

## Effect of the Use of News-Based Science Teaching on Al Madani Pesantren Student's Literacies

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### Abstract

The development of information in the digital era and the technology progression have an impact on the easy access to information. Society tend to receive the information from sources that have not been accurate. Observation in IPA class on natural science subject is still based on the package books and LKS which provided by the school. Learning natural science through news increase the student involvement and support a lifelong learning. Thus the IPA teacher presents a model of news-based teaching at environmental pollution topic. The method used is a Quasi Experimental Design with the non-equivalent control group design. The population is seventh grade students in junior high school IT Al Madani. Sampling with cluster random were taken by two classes. The results showed the t-test different significant (sig value > 0,05). The increase literacy in science class experiment were 49,2%, while the control class were 36,0%. Critical thinking ability of students have a different significant (sig value > 0,05). The ability of critical thinking students class experiments were 28,3%, while control class were 21,7%. Model news-based teaching familiarize students to think seamlessly and original then develop the creativity. Creativity in the experiment class were more develop than the control class. Creativity in the form of written ideas are the works of scientific posters, letters for officials, and recycle products. The conclusion were news-based teaching model influenced the science literacy, critical thinking, and creativity.

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## INTRODUCTION

The facts in class IPA that is still natural knowledge-based material books categorized package provided the school. Therefore the author presents a model of news-based teaching model of learning which utilises news as a source of learning. A learning model of news-based teaching to facilitate students through the utilization of science news with steps cut the news, read the news, find your problem in the news to criticize news issues. An excess of News-Based Teaching, namely students given the opportunity to express an opinion through many recordings broadcasted news about various events. News footage as a serving dish subject matter then continued with the granting in groups. The application of the model of news-based teaching can enhance students' ability in suggested and increasing seriousness in doing tasks (Purnamasari, 2012).

According to Prasetyo (2001) an excess of news-based teaching namely familiarize students read meaning and then students can summarize discussion activities through the creation of up to 5 sub-activities namely (1) the circumference of knowledge, (2) reading means, (3) comparison and the equation, double input (4), (5) sinetik. Literacy education activities are due to train children to think holistic. Evidence of literacy education and environmental education in the schools that is creativity, critical thinking, and the interaction of the students trained and improved.

## METHODS

The research was carried out on even-numbered school year 2017/2018 Semester in junior high Isam Al Madani. This research was carried out with the method of quasi experimental research design used was the non-equivalent control group design. The population in this research is the seventh grade students in junior high IT Al Madani. Sampling is done with cluster random sampling taken by two

classes. One experimental group/class as a treatment, and one class as a comparison group.

Pretest posttest prior learning and after learning. The group who were given preferential treatment by applying the learning model of news-based teaching called Group of experiments and groups that were given the scientific learning model called the control group (the comparison). Data obtained from research is science literacy scores of students, score a critical berrpikir students, and the student's portfolio. Then the data were analyzed with the test data in the form of a test of the difference of the two averages or test the t-test.

## RESULTS AND DISCUSSION

The science literacy of the students in this study refers to the understanding and application of science in everyday life. Based on the score of students in answering the problems such as environmental pollution. During the research literacy science students are assessed through a test that is by a matter of a test consisting of five science literacy test question. Science literacy indicators covering knowledge aspect of accuracy of the students in writing down the cause of the pollution, the accuracy of the students in classifying the impact of pollution and the idea of students in writing the critique and suggestions towards pollution problems.

Data analysis based on improved literacy science experimental class students better than the class of the control. Improvement of the literacy score in science class experiment of 49, 2% after applied the model of news-based teaching. Then for the classroom with learning without models of news-based teaching science literacy shows an improvement of 36, 0%. The increase in the literacy test in science as in Table 1.

**Table 1.** Science literacy enhancement

Class	Mean		Increasment posttest pretest	% Increasment of posttest pretest	
	Pre test	Posttest		-	-
Experiment	55.00	82.06	27.06	49.2	
Control	54.72	74.44	19.72	36.0	

Creativity in research is defined as a large number of the idea of writing students. Indicators of creativity that is seamlessly thinking skills, thinking skills, and skills in original detail. On the first indicator i.e. thinking skills seamlessly data collected in the form of a

written student related idea 5 W + 1 H from reading. Later on original thinking skills indicators data collected in the form of scientific posters. Scientific poster is a structured task given the teacher at the end of the meeting, as shown in Figure 1, 2, 3 and 4.



