TRAINING AND MENTORING OF LITERACY AND NUMERACY ACTIVITIES THROUGH THE USE OF ICT-BASED BULLETIN INTEGRATED CHARACTER EDUCATION (BICE) MEDIA IN ELEMENTARY SCHOOL 9 MAMBORO

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Abstract

SDN 9 Mamboro is one of the schools in Palu City that has launched a literacy and numeracy program. Observations conducted by the service team showed that the literacy and numeracy practices at this school were not optimal. The implementation is still at the habituation stage, directing students to read for 15 minutes at the beginning of the lesson and the implementation is not routine. The book collection and the number of students visiting the library were also lacking, the reading corner was inadequate, the learning methods used were conventional and most teachers did not have the necessary skills to create ICT-based learning media. Based on these observations, the service team and the principal agreed to provide training and assistance in literacy and numeracy activities through the use of bulletin-integrated character education (BICE) media. The expected goal of this activity is to improve students' literacy and numeracy skills. The average pretest score of literacy and numeracy skills was 38.29 and increased to 84.92 during the posttest.

Keywords: Literacy, Numeracy, Bulletin Integrated Character Education, Mentoring

INTRODUCTION

Numeracy literacy is a person's ability to use their potential related to using various types of numbers and symbols related to basic mathematics to solve practical problems in daily life, analyze information displayed in various forms such as graphs, tables, charts, and so on, and use the interpretation of that information to make decisions. Numeracy literacy is being developed in Indonesia with the aim of shaping the society. The Human Development Index, a measure of the quality of human capital, considers this ability (DITPSD KEMDIKBUD, 2022). The results of the Minimum Competency Assessment (MCA) and the Program for International Student Assessment (PISA) can be used to assess students' literacy and numeracy skills (Iswara et al., 2015); (Wen Chun & Su Wei, 2015).

The results of the PISA survey, organized by the OECD (Organization for Economic Co-Operation and Development), show that the literacy skills of Indonesian students are still much lower than other countries. In 2012, Indonesia ranked 64th out of 65 countries; in 2015, 64th out of 72 countries; and in 2018, 74th out of 79 countries. The results of the Minimum Competency Assessment (MCA) conducted in 2022 in all primary schools in Indonesia showed that the literacy and numeracy skills of primary school students were below the minimum competency, or less than 50% of students reached the minimum competency limit. Furthermore, the student character index is placed in the developing category because students are accustomed to using the Pancasila character standards. Similar results were found in the information on the Palu city education report card page. In addition, students' skills in information literacy and numeracy were below the minimum competency and their character index was in the developing category. There are differences in information literacy skills between students living in cities and those living in villages (Pusmendik Kemdikbud, 2022).

One of the primary schools in Palu city is SDN 9 Mamboro, which is located on Jalan Mantilayo No. 53 in North Palu sub-district. The school is located in the northern part of Palu city and quite far from the city center. An interview with the principal revealed that the school is one of the schools in Palu city with low AKM scores, which means that the students have low skills in reading and writing. From the observations made at the school, it appears that the literacy and numeracy program at this school has not been running well. Its use is still in the habituation stage, where students are asked to read 15 minutes. The implementation is also not routinely carried out, the school book collection is still lacking, the reading corner needs to be improved, and the teachers' learning methods are still conventional. On the other hand, this school has Wi-Fi facilities, an IT room and some Chromebooks provided by Kemdikbud. These facilities can ideally be utilized by teachers to create learning media that can improve students' literacy and numeracy skills. However, based on the results of interviews with school principals and several teachers, it was found that educators were still unable to make ICT-based learning media so they needed assistance and training in making ICT-based learning media. (Mulyani, 2021) states that currently elementary school teachers must be technology literate because it is the basis for the formation of character education, identity, and positive habits. Technology is now part of basic human needs so that learning must also be collaborated with technology (Susilo, 2020).

ICT-based learning media is an important part of educational transformation (Lestari, 2018). It is a form of technological adaptation for learning that is in line with the industrial revolution 4.0 (Darwanto et al., 2022) and can increase students' motivation to learn (Laisa, 2019). One type of learning media is ICT-based learning which is used to prepare teachers and students to enter the era of society 5.0, or the concept of social problem solving that combines physical and virtual spaces (Sururuddin et al., 2021).

