Merdeka Curriculum Innovation: Grand Design for Digital Literacy Learning in Special School

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Abstract

Creative and inspiring rules are competencies in independent learning. The Merdeka curriculum needs to integrate digital literacy into learning. Digital literacy is important especially for students who attend the special school in order to have the ability to understand and implement digital literacy-based learning processes. To develop digital literacy in SLB, a digital literacy learning design is needed. In Riau Province, there is no special school education unit that has a digital literacy-based curriculum, based on interviews with supervisors and the head of the Riau special school principals association. Based on this description, the research team felt it was important to develop digital literacy-based learning in SLB. The aim to be achieved through this research is the preparation of a learning design that can be implemented in special school education units. The research methodology used is a research and development with research stages: exploratory study, FGD exploratory study, drafting of the model, conceptual and operational testing of the model, and developing a digital literacy-based curriculum. The results of the study are in the form of a learning design that includes a digital literacy learning framework and a learning development formula for the digital literacy curriculum. It can be concluded that there is a significant difference in teacher knowledge between before and after following the digital literacy-based curriculum model of 0.892 (89.2%) at \( \alpha = 0.05 \).

Keyword: Independent Curriculum Innovation, Learning Design, Digital Literacy, Special Schools, Disability Issues

INTRODUCTION

Unfortunately, cyberspace is currently increasingly filled with content related to fake news, hate speech and radicalism, even fraudulent practices. The existence of negative content that is damaging the digital ecosystem today can only be prevented by building awareness among each individual. Being digitally literate means being able to process various information, being able to understand messages and communicating effectively with other people in various forms (Idhartono, 2022). In this case, the form in question includes creating, collaborating, communicating, and working in accordance with ethical rules, and understanding when and how technology should be used to be effective in achieving goals. This also includes awareness...
and critical thinking about various positive and negative impacts that may occur due to the use of technology in everyday life (Rafi et al., 2019). Encouraging individuals to shift from passive consumers of information to active producers, both individually and as part of a community. If the younger generation lacks digital competence, this is a very risky situation for them to be left out in the competition for jobs, democratic participation and social interaction. So there is a need for learning guides in educational institutions to implement digital literacy in school communities, especially in special school education.

In today's digital era, digital literacy skills have become important skills that can provide access and independence to individuals with special needs. However, the lack of attention to digital literacy among Special Schools has become an urgent challenge, giving rise to the need for an Independent Curriculum Innovation that focuses on the Grand Design of Digital Literacy Learning. In Indonesia currently, the number of media has been recorded as increasing rapidly, reaching around 43,400, while only around 243 media are registered with the Press Council. In this way, people can easily get information from various existing media, regardless of whether the news is official or not (Gusteti et al., 2023; Zolg, 2021). This is indicated by the increasing decline in society's reading culture, which is still at a low level. The presence of various gadgets (gadgets) that can connect to the internet network diverts people's attention from books to the devices they own. On the other hand, the development of digital media provides opportunities, such as increasing e-commerce business opportunities, the birth of new jobs based on digital media, and the development of literacy skills without negating print-based texts. The rapid development of the digital world that can be utilized is the emergence of the creative economy and new businesses to create jobs.

Every individual needs to understand that digital literacy is an important thing needed to be able to participate in today's modern world. Digital literacy is as important as reading, writing, arithmetic and other scientific disciplines. The generation that grew up with unlimited access to digital technology has different thinking patterns from previous generations (Mayasari & Nurjanah, 2020). Everyone should be responsible for how to use technology to interact with the surrounding environment. Digital technology allows people to interact and communicate with family and friends in everyday life.

Digital literacy will create a society with a critical-creative mindset and outlook (Rowsell, 2013). They will not be easily taken in by provocative issues, become victims of hoax information, or become victims of digital-based fraud. In this way, people's social and cultural life will tend to be safe and conducive. Building a digital literacy culture needs to involve the active role of the community together. Success in building digital literacy is an indicator of achievement in the fields of education and culture.

