Literacy Teaching and Learning Model Based on MID to Improve Students' Reading Comprehension Skills for Elementary School Students

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Abstract : The main issue in this study is the low literacy skills of elementary school students. The main reason why this condition occurs is that literacy teaching process still applies a wrong model. To improve the literacy skills of elementary school students', this research established a model of teaching literacy based on MID concept. This study was conducted by using exploratory mix methods research. Research samples were elementary school students from three schools with three distinct characteristics. The findings have revealed that the model of teaching literacy based on MID concept is a unique literacy learning model.

Keywords : Models of teaching literacy, MID Concept, literacy skills, elementary students.

1. INTRODUCTION

Twenty-first century is known as the information age. This given name is in line with the characteristics of the 21st century marked by the rapid development of information and global nature. This development is supported by the development of communication technologies, especially in the field of computing which cause almost all human routines become extemporaneous. In line with these characteristics, the demand for literacy skills is growing. According to Morocco, et al. (2008: 5) that in the twenty-first century, the most important abilities to be possessed by humans is the ability of multi-literacies. Multi-literacy skill is characterized by four important things: the ability of high understanding, critical thinking skills, the ability to collaborate and communicate, as well as critical thinking skills.

In line with the development needs of literacy, the development of literacy skills of students in the school were even undergoing a paradigm shift. At least four competencies that must be mastered by the students so that they are able to play an active role in the twenty-first century. The fourth student competencies that must be mastered is the ability to read in high understanding, good writing skills to build and express meaning, the ability to speak accountably, and the ability to master a variety of influential digital media. As Concannon-Gibney and McCarthy (2012) stated *"...all students be provided with the problem-solving, communication and thinking skills that they will need to be effective workers and citizens in the 21st century. Reading plays a key role in science achievement."* Associated with these conditions, it is not something unfair if the government ultimately changed the curriculum 2006 to the curriculum 2013.

Ministry of Education and Culture (2013: 1) has explained that the development in curriculum 2013 is expected to produce productive, creative, innovative, and affective citizen through strengthening attitude (know why), skills (know how), and knowledge (know what) that are integrated to the lesson.

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This is reasonable efforts in line with the fact that numerous studies and surveys conducted by several international institutions always put Indonesia in the lowest order in the field of literacy even compared to some ASEAN countries.

The demands on the development of literacy education is reinforced by various measurement results on Indonesian students' multiliteracy skills that has been conducted by several international institutions that always puts Indonesia at the lowest order in the field of multiliteracy skills (science, math, and reading) even compared to some ASEAN countries. This is proven by the Progress in International Reading Literacy Study (PIRLS) survey conducted in 2011, Indonesian students still placed at lower order (the order of 42) compared to other countries studied (TIMSS & PIRLS, 2012). Multiliteracy assessment (reading literacy, scientific literacy, and mathematical literacy) conducted by the Programme for International Student Assessment (PISA) shows the same thing that Indonesia is a country with a low level of ability multiliteracy since 2000 to 2012(the last period of measuring the data). (OECD 2003; OECD, 2004; OECD, 2007; OECD, 2010; OECD, 2013).

Based on empirical data above, the efforts to improve the quality of literacy learning process should be done as early as possible so that literacy competence of elementary school students can be increased. The exertion to improve the literacy skills of primary school students are also more crucial to be done in line with the implementation of Curriculum 2013, in which the content of Indonesian Language subject is integrated with other subjects so that the learning is carried out through multiliteracy, integrated, and simultaneously differentiation approach. Through this approach the students are expected to have much better competence of attitudes, skills and knowledge. Through this approach students are also expected to be more creative, innovative, and more productive. Hence, in the context of teaching literacy curriculum in 2013 is not only oriented to improve the cognitive abilities, but more oriented towards the development of attitudes, skills and knowledge of students.

