The Problematic of Digital Inequality in an Educational Political Policy Perspective

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ABSTRACT
This research explores and analyzes the problem of digital inequality in education, especially from the perspective of educational political policy. Digital inequality, which includes disparities in access and use of technology among students, can be a serious obstacle to achieving the goal of equitable and inclusive education. This research uses a policy analysis approach to investigate educational political policies that may be the cause or solver of digital inequality by involving case studies that occurred at Muhammadiyah Middle School in Depok City. By analyzing the role of educational political policies in digital inequality, this research aims to present findings that can contribute to the formulation of more effective policies in overcoming this inequality. It is hoped that the results of this research will provide insight for policy makers to develop policy strategies that can minimize digital inequality among students, as well as improve the overall quality and accessibility of education.

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1. INTRODUCTION

When we enter the era of information technology-based globalization, education is faced with new challenges and infinite opportunities. Advances in information technology have changed the way we interact in everyday life, both adults and children. It seems that engagement with digital technology, especially smartphones, has become an essential need that stretches across generations (Solehudin, 2023b). On the one hand, technological developments open the door to unlimited access to information and learning, while on the other hand, digital inequality becomes a significant obstacle in achieving the goal of equitable and inclusive education (Budiarti, 2023). Education in this digital era is not only determined by the availability of physical facilities and infrastructure, but also by access and use of technology among students (Budiarti, 2022).

The importance of digital access in education can be seen from the challenges faced during the COVID-19 pandemic. Unpreparedness for online learning due to lack of formal orientation, training, and constant internet connectivity has hindered the continuity of education (Agormedah et al., 2020). In addition, global citizenship education emphasizes the importance of digital access in preparing...
students to actively participate in a digitally connected world (Usmi & Samsuri, 2022). Addressing national education gaps, including access to education, quality of education, and equitable distribution of educational infrastructure, is very important in mitigating the digital divide (Pranoto & Inharjanto, 2020). The interaction between digital literacy and technology in higher education highlights the complex relationship between these factors and the need for digital literacy skills among staff and students (Nikou & Aavakare, 2021). Furthermore, the role of information and communication technology (ICT) devices in supporting various sectors, including education, during social restrictions increasingly emphasizes the importance of digital access in ensuring the continuity of educational services (Gupta et al., 2022).

In addition, teacher competence in utilizing digital tools to improve early childhood education outcomes shows the direct impact of digital access on educational achievement (Hibana & Surahman, 2021). Expanding access and application of digital technologies in education systems is essential to foster equity and organizational change, emphasizing the holistic perspective necessary for effective digital integration in education (Reis-Andersson, 2022). Further, formation of digital education models in the context of the digital economy highlight the challenges that drive the need for the development of digital education to overcome the digital divide (Buhaichuk et al., 2023). Increasing faculty competency in digital accessibility for inclusive education is critical to ensuring equitable access to educational resources and materials (Bong & Chen, 2021). The digital adaptation caused by the pandemic has underscored the need to increase work-based knowledge through effective digital integration, emphasizing the variables of technological literacy and digital pedagogy among staff (Lester & Crawford–Lee, 2022).

The lack of digital infrastructure for online access and the difficulty of adapting to digital learning services during the pandemic further emphasize the importance of increasing digital access in education (Huda, 2022). In addition, teachers’ lack of mastery of science and technology has affected the smoothness of online teaching and long-distance student guidance, thus highlighting the important role of teacher competence in utilizing digital tools for effective education delivery (Sudrajat, 2020). At the same time, strategic support for digital libraries in distance education emphasizes the need for policies and initiatives to develop digital infrastructure to support educational access (Owusu-Ansah et al., 2018). Modernization of the pedagogical system through the integration of digital technologies and the experience of foreign educational systems is essential to overcome the digital divide and ensure the relevance of education (Potapchuk, 2023). The digital transformation of education in remote and resource-limited areas increasingly emphasizes the principles and mechanisms necessary for digitalization to overcome resource limitations and geographic challenges (Ivanov et al., 2021).

The importance of digital access in education can be seen from the various challenges and opportunities posed by the digital divide (Solehudin, Khuluqo, et al., 2023). Overcoming this challenge requires a comprehensive approach that includes policy initiatives, teacher competency, digital infrastructure development, and strategic support for digital integration in education. The problem of digital inequality involves disparities in the ability to access and use technology between various groups of society (Solehudin, Gunawan, Kodir, et al., 2023). Not only in economic matters, but especially in the context of education provision, there is a disparity between those who can access digital resources freely and those who are limited by limited access or technological skills teknologi (Solehudin, Gunawan, Alamsyah, et al., 2023). In this context, a political education policy approach becomes very important to overcome these inequalities and ensure that technological sophistication supports a vision of inclusive and equitable education.

