

EFFORTS TO FAMILIARIZE LITERACY CULTURE IN STUDENTS: ORIENTATION IN THE MADRASA ENVIRONMENT

DEDI RIYAN RIZALDI¹, ZIADATUL FATIMAH², ARIS DOYAN^{3,4}, SUSILAWATI^{3,4}, MUH. MAKHRUS^{3,4}

¹Madrasa Aliyah Plus Nurul Islam Sekarbela, Mataram, Nusa Tenggara Barat, Indonesia, ²Public Senior High School Nahdathul Wattan Mataram, Mataram, Nusa Tenggara Barat, Indonesia, ³Magister of Science Education Program, University of Mataram, Mataram, West Nusa Tenggara, Indonesia, ⁴Physics Education Program, Faculty of Teacher Training and Education, University of Mataram, Mataram, West Nusa Tenggara, Indonesia. Email:dedi0313@gmail.com

Received 2021.08.24-Accepted 2021.09.12

ABSTRACT

In the 21st century or known as the Industrial Revolution 4.0, students must fulfill several skills and one of the skills that must be possessed and developed by students is literacy skills. Literacy ability is a person's ability to read, write, speak, listen, see, and think. The purpose of this study is to describe the strategies to increase students' interest in learning about physics through literacy culture. Literacy culture is introduced to students through physics deepening subjects by studying the world's Muslim physicists. This activity uses qualitative methods with data collection techniques in the form of observation and documentation with the object of research being all students majoring in science at Madrasa Aliyah Plus Nurul Islam Sekarbela. Based on the activities that have been carried out, it is concluded that students' motivation and interest in learning about the history of physics is very high, especially related to the various findings of the Muslim physicist.

Key words: *Literacy Culture, Physical Education, Madrasah Environment.*

INTRODUCTION

Education is one sector that can describe the extent of the level of development experienced by a country. The output of the current educational process will be directly faced with various competitions which are not limited to the national context but also on an international scale. This condition is of course because that we are currently in the 21st century or known as the Industrial Revolution 4.0. One of the skills that must be possessed and developed by students is literacy skills.

Literacy ability is a person's ability to read, write, speak, listen, see, and think (Kuder & Hasit, 2002). While Nurhayati, et al. (2020) emphasize that literacy is a person's ability to process and understand various information obtained. Literacy skills have a very important influence on the success of the younger generation, especially students (Irianto & Febrianti, 2017). This is because good literacy skills will help students to understand information both orally and in writing. In the learning process, whether formal (school) or informal (community), literacy skills become a basic skill that helps students to develop various other skills. These skills are known as 4Cs, including Critical Thinking and Problem Solving, Creativity, Communication Skills, and the Ability to Work Collaboratively (Ati & Setiawan, 2020; Mayarni & Yulianti, 2020; Nurhayati, et al., 2020).

Based on the results of PISA 2018 illustrates that the literacy ability of students in Indonesia is still included in the low group (Hewi & Shaleh, 2020; Narut & Supardi, 2019). This is also one of the factors that cause student achievement, especially in physics, is still low. Submission of physics subjects that only emphasizes the calculation process and various formulas will indirectly make students' motivation and interest decrease (Hastuti, et al., 2012; Rizaldi, et al., 2020). Teachers need to find solutions to attract students' interest in physics before entering the core material. One alternative that the teacher can do is to ask students to carry out various literacy activities regarding the life history of various Muslim physicists and their influence on human life. By getting used to these activities, it is hoped that students will become more interested in learning physics material that was previously considered difficult and boring.

METHOD

The method used in this study is a qualitative research method. All data obtained were described descriptively to provide a complete picture related to the topic of the problem. According to Gunawan (2012), this type of qualitative research is research whose findings are not obtained through statistical procedures or other forms of calculation.