Based on the above two conditions, efforts to improve the quality of teaching literacy should be done. The main steps that must be done is to formulate learning model that corresponds to the demands of 2013 curriculum that is teaching and learning model based on multiliteracy, integrative, and simultaneously differentiation learning. Learning model that thus expected to develop students' understanding through finding out and asking, develop the ability to collaborate and communicate through cooperative learning, and simultaneously develop the ability to think creatively in solving various problems through analytical thinking practice.

The effort of developing this model is a must since the existing variety of learning model today is not specifically oriented towards the students' multiliteracy skills. In other words, the learning model which has been developed is only oriented to the specific literacy. The development of learning model based on multiliteracy, integrative, and differentiation is also in line with the opinion of Greenleaf, et al. (2010) who states that "*We must think strategically about the integration of literacy development across subject matter domains if we expect to develop students' multiple capacities*". Furthermore Greenleaf, et al. (2010) reinforces the need for developing multiliteracy learning through the conclusions of their research which stated that the integration of science literacy in the learning of science at the same time is able to improve students' literacy.

Based on the description above, the researchers were interested in designing multiliteracy, integrative, and differentiation (MID) model. For that reason, this research focused on efforts to produce learning model in multiliteracy, integrative, and differentiation learning dimension.

There are several goals of this study. The purpose of this study was to determine, explain and describe the final product learning model based multiliteracy, integrative, and differentiation concepts in accordance with the characteristics of elementary school students and the impact of the learning model based on multiliteracy, integrative, and differentiation concepts to increase students' literacy skills of elementary school.

2. RESEARCH METHOD

The method used in this study is mixed exploratory methods. This study was conducted in West Java province. Based on the draw, it was obtained three counties as a test site that is Regency Bandung and Cirebon. The subject for the qualitative study is the teachers who teach in schools included in research sites and in each district it was set 3 target schools. Based on this concept, the number of teachers involved in the study were 9 people. The subject of research for quantitative study is elementary school students who were in grade 5. The subject of this research was determined by purposive sampling. The subject of limited experimental classes were only grade 5 students at randomly selected schools. While the subject of extensive experimental classes were grade 5 students in the 3 districts. The way to determine the location of the school is done purposively with consideration of the location of the school and students' academic ability.

The instrument used to collect the data of this study were (1) semi-structured questionnaires, this is used to collect data of tracking needs (2) guidelines for semi-structured interviews to collect teacher's response on the model (3) test to measure the literacy skills of students, (4) assessment process shaped scoring rubrics to measure students' activities, (5) the field notes to collect data of observation, (6) assessment guide for the learning process, and (7) documentation to collect data of research process. Based on the type of instrument used, this study resulted in two types of data qualitative data which are processed qualitatively and quantitative data which were processed using a statistical method that is (t) test and ANOVA test.

