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Literacy Movement: How does Mathematics Teacher Integrate it into the Learning Process?

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ABSTRACT

The 2013 Curriculum (K13) 2017 Revision required the teachers to facilitate their students to have the willingness to read by integrating literacy movements into the learning process. This study describes how does the Civil Servant Mathematics teacher integrate literacy movement into the learning process. The subject of this study is a Civil Cervant Mathematics teacher at SMAN 1 Wuryantoro, Wonogiri Regency. Based on the observations and interviews, the teacher 1) compiles long story questions to train students' ability in reading comprehension, 2) provides opportunities for students to borrow books in the library during group discussions, 3) provides opportunities for students to operate their smartphone to search the materials, 4) assigns individual tasks to the students to look for the articles or journals about the materials, and 5) gives motivation about the importance of reading to integrate the literacy movement.

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INTRODUCTION

Humans are creatures that are required to always develop their potential in accordance with the progress of the times. Humans need to always learn in order to compete globally with other human beings in the world. Learning is an active process and the Institute is committed to ensuring that the learner is at the center of the learning experience (Waterford Institute of Technology (WIT), 2007). Smith (2007) said that the students are characterised by their low boredom thresholds and short attention spans. They are accustomed to being continually entertained and this has shaped their expectations for increased levels of interactive and participative information literacy instruction.

Literacy is the key to competing at the global level. The World Economy Forum 2015 defines 21st-Centuries of competence and literacy is the key (Tim Satgas GLS

2016, 2017). Reading skills are a very important skill in life. The reading skills are closely related to the human knowledge and understanding. The reading skill is closely related to the analytical, critical, and reflective reading comprehension. However, at the high school level, the Indonesian students' reading comprehension according to the Organization for Economic Cooperation and Development (OECD, 2016) showed that Indonesia students are ranked at 62nd of Program for International Student Assessment (PISA). Indonesia was only scored 397 when the average OECD score was 493. For this reason, the Ministry of Education and Culture (Kemendikbud) develops a School Literacy Movement (GLS) involving all stakeholders in the field of education. GLS is a fifteen-minute reading activity performed at the beginning, middle, or end of the learning process. The book that is read is not a textbook lesson. Books that are read are books of interest to students. To simplify scheduling and learning hours, GLS should be done at the beginning of the lesson. GLS aims to make students love reading and making reading as a habit and lifestyle.

In K13 2017 revision, GLS is no longer a separate part of the learning process. It means that GLS must be integrated into the learning process. Direktorat Pembinaan sekolah Menengah Atas (Direktorat PSMA, 2017) said that students and teacher do GLS to enrich and deepen the insight and mastery of the material so that students are directly involved and not just dependent on the teacher.

Many problems encountered in implementing GLS. The main problem is the low literacy ability. Students and teachers are feeling lazy to read. Second is the unavailability of reading books that appeal to students and teachers. Many schools have only textbooks so it makes the difficulty develop reading habits because students feel lazy. The third is the teachers' ability has not been maximized in developing literacy activities according to the conditions of students and schools. Fourth is there is no adequate reading place. The school library has not met the government standards.

The teachers' competence is the main requirement of the achievement of national education goals. This is also true in integrating literacy movements in the learning process. Based on this, this study describes the way teachers integrate the literacy movement into the learning process.

GLS is developed based on Nawacita especially at number 5 (five) which is improving the quality of life of human and society of Indonesia, 6 (six) that is increase the increase of people productivity and competitiveness in international market so that the Indonesian can go forward and rise with other Asia nations, 8 (eight) that is to revolutionize the character of the nation, and 9 (nine) is to reinforce diversity and strengthen social restoration Indonesia (Sutrianto, Rahmawan, Hadi and Fitriono, 2016). Furthermore, Sutrianto, Rahmawan, Hadi and Fitriono (2016) said that literacy in the context of GLS is the ability to access, understand, and use something intelligently through various activities such as reading, seeing, listening, writing, or speaking.

As time passes and the progress of the times that requires students to have skills in the 21st Century, so in K13 2017 revision, GLS must be integrated into the learning process. Teachers should facilitate students to develop literacy skills. Student competencies expected to increase after this literacy are 1) using a special feature representation to support claims, inference, and prediction, 2) changing one mode to another, 3) explain interconnected interconnections, 4) providing different representations in explaining the phenomenon (5) choosing, combining, and/or producing standards and non-standards to communicate a particular concept, and 6)

evaluating multimode representations and explaining why one representation is more effective than the other (Dirjen PSMA, 2017).