The digital divide has become an important issue from an educational policy perspective, because it impacts the implementation of educational programs and the overall quality of learning (Hamburg & Lütgen, 2019). The impact of digital technology on inclusive education and the role of digital platforms in promoting digital inclusion are important considerations in overcoming the digital divide (Hamburg & Lütgen, 2019). In addition, the allocation of government funds for education also significantly influences educational disparities, thus highlighting the importance of policy making in...
reducing educational disparities (Wardhana et al., 2023). The role of all parties in fighting for policies that favor women, including policies related to education, is very important in overcoming wider social disparities (Mayrudin et al., 2022). Therefore, legal, political, economic and social factors on policy implementation underscore the complexity of education policy and the need for a comprehensive approach to overcome the digital divide (Wardhana et al., 2023).

Inequalities in the digitalization of education in regions can be caused by various factors, including resource availability and budget allocation. Research by Amelia et al. (2019) highlighted the importance of regional spending in the education sector as a mediator that influences educational outcomes at the provincial level (Mayrudin et al., 2022). This shows that appropriate budget allocation in the education sector can have a direct impact on educational outcomes in the region. Apart from that, Chandra (2022) also emphasized that government spending in the education sector allocated in the Regional Revenue and Expenditure Budget (APBD) can provide encouragement for human development planning as measured by the Human Development Index. Therefore, inequality in the digitalization of education in the regions can be related to the uneven allocation of the education budget at the regional level (Chandra, 2022).

Apart from that, Sufi & Suharti (2021) found that MSMEs in several regions in Indonesia still use manual systems and are far from digitalization. Although this research is not directly related to education, these findings can reflect the general condition of digitalization in the area (Sufi & Suharti, 2021). Inequalities in the digitalization of education in the regions can also be reflected in the condition of digitalization of MSMEs and information technology infrastructure which is still limited in several regions. Inequalities in the digitalization of education in the regions can be caused by unequal education budget allocations at the regional level as well as limitations in general information technology infrastructure in the region. Through an in-depth review of the problematic of digital inequality, this research seeks to detail the impact and root causes of inequality in access and use of technology in the educational environment. This understanding becomes the basis for developing a more focused view of how educational political policy can act as a key instrument in overcoming digital inequality. By analyzing the role and impact of educational political policies in managing digital inequality, this research aims to provide a comprehensive view and make a meaningful contribution to the development of more effective and inclusive policies in the education sector (Solehudin, Budiarti, et al., 2023).

This research focuses on digital inequality which is a challenge for private schools, especially Muhammadiyah Cisalak Junior High School in Sukmajaya District, Depok City. This research not only identifies the digital inequality problems faced by these schools, but also aims to examine whether there are special policies or educational political policies that have been implemented or are being pursued to overcome these challenges. Private schools, such as Muhammadiyah Cisalak Junior High School, often face obstacles in terms of access and use of digital technology. Digital inequality can disadvantage these schools in terms of up-to-date curricula, digital learning resources, and access to relevant information. Therefore, it is important to examine concrete efforts made by the government or related institutions to overcome digital inequality in private education environments.

In this research, the analysis is not only focused on the problem of digital inequality itself, but also includes an in-depth review of policies aimed at equalizing access and expanding opportunities for private schools in facing the digital revolution. This could include subsidies or technology assistance policies, training programs for teaching staff and administrative staff, as well as incentives for developing digital infrastructure in private schools. Apart from that, research can also involve mapping existing education policies, analyzing the success or obstacles faced in their implementation, as well as investigating the views and experiences of educational practitioners related to efforts to reduce digital inequality among private schools. So this research not only provides an overview of the problem of digital inequality at Muhammadiyah Cisalak Junior High School and other private schools, but also provides valuable insight into the role of educational policies and strategies in overcoming these
challenges, as well as providing a basis for developing more effective and inclusive solutions in the future.

2. METHOD

This research uses a policy analysis approach to investigate educational political policies that may be the cause or solver of digital inequality by involving a case study that occurred at the Muhammadiyah School in Depok City. Primary data in this research was obtained through interviews at the Muhammadiyah Middle School (SMPM) Cisalak, Sukmajaya District, Depok City. The data analysis used in this research refers to the theory presented by Miles and Huberman (1994) which consists of data reduction, data presentation and conclusions and verification as in the following picture:

![Chart 1. Application of Miles and Huberman Model Analysis](image)

3. FINDINGS AND DISCUSSION

Finding

The problem of digital inequality from an educational political policy perspective, especially in Depok City, can involve a number of aspects that influence access and use of digital technology in education circles. Some private schools in Depok City may still experience problems with internet infrastructure, especially in rural or suburban areas. This can make it difficult for students and teachers to access digital educational resources.

