple arithmetic operations, and sort the results. Based on the results of the interviews, it was found that the questions were quite difficult for students because in solving them, several stages had to be carried out and required a long time to think. This shows that the numeracy literacy skills of students participating in the independent student exchange program in the form of the ability to interpret mathematical concepts as labelling a set of events, symbols or objects with similar characteristics or attributes are very important.

The results of scientific literacy skills of students participating in independent student exchange program can be seen in 1) an indicator of scientific knowledge ability with a percentage score of 73.7% in the sufficient category, 2) an indicator of identifying statements with a percentage score of 76.6 in the good category, and 3) an indicator of the ability to draw conclusions with the percentage score of 74.9% is in the sufficient category. Where these indicators show students' ability to use their cognitive abilities to explain natural phenomena, formulate scientific questions every time they investigate, and draw conclusions based on existing facts through the investigation process (Novita Sari, 2018). The smallest percentage gain in students' scientific literacy skills is found in the indicators of scientific knowledgeability. Based on the results of the interviews, this happened because students were not careful in reading and interpreting the problems they had to solve. The shape of the problem is shown in Figure 2.

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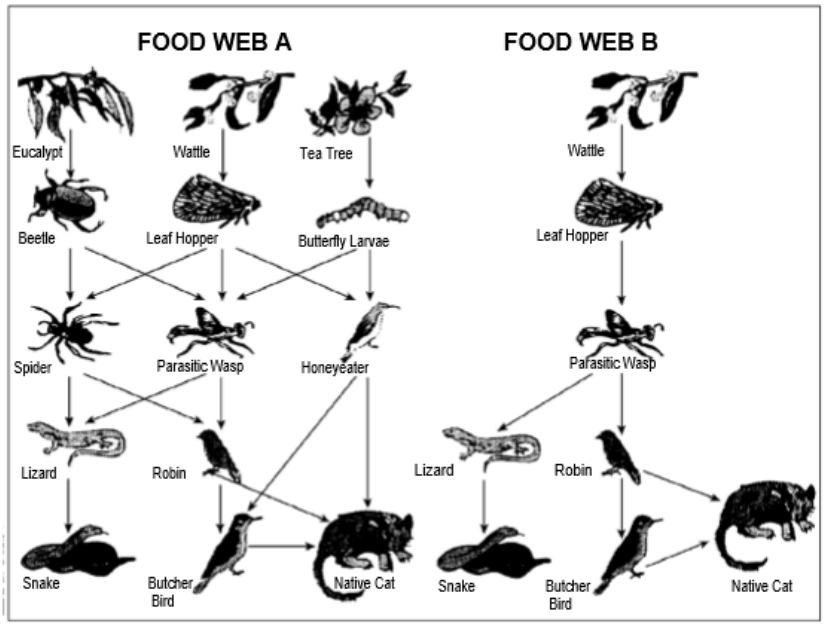
BIODIVERSITY IS THE KEY TO MANAGING THE ENVIRONMENT

Ecosystems that maintain high biodiversity (i.e., a wide variety of living things) are much more likely to adapt to human-induced environmental changes than those with little. Consider the two food webs shown in Figure 1. The arrow points to the organism eaten by the organism that ate it. These food webs are highly simplified compared to those in real ecosystems, but they still illustrate key differences between more diverse and less diverse ecosystems.

Food web B represents a situation with very low biodiversity, where, at some levels, the food pathway involves only one type of organism. Food web A represents a more diverse ecosystem with more alternative feeding routes. In general, biodiversity loss should be seriously considered, not only because extinct organisms represent a major loss for ethical and utilitarian (beneficial) reasons but also because remaining organisms become more vulnerable (exposed) to extinction in the future.



Source: Adapted from Steve Malcolm: 'Biodiversity is the key to managing environment', *The Age*, 16 August 1994.

Figure 1. Food webs A and B

The sentence above states that "Food web A represents a more diverse ecosystem with the presence of more alternative feeding pathways." Look at Food Web A. The only two animals in this food web have three (immediate) food sources. One of them is an animal…

A. Native Cat
B. Snake
C. Butcher Bird
D. Leaf Hopper
E. Parasitic Wasp

Figure 2. Scientific literacy test questions on scientific knowledge ability indicators

Based on Figure 2, this question is a matter of scientific content about animal diversity and food chains, where this science material is very general and easy to master. When answering it students must understand the narrative in the text, observe the pictures given, and solve the problem in question. But there are still students who need to be corrected in answering this item. During the interview, some students thought the questions needed shorter and easier understanding. This shows that the student needs more scientific knowledge.

The results of digital literacy skills in independent student exchange program participating students can be seen in indicators 1) The ability to operate computers and publications with a percentage score of 89.1% is in the very good category, 2) The ability to construct information with a percentage score of 93.1% is in the very good category, 3) Utilizing access the internet with a percentage score of 93.7% is in the very good category, 4) Presenting information with a percentage score of 91.4% is in the very good category, and 5) The ability to communicate with a percentage score of 94.3% is in the very good category, where these indicators show the ability students in terms of accessing various information in the digital space, developing creative and collaborative thinking to extract information or knowledge, as well as thinking critically and conducting evaluations independently (Dinata, 2021; Hadinugrahaningsih et al, 2017).

Based on the results of interviews with students who took part in Independent Student Exchange Program activities, information was obtained that they carried out their lectures online and offline, studied with lecturers from other universities according to the courses they took, worked on project-based assignments, actively participated in discussions and presentations, and adapted to habits and culture around the campus of his choice. This shows that the learning activities received by independent student exchange program students have used the student center approach and are expected to be able to develop students' basic literacy skills in achieving their life goals. According to Pertiwi et al. (2022) and Bhagra & Sharma (2018) the student center learning approach can develop the quality of human resources society needs, such as leadership, creativity, self-confidence, discipline, independence, critical thinking, communication skills, working in teams, technical expertise, and a global outlook.

CONCLUSION

This study concludes that students' basic literacy skills have an average value of 81.6%. This shows that students already have good basic literacy competencies. The components of basic literacy skills include numeracy, scientific, and digital literacy skills in everyday life. These students' measurable basic literacy will be the initial capital to participate in the student exchange program.

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