3. RESULTS AND DISCUSSION

(*a*) Illustration of MID Model

1. Grand Design Model

MID model developed in this study is based on a common design as follows :
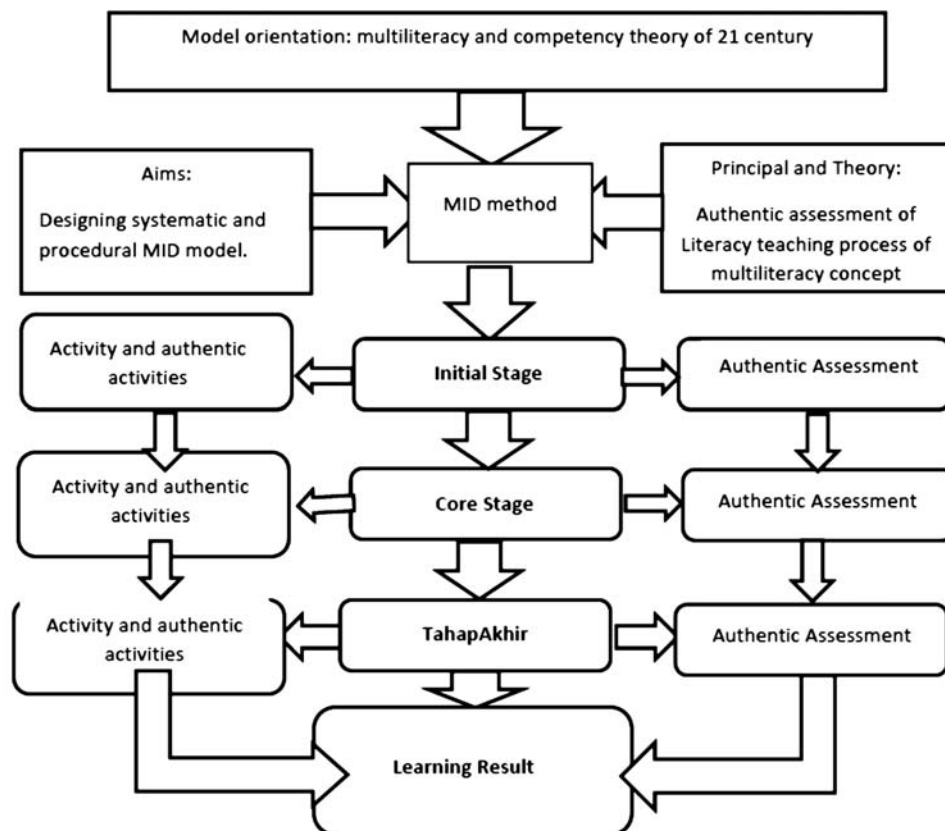

Figure 1: Grand Design of MID model

The design above further was developed as MID teaching and learning model. A developed learning model was based on the four basic theories used and then performed the process of model development. The process of developing this model is based on the systematic model development work initiated by Dick, Carey, and Carey (2009). The process of developing the model itself is done in four stages: (1) the stage of identification, (2) the design stage, (3) the development stage, and (4) the test phase of the experiment. Dissemination stage carried out the development process upon the completion of a whole series of model development and reporting of research.

The final result of this development process is the concept of MID and its devices. The first tangible results is the theoretical basis of MID learning process while the second tangible result is devices that can be used practically in implementing the model in the process of learning. Both of these outcomes is the final product that became the main product of this research.

2. Syntax Rule of Teaching Literacy Based on MID Model

One of the components in the learning based on multiliteracy MID is learning cycle or cycles of meaning. This cycle is a guide for implementing the teaching and learning in the classroom. In other words, this cycle is depicting the stages of multiliteracy learning in general. This is usually known as learning syntax. Syntax in MID-based learning model is as follows.
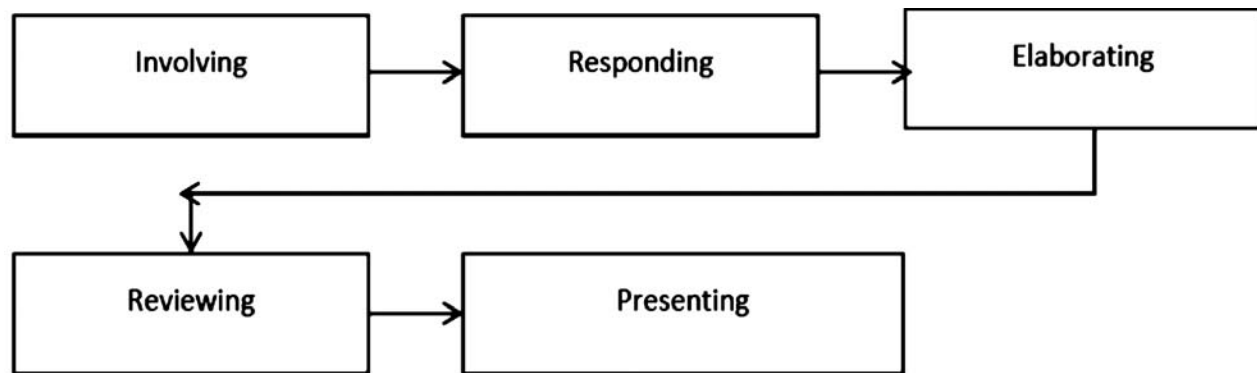

Figure 2: Syntax Rule of Teaching Literacy Based on MID Model

Based on Figure 2 above, literacy learning stages based MID are generally itemized as follows.

