

Marginalizing and Distracting: Digital Technology Integration in *Kurikulum Merdeka*

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ABSTRACT

The implementation of Indonesia's Kurikulum Merdeka aims to transform education through student-centered learning and digital technology integration. However, this study reveals significant challenges that hinder its success. Drawing on recent surveys, case examples, and literature, the findings highlight how economic and infrastructural barriers marginalize both teachers and students, limiting access to essential digital tools and reliable internet. Moreover, while digital technologies offer promising educational affordances, their use also introduces distractions that can undermine learning outcomes. These tensions expose a gap between the curriculum's visionary goals and the practical realities faced in diverse educational contexts. The study underscores the urgent need for targeted policy interventions to improve digital equity, support teachers, and develop strategies to manage technology use effectively. Implications for curriculum design and recommendations for future research on digital inclusion and distraction management are discussed to guide the evolution of Kurikulum Merdeka towards a more equitable and effective education system.

Keywords: Affordance, Critical Social Theory, Digital Technology, Kurikulum Merdeka.

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1. INTRODUCTION

There is an asserted belief that digital technology can enhance students' learning outcomes and reduce the teachers' working load. However, it has been argued that students' engagement with digital technology might contribute to the diminishment of students' knowledge as they tend to rely heavily on the internet during the learning process (Selwyn, 2016) as well as distracting students from the learning process (Selwyn & Aagaard, 2021). Moreover, instead of improving students' performances, the teachers might find it hard to acclimatize with the latest digital technology (An & Oliver, 2021), leading to less productive classrooms for teachers and students. In addition, the integration of digital technology might lead to social injustice (Grant & Eynon, 2017) as some teachers or students cannot afford to access supporting gadgets or internet connection. In this article, we will argue that the integration of digital technology to *Kurikulum Merdeka*, a national curriculum of Indonesia, can be considered as marginalizing and distracting, bringing more possible adverse consequences to students and teachers. Furthermore, we will use affordance theory and social critical theory to analyze this subject. The next paragraphs will discuss those theories.

Criticism has an important role in enhancing the quality of education as critiques allow stakeholders (the government, educational institutions, the teachers, parents and students) in the educational field to look back at their practice and improve. Against this background, criticisms become a central point of critical social theory (CST). Leonardo (2004) defines CST as an interdisciplinary knowledge foundation with the underlying objective of promoting the emancipatory potential of knowledge through constant critiques of institutional and conceptual challenges, highlighting how people and social systems interact, create and help both people and social systems become free. Furthermore, CST responses the real-world circumstances through the perspectives of

philosophical, political, and pedagogic, creating progressive social changes to produce a better society (Mellor, 2013). Due to CST's heavy focus on addressing social inequality in education, jargons such as "pedagogy of the oppressed" (Freire, 2021), "predatory culture" (McLaren, 2022), "dancing with bigotry" (Macedo & Bartolome, 2016) are familiar in studies of CST in education. Therefore, CST argues that the quality education can only be achieved when one confronts the reality of inequality in education, accepting that the social arrangements can lead to social inequalities and comprehending the causes of inequality in education (Leonardo, 2004).

In regards to CST in educational technology or "the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources" (Januszewski & Molenda, 2008, p.1), being critical means analyzing the role of educational technology in the reproduction of inequalities or the worsening of injustice (Macgilchrist, 2021) such as flagging black or gender binary students as suspicious because the proctoring software was developed using the datasets of white, cisgender faces (Swauger, 2020). As CST promotes the equal provision of technology tools to help the teachers and students to facilitate the productivities of students and teachers (Otoo et al., 2020), inequality can also take place as teachers in privileged schools and less advantaged schools have different interpretations to students using digital gadgets in their schools (Rafalow, 2020). For instance, while the teachers in affluent areas celebrate students' practices when using computers in the computer lab, teachers in less advantaged schools perceive the actions as breaking the school facilities due to the lack of computer facilities in their school. Furthermore, Hall (2011) argues that CST is suitable to criticize the use of learning technology in the classrooms as this theory allows educators to uncover and generate alternative solutions to sociocultural issues by examining learning technology as historical situated. It can be concluded that the use of CST in the context of this study is appropriate due to the research subject.