Data collection techniques are used in the form of observation and documentation. While the object of research is all students majoring in Natural Sciences at Madrasah Aliyah Plus Nurul Islam Sekarbela, totaling 69 people. In general, there are several steps carried out in qualitative research, including:

- Determine the orientation of the problem.
- Conducting observation activities to find out the problem.
- Exploration to collect information based on a predetermined topic.
- Carry out literacy activities from various supporting sources such as journals, books, etc.,
- Make a discussion to fully describe the research findings.
- Make a conclude (Gunawan, 2012; Nurhayati, et al., 2020b).

RESULT AND DISCUSSION

RESULT

The tendency of students to participate in the learning process depends on several factors, including teachers, subject matter, methods, and implementation of the learning process. One of the learning materials that become a problem for students is physics. Based on the observations made, it was obtained several factors for the students' reasons, including:

Lack of apperception given

Most teachers in delivering physics material are too focused on formulas and numbers so that the thought will appear that physics will never be separated from mathematical calculations.

Boring teaching method

It is undeniable that every subject certainly cannot be delivered using the same learning methods and models. This is due to the characteristics of the subject matter in it. Learning related to the context of physics should use methods that provide opportunities for students to discover and prove themselves related to existing problems.

Lack of integration with student needs

In order for the learning process to be more meaningful, the teacher needs to identify the relationship between subject matter and student life. Because by knowing this, students will be more easily interested and motivated in following the learning that is being carried out.

To overcome the various problems obtained from the views of students above, a modification of the learning system was carried out by familiarizing students with the literacy culture of students through physics deepening subjects. Literacy culture is carried out as a means for students to find and solve problems given in producing the final product. After being given treatment by applying literacy culture for one semester (6 months), several results were obtained, among others.

Increased interest in learning

This increase in motivation and interest in learning can be seen through the daily life of students in following the learning process. Students become more interested in solving problems given by the teacher. The habit of

literacy culture both before learning and when studying independently at home makes students more selective in finding and evaluating information.

Changes in Mindset (Perspective) in Learning

The most important part before carrying out the learning process is to equate students' perspectives or views on the learning material. Physics is one of the subjects that is very close to student life. Various events experienced by students can actually be explained through the context of physics. Learning physics in the madrasa environment provides an opportunity for students that basically the context of physics material can be integrated with religious knowledge through Muslim physicists. By directing students into this mindset, students will be more interested in exploring two contexts, namely physics and religion.

Improve Some 21st Century Skills

There are several skills that students have after participating in learning, including: 1). Be selective and skilled in seeking information from various relevant sources (Culture of Literacy), 2). Enjoys working with peers through the process of discussion and group work, 3). More open and accepting various inputs and suggestions, 4). Accountable for the results of the study conducted through the presentation process in front of the class, and 5). Apply the values learned in everyday life both in the school environment and in the community.

DISCUSSION

Literacy Culture

Literacy is a symbol or system where the sound system contains meaning. Literacy is also a basic competency that includes four aspects of language skills, namely listening, speaking, reading, and writing. Sari & Pujiono (2017) say that literacy is a person's language ability (listening, speaking, reading, and writing) to communicate in different ways according to their goals. The breadth of the meaning of literacy itself is not only related to reading and writing, but rather using information and reading materials in answering various problems of daily life. Literacy is the ability to use reading and writing skills in carrying out an obligation such as doing tasks both in the school context and outside of school (Tompkins, 1991). Meanwhile, Wells argues that literacy is the ability to get along with discourse as a representation of experiences, thoughts, feelings and ideas appropriately following the objectives.

There are three types of literacy, namely visual literacy, oral literacy, and printed literacy. These three types of literacy lead to language arts activities that are recognized in various cultures (Anggraini, 2016):

Visual Literacy

Visual literacy is an ability where individuals can recognize the use of lines, shapes, and colors so that they can interpret actions, recognize objects, there are four categories of visual literacy, namely as follows:

Understanding of the main idea, namely the ability to understand a message.

Perception of the relationship of the part of the relationship of the whole, namely the ability to identify details that support the meaning of the whole.