- **Involving :** At this stage, teachers must engage students in learning through generating the schemata or prior knowledge that the students have. The next activity is the students are encouraged to link the topics to be discussed by the student with the aim that students felt the most important topic to study. The third activity undertaken at this stage is under the guidance of the teacher students are expected to be able to make a variety of questions that are essential to be resolved through a variety of critical inquiry work on the next stage. In order to prepare students to follow the next steps teachers should also expose the students' learning activities that will be done as exposing the achievements of what activities students should produce at each stage of the learning activity.

- **Responding :** At this stage the students will individually respond to all the challenges the teacher gave. Students actively started doing various investigations, observations, or simple research activities related to the question that has been made in the first phase. In this stage, students may use the library, schools' environment, or media that has been provided by the teachers in order to create a temporary answer to the question they made.

- **Elaborating :** At this stage the students will elaborate more on the findings of individuals with a friend in the group. As they perform elaboration activity, multiliteracy learning can be combined with cooperative learning of jigsaw. The process of elaboration should be to generate ideas

together that can be used to answer questions that have been posed. The result of this elaboration activities outlined in the report that all members of the group should also possessed the group.

- **Reviewing :** At this stage, the group review the truth of draft report. The review process can be done to check the individual data, the validity of the source, and the accuracy of the results. If the entire contents had been accurate, then the group appoint a representative to explain the work and other students were prepared to write the note of class discussion, revising the results of the class input, and also the team tasked to maintain or take responsibility for the content of the report.
- **Presenting :** At this stage the group representative presents the results of their work to the class. The exposure is continued with discussion and ends with an overview activities, strengthening and development of the material by the teacher.

3.   **Implementation Model, Reaction Principle, Environmental Systems and Expected Impact of MID**

(a) **Implementation Model**

Implementation of the application of MID –based Literacy Learning Model in teaching and learning process takes between 70-140 minutes which takes place in 1-3 sessions. For effective implementation, the learning schedule should be held 2 times a week. In the implementation, teachers and students should have the ability of critical thinking, creative thinking, communication skills, and have the passion and motivation to work both individually and cooperatively. During the application of the model, the teacher must record the various activities and the student's work, organize and bind the habitual patterns of thinking and learning as well as trying to influence the students psychologically so that they get used to move well.

(b) **Reaction Principle**

The main reaction that should be given is that the teacher must constantly raise the motivation to learn, develop critical, creative and productive thinking skills, and make the students accustomed to work cooperatively, collaboratively, and communicatively. The reaction expected from the students is that students are ready to work hard, conscientious, diligent, and responsible for the learning process.

(c) **Environmental Systems**

In order to implement this model, the expected environment available is the availability of the roots which are arranged in a relevant multidisciplinary science, media and learning resources, complete worksheets that process individuals and groups, and situations that support learning. Something that equally important is that students should be aware of the true role and duties during teaching and learning. This includes (1) optimizing the thinking skills, creative skills, and motivation to learn and work; (2) openness to ideas, concepts, thought and new input; (3) ready to work together collaboratively and cooperatively; and (4) the ability to optimize both intra and inter-group communication.

