

THE DEVELOPMENT OF A PARMI (PRODUCTION, ATTENTION, RETENTION, MOTIVATION, AND INNOVATION)-BASED LEARNING MODEL

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Abstract

The objective of this research is to describe the steps in developing a PARMI-based model of scientific writing. This model includes: 1) making prototypes, and 2) piloting the model through four stages, namely focus group discussion, experts' considerations, limited trials, and extensive trials. Subjects in this research were STAIB (Islamic Institute of Bunga Bangsa), STAIC (Islamic Institute of Cirebon), STAIMA (Ma`had Ali Islamic Institute), and ISIF (Fahmina Institute of Islamic Studies). The research period ranged from July to December 2014. This model encompasses: 1) the philosophical foundation underlying a PARMI-based learning model, whether conceptual or principal, 2) steps of a PARMI-based learning model, and 3) the impact of a PARMI-based learning model. Thus, a PARMI-based learning model is suitable for learning to write scientifically.

Keywords: Learning, model, PARMI, scientific, writing

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1.0 INTRODUCTION

The success of scientific writing research involves several factors such as learners, teachers, learning models, and learning evaluations. Without learning models, it is hard to build, improve, and develop students' scientific writing skills. Therefore, a PARMI-based learning model (production, attention, retention, motivation, and innovation) is expected to solve students' problem in scientific writing.

As an acronym, PARMI is expected to facilitate learning. As a combination of Bandura's social learning and its innovation, it emphasizes students' attention, motivation, production, and retention. These four components have a big share in learning to write scientifically. Writing is a manifestation of innovation and creativity. The more a person is creative, the greater his or her innovative attitude will be in developing and improving scientific writing skills.

This research paper aims at developing the conceptual framework of a PARMI-based learning model, as follows: 1) the philosophical foundation underlying a PARMI-

based learning model, both conceptual and principal, 2) steps of a PARMi-based learning model, and 3) the impact of a PARMi-based learning model.

2.0 THEORY AND METHODS

2.1 Theory

One's success in writing is closely connected to the motivation of students and lecturers (Lo and Fiona, 2007; Nilsen, 2009; Lucas, 2010; Mahadi and Sepideh, 2012). The redesign of learning can be in the form of curriculum development in universities to maximize memory and students' skills (Harris, 2006, Hasegawa, 2013, Bair and Cynthia, 2013; Kellogg, 2008; Giridharan and Alison, 2011). Scientific writing is a way of expressing ideas necessary to think (Suyanto and Sutinah, 2011: 3) because to write is a part of critical thinking skills (Bair and Cynthia, 2013). The characteristics of critical thinking, among other things, are to find the right and reliable information and sources (Zuchdi, 2009: 50; Munandar, 2012: 35) that focus on various aspects (Sutrisno, 2012: 69). The form of scientific papers can be papers, reviews, activity reports, and proposals (Kalidjernih, 2011: 2-3). Scientific literature must contain universally acceptable truths, in terms of country, language, and culture (Terry Mart in Kompas, 2012). However, students merely pay attention to the content and ignore the aspects of writing as scientific work (Muqowim et al, 2011: 17).

2.2 Method

The research activity is based on the Glanz's model theory (Gall, et al., 2003: 585-591) and the Zuber Skeritt's model (Cohen, et al., 2000: 235), encompassing a focused selection, data collection, analysis and interpretation of data, reflection, and modification. Here are the steps involved: 1) creating prototype of PARMi based learning model; 2) piloting the PARMi-based learning model covering four stages such as FGD, experts' judgment, limited trial, and extensive testing; and 3) establishing the PARMi-based learning model. Research subjects on a limited trial were conducted at the Islamic Institute of Bunga Bangsa (STAIB). The research subjects on extensive trials were conducted in STAIMA, STAIC, and ISIF. Validity of data triangulation, method, and peer-debriefing involved two experts, namely Prof. Andayani, M.Pd. and Dr. Hisham Zaini, MA. Data validity was also conducted in a workshop attended by general course

lecturers of Indonesian Language, students, Vice Dean for Academic Affairs, and Vice Rector for Academic Affairs. A limited trial was conducted six times from September to October 2014. A broad trial was conducted in each of the seven meetings from November 2014 - December 2014.

3.0 Results

A PARMi-based scientific writing model is developed through a juridical, conceptual, and empirical framework. The juridical foundation is mainly concerned with the letter of the Director General of Higher Education, No. 152/E/T/2012 on Scientific Publications. The conceptual foundation is a variety of experts' opinions and relevant research synthesized to determine the success of learning, students' conditions and needs as applied in the Cirebon-based Islamic Institutes.

The PARMi learning model has five main components, namely production, attention, retention, motivation, and innovation, as summarized below:

a. Model Structure

The PARMi-based learning model has seven stages of activities: 1) gathering as much information as possible about the learning problems to uphold aspects of motivation, attention, and production; 2) identifying information by focusing on aspects of retention and production; 3) choosing the most interesting information concerning the scholarship that depends on aspects of innovation, and production; 4) exploring information and facts to support data and deal with aspects of motivation, attention, retention, innovation, and production; 5) explaining the facts and data pertaining to selected problems that contain aspects of attention, retention, and production; 6) analyzing facts and data about both newly acquired and long-held knowledge. This activity examines aspects of retention, innovation, and production; 7) summarizing the results of the analysis to support the production aspect.