Based on the description that has been presented, the service team proposed to provide training and assistance in literacy and numeracy activities to the school principal and this was approved by the school. The training provided is the making of Bulletin Integrated Character Education (BICE) learning media. Bulletin learning media is one of the learning media in the form of a simple magazine that contains brief descriptions of certain topics to achieve a goal (Asyhari & Silvia, 2016a). Bulletin can make students more active, enthusiastic, confident and can increase their learning activities (Dewi, 2019). Bulletin can be used as one of the ICT-based

learning media that can be made by teachers at SDN 9 Mamboro. Optimizing literacy and numeracy activities at school by utilizing the bulletin that has been made is done through assistance by the service team. In this case, the service team together with teachers are involved in the learning process in the classroom.

IMPLEMENTATION METHOD

The method carried out in this service activity consists of providing training and practice, as well as assisting learning activities in the classroom. Before and after the training and assistance the students represented by class IV were given a pretest and posttest to see the comparison of students' literacy and numeracy skills before and after the service activities were carried out. The description of each method carried out is as follows:

a. Providing Training and Practice in Making Bulletin Integrated Character Education (BICE) Learning Media

   This activity began by delivering materials related to the concept of learning media in the form of bulletins, and introducing ICT-based applications that can be used to create bulletins. Furthermore, in practical activities, each teacher was accompanied and trained to design and compile bulletin media according to the material taught in class.

b. Mentoring with literacy and numeracy activities

   This activity is carried out by accompanying the teacher to carry out learning in the classroom. The mentoring activities carried out include: habituation of reading activities 15 minutes before learning begins, assisting teachers in carrying out the learning process in the classroom using innovative learning models and methods, adding student reading resources, and fixing the reading corner in each class. This mentoring activity is carried out by utilizing learning media in the form of bulletins integrated with character education that have been made by teachers during training.

RESULTS AND DISCUSSION

The training was conducted by delivering materials related to ICT-based learning media, and applications that can be used to create learning media in the form of Bulletin Integrated Character Education (BICE). Furthermore, in the practice of making media, the teachers were trained and assisted in making BICE learning media. In the training and practice activities, all participants seemed quite enthusiastic and eager to participate in the activities. the training conducted according to the participants was new. The interesting designs and features of the application used made it easier for them to create learning media. This spurred the participants to try to make their own designs. On the sidelines of training activities and media making practices, many participants asked questions related to the elements that can be uploaded in the Canva application as one of the applications that can be used to create bulletin learning media. In line with this condition, Purnomo (2021) stated that training activities that are carried out thoroughly and can increase the enthusiasm of training participants and form collaborative and fraternal relationships among training participants.

Figure 1: Presentation of Training Materials

Figure 2. Practice of making BICE learning media

The use of information and computer tools is necessary in the development of education. Experience and practice inevitably produce results that cannot be released in the learning process (Duha Khalid Abdul-Rahman Al-Malah et al., 2023). With changes in the education system through experience and practice, old habits will be discarded (Noviantini et al., 2023). It is no longer a surprise to the world that various advances emerge and pose challenges to education, such as those experienced by teachers and students at SDN 9 Mamboro. Often, experts need to collaborate to find the best solutions to achieve the most effective goals. Information shows that communication in the education process is one of the important components in literacy. Therefore, the choice of media includes pedagogical communication (Khamidovna, 2023). According to Nduru & Nome (2023), teachers should be able to inspire and be role models for their students. Character strengthening encourages innovative and creative teaching. With the advancement of the country, any issue related to education becomes a challenge. Cultural shifts, effectiveness, efficiency, and standardization of teaching all have an impact on the goal of depicting the quality of education in the future (Sumar et al., 2020). The results of the Bulletin media design product made by the teacher can be seen in Figure 3.