(d) **Expected Impact**

MID Based model was developed with the hope of impacting instructional form of (1) improving the literacy skills of students, especially reading, (2) the development of students 'skills in carrying out the process of scientific work during the teaching and learning process, and (3) improvement of students' skills in critical thinking, creativity, and innovative. The accompanying impact is in terms of (1) developing the character of students, including disciplines, meticulous, hard work, responsibility, tolerant, polite, courageous and critical as well as ethical and (2) forming life skills to the students, (3) improving the scientific attitude and (4) fostering students' ability to communicate, argue and collaborate / cooperate. Visually, the impact of the application of this model can be described as follows.
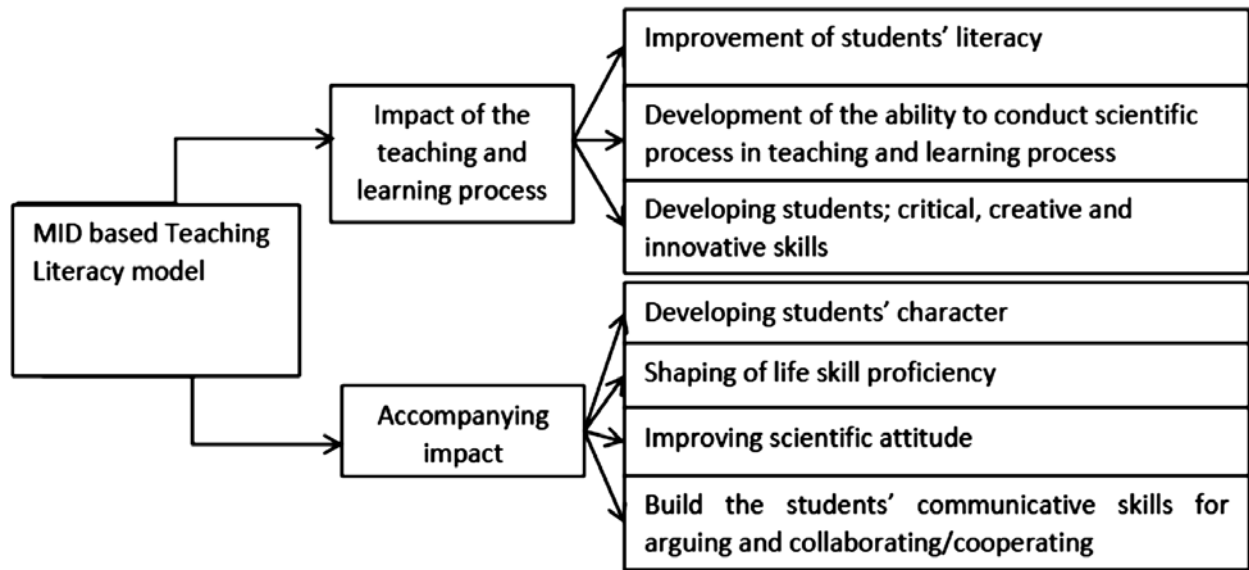
Figure 3: Impact of MID Based Literacy Teaching and Learning Model

(*b*) Result

Based on the test results of limited experiments that has been conducted three times, it shows that in experiments carried out reading literacy skills of students has increased significantly. Results of statistical tests on the limited experimental results are presented in Table 1 below.

Table 1
Anova Test Results of Students' Reading Literacy in Limited Experimental Results

			Experiments	
			Equal variances assumed	*Equal variances not assumed*
Levene's Test for Equality of Variances		F	7.846	
		Sig.	.007	
t-test for Equality of Means		T	4.695	4.695
		Df	62	51.206
		Sig. (2-tailed)	.000	.000
		Mean Difference	9.72812	9.72812
		Std. Error Difference	2.07189	2.07189
	95% Confidence Interval of the Difference	Lower	5.58648	5.56904
		Upper	13.86977	13.88721

The table above shows that the application of Teaching Literacy based on MID Model during the limited experiment contributed significantly to the improvement of students' reading literacy skills. This increase occurred in all phases of the experiment. Thus, the model developed can be used to improve students' reading literacy in limited scope.

Based on the test results of extensive experiments conducted in three experimental classes, it is noted that developed Teaching Literacy based on MID model effectively developed students' reading literacy skills. On the other hand it is also known that the conventional learning model of literacy also significantly contributed to the improvement of students' skills in reading comprehension. However, the conventional model used in the schools could only make significant differences in students' reading ability after it was applied three times. It was totally different from MID which could significantly contribute to every process teaching and learning activities. In order to prove the effectiveness of this model, the t test was then conducted and the result is described in the table below.