This research aims to fill the gap in academic literature regarding the lack of attention to the integration of digital literacy in special education institutions. Thus, this research will discuss the implementation of the Merdeka Curriculum which offers an inclusive and adaptive approach to digital literacy learning in Special School Institutions. It is hoped that this research can make a significant contribution to our understanding of how digital literacy integration can be carried out effectively among students with special needs. The main aim of this research is to design a holistic and inclusive framework for implementing the Merdeka Curriculum which focuses on digital literacy learning in Special Schools. In addition, this research aims to evaluate the impact and effectiveness of this approach on the development of digital literacy skills and the active engagement of students with special needs in the ever-changing digital era (Hakim et al., 2022). Through this research, it is hoped that there will be a real contribution to our understanding of the need for an inclusive approach in education, especially in integrating digital literacy among students with special needs. Thus, this research will provide valuable guidance for educational institutions, educators, and policy makers to develop more inclusive and technology-oriented curricula in the future.

The problem of low literacy in Indonesia has attracted much attention from Indonesian researchers. However, there has been no effort to overcome this problem for children with special needs in Special Schools. Teachers and parents at this level always hope that their children can develop optimally, especially in literacy so that they can be successful in learning at school. However, there is no media that makes the efforts of teachers and parents aligned. Based on the problems above, it is felt necessary to develop learning designs by including digital literacy elements in the curriculum at Special School Education Institutions.

**RESEARCH METHOD**

This study is a research and development study. The development model to produce a digital literacy learning model for children with special needs using the ADDIE model. ADDIE stands for analyze, design,
develop, implement, and evaluate. The research location is planned for Pekanbaru City. It is planned that the population in the research will be SLB Cendana. Data collection tools are in the form of questionnaires, namely questionnaires and documentation. The following is the flow of research that has been and will be carried out. What the research team members have done is preparing proposals/model designs and exploratory studies.

The population of this study included 12 Cendana Duri SLB students and teachers. The sample is representative of the population. In accordance with the opinion of (A. M. Yusuf, 2005) states that the sample is part of the selected population and represents that population. Sampling in this research was carried out using the Total Sampling technique. The entire population is the sample in this study. The sample distribution in the conceptual model test amounted to 6 people representing the obstacles experienced by (2 people who were blind, 2 people who were deaf, and 2 people who had intellectual barriers) and 19 people during the operational trial of the development model. The tool used to collect data in this research was a questionnaire. According to (M. Yusuf, 2014) a questionnaire is a series of statements related to a certain topic that is given to a group of individuals with the aim of obtaining data. So a questionnaire is a set of statements that must be answered by respondents in writing which is used to obtain various information directly from respondents. Statement items are arranged using a Likert scale. After the data has been processed, assessment criteria for each data obtained are determined which refer to the limitations stated by (Sugiyono, 2015). The grouping of data processing criteria is as Table 1. Figure 1 retrieved research flow model digital literacy.

![Research Flow Model Digital Literacy](image)

**Figure 1. Research Flow Model Digital Literacy**
Table 1. Variable Data Processing Criteria

<table>
<thead>
<tr>
<th>Percent</th>
<th>Category</th>
</tr>
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<tbody>
<tr>
<td>81-100%</td>
<td>Very high</td>
</tr>
<tr>
<td>61-80%</td>
<td>Height</td>
</tr>
<tr>
<td>41-60%</td>
<td>High enough</td>
</tr>
<tr>
<td>21-40%</td>
<td>A little</td>
</tr>
<tr>
<td>0-20%</td>
<td>Almost no</td>
</tr>
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</table>

RESULT AND DISCUSSION

General description of the digital literacy-based curriculum manuscript can be briefly described regarding the model and accompanying products, namely the digital literacy-based curriculum model. Assessment is carried out consistently, systematically and programmed using tests in written or verbal form and non-tests in the form of work observations, attitude measurements, assessment of work results, projects/products, portfolios and self-assessments. The results of the field study were obtained through filling out questionnaires from educators and school principals regarding digital literacy-based curriculum models, 54% of teachers’ knowledge regarding digital literacy-based curriculum models is still low. And no teacher really understands the digital literacy-based curriculum model. The application of digital literacy-based curriculum models by teachers has not been implemented. This can be seen from the fact that 69% of respondents do not apply a digital literacy-based curriculum model in schools. Teachers’ perceptions regarding the usefulness of digital literacy-based curriculum models, an average of 84% of teachers said they had not felt the benefits.