Picture 3. BICE Learning Media made by the teacher

Some research results show that current technology has initiated an extraordinary information age, and the implementation of the activities that have been carried out in this service is in line with these findings (Liu et al., 2023). Students should be trained to be more active in literacy and numeracy. One way that can be done to foster student interest in literacy and numeracy is by presenting interesting reading materials (Nafisyah et al., 2023). If learning media is created, student characteristics must be considered (Arosyidah et al., 2021). Aesthetic and practical presentation of materials that can bring literacy vehicles for students who still need explicit and technical virtualization and informatization. The integration of local cultural values in the presentation of materials and relevant features through the presentation of materials will affect mentally in supporting the attitudes (morals) of their generation as a modern society in the future (Mashrabjonovich, 2023). The selection of appropriate media and the integration of character values through the presentation of materials and aesthetically valuable features in learning will further help achieve national ideals in the future. The growth of human knowledge and skills index will be an important factor in the success of education units (Jamilah et al., 2021). This will support the increase in the human knowledge and skills index, which is critical to the success of educational institutions (Alismaiel et al., 2022).

The view of the importance of utilizing learning media to improve students' literacy and numeracy skills is one of the considerations of the service team in carrying out service activities. Therefore, in the mentoring stage, the service team utilized the learning media that had been made by the teacher as one of the students' reading resources. There are 5 bulletin designs made by teachers from the results of training and practice. The bulletins were used during mentoring related to the 15-minute reading habit before learning begins. (Juniyanto & Nur Mahmudah, 2022) stated that strengthening literacy and numeracy is the key to educational progress and to support this requires appropriate habituation activities including reading 15 minutes before learning begins.

Picture 4. Mentoring in reading habituation 15 minutes before learning begins

At the time of assisting the teacher to teach in class, the learning material taught by the teacher was related to plants as the source of life on earth. Therefore, the team discussed and agreed with the teacher to apply a scientific learning approach with a direct observation method by observing plants around the school environment. All learning materials have been described by the teacher in the BICE learning media that has been made. Furthermore, through learning outside the classroom, students are directed to match the content of the material in the learning media with the results of the observations made. This activity makes students look excited and enthusiastic in participating in learning. The success of learning and the achievement of students' literacy and numeracy skills is influenced by learning methods in the classroom that are attractive to students. The selection of appropriate and fun methods can make the expected learning objectives can be achieved by students including the goal of improving student literacy and numeracy (Tardiani, 2023).

Picture 5. Mentoring in the Application of Innovative Learning Models, Approaches and Methods

In the implementation stage of the mentoring, the service team also helped fix the reading corner in the classroom. This effort is one of the things that can be done to help improve students' literacy and numeracy to the maximum. A well-organized reading corner can continuously attract students' attention to reading (Silitonga et al., 2023). The existence of a reading corner in the classroom can increase student independence in learning by 60% and increase student numeracy literacy by 50% (Darmadi et al., 2022).

Figure 6. Reading corner at SDN 9 Mamboro

Students' literacy and numeracy skills that are a reference for achieving the results of the activity are measured using the student literacy and numeracy test instrument. This instrument consists of 15 questions with various forms of question choices in accordance with the literacy and numeracy test instruments. This test was given before and after the service activity was carried out. Grade IV students were selected as samples in administering the literacy and

numeracy test instruments. The results of the pretest and posttest analysis of students' literacy and numeracy skills can be seen in table 1.

Table 1. Students' Literacy and Numeracy Scores

Statistic	Pretest	Posttest
Total number of students	27	27
Minimum	22,96	64,26
Maximum	58,52	98,33
Mean	38,29	84,92
Standard Deviation	8,24	7,98

The data in Table 1 shows that students' literacy and numeracy skills improved after the service activities were carried out. The teachers who participated in the training and mentoring said that the activities were very useful. They hope that similar activities with a sustainable concept will continue to be carried out by a dedicated team to improve the overall quality of education, especially at SDN 9 Mamboro. During the mentoring process, students' activities and interactions in learning also improved. The students have begun to familiarize themselves with reading at the reading corner, and have begun to dare to ask questions to the teacher regarding the learning materials delivered by the teacher. Through this service activity, it is important to note that the management of human resources in schools can be achieved through the development of the abilities, characters, attitudes, and skills of teachers as the bearers of teaching programs in accordance with the mandate of the curriculum nationally (Dr. Preeti Oza, 2021). The use of procedural digitization in learning will help pour creative ideas into audio-visual media, which will increase student understanding in a sustainable manner (Inamorato dos Santos et al., 2023). The creation of digital learning media can be done through the process of finding inspiration from developing more interesting media (Soemantri, 2019).

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