

# Academic Literacy of Students for Scientific Paper Competition in National Level

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**Abstract---Students' academic literacy is closely related to scholarly which is supported by creative and critical characters. Without such characters, the quality of student scientific paper will not comply with the writing guidelines. As a result, Program Kreativitas Mahasiswa (PKM)/Student Creativity Program are not qualified or failed in the competition. This failure is even more painful when it is caused by administrative errors. In terms of content substance, PKM which passes to be funded has scientific literacy that is fostered through multi-literacy learning obtained during lectures. Because, academic literacy is a vehicle for students to improve their ability to learn. The processes avoid the forms of plagiarism.**

**Keywords: academic literacy, scientific paper, national level competition**

## I. INTRODUCTION

Academic literacy in higher education is the main capital for students to achieve their academic success (Donohue & Erling, 2012). This strategic role of literacy is not optimized by students. As a result, many lecturers in universities complained about this academic literacy limitations (Chimbganda, 2011). The significant complaints are the students' ability to deeply and rationally communicate an idea. In expressing ideas, students seemed influent and inaccurate. This is due to students' limitations and lacks in interacting and dealing with literacy activities.

Literacy originated from Latin word *littera* (letters) whose understanding involves the understanding of writing systems and accompanying conventions. However, literacy is generally related to language and how the language is used. The written language system is secondary. When talking about language, it certainly cannot be separated from the conversation about culture because language itself is part of culture. Therefore, defining the term literacy must include elements that include language itself, namely the socio-cultural situation. In this

regard Kern (2000) defines the term literacy comprehensively as follows:

Literacy is the use of socially, and historically, and culturally-situated practices of creating and interpreting meaning through texts. It entails at least a tacit awareness of the relationships between textual conventions and their context of use and, ideally, the ability to reflect critically on those relationships. Because it is purpose-sensitive, literacy is dynamic – not static – and variable across and within discourse communities and cultures. It draws on a wide range of cognitive abilities, on knowledge of written and spoken language, on knowledge of genres, and on cultural knowledge. (Kern, 2000)

Literacy is not merely mechanical reading and writing skill. Literacy includes responses, understanding, and organized life activities and is applied through continuous learning activities. In this case, the concept of academic literacy has a broad meaning as suggested by Wagner (1987), Freire and Madeco (1987), Namuddu (1989), and Unsworth (1993), namely mastery of an integrated stage of knowledge between listening, speaking, reading, writing, calculating, and thinking. This ability involves the activity of gathering knowledge that directs someone to understand and use language that is appropriate to the social situation. The concept of literacy used in this activity combines the concepts of functional literacy, skill literacy (basic life skills and cultural literacy).

Simply, the definition of academic literacy is not directed to the ability to read and write or literate. In the current context, literacy has a very broad meaning. Literacy can also be interpreted as literacy of technology, politics, critical thinking, and sensitivity towards the environment. Krisch and

Jungebult (1985) in *Literacy: Profile of America's Young Adult* defines academic literacy as a person's ability to use written or printed information to develop knowledge so that it benefits society. Furthermore, someone can only be said to be literate if he can understand something because he reads and does something based on his reading comprehension.

In the past two decades, academic literacy has faced new challenges in the college management implementation (Lea & Street, 1998, 2006; Thesen & Cooper, 2014; Wingate, 2015). The social and cultural changes that occurred in the 1990s to date have led to a more diverse student population and more diverse learning needs in the context of higher education (Goodfellow & Lea, 2013). Internet usage in various personal and professional fields has aroused great interest in the field of digital competence in educational programs and teaching and learning activities in universities.

Viewed from the level of literacy, Wells (1987) states that literacy can be divided into four levels, namely performative, informational, and epistemic. At the performative level, people are able to read and write, and speak with the symbols used; at the functional level, it is expected to be able to use language to fulfill daily needs such as reading manuals or instructions; at the informational level it is expected to be able to access knowledge with the language; while at the epistemic level it is expected to transform knowledge. On the basis of these levels, academic literacy is an epistemic level.