Overall, the indicators that measure the conformity of the model title with its implementation during operational testing in the three institutions, 67% of teachers stated that the level of suitability of the title with operational testing was high and no teachers stated that the model title was not in accordance with the operational testing that had been carried out. The systematics of writing Curriculum Manuscripts is good. Indicators that serve as benchmarks for the suitability of the systematic writing of the model to its implementation during operational testing in the three institutions. 67% of teachers stated that the level of conformity was high. And no teachers stated that the systematic writing of the Curriculum Manuscript was not in accordance with the operational testing that had been carried out. Overall indicators that serve as benchmarks for the suitability of the use of spelling in the Curriculum Manuscript to its implementation during operational tests in the three institutions. 75% of teachers stated that the level of conformity of titles to operational trials was high and 50% was quite high. This means that no teacher stated that the use of model spelling was not in accordance with the operational tests that had been carried out. On the indicator of suitability of the description/content of the Curriculum Manuscript with the implementation of operational tests in the field, 50% of teachers stated that it was quite high and high. Or the level of suitability is high. Including the teacher's understanding of the contents of the script. There were no teachers who stated that the text needed to be repeated or needed to be completely revised in terms of the description/content aspect of the Curriculum Manuscript. The application of the model includes the teacher's ease in applying the model, the feasibility and suitability of applying the model to the learning process containing digital literacy. From the results of operational tests on children, it was stated that the suitability of implementing the model was very high, namely 67% and no teachers experienced significant difficulties in implementing and applying the model. Learning contains digital literacy.

Conceptual and Operational Model Test Results

Trial of a digital literacy-based curriculum model at SLB Cendana Duri. The trial participants were the research team, institutional managers and students. Before researchers together with school principals and teachers implemented the training model that had been prepared, teachers were observed regarding teachers' understanding of digital literacy-based learning, teachers in implementing digital literacy-based learning. Then digital literacy-based learning was implemented using the PPI that had been designed. During the trial, researchers carried out observations and monitoring to obtain data that could be used to improve the curriculum.
After carrying out the conceptual test, teachers were interviewed again to measure their understanding after following the lesson. Things that are observed and monitored include: 1) The ability of school principals and teachers to implement digital literacy-based learning. 2) Activities of school principals and teachers during trials of digital literacy-based learning models. 3) Responses of school principals and teachers to the implementation of trial results of digital literacy-based learning models. 4) Ease and difficulties faced by school principals, teachers and students when testing digital literacy-based learning.

Before learning is carried out, the teacher fills out a questionnaire first through an interview by the research team to measure the teacher's level of understanding and competence in learning containing digital literacy. The results obtained were that 65% of all teachers had a low level of understanding regarding digital literacy learning. Another 25% are in the medium category, 10% of teachers are in the very low category, and there are no teachers in the high and very high categories.

Based on the pretest results (Figure 2), it can be concluded that on average teachers need to take part in digital literacy learning for students.

After implementing technical orientation and learning, satisfactory results were obtained (Figure 3). This is demonstrated by the posttest results which show that 60% of teachers have high ability and understanding in learning containing digital literacy. Only 10% of them are still in the low category. To see a comparison of pretest and posttest results, please see the figure 4.

From the results of data analysis, it was concluded that there were significant changes and improvements in teacher understanding before and after implementing the model. Based on the graph above, all learning indicators/materials increased from before the treatment was given to after the implementation of learning containing digital literacy for students.

There are documentation studies on several core activities carried out during research use on students:
difference test results (t test) pretest and posttest operational test

Tabel 2. Paired Samples Correlations

<table>
<thead>
<tr>
<th>Pair</th>
<th>N</th>
<th>Correlation</th>
<th>Say.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80</td>
<td>0.892</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on data processing using SPSS 20.00, it can be concluded that there found significant differences in teacher knowledge between before and after following the digital literacy-based curriculum model 0.892 (89.2%) on a = 0.05.

The concept of Digital Literacy, in line with the terminology developed by UNESCO in 2011, refers to and cannot be separated from literacy activities such as reading and writing, as well as mathematics related to education. Therefore, Digital Literacy is a life skill that does not only involve the ability to use ICT devices, but also social skills, the ability to be a learner, as well as having an attitude, thinking critically, creatively and being inspired as competencies in digital literacy. Digital Literacy is a term related to the term digital divide which has appeared previously. The digital divide is an economic, social and political gap/inequality that arises as a result of unequal ability to access, sort and process information that is spread globally and digitally. This inequality can apply at the country, community group or individual level (Idhartono, 2022). Digital Literacy means the ability to know sources of information, access/retrieve, sort, process, interpret and utilize digital information both offline and online to achieve economic, social and political excellence. Digital literacy includes ICT literacy and information literacy.