<table>
<thead>
<tr>
<th>Types of Inequality</th>
<th>Political Policy Aspects of Education</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Internet Access</td>
<td>Education infrastructure policy</td>
<td>Digital device distribution policy.</td>
</tr>
<tr>
<td>Inequality of Access to Digital Devices</td>
<td>Digital device distribution policy</td>
<td>Students with digital devices have an advantage</td>
</tr>
<tr>
<td>Lack of Teacher Digital Skills</td>
<td>Educational human resource training and development policy</td>
<td>Potential threats to student data security</td>
</tr>
<tr>
<td>Online Security and Privacy Issues</td>
<td>Cyber security policy in education</td>
<td>Does not cover relevant digital skills</td>
</tr>
<tr>
<td>Lack of Digital Curriculum</td>
<td>National education curriculum policy</td>
<td>Does not cover relevant digital skills</td>
</tr>
</tbody>
</table>

Students from disadvantaged families face difficulties in owning or accessing digital devices, such as laptops or smartphones, which can support learning activities. This inequality can affect students' ability to participate in online learning. At the same time, teachers in private schools also do not fully
have sufficient digital skills to provide online learning effectively, which affects the quality of teaching and teacher-student interaction in a digital environment.

Basically, the Regional Government has committed to continuing to provide guidance to students in its region, especially students who have potential intelligence and/or talents that can be developed, with the aim of achieving the highest achievements in science, technology, arts and/or sports in the region. Various levels, starting from education units, sub-districts, cities, provinces, national, to international (Perda No 14 2021, 2021). In the context of Depok City, digital evolution in government is guided by Depok City Regional Regulation (Perda) Number 2 of 2019 concerning the Implementation of Smart Cities (JD 03 - berita depok, 2023). However, the concrete steps taken by the government are still limited to state schools, while private schools have not yet been touched. In fact, research data shows that the role of regional governments in overcoming network technology problems in education is still low, the government is more focused on efforts to digitalize all services to the community while there is a gap between private schools and state schools is still untouched, as we found in several private schools in the Muhammadiyah area of Depok City.

Based on the results of research conducted at Muhammadiyah Cisalak Middle School, Sukmajaya District, Depok City, all digital-based learning support devices are being implemented by the school itself, although by inserting it from the BOP budget and will only be implemented in 2022 as in the following table:

<table>
<thead>
<tr>
<th>Types of Technology</th>
<th>Amount</th>
<th>2022</th>
<th>2023</th>
<th>Unit Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer/Laptop</td>
<td>15 Unit</td>
<td>√</td>
<td>-</td>
<td>Chromebook</td>
</tr>
<tr>
<td>Internet Network Access</td>
<td>1 Unit</td>
<td>√</td>
<td>-</td>
<td>Router</td>
</tr>
<tr>
<td>Learning Media</td>
<td>1 Unit</td>
<td>√</td>
<td>-</td>
<td>Infocus</td>
</tr>
<tr>
<td>Online Learning Tools</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In the context of Muhammadiyah Cisalak Middle School, this effort is carried out by aligning the school budget (BOP) to integrate various digital-based learning devices and systems. The use of digital technology in learning is a progressive step adopted by many modern educational institutions. This step is realized through the BOP budget allocation which is used to purchase hardware and software, as well as building the required technological infrastructure. The lack of budget and the large number of needs related to digital learning devices mean that schools only use what they can despite all the limitations.

In the implementation process, schools must carefully plan the use of BOP funds in order to balance physical and digital infrastructure needs, as well as daily operational costs. The school’s ability to set aside a budget for digital technology shows awareness of the importance of technology integration in the teaching and learning process. The application of digital technology in learning is not just introducing hardware such as computers and projectors, but also includes the use of supporting software, online learning, and the development of special learning platforms. This helps increase interaction between teachers and students, facilitates access to diverse learning resources, and creates a more dynamic and interactive learning environment. Through this effort, SMP Muhammadiyah Cisalak strives to maintain the quality of learning that is relevant to current technological developments, while providing learning experiences, especially in adapting to developments in digital technology, for students at SMPM Cisalak, Depok City.
Discussion

With the increasing use of digital platforms, the issue of online security and privacy has become crucial. Schools and teachers need to understand and implement cyber security policies to protect student data and personal information. There may be a lack of educational curricula that cover digital skills appropriate to current technological developments. Integration of relevant digital curriculum can help students prepare for the demands of the digital world.

Students with special needs or disabilities may face greater challenges in accessing online learning. Inclusive education policies need to be improved to ensure that all students can participate in learning equally. In overcoming these problems, educational political policies in Depok City need to pay attention to improving infrastructure, distribution of digital devices, digital skills training for teachers, cyber security policies, improving the digital curriculum, and inclusiveness efforts in education. By overcoming this digital inequality, it is hoped that education in Depok City can be more equitable and provide equal opportunities for all students to access and utilize digital technology in the learning process.