Therefore, CST can act as a 'scalpel' that cuts into the core of the problems of inequalities in educational technology, possibly showing the reasons behind the problems such as the disparities of students' achievements or teachers' performances in the classrooms. The findings of Adara et al's (2019) research toward demotivation factors among university students in an urban area imply that the participants found learning English in the university is more engaging because they are provided with better computer laboratories than ones they got in their high schools. Such 'digital disparity' can also be found when students from rural areas need to decode digital practices as they transition to higher education (Timmis & Muhuro, 2019). Moreover, this disparity can be visibly found during the trying times such as the COVID-10 pandemic as the internet access led to the disparities of students' access to online learning (Macgilchrist, 2021). A study of Adara and Najmuddin (2020) shows that online learning during the Covid-19 outbreak can lead to students' demotivation as some students cannot afford to have needed gadgets such as cellular phones or laptops. Thus, instead of condoning students as lazy or teachers as demotivating, the inequalities to digital technologies can be the real causes of students' lack of motivation to achieve their learning goals. In regards to the present study, we will use the perspectives of CST to analyze how the inequalities in technology marginalize a group of teachers and students in the context of the integration of digital technology in *Kurikulum Merdeka*. The next paragraph will discuss affordances theory.

The term 'affordance' was initially coined by Gibson (2017) to refer to the characteristics that an object can offer or provide to an animal. Norman (2016) adds that the concept of affordances involves the perceptions and actual uses of a certain object. For instance, a knife with its sharp point and handle offers its user to cut some objects. In regards to technology, technological affordances refer to the potential uses of technology while pedagogical affordances involve the use of technology in the classrooms (Drennan & Moll, 2018). The studies of affordances in educational technology

revolves around the question of the possible uses of certain technological tools to the students' improvements (Bower & Sturman, 2015; Conole & Dyke, 2004; Dalgarno & Lee, 2010; Ma et al., 2020; Nami, 2022; Ryane & El faddouli, 2020). However, Derry (2007) protests that affordances cannot be used to explain phenomena in the field of educational technology as the direct perceptions of an object cannot be translated to the complex issues such as human learning. For instance, humans are able to perceive the use of computers through the interaction with the users or a manual book.

In order to bridge the differences in perceptions toward the concept of affordances in educational technology, Aagaard (2018) proposes the idea of using affordances to explain 'action possibilities' of certain objects but their actual uses in the educational practice. Furthermore, the concept of affordance in technology does not only involve the intended use of a certain technology but also the unintended consequences that can arise due to its application (Conole & Dyke, 2004). Therefore, analyzing affordances in the context of educational technology also includes making a critical analysis of both positive and negative consequences of integrating technologies to the classrooms. Through the concept of affordances, Aagaard (2018) argues that a technology tool might be distracting as it offers various possibilities, making students distracted. In this respect, digital technology is viewed as downright distracting to students. We will use the concept of affordances to investigate how the integration of digital technology in *Kurikulum Merdeka* can be distracting for students and teachers.

This study fills this gap by combining CST and affordance theory to critically examine how digital technology integration in *Kurikulum Merdeka* may marginalize certain groups and create distractions that impede learning. It also focuses on the unique infrastructural and socio-economic challenges faced by Indonesian schools, offering practical insights for policymakers and educators to promote equitable and effective technology use. By addressing these issues, this research contributes to a deeper understanding of the social implications of educational technology within Indonesia's ongoing curriculum reform.

2. METHOD

This study adopts a purely conceptual research design, with no empirical data collection such as interviews, observations, or surveys. Instead, it draws on existing academic literature, policy documents, and theoretical frameworks to analyze the integration of digital technology into Indonesia's *Kurikulum Merdeka*. Conceptual research, as defined by DeCuir-Gunby and McCoy (2023), involves systematically organizing and interpreting concepts to explore a particular issue. It focuses on identifying key ideas and their interrelations to generate new theoretical insights. In this study, the conceptual analysis is grounded in Critical Social Theory (CST) and affordance theory to interrogate the assumptions and consequences of educational technology use in curriculum reform.

The primary data for this conceptual study consists of peer-reviewed journal articles, scholarly books, and government policy documents related to educational technology and curriculum development. A targeted literature search was conducted using databases such as Google Scholar, Scopus, and Web of Science, with search terms including "digital affordances," "critical social theory in education," "technology integration in curriculum," and "*Kurikulum Merdeka*." The review focused on literature published between 2004 and 2024, with emphasis on works that address post-pandemic digital learning, equity in technology access, and pedagogical innovation. Approximately 40 documents were reviewed, and about 30 were selected for in-depth analysis based on their relevance, credibility, and conceptual contribution to the topic.

The analytical process was guided by a deductive approach using CST and affordance theory as interpretive frameworks. First, key constructs from CST—such as power, marginalization, and structural inequality—were defined and contextualized in relation to digital learning. Simultaneously,

key ideas from affordance theory—including action possibilities, perceived affordances, and unintended consequences—were synthesized from existing studies (e.g., Bower & Sturman, 2015; Conole & Dyke, 2004; Aagaard, 2018). Using these frameworks, the selected literature was examined to identify patterns in how digital tools either support or undermine equitable teaching and learning within the *Kurikulum Merdeka*. Themes such as unequal access, teacher readiness, and student distraction were analyzed in light of these theories to draw out critical insights about the risks and limitations of technology integration in education policy.