The distinction of fantasy, reality, namely the ability to conclude or suspect the relationship between symbols and reality.

An introduction to the artistic media used

Oral Literacy

Oral literacy the most important needs in communicating are speaking and listening. Meanwhile, reading, writing are seen as important skills, but not as primary skills needed in daily life.

Deft literacy

Literacy of written texts is described as activities and skills that are directly related to printed texts, either through reading or writing.

The term literacy generally refers to the ability or skill to read and write. However, in general, mastery of reading skills is better than writing skills (Pradana, 2020; Lestari, et al, 2021). Reading interest is an encouragement to understand word for word and the content contained in the reading text. Reading is a complex and deliberate activity, this activity is in the form of a thought process consisting of various thoughts that work in an integrated manner towards one goal.

Literacy activities can be carried out anywhere, both in the classroom and outside the classroom. Basically, literacy activities aim to acquire information skills, namely collecting, processing, and communicating information. The ability to explore and find information is a skill that needs to be mastered by students. Literacy culture can be built through various reading and writing habituation activities. Various ways to build a literacy culture can be done at school or in the home environment. Building a literacy culture must be done sustainable.

To improve the literacy culture in schools, it can be applied through reading activities for 15 minutes before the learning time begins. Students can also take advantage of their break or free time when they have finished completing assignments by reading books in the reading corner with other students. In the use of reading corners, it does not only contain textbooks, but can also be given storybooks, magazines, newspapers, encyclopedias, and so on.

Madrasa Environment

Madrasa is an Arabic word that means "school". The origin of the word is *darasa* which means learning. In Indonesia, madrasas are designated as schools whose curriculum contains Islamic lessons. In general, the use of the word madrasa in the sense of school has a special connotation, a namely Islamic school. Madrasah means a place or vehicle where students receive learning, with the intention that in madrasas children undergo a directed, guided, controlled learning process. Technically in the formal teaching and learning process in Indonesia, madrasas are not only understood at a glance as public schools but more specifically, namely "Religious Schools", places where students get learning about religious and religious matters or intricacies (Islamic Religion) (Baharun and Rizkiyah, 2020; Rizaldi, et al., 2021a).

As in the first revelation received by the Prophet Muhammad, SAW is "Iqra'" which means read. Where, especially in the madrasa environment, which generally

studies the religion of Islam, it is certainly no stranger to this. Reading or we can be familiar with literacy at this time has an impact on the school environment, especially the madrasa environment. In addition to directing teachers to be active in learning by adding insight through literacy or reading, this has also become an order that must be carried out because in the Qur'an "read" is something that is first ordered to mankind in general.

The madrasa environment can have a positive impact on students in developing literacy in various fields of knowledge (Rizaldi, et al., 2021b). The positive impact is because the teachings that have been passed down from generation to generation are taught by teachers about how to build literacy in the madrasa environment. The most basic is by reading the Qur'an and followed by getting used to reading other subjects such as physics subjects.

Efforts to Improve Literacy Culture in Madrasah Environment

The success of students in solving various problems depends on their literacy skills. The rapid development of digital has created a lot of information that is provocative and cannot be proven true. Therefore, if students cannot examine the truth of a statement, it will be very difficult to find solutions to existing problems. Therefore, it is very necessary for every teacher's efforts to start getting used to the literacy culture of students, especially while in the madrasa environment.

Efforts to familiarize students' literacy culture begin through physics deepening subjects. This subject is one of the alternatives given by madrasas to deepen and support students' understanding of the scope of physics material. As it is known that the tendency of students to have a pattern of thought or view that the physics material being taught is too focused on questions and formulas. Therefore, to change perceptions and increase students' interest in learning, especially in the madrasa environment, it is through physics deepening subjects.

The teacher designs learning by introducing various Muslim physicists to students. This is of course based on the interests of students who choose to study in a madrasa environment, which is very interested in the religious context. Refraction of literacy activities on physics deepening subjects is certainly expected to have an impact on students' interest in learning physics subjects. The teacher introduces various Muslim physicists and their findings which are indirectly useful for human life. In addition to focusing on learning outcomes, these physics deepening learning design also trains and shapes the character of students who are male and female students who love Muslim figures.