According to Ferguson, the information literacy component consists of basic, library, media, technology, and visual literacy (Sutrianto, Rahmawan, Hadi and Fitriano, 2016). Basic literacy is the ability to listen, speak, read, write, and count is related to the ability of analysis to calculate, perceiving, communicating, and drawing information based on personal conclusions and conclusions. Library literacy is the ability to provide an understanding of how to distinguish between fiction and nonfiction, using reference and periodic collections, understands the Dewey Decimal System as a classification of knowledge that makes it easy to use libraries, to understand the use of catalogs and indexing, to have knowledge in understanding information while completing a writing, researching, working, or solving problem. Media literacy is the ability to know various forms of different media, such as print media, electronic media (radio and television media), digital media (internet media), and understand the purpose of using it. Technology literacy is the ability to understand the completeness of the following technologies such as hardware, software, and ethics and etiquette in the use of technology. Further, the ability to understand technology to print, present, and access the internet. In practice, computer literacy also includes computer turning and shutting down, storing and managing data, and operating software programs. In line with the flood of information due to the current technological developments, good understanding is required in managing the information the community needs. Visual literacy is the advanced understanding of media literacy and technological literacy, which develops the ability and learning needs by utilizing the visual and audiovisual material in a critical and dignified way. The interpretation of unstoppable visual material, whether in print, auditory, or digital (the combination of the three is called multimodal text), needs to be well managed. In any case, there are many manipulations and entertainment that really need to be filtered by virtue of ethics and propriety.

The GLS steps consist of three, namely the habituation, development, and learning steps. The habituation step is the first stage in the GLS. The habituation step aims to emerge the students' reading interest through a 15-minute reading activity. Development step aims to improve students' literacy skills through the responding activities of books that they have been read. The learning step aims to improve students' literacy skills and use enrichment books and reading strategies in all subjects.

One of the principles of literacy activity at the habituation step is teacher set a 15-minutes reading time each day. The teacher read book excerpts and discuss with students. The teacher can also take advantage of the library's role in getting students to read. In this step, the teacher served as a student guide in reading.

The principle of literacy activities at the development step is similar to the habituation step. The distinguish is a 15-minute reading activity followed by follow-up activities. The teacher can ask students to give or write brief comments on a book they have read. The teacher with students can also conduct a book review activity. Book review is an activity to revisit the contents of a book in a nutshell by providing advice related to the shortcomings and advantages of the book according to rules that are generally or predetermined.

The principle of literacy activities at the learning step is to support the 2013 Curriculum implementation which requires students to read non-text book lessons. Teacher can request and guide students reading 15-minutes then ask academic or subject-related duns.

METHODS

This research is qualitative with ethnography strategy which aims to know how does the Mathematics teacher at SMAN 1 Wuryantoro, Wonogiri Regency integrate literacy movement in the learning process. The ethnographic strategy involves activities about the world of people who have learned to see, hear, speak, think, and act differently (Spradley, 2007).

The subject of this study is a teacher of Mathematics SMAN 1 Wuryantoro, Wonogiri Regency. Researchers choosed teacher who has status as a Civil Servants and good communication skills. This study used observation and interview methods to collect data. Observation is done by observing the teacher while teaching in the classroom. Interviews were conducted by asking the teacher some questions about the learning process that have been done and integrating literacy movements. This study analyzed activity and speech data from the teacher at the time of observation to get a conclusion about how to integrate literacy movement into the learning process. This study also analyzed data in the form of teacher answers at the time of the interview. This study used time triangulation techniques and methods to obtain valid data. Researcher compared the data from observation and interview at the different time to get the valid data.

RESULTS AND DISCUSSION

One of the factors that influence the learning activity is the teacher. Teachers are external factors that support the achievement of learning outcomes. A skilled teacher in the learning process is better than the unskilled teacher because the skilled teacher can easily take advantage of learning situations and media. It will also affect the teacher ability to integrate 21st-century skills (one of them are the literacy movement) into the learning process.

The results of this study is the teacher has the belief that reading ability is a very useful provision for the future of her students. By reading, students can add and develop knowledge, analytical skills, and critical thinking. There are five ways that the teacher does to integrate literacy movements into the learning process. They are compiles long story question, provides the students to borrow books in the library, provides the students to operate their smartphone, assigns the students to search articles or journals, and gives motivation of the reading.

1. Compiles Long Story Questions

The story question is a question that is presented in the form of a short story. Stories in the story question can be told about daily life or other things. The story question is an attempt to build and apply the concept that students were learned that appropriate to the daily experience. Students will be more interested in solving problems that related to their life. By the story question problem, students are expected to interpret the words in the question, perform calculations, and use the relevant procedures that they have been learned. The story question problem is also train students to translate stories about real life situations into the Mathematics language.