Table 2
The results of t Test om the students' Literacy Reading Ability between
Experiment Class and Controls Class

			Reading Literacy	
			Equal variances assumed	*Equal variances not assumed*
Levene's Test for Equality of Variances		F	.260	
		Sig.	.611	
t-test for Equality of Means		T	6.264	6.264
		Df	188	187.924
		Sig. (2-tailed)	.000	.000
		Mean Difference	10.22524	10.22524
		Std. Error Difference	1.63236	1.63234
	95% Confidence Interval of the Difference	Lower	7.00516	7.00518
		Upper	13.44533	13.44531

Based on the data in the table above, MID Model developed deemed to have a higher level of effectiveness for increasing the reading literacy skills than the conventional model used in schools. This proves MID Model has effectively improved the literacy skills of elementary school students' reading.

(*c*) Discussion

MID Model

MID Model developed in this study is a literacy reading teaching and learning model that is oriented to the development of process and learning outcomes. In line with its objectives, the resulting models have important functions and role in developing better teaching and learning activities, ie learning literacy reading which correspond to the concept of appropriate reading, develop the habit to comprehend reading carefully and creatively, thus ultimately will give an impact on improving the literacy skills of students' reading.

This model requires teachers' work in total. This means the teachers should be whole-hearted in developing a harmonious, qualified, and dignified teaching and learning process. Through the application of MID Model, teaching and learning process is built on awareness of roles shared between teachers and students. Collegiality, openness, and developmental environment of knowledge system began to take shape through this application. This condition is further encouraging the creation of a conducive learning environment for the teaching and learning activity begins with the formation of a positive attitude, both teachers and the students themselves. Then students are ultimately been accustomed to learning by starting their awareness of why and for what they are learning.

MID model also deemed to be able to build more qualified teaching literacy reading. This is in line with the fact that this model requires the activities of teaching and learning literacy reading is always carried out by applying the relevant syntax in every reading activities. Under these conditions, the second thing that developed in the reading skills of students is not only physical skills but also mental skills. So the students are accustomed to examine a discourse through scientific methods based multiliteracy. This automatically affect the students' intelligibility and survival understanding of the content of the discourse. Through such teaching and learning process, students will gain the knowledge-based skills so their acquisition of knowledge is more constructive and creative.

Moreover, MID model has also been able to build a dignified learning. Dignified learning is learning process on the basis of an active efforts based on the values of the characters. Through MID model, cognitive knowledge formed was not based solely on the intellectual abilities of students but also based on the principles of cooperation, caring, honesty, perseverance, and the values of other characters. Under these conditions, the intellectuality developed on students are also accompanied by the development of character of themselves. Based on this fact, the MID model was believed to form a superior personal who have good intelligence and a noble character.

Under the conditions of its final form, the developed MID model has some differences with the model that has been developed through previous research. At least five major difference between the models developed with a model that previously has been developed. The first difference is that the MID Model developed through this research are prepared in accordance with the method of reading comprehension or learning model used. On the basis of the proper use of the model the teaching and learning process is conducted in more conducive environment and is directly able to improve the students' competence This is in line with the opinion of Joyce, et al. (2009: 23) stating that the use of the learning model is believed to be able to improve the achievement of learning objectives.

The second difference is that the developed MID Model devoted to the reading process so that the model was developed based on the real activity of the students during reading. In line with the clear stages of this activity, the teacher can better monitor the students' learning difficulty level because the teaching and learning process using MID model are really able to expose its formative function during the learning process. This is in line with what Popham (2011: 5) statement that formative assessment is carried out during the learning process based on the real activity of the students during learning so that this assessment will be able to provide feedback significantly to the improvement of learning achieved by the students.

The third difference is that the developed MID model has been able to make students accustomed to possess characters during the learning process. Through the real activities conducted along with learning model, students would unconsciously been accustomed to cultivate core values and universal character include (1) honesty, (2) intelligence, (3) caring, and (4) firmness. The four characters value is then developed specifically in accordance with authentic activities undertaken during the students' learning process.