## II. METHODS

This research was conducted by using document analysis technique (Owen, 2013). The documents analyzed are in the form of student scientific papers in the form of a PKM that will be sent to participate in the national level selection by Universitas Negeri Semarang. Students who write proposals are second & third year undergraduate students. The author of the scientific paper is recommended from inter-expertise field (study program)

The type of PKM used in this study was PKM Kewirausahaan/Entrepreneurship Student Creativity Program. This type of PKM is a program to develop students' understanding and skills to become entrepreneurs. PKM Kewirausahaan is not merely profit-oriented, but prioritizes the type of business commodity that shows the expertise of the team (Ditjen Belmawa, 2017). Business commodities

produced by students can be in the form of goods or services which are, then, one of the students' basic capitals in entrepreneurship and entering the market. The commodity of the PKM Kewirausahaan team should not be a competitor of similar products which are the society's income.

The validity and reliability of the PKM proposal was carried out by each of students' supervisor lecturers. The research data was obtained from 325 PKM proposals to be sent to the Directorate General of Learning and Student Affairs of the Ministry of Research, Technology and Higher Education of Republic of Indonesia. All PKM Kewirausahaan were obtained from PKM Kewirausahaan proposals from Universitas Negeri Semarang (UNNES).

This competition is conducted annually. Nationally, thousands of texts sent will be selected by reviewers who are experts in their respective fields. Qualified proposals are given funds to carry out the proposed activities. The amount of funds that students will receive per title is IDR 5,000,000 (five million rupiahs) up to IDR. 12,500,000 (twelve million and five hundred thousand rupiahs). Thus, PKM proposals that are properly funded must have the unique and new creative ideas.

All PKM proposals used as data sources were written by students from inter-study programs and different years. Most students who take part in the PKM proposal writing were second & third year students. The collaboration of writers with different scientific backgrounds further enriches academic literacy which is explained in the results of writing scientific papers. All PKM used in the study were analyzed in terms of administration and content substance. Administratively, the PKM proposal analysis is seen from the PKM proposal compliance with the provisions that have been stated in the PKM proposal writing guide, namely passing through the administrative selection and passing the content selection. The administration selection analysis is entirely based on the rules of affairs written in the PKM guidelines. Meanwhile, the analysis of substance content was focused on ideas creativity, product excellence of the proposed program, literature sources usage, and linguistic rules usage. The following are the assessment rubric.

The data analysis procedure in this study consists of three main activities that occur simultaneously, namely data reduction, data presentation, and conclusion drawing (Miles and

Huberman 1994). Data reduction is the process of selecting, concentrating, simplifying, abstracting, and transforming "rough" data that appear in data sources. The following activity is presenting systematically arranged data. The data presentation is manifested in matrix and tables to ease researchers to see and understand data. The conclusion was made by formulating the patterns and techniques of students' arguments reasoning. The conclusion that has been obtained remains open to be re-tested. The test is done by examining other data sources and discussions with colleagues.

### III. RESULTS AND DISCUSSION

PKM is one of national-level prestigious students' scholarly reasoning event. Students who are passed the selection and given funds are considered to be students with high academic literacy. Qualified students are awarded funding for implementing the proposed program as written in the proposal. From the PKM-funded implementation, the national reviewer team conducted monitoring and evaluation. Eligible PKMs are to be included in national-level competitions in the forum of Pekan Ilmiah Mahasiswa Nasional (PIMNAS)/National Student Scientific Week. The following is a comparison of PKM proposals sent to the national level with PKM that passed the selection.

**Table 1.** Comparison of Proposed and Passed PKMs (Source: Students Affairs of UNNES)

NO.	PKM type	Proposed		Passed	
		Tot al	%	Tot al	%
1.	Entrepreneurship PKM	325	35	21	2
2.	Community Service PKM	269	29	16	2
3.	Copyright PKM	88	10	8	1
4.	Exact Sciences Research PKM	82	9	14	2
5.	Social and Humanities Research PKM	156	17	12	1
6.	Technology PKM	1	0	0	0
<b>TOTAL</b>		<b>921</b>	<b>100</b>	<b>71</b>	<b>8</b>

With this number, UNNES ranked 7th nationally on PIMNAS event. However, when viewed from a comparison of the proposed PKMs and passed PKMs, there were significant inequalities. This means that there are students' scientific literacy that need attention. The

administration carelessness and the substance contents shallowness are the main things that have always been an obstacle for students' PKM to pass the selection. Even though the ideas have been categorized as innovative and creative, the PKM proposals that violates the provisions in the guidelines will declared as fail.