b. Social System

The learning model of PARMi requires a good cooperation between lecturers and students as well as between students. Lecturers assist students to foster motivation and attention, strengthen retention, and produce creative writing. A PARMi-based learning model integrates knowledge into problem solving and students' innovation.

c. Role of Lecturer

Lecturers are motivators and facilitators who monitor every progress of students' work. Lecturers are expected to assist students to face difficulties when they implement the technique of writing and search for referral sources.

d. Support System

This model can be used for product-oriented courses or outcomes that focus on capabilities.

e. Instructional Impacts and Companions

A PARMi learning model shows 1) the growing interest in writing; 2) growing confidence in writing the ability; 3) creative; 4) producing papers and sending them to journals, both internal and external; 5) a scientific integration between the theories in the classroom and the real problems in society; and 6) a change of mindset between students and lecturers mainly connected to a lecturer's position, which is regarded as more and more frightening.

3.1 Results of Model of Development Based on Focus Group Discussion

A Focus Group Discussion (FGD) is to get input and suggestions from the lecturers of Indonesian general course. The FGD was conducted on Monday, July 15, 2014 in the Tadric English Department Room, IAIN (State Islamic Institute) of Sheikh Nurjati Cirebon. The FGD was attended by representatives of Indonesian general course students and lecturers in Cirebon-based PTAs. The prototyped aspects of PARMi-based scientific writing model consist of: 1) the needs to review individual students' writing skills; 2) the students' needs to give a task involving reading activities, both books and news; 3) the students are given a place to display or show the work; 4) holding activities related to scientific writing; 5) ensuring students' cognitive abilities about the rules of writing scientific papers; and 6) the needs to be firm in doing PARMi-based scientific writing activities.

3.2 Model Development Results Based on Expert's Judgment

Experts' consultations or assessments aim to get feedback, suggestions, validation, and approval. Validation was obtained from Indonesian language and literature learning experts, Prof. Dr. Andayani, M.Pd. and learning experts at PTAs, Dr. Hisham Zaini, M.A. The given input includes: 1) the course outline (SAP) needs to be reviewed, 2) some indicators do not deal

with the Basic Competency, 3) PARMi concepts need to be re-emphasized in terms of learning, 4) the evaluation needs to be reviewed to know the ability of scientific writing students with the semester final evaluation, 5) the needs to review the selection of instruments in the form of writing papers, and 6) lessons should be relevant accordingly.

3.3 Results of Model Development and Improvement Based on Limited Trial at PTAI

Limited trials were conducted at the Mathematics Teacher Education Department (PGMT), Islamic Institute of Bunga Bangsa (STAIB) in Cirebon for two months, or eight meetings. This limited trial: 1) applies prototypes that have been adapted to the feasibility concept of a PARMi-based learning model, learning objectives, lecturers' and students' needs analysis, 2) evaluates prototyped implementation results, 3) corrects deficiencies during the prototyped implementation, and 4) re-applies the improved prototype in the next meeting. Limited trials include implementation, evaluation, strategy improvement, and material improvements based on the previous course outline (SAP) or lesson plan (RPS).

A PARMi-based learning model has advantages and disadvantages. Its advantages include 1) the lecture atmosphere is different; 2) students are directly involved in learning; 3) inter-students synergy; 4) students can learn about interview techniques; and 5) students can prepare interview reports. Its drawbacks include 1) the students find it difficult to determine and find out the interviewee; 2) some group members neither do nor perform the task; 3) tasks are less clear resulting in students' different understanding of concepts, lack of knowledge and confidence; 4) the time is limited.

3.4 Results of the Model Development and Improvement in Extensive Trials

The Department of Islamic Religious Education at Ma'had Ali Islamic Institute (STAIMA), Cirebon Islamic Institute (STAIC), and Institute for Islamic Studies of Fahmina (ISIF) carried out a wide-ranging trial of the PARMi-based scientific writing model. The results of extensive trials in STAIMA Cirebon show 1) limited time to discuss the materials; 2) students' lack of reading ability; 3) the lack of campus infrastructure especially

Internet networking and information technology. The average value of pretest is worth up to 63.32 and posttest is worth up to 72.16.

The extensive trials in STAIC increase the mean values of pretest (64.57) and posttest (71.46). Thus, by using the PARMi-based scientific writing model, students' ability in the scientific writing can be improved. Extensive trials in ISIF Cirebon show that the mean pretest score is 63.76, while the mean posttest rate is 74.43. In short, students' score in scientific writing is improved by 14.33%. Here are the t-test results using the SPSS 21 application.

Table 1. Results of *t*-Test at STAIMA, STAIC, dan ISIF

		Paired Differences					<i>t</i>	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
STAIMA	Posttest - Prettest	8.840	2.672	.534	7.737	9.943	16.541	24	.000
STAIC	Posttest - Pretest	7.333	3.304	.603	6.099	8.567	12.155	29	.000
ISIF	Posttest - Pretest	10.667	3.623	.661	9.314	12.020	16.126	29	.000

5.0 CONCLUSION

The development of a PARMi-based scientific writing model has been declared feasible by experts, lecturers of Indonesian general course, and students who take the Indonesian general course. Experts' judgment of the prototype is concerned with 1) basic competence specification; 2) other related indicators; 3) strict loading of PARMi steps; 4) specific evaluation; 5) instruments; and 6) learning materials. In a limited trial, students cannot implement a prototype of PARMi-based scientific writing model fully. In a broad trial, however, students are able to use it to improve their writing skills.

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