The role of local government in the field of education is very important for the development and improvement of the education system. Local governments are responsible for managing resources and finances efficiently to support education policies and initiatives. They play an important role in ensuring transparency and accountability of financial reporting, which is important for evaluating the allocation and utilization of economic resources in the education sector (D. E. Sari et al., 2020). In addition, local government financial performance, which is influenced by factors such as regional divisions and revenue allocation, has a direct impact on the ability of local governments to fund educational activities and services (Rambe, 2020); (Badjra et al., 2017). (E. S. Wahyuni et al., 2019). It has been proven that the commitment of regional heads and their audit opinions have a significant influence on the disclosure of financial reports, including those related to education (M. P. Sari, 2022).

Furthermore, analysis of government expenditure in the education sector is important to understand the impact of domestic investment and local government revenues on education development. (E. S. Wahyuni et al., 2019).

In the Chinese context, investment in technical education funding by local governments is highlighted as an area requiring attention and improvement (Zheng, 2017). This emphasizes the importance of adequate funding and investment in education by local governments to support the development of education policies and initiatives. In addition, analysis of educational policies related to migrant children in China revealed potential shortcomings in local government policy implementation, indicating the need for more effective strategies to meet the educational needs of migrant children (Jiang, 2023).

The problem of digital inequality from an educational political policy perspective, especially in Depok City, involves a number of aspects that influence access and use of digital technology in education circles. Based on relevant references, there are several aspects that can be focused on in this analysis. First, educational inequality can be influenced by government spending in education, gender gaps, and per capita income (Hamzah et al., 2017). These factors can contribute to educational inequality in a region, including Depok City. Apart from that, strengthening new literacy in teachers in responding to the challenges of the industrial revolution 4.0 era is also an important aspect in the context of developing educational political policies (Ibda, 2018). In addition, the influence of education on labor income inequality shows that investment in education can reduce income inequality, including income inequality between genders (R. N. T. Wahyuni & Monika, 2017). This shows that educational political policies can play a role in reducing digital inequality by increasing access and quality of education.

The role of local governments in implementing digital education can be analyzed from various points of view. Lang and Brüesch (2020) emphasize the importance of organizational capacity, leadership, interaction, institutional arrangements, and shared understanding in the effective implementation of digital education programs by local governments. This highlights the need for local
governments to have the capacity and leadership to drive digital education initiatives (Solehudin, 2023b). The application of digital signatures as a new smart governance model, which shows the potential of local governments to adopt innovative digital solutions in governance, including in the Education sector (Rossikhin et al., 2020) provides insight into the potential of digitalization of the Education system which emphasizes the need for a comprehensive assessment regarding the advantages and disadvantages of digitalization in educational institutions. The challenges faced by Education stakeholders show that local governments play an important role in addressing these challenges and providing support to digital literacy initiatives, especially in early childhood education.

The role of local governments in implementing digital education requires organizational capacity, leadership and a comprehensive assessment of the potential for digitalization. In addition, local governments must address challenges related to implementing digital literacy, especially in early childhood education, and consider innovative digital solutions such as digital signatures in governance. Digital inequality in the perspective of educational political policy in Depok City needs to pay attention to economic factors, digital literacy and investment in the education sector. Integration of data from these various aspects can provide a comprehensive understanding of digital inequality and provide a basis for effective development policies in overcoming this problem (Solehudin, 2023a).

To overcome digital inequality in the education sector and ensure equal opportunities for all students, the Depok City Government can implement various policies and initiatives such as improving internet infrastructure throughout the city, including remote or less accessible areas, to ensure stable internet access. and quickly for all students, providing financial support or subsidies to families with low incomes so that they can access internet services at affordable costs and providing training to teachers to be able to integrate digital technology in the learning process, including distance learning.

Apart from that, you can also create and provide quality digital learning materials that can be accessed online, provide digital devices such as laptops or tablets to underprivileged students, so that they can participate in online learning more easily and what is no less important is establishing policies to collect data. returning digital equipment given to students after they have completed their education or if they are no longer needed and establishing collaboration with telecommunications companies to provide internet services or data packages at affordable prices to students.

4. CONCLUSION

Junior high schools have an important role in forming the basic knowledge and skills of students. Therefore, policies and programs aimed at SMPM, such as in Cisalak, need special attention to ensure that a strong foundation in digital literacy and technology skills is instilled from an early age. By implementing technology subsidy or assistance policies, training programs for teaching and administrative staff, as well as incentives for digital infrastructure development, it is hoped that SMPM Cisalak Depok City and other private schools can improve the quality of their education through better technology integration. However, the research results show minimal attention from local governments, especially in this case the Depok City Government, in helping schools develop digital literacy and skills for junior high school children. This can be seen from the absence of specific assistance related to the procurement of digital devices and online-based learning.

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