In appendix 1 and appendix 2, it can be seen from the compiled results of the PKM review. Administratively, students' scientific paper in the form of PKM proposals tends to neglect the PKM writing guidelines. Students tend to use the systematics as they see on their seniors' PKM proposals written in previous years. This step led many students not to read the PKM proposal writing guidelines. In fact, every year the guidelines used to write PKM proposals are always different. This has an impact on the PKM Proposal writing systematics to be changed as well.

Most of the changes in the writing guideline are not complied by students, subsequently turns into loss for students themselves. Many of PKM proposals were administratively failed before being selected for its substance. This administrative assessment should make students comply the guidelines before they are sent to the national level. In such competition, administrative compliance is the first and foremost thing in the competition. Thus, the conditions show that students' academic literacy in understanding the specific rules of writing scientific papers are low.

The quality of student academic literacy can be seen from the quality of their scientific papers. This is due to the fact that in scientific writing, there are many academic demands that must be met, so that each person's academic quality can be seen from every scientific work they write. Moreover, from scientific works that are used for competition, the fulfillment and suitability of the provisions stipulated in the guidelines are the initial requirements that determine the next selection stage.

Failure at the administrative stage makes it unable to continue to the substance content selection. Therefore, student academic literacy in scientific paper for competition must be presented to avoid mistakes in various practices of administrative and substance. These mistakes can be reduced by carrying out qualified academic literacy practices. With this practice of academic literacy, it allows students to read, speak, listen, and think there are all kinds of literary sources (Coffin

& Donohue, 2012; Abu-Asba et. Al., 2014), including PKM guidelines. A correct and optimum academic literacy practices contribute on nation's development and welfare.

Ambigapati (1999) explains that literacy can provide opportunities for economic and social development towards living welfare, both for individuals and society. Human literacy is the most significant asset for any country in the world. Therefore, many countries, especially those that are developing, make literacy as the main agenda of their costly development. Expensive financing will not be in vain when humans who have intelligence and character are finally formed. However, the significance of academic literacy has not been able to provide awareness to various parties to rush to improve literacy skills.

Up to present time, compared to western nation's literacy, Indonesian society's literacy is far lower (Yusuf 2004). Many people can read, but prefer not to read. Through international studies that are believed to be instruments for testing global competencies, namely PIRLS, PISA, and TIMSS, Yusuf (2006) also stated that the level of Indonesian literacy in reading, mathematics and science is low compared to the literacy level of students of their age worldwide.

The results of the 2016 Central Connecticut State University (CCSU) study, Indonesia's literacy ranked 60 out of 61 countries in The World's Most Literate Nations. Indonesia falls behind the other largest Facebook user countries, namely the United States (7) and Brazil (43). Indonesia also falls behind fellow ASEAN countries, namely Singapore (36), Malaysia (53) and Thailand (59). The top five countries with the highest literacy rankings are Finland, Norway, Iceland, Denmark and Sweden. Data on reading interest as an element of literacy is also unpleasant. UNESCO in 2012 stated that Indonesia's reading interest index was only 0.001, which meant that there was only 1 person who read in every 1000 Indonesian people. While the 2015 National Library study showed that public reading interest was still 25.1 or falls into the low category.

With such conditions, Indonesian netizens lack the nutritional supply to create quality content and talks on social media. Hence it is unsurprising if the information circulating on social media is dominated by hoaxes, because netizens fail to identify the truth of the information received. As a result, a person's life drifts away, does not know the direction of the life he lives, the value of life he

believes in, and perhaps his identity. In this context, someone will be prone to conduct deviant behavior and harm many other people (Maryam, 2008). Therefore, the lack of literacy culture still overshadows the condition of Indonesian literacy, including student's academic literacy.

Low academic literacy makes students tend to commit plagiarism. Plagiarism which is rampant among students makes them unwilling to think and develop their abilities as intellectuals (Arista & Listyani, 2015). Student morale will wear off. By committing plagiarism, their thoughts cannot develop optimally. Plagiarism activities turn off students' creative and critical thinking patterns so that they will tend to seek convenience that will lead to ignorance of the next generation.

#### IV. CONCLUSION

Academic literacy in scientific paper for competitions in second & third year college students is determined from coaching in the first semester of their college year. The process of fostering academic literacy will prevent students from committing acts of plagiarism, especially towards their seniors' PKMs, which is not relevant to their current applicable PKM writing guidelines. Incompatibility with guidelines will do no good for students. PKM that has been prepared will be rejected or declared not to pass. This is a loss for the institution and the individual students who no longer have the opportunity to participate in the next stages

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