The fourth difference is that the developed MID model does not only present the general activity in learning, but also contains a number of activities oriented to the formation of better reading habits. The habit of reading in this study is not physical / visual reading habits but rather cognitive. The proposed habit of reading is the habit of the students in building a knowledge based on material they read, including

habits to accurately capture ideas, process ideas appropriately and cooperatively, and acquired the habit of expressing ideas creatively and responsibly. Based on this fact, the developed MID model emerged new idea that the reading habit is not only physical / visual activities, but more importantly mental / cognitive activities.

The fifth difference is that the developed MID model comes with process worksheets that leads students to work based on the demands of developed model. Under these conditions, even if teachers do not master the model of teaching and learning reading well, teachers and students themselves will be able to implement and follow based on authentic learning activities aligned with the model. The use of process worksheets give impacts on improving the ability of students directly and gradually along with the principle of learning stages as proposed by Axfor, Harders, & Wise (2009: 3) which states that through the learning stages, pupils will have a set of skills, strategies, and complex knowledge.

The successfully developed MID Model in teaching and learning reading literacy has also been directed to the acquisition of in-depth knowledge of what students read. This is in line with the activity and syntax form that are also constantly emphasizes work-based brain activity that are important for in depth knowledge acquisition. Furthermore, various information or knowledge gained by the students also believed to last long since the knowledge rather gained through the real performance of the student than instant acquisition of knowledge.

The Contributions of Mid Model Toward The Development of Reading Literacy Skills

MID Model developed through this research also significantly give positive contribution to the improvement of reading literacy skills of elementary school students. This increase occurred in all sample schools, which means that the MID model did not only function for high-level students but also for low-level students. MID Model developed in this study is arranged through the activity of thinking. Along with this fact, the students are familiarized with the process discourse with appropriate strategies. With the strategy they used, more students could explore in depth the contents and context of discourse so that their understanding were increasing. The success in increasing the literacy reading skills through this activity is reciprocal with studies that have been conducted by Greenleaf et al. (2010: 3) that develops reading apprenticeship learning model which also rely on the activity as a stimulus for the development of students' skills in reading comprehension.

The purpose of teaching reading with optimizing authentic activity is to create models of literacy reading based on students' learning activities. This has been the similar condition as research conducted by Greenleaf et al. (2010: 3). Therefore, it is natural if MID Model in reading literacy learning developed in this study proved to be able to develop students' reading comprehension. Other experts who develop teaching reading based on students' activities that relevant to MID model is Bryant, et al. (2009: 1). Bryant, et al. (2009: 1) concluded that the direct interaction of the student reading on pre, whilst, and post reading stages will build students' knowledge about the material learned.

About the preparation of worksheet as a form of authentic assessment process during the teaching reading process, MID model developed in this study are consistent with the findings of research conducted by Alonzo et al. (2009: 1) which concluded that the assessment will build a higher understanding in the pupils.

MID Model developed in the study is indeed able to also improve the quality of the learning process of reading literacy in schools. Due to the fact that MID model is basically a process to develop creativity, innovation, and productivity, this has been proving the contribution of MID for teaching and learning literacy reading process. Through the implementation of this model, the teacher recognized that learning literacy reading becomes more interesting and creative so that students are challenged to be able to read the whole variety of good discourse better either in science, social, or mathematical discourse.

4.   CONCLUSION

MID model generated through this research is a learning model of literacy reading oriented to the development process and learning outcomes. Under the conditions of its final form, the MID developed has some differences with other models that have been developed by experts in several previous study. This difference indicates that MID developed have significant importance for the improvement of the quality of teaching and learning outcomes in reading literacy.

The survey results revealed that MID model has proven to significantly contribute to the development of students' habits and increased students' reading literacy skills. This increase occurred in all sample schools, which means that MID model has improved not only for highly level students but also for lower-level students. Given this reality, MID Model is indispensable to improve the students' habits and students' skills in reading comprehension in a variety of text types either in scientific, social, and mathematical text.

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