**Figure 1.** Picture to environment pollution



**Figure 2.** Picture to environment pollution



**Figure 3.** Picture to environment pollution



**Figure 4.** Picture to environment pollution

So, the creativity of students in learning skills in aspects of the topic of environmental pollution, namely in the form of paper letters to officials and scientific posters.

Critical thinking ability of the students in this study refers to a number of questions, the number of arguments, the amount of criticism and suggestions, and answers to student news article from the dangers of air pollution. Aspect of the ability to criticize the problem assessed

through question critical thinking test consisting of two reserved long readings sourced from articles and scientific journals.

Data analysis based on improved critical thinking ability by 28, 3% with an average score after applied the model of news-based teaching. Then for the classroom with learning without models of news-based teaching shows an increase of 21, 7%. Increase in literacy tests of science as in Table 2.

**Table 2.** Increased critical thinking ability

Class	Mean		Increasment		%
	Pre test	Posttest	posttest pretest	–	posttest pretest
Experiment	62.35	80.00	17.65		28.3
Control	61.39	74.72	13.33		21.7

Discussion of problem Formulation are answered through research is how the literacy ability of science students, how the creativity of students, and how critical thinking ability of students having applied the model of news-based teaching. The first data collected through literacy worksheets, both through the science literacy test consists of five reserved essays and critical thinking test consisting of two essay question. A matter of science literacy test consists of reading the question long, questions with pictures, text analysis and questions the news into data-shaped pie charts or tables.

A model presents a news-based teaching (News-based learning) in learning the IPA be one solution to familiarise science literacy. The way is providing newspapers and discussing the topic or case of science that is in the news. Designing classes with literacy corner as the site of the availability of information from the newspaper. The first students in pairs choose a newspaper that's been provided for teachers in literacy corner. Then the students read the news the Citarum River is getting damaged. Students in a group alongside his partner fill out and answer the questions that are on the literacy worksheets. Students cutting out science news then tacked on the wall of literacy, there hung a piece of news of environmental pollution on the tree of knowledge that is in front of the class. In line with the theory of Jarman and McClune stating that read and understand the important points of the media reports was the scientific skills of the 21st century. Learn science through news can increase student involvement with science and provide support in learning science (Jarman & McClune, 2007).

Critical thinking ability of students in aspects of conjecturing alternatives (has alleged an alternative) and aspects of drawing

conclusion (infer) assessed via question test critical thinking. The question of the critical thinking test in the form of a long reading from a news article about the dangers of air pollution. Students write down the reason to agree or disagree with the reason and can conclude the efforts to reduce the harm from air pollution.

After applied the model of news-based teaching critical thinking ability of students better than before the applied model of news-based teaching. In line with the opinion of Blake (1993) defines that critical thinking is the art of thinking about thinking, think clearly, precise, accurate, relevant, consistent, and open. Critical thinking while understanding reading would involve someone to critical in conveying ideas through language.

The creativity of students in boarding schools Al Madani in learning the IPA form of scientific poster paper. Initially students make scientific posters with messages that are simple on paper, then the assignment of HVS next student group is able to make posters with messages about how to take care of the Earth with the contents of the message are more complex. A few students dared to read out a plan of action against environmental pollution problems in front of the class. In addition, students are able to create a letter to officials with a polite language and manners.

Source of creativity is the tendency to actualize themselves, realize the potential, the urge to grow and become mature, the tendency to express and enable all of the capabilities of one's self, with nature, and with people others. Students in boarding schools Al Madani essentially have creative and independent character. Because accustomed to living in an environment of boarding schools which familiarise children do activities independently.

However, in learning in classroom teachers need to provide support in the form of tools and materials which support the creativity of students. As well as providing mentoring or guidance on a regular basis to the group in collecting waste that can be recycled and in completing the tasks of the project.

## CONCLUSION

Learning the IPA with model news based teaching gives influence on science literacy, creativity, and critical thinking. Learning natural science through news teacher and student increase and support a lifelong learning.

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