The teacher makes a long story to train students to understand long story problems, especially during the national exam. For example, when linear programming material, teacher composes stories do not use the language directly but uses daily

language. For example, the teacher uses words no more than, not less than, and as much as possible. It is intended to train students to create mathematical models of daily language. Thus, teacher has trained students to have basic literacy skills especially in terms of writing down information obtained in a reading.

2. Provides the Students to Borrow Books in the Library

A library is a school media to encourage active and student-centered learning. As Hegarty, Carbery, and Hurley (2009) said that the impetus behind the library's explicit commitment to active and student-centered learning. Students can find materials that are not taught in the classroom by reading in the library. The library can also help students open their insights because the library not only has a collection of textbooks as well as general knowledge and skills books.

During the learning process, teacher sometimes divides students into several discussion groups to discuss a problem or learning material. Due to the limited book owned by the students, the teacher provides the opportunity for students to borrow books from the library to add to the source of the material under discussion. By giving students the opportunity to borrow books to the library, teacher also hopes that students get used to the library and read whatever they want.

3. Provides the Students to Operate Smartphone

Rockman (2005) said that ICT literacy impacts the way that students live, learn, and work. It is important that they be able to distinguish between various types of information, evaluate their information choices wisely, and use the information ethically. Each student must have and bring the smartphone to school. Many students operate smartphones at the time of learning process to open social media so as not to notice when the teacher explains the material. This is what underlies teacher to give students the opportunity to operate their smartphones to look for materials or learning materials not found in the book.

The teacher hopes that the wise students in operating the smartphone. Rather than just being used to open social media, the teacher uses smartphones as a medium of learning as well as a media integrating literacy movement. Thus, the teacher has facilitated students in technological literacy. The teacher expects students to have the ability to follow technological progress (access the internet) and have ethics and etiquette in utilizing technology.

4. Assigns the Students to Search Articles or Journals

Teacher assigns individual tasks to students to search for articles or journals. For example, at the time of linear program material, the teacher asks students to make an article about the usefulness of linear programming in technology. The teacher asks the students to find the source of the article in a journal or article on a blog that can be trusted. The teacher asserts that the assigned tasks (copies of friends) will not be assessed. With this task, teachers expect that students have the ability to write articles, find reliable sources, present their articles, and be responsible for their writing.

5. Gives Motivation of the Reading

Motivation is an endeavor that can cause a particular person or group of people to be moved to do something because they want to achieve their desired goals or get satisfied with their actions (Kamus Besar Bahasa Indonesia (KBBI), 2016). Teachers often convey the importance of reading to increase knowledge and understanding of

something in life. In conveying the motivation for the importance of reading, teachers use data from PIRLS, TIMSS, and PISA which states that literacy skills in Indonesia are low. By providing the motivation, students are expected to have a high willingness in reading.

CONCLUSION

The four points of Nawacita number 5, 6, 8, and 9 are closely related to the literacy component as a qualified, productive and competitive human capital formation, character, and nationalist. That is why Kemendikbud develops a GLS involving all citizens of the school. The GLS is initially stand-alone (done at the beginning, middle, or end of the learning process), beginning in 2017 (precisely after revision of K13 in 2017) GLS must be integrated into the learning process.

One of the GLS steps is improving literacy skills and using enrichment books and reading strategies in all subjects. Thus, all subject teachers have to implement the literacy movement into the learning process that is tailored to the characteristics of each subject. GLS integration in the learning process is not easy because Indonesians have low literacy skills, unavailability of reading books, low teacher ability, and facilities that are not standard. However, in the hands of competent and professional teachers, GLS will be easily integrated into learning process.

This study describes how does the Civil Servant Mathematics teacher at SMAN 1 Wuryantoro, Wonogiri Regency integrate literacy movement in the learning process. The Civil Servant Mathematics teacher at SMAN 1 Wuryantoro, Wonogiri Regency integrates literacy movements based on his own experience and skills. The teachers are not guided by books or guidelines from the government (Kemendikbud) to integrate literacy movements into the learning process. The Civil Servant Mathematics teacher at SMAN 1 Wuryantoro, Wonogiri Regency integrates literacy movements by: 1) compiles long story questions to train students' ability in reading comprehension, 2) provides opportunities for students to borrow books in the library during group discussions, 3) provides opportunities for students to operate their smartphone to search the materials, 4) assigns individual tasks to the students to look for the articles or journals about the materials, and 5) gives motivation about the importance of reading.

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