While conceptual studies offer valuable theoretical contributions, they also come with inherent limitations. This study does not rely on empirical fieldwork, and therefore its findings are not based on direct experiences of teachers or students. The analysis depends on secondary sources, which may reflect disciplinary or geographic biases. Furthermore, while conceptual arguments can uncover systemic issues and guide future research, they do not provide measurable or generalizable data. As such, this study is best understood as a theoretical exploration that highlights key concerns and opens space for further empirical research on the lived experiences of stakeholders in the implementation of *Kurikulum Merdeka*.

3. RESULT AND DISCUSSION

3.1 Results

3.1.1 Technology as a Marginalizing Factor for Teachers

The integration of digital technology within *Kurikulum Merdeka* continues to marginalize many teachers due to persistent resource limitations. Although the unwritten expectation for teachers to share *Aksi Nyata* projects on social media has been officially removed (Aranditio, 2025), many educators still struggle because they lack access to suitable digital devices necessary for preparing and delivering teaching materials. A 2024 survey by the *Perhimpunan Pendidikan dan Guru* (P2G) revealed that 71.1% of teachers paid for internet access from their own funds, and 51% worked on administrative tasks outside regular school hours, often late into the night (Haeri & Afriansyah, 2024). This burden is compounded by the low average monthly salary of Indonesian teachers, approximately \$300, while the average cost of mobile phones is about \$186.44 (Statista, 2024). Multiple studies confirm that insufficient infrastructure and shortage of appropriate gadgets remain significant barriers to effective *Kurikulum Merdeka* implementation (Akhmadi, 2023; Ben Gurion & Nasir, 2024; Putri, 2023; Rumiati et al., 2023). Therefore, despite policy changes easing formal demands, many teachers remain marginalized by economic and infrastructural challenges that limit their engagement with digital technology in education.

3.1.3 Technology as a Marginalizing Factor for Students

Similarly, the integration of digital technology risks exacerbating educational inequalities among students, especially those from low-income and rural areas. While internet costs in Indonesia are relatively affordable compared to neighboring countries (Puspita, 2024), the country's low minimum wage levels limit many families' ability to maintain reliable internet access (Shofa, 2024). This digital divide manifests in insufficient infrastructure and a lack of qualified teaching staff in rural areas, which puts students at a disadvantage compared to their urban counterparts (Hidayat, 2024). Educational disparities are also reflected in participation rates in higher education, with only 12.23% of students from Papua enrolling in tertiary education compared to 73.9% in Yogyakarta (Prasetyo, 2025). The COVID-19 pandemic further revealed these inequities, as many students in remote regions struggled to participate in online learning due to poor connectivity and limited devices (Angdhiri, 2020). Consequently, although digital technology integration aims to promote educational equity, it

frequently perpetuates existing socio-economic disparities among students by failing to address fundamental access issues.

3.1.4 Technology as a Distracting Factor

Digital technology is often praised for its potential to enhance student learning, but its implementation in classrooms presents challenges that require critical scrutiny. Numerous studies affirm the positive role of digital tools in education (Adara & Haqiyah, 2021; Aliu & Oke, 2023; Sharma, 2022). Affordance theory provides a useful lens to examine how these tools function in educational settings. Berthelsen and Tannert (2020) classify digital learning materials into three types of affordances: physical (hardware-based actions), virtual (software-driven interactions), and socially mediated affordances (interaction through digital platforms). These affordances offer diverse opportunities for engagement. For instance, Cheng's (2024) study of music video games reveals that such platforms can enhance musical skills, but excessive reliance leads to unbalanced skill development. Lee et al. (2024) echo this caution, arguing that informal digital learning tools should complement, not replace, formal instruction. These findings suggest that while digital technologies offer educational potential, they should be deployed as supportive tools rather than central pillars of instruction.

However, the flexibility offered by digital technologies can also be a source of distraction, affecting both students and teachers. Selwyn (2016) introduced the concept of "digital distraction" as a key challenge in educational technology. Defined as the use of devices or platforms that divert attention from learning tasks (Vermaat et al., 2017), digital distraction reduces focus and presence (Güngör & Kurt, 2024). McGarr (2024) argues that despite being widely overlooked, this issue threatens deep engagement with learning. Several studies support these concerns. For example, Adara et al. (2020) found that mobile-assisted language learning, while intended to foster autonomy, often resulted in students becoming distracted by unrelated applications. Flanigan and Titsworth (2020) report that in-class device use negatively affects note-taking, and Aaron and Lipton (2018) found that unrestricted device use hampers students' short-term memory retention. The accumulation of such findings has led scholars like Aagaard (2022) to speak of the "end of the honeymoon era" of educational digitization. Movements advocating for device bans in classrooms (Selwyn & Aagaard, 2021) reflect a growing resistance to unchecked digital integration. These insights indicate that, despite its perceived benefits, technology can fragment attention and diminish learning outcomes when not critically regulated.