Several Muslim physics figures who become topics in physics deepening learning, including *Abbas Ibn Firas* (As Designer of the First Aviation Machine), *Abu Ali al-Huseyn bin Abdullah bin Hasan Ali bin Sina* (As Father of World Medicine), *Bacharuddin Jusuf Habibie* (The Inventor of the Habibie Factor or Habibie Theory on Airplanes), *Abu Yusuf Ya'kub Ibnu Ishak al-Sabah al-Kindi* (The Originator of the Theory about Color Blue Sky), *Abdurrahman al-Khazini* (The Originator of the Theory about Center of Gravity), etc. These various Muslim physics figures, of course, in addition to providing various information related to inventions that are continuously used by humans, can also provide life

motivation that there is no instant/direct success. All successes go through a long process and are accompanied by various problems. Therefore, literacy culture is one of the skills that students can use to review various available information to be able to find the most effective solution.

By facilitating students to carry out technology-assisted cultural literacy activities, the teacher tries to direct students to properly use the facilities provided by parents, especially gadgets in the form of cellphones. This form of effort can be integrated with the cultivation of character values that reflect a student such as honesty, responsibility, discipline, and being open to knowledge.

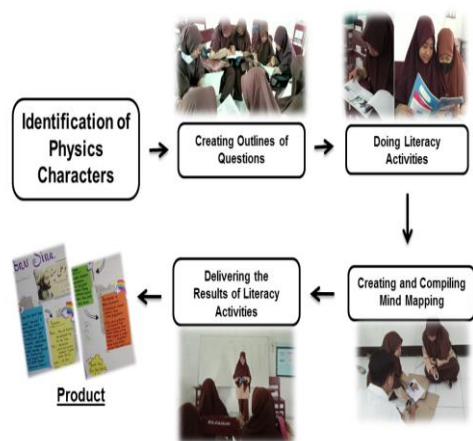


Fig.1: Syntax of Deepening Physics Learning to Familiarize Literacy Culture

In terms of syntax, learning activities start from the stage of identifying to communicating the results of literacy activities. The various stages that are passed are designed to help students develop various skills such as being skilled in finding various information, testing the truth of information, critical thinking, creative thinking, and of course communicative. The learning stages in physics deepening subjects include

Identify the relevant physics figures

This stage is very important to be considered by the teacher because by choosing the right character, the desired learning target is especially to attract students' interest in learning.

Formulate problems and frame questions

This stage helps students to obtain various relevant data related to the characters that are used as topics in the learning process. In addition, this stage allows later literacy activities to be more centralized and not widened so that it is following the initial learning objectives.

Carry out information literacy activities

This stage is one of the most important parts in supporting the growth of student cultural literacy. After the topic and problem formulation are determined, the activities carried out by students are to carry out information literacy both from print and electronic media sources. Every statement related to the character that is the topic of learning must be proven true through relevant and reliable sources. This is to ensure that the information obtained is correct when presenting in front of the class.

Composing the results of literacy into a mind map

At this stage, students evaluate the various information obtained and then arrange it in the form of work, namely Mind Mapping. The use of this method to provide an attractive appearance and student work can be used as posters in each class.

Delivering the results of literacy studies through presentation activities

This stage is a form of student responsibility in maintaining information in front of peers. This stage trains students' communication and argumentation skills so that critical and creative characters will be formed.



Fig. 2: The Final Product of Student Assignments in the Form of Mind Mapping

Based on the students' responses after following the learning system by getting used to the literacy culture, it can be seen that students are very enthusiastic in learning and understanding related to various Muslim physicists who are the topics of learning. Students become more open in providing views or opinions with peers during the material discussion process (Fatimah, et al., 2020). Students who previously only focused on the material presented by the teacher, are now starting to look for various information independently through various relevant sources. Another thing that becomes the most important point in learning activities based on literacy culture is in sessions or phases where students present products in the form of mind mapping in front of other friends (Rizaldi, et al., 2021c).