Along with the improvement and development of various audio visual technologies. The process of displaying information was apparently not sufficient to meet the needs of society at that time. The need for tools to create, design, process and store data and information was eagerly awaited, so in 1941 the computer was discovered (Kandriasari et al., 2023; Retnaningrum et al., 2023; Syarif et al., 2023). Technological developments are not only in the form of computers (hardware), but also in the form of rapid progress also occurring on the software side. At the beginning of computer use, the applications used were text-based. Since the discovery of the Windows operating system, which has user-friendly accessibility, supporting applications have begun to emerge that can be used for digital media (Mahmud et al., 2023; Suryadi & Ndona, 2023). Laptops that are currently widely available can answer the needs of people around the world in the form of ease of mobility. Currently, the use of laptops is starting to be replaced by the use of gadgets in the use of digital media, which is also in line with the extraordinary increase in internet networks.

Digital literacy in substance is as defined above. However, the digital world has increased the complexity of the dimensions of the previous non-digital world (Utama & Marlina, 2023). The formation of a digital society (digital citizenship), namely a group of people whose members are spread across all corners of the world, but are connected to each other and information is sent from one member to another without the constraints of space and time. The information flowing in it is multimedia in nature. The positive impact is the rapid and massive spread of information (viral). The negative impact of the speed and massiveness of information circulating is that the information filtering process is hampered.

There is a need to emphasize communication ethics more than before to avoid misunderstandings regarding the substance of the information sent. Writing news that is wrong, doubtful or not supported by accurate data about another party can be detrimental to that party. There is a need for more attention to the legal aspects of the digital world, especially respect for IPR. The digital world has made this appreciation so vulnerable because of everything. School digital literacy must be developed as an integrated learning mechanism in the curriculum or at least connected to the teaching and learning system. Students need to improve their skills, teachers need to increase their knowledge and creativity in the digital literacy teaching process, and school principals need to facilitate teachers or education staff in developing the school's digital literacy culture (Fitria & Budi, 2023; Idhartono, 2022; Lubis et al., 2023).

Strengthening literacy actors or facilitators in the school environment is emphasized by training school principals, supervisors, teachers and education staff on digital literacy. These trainings are related to the use or utilization of information and communication technology in school development, (Hakim et al., 2022) for example, school principals and supervisors are given training on the use of digital media in school management, teachers are given training on the use of digital media in learning, and students are encouraged to use information and communication technology intelligently and wisely. The training here also
emphasizes the example set by school principals, teachers and education staff regarding the application of digital literacy in the school environment (Nasution et al., 2023).

With these results, it is hoped that there will be digital media that contains these activities so that they can be used for literacy activities in Special Schools (Casey et al., 2009) with the research title Application of Digital Literacy in 2013 Curriculum Learning Based on E-Learning Theme 8 Bumiku Class VI Elementary School Negeri 2 Purwalingga Lor, with the results of research. The implementation of digital literacy activities also experienced several obstacles in the implementation process, including disrupted internet connections or networks, not all students were able to bring their own cellphones, limited time for completing questions and participant focus. students who are divided by the electronic devices used. To overcome these obstacles, there is an innovative solution, namely making the learning system into 2 sessions so that students can borrow and borrow from each other (taking turns) using cellphones, maximizing the internet network, and students will answer questions according to their respective abilities. The application of digital literacy in the e-learning based learning process in class VI of SD Negeri 2 Purwalingga Lor, which has been implemented for 2 years, has had a positive impact because students feel happy and enthusiastic about participating in the learning process.

Increasing the number and variety of quality learning resources in schools is a necessity that must be implemented by schools. The rapid development of science in the digital era demands renewal and addition of new knowledge in the school environment. In this case, schools are required to increase the number and variety of quality learning resources for their school residents, especially for students. According (Asfiati & Mahdi, 2020; Mardiana & Umiarso, 2020) with the research title Analysis of the Need for Digital-Based Literacy Media in Special Schools. The results of this research show that teachers and parents hope that this literacy media can be played across genders, containing singing, drawing, telling stories and activities play.

CONCLUSION

Based on the overall results of the questionnaire, it was concluded that the indicators that measure the readability of the curriculum contain digital literacy. Then, there was an increase in teacher knowledge and understanding after operational trials of the digital literacy-based SLB curriculum development model on the research subjects that had been carried out.

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REFERENCES


Teknologi Pembelajaran, 6(1), 91-96.
https://jurnal.unipasby.ac.id/index.php/devosi/article/view/6150