In the context of *Kurikulum Merdeka*, the potential for digital distraction is particularly relevant. The curriculum emphasizes student-driven projects and the integration of technology as a means for applied learning. While this approach aims to foster creativity and real-world skills, it also opens up possibilities for off-task behavior. Students may be tempted to browse social media or engage in unrelated online activities instead of accessing learning materials, especially when using personal devices. Although some schools restrict phone use during class, students still rely on smartphones or laptops for assessments, making distraction a persistent risk. Teachers, too, face similar challenges. Rather than focusing solely on pedagogy, educators are often required to create digital learning content, which can be time-consuming and stressful. While studies such as Flerlage et al. (2023) and Sya'ro and Dewi (2022) suggest that digital content may boost student motivation, further research is needed to determine how these materials can be effectively incorporated into everyday teaching. Oliver (2024) cautions against substituting meaningful teacher-student interactions with tech-based efficiencies, arguing that educational value should be defined by those within the classroom, not by

external technocratic agendas. This perspective underlines the importance of allowing both teachers and students to choose technological tools that suit their unique needs and contexts.

3.2 Discussion

The findings reveal a disjunction between the goals of *Kurikulum Merdeka* and on-the-ground realities. While the curriculum encourages learner autonomy, digital content creation, and innovation, these goals are often undermined by unequal access to devices, bandwidth, and professional development. Teachers in rural and under-resourced schools face disproportionately high burdens, while students from low-income families remain digitally excluded. Furthermore, while digital tools provide new learning affordances, they also introduce behavioral and cognitive challenges, especially when not scaffolded with appropriate guidance. Thus, the implementation of *Kurikulum Merdeka* is shaped not only by policy but by the material and social contexts in which it is enacted.

These findings support broader critiques in the educational technology literature. Selwyn (2016) and Aagaard (2022) emphasize the risks of technocentrism, where technology is assumed to be beneficial regardless of social context. Similarly, the evidence here confirms Berthelsen and Tannert's (2020) affordance theory: technology only enables learning when users are able to access and engage with its intended functions. The digital divide in Indonesia echoes global patterns in low- and middle-income countries, where digital equity remains a persistent challenge despite policy-level enthusiasm (Sharma, 2022; Aliu & One, 2023).

The findings highlight several important implications for the implementation of *Kurikulum Merdeka*. First, policy design must take into account the existing material conditions, especially infrastructure gaps in rural and under-resourced regions; without targeted investments in connectivity and teacher support, efforts to integrate digital technology risk reinforcing existing educational inequalities. Additionally, improving digital literacy among teachers is crucial—not only in terms of technical skills but also by fostering critical digital agency that enables educators to select and adapt technological tools according to their pedagogical needs and local contexts. Moreover, there must be a careful balance between leveraging digital content to enhance student engagement and preserving the central role of meaningful teacher-student interactions; technology should supplement, not replace, these human connections that are essential for deep learning. Finally, these insights point to the need for further research, particularly longitudinal and regional case studies, to better understand how digital integration evolves over time and across diverse educational settings within Indonesia's decentralized curriculum framework.

4. CONCLUSION

This study demonstrates that while the *Kurikulum Merdeka* aims to foster innovative and equitable education through digital technology integration, significant economic and infrastructural barriers continue to marginalize both teachers and students. Teachers often bear personal costs for internet access and face limited device availability, which restricts their ability to implement the curriculum's project-based, technology-rich pedagogy. Similarly, students from low-income and rural areas encounter persistent digital divides that impede equitable participation in learning activities. Additionally, despite the potential benefits of digital tools, their use sometimes results in distractions that undermine both student engagement and teaching effectiveness. These findings highlight the critical gap between the curriculum's policy aspirations and the practical realities of its implementation.

The implications of these findings are significant for education stakeholders. Policymakers must prioritize investments in digital infrastructure and economic support for teachers and students,

especially in marginalized regions, to close access gaps and enable meaningful participation in *Kurikulum Merdeka*. Educators should receive targeted training to effectively integrate technology while managing its potential distractions, ensuring that digital tools enhance rather than detract from learning. Curriculum designers should also incorporate flexible guidelines that allow adaptation to diverse local contexts, balancing innovation with practical feasibility.

Based on these findings, future research should investigate context-specific strategies to alleviate digital marginalization, including interventions that improve infrastructure and provide financial support. Further studies could explore best practices for managing digital distraction within student-driven projects and technology-enhanced learning environments. Such research will be essential to refine the *Kurikulum Merdeka*, helping it achieve its goals of innovation, equity, and quality education across Indonesia.

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