CONCLUSION

Based on the discussion that has been described above, it can be concluded that literacy generally refers to the ability or skill to read and write so that it can become a culture in schools. This culture will certainly have an impact on students' habits to get to know material in-depth, especially about physics which is generally only known by working on problems that are mathematical in nature.

REFERENCES

- Anggraini, S. (2016). Budaya literasi dalam komunikasi. *Wacana: Jurnal Ilmiah Ilmu Komunikasi*, 15(3), 264–279.
- Ati, T. P., & Setiawan, Y. (2020). Efektivitas Problem Based Learning-Problem Solving Terhadap Kemampuan Berpikir Kritis dalam Pembelajaran Matematika Peserta didik Kelas V. *Jurnal Cendekia: Jurnal Guru Matematika*, 4(1), 294–303. <https://doi.org/10.31004/cendekia.v4i1>

- Baharun, H., & Rizqiyah, L. (2020). Melejitkan Ghirah Belajar Santri melalui Budaya Literasi di Pondok Pesantren. *Tadris: Jurnal Pendidikan Islam*, 15(1), 108–117.
- Nurhayati, E., Rizaldi, D. R., & Fatimah, Z. (2020b). Pencegahan Penyebaran COVID-19 Melalui Inaktivasi Virus dalam Kajian Kinetika, Termodinamika, dan Kesetimbangan. *Jurnal Ilmiah Profesi Pendidikan*, 5(2), 102–107. <https://doi.org/10.29303/jipp.v5i2.121>
- Irianto, P. O., & Febrianti, L. Y. (2017, June). Pentingnya penguasaan literasi bagi generasi muda dalam menghadapi MEA. In *Proceedings of the Education and Language International Conference*, 1(1).
- Putri Pradana, F. A. P. (2020). Pengaruh budaya literasi sekolah melalui pemanfaatan sudut Baca terhadap minat membaca Siswa di sekolah dasar. *Jurnal Pendidikan Dan Konseling*, 2(1), 81–85. <https://doi.org/10.31004/jpdk.v1i2.599>
- Rizaldi, D. R., Jufri, A. W., & Jamal, J. (2020). PhET: Simulasi interaktif dalam proses pembelajaran fisika. *Jurnal Ilmiah Profesi Pendidikan*, 5(1), 10–14. <https://doi.org/10.29303/jipp.v5i1.103>
- Riyan Rizaldi, D. R., Doyan, A., Fatimah, Z., Zaenudin, M., & Zaini, M. (2021a). Strategies to improve teacher ability in using the madrasah e-learning application during the COVID-19 pandemic. *International Journal of Engineering, Science and Information Technology*, 1(2), 1–6. <https://doi.org/10.52088/ijesty.v1i2.47>
- Rizaldi, D. R., Zaenudin, M., Fakhurrozi, F., & Fatimah, Z. (2021b). PKM penanaman nilai karakter melalui masa taaruf Siswa madrasah dalam kondisi normal baru COVID-19 di MA PLUS NURUL islam sekarbela. *Jubaedah: Jurnal Pengabdian Dan Edukasi Sekolah (Indonesian Journal of Community Services and School Education)*, 1(2), 195–201. <https://doi.org/10.46306/jub.v1i2.36>
- Rizaldi, D. R., Doyan, A., Makhrus, M., Fatimah, Z., & Nurhayati, E. (2021c). Adaptation to new normal conditions: Students physics learning outcomes using the blended learning model. *International Journal of Asian Education*, 2(3), 369–376. <https://doi.org/10.46966/ijae.v2i3>
- Sari, E. S., & Pujiono, S. (2017). Budaya Literasi di Kalangan Mahapeserta didik FBS UNY. *Litera*, 16(1), 105–113.