Challenges for Implementing the Independent Curriculum (Kurikulum Merdeka): An Analysis of Facilities and Infrastructure Inequality at Madrasah Ibtidaiyah Al-Ishlah Palembang

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Keywords	ABSTRACT
Independent Curriculum; Facilities; Infrastructure Inequality	This study aims to analyze disparities in facilities and infrastructure as the primary challenges for implementing the Merdeka Curriculum at Madrasah Ibtidaiyah (MI) Al-Ishlah Palembang. the research employs a descriptive qualitative approach through interviews with Islamic Education teachers and direct observations of the school's physical conditions, including classrooms, the library, sanitation facilities, and technological equipment. The findings indicate that limited classroom space, inadequate sanitation facilities, and insufficient information technology devices have a direct impact on the implementation of differentiated learning, P5RA projects, and technology-based instruction. Additionally, the implementation of two-session learning due to space constraints will impacts the effectiveness of study time. The research findings confirm that insufficient facilities and infrastructure are an essential obstacle to achieving the Independent Curriculum's objectives. Therefore, efforts to strengthen facility and infrastructure management, ensure sustainable funding support, and foster collaboration among schools, government, and the community are required to optimize the quality of learning.

INTRODUCTION

Based on an etymological perspective, the term "curriculum" originates from the ancient Greek linguistic tradition. This term consists of two elements which are "curir," means athlete or runner, and "curie," refer to the competition track or arena. This etymological understanding shows that the curriculum represents an educational pathway that students must traverse, or conversely, can be seen as a competitive arena for achieving desired learning goals.[1] This fundamental definition indicates that the essence of the curriculum extends further than being used as an ordinary set of educational resources, instead of systematically constructed roadmap designed to comprehensively encourage the development of students' abilities.

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[1] Kurniasih, I., *AZ Implementasi Kurikulum Merdeka* (Jakarta: Amazing Books Creative, 2023).

In the framework of the Indonesian education system, the Independent Curriculum was introduced as a pedagogical foundation that integrates various internal curriculum activities through more flexible and contextually relevant methods. The educational content is concisely and extensively structured, designed to provide students with sufficient time to expand the conceptual understanding and maximize the capabilities. Furthermore, teaching professionals are given the freedom to choose appropriate teaching materials, which allows teacher modified he learning process as consist as students' needs and interests.[2]

The development of the curriculum concept in the history of educational knowledge indicated various of definitions offered by experts, which influenced by their own scientific background and philosophical orientation. Abdurrahmansyah[3] notes that such variety is caused by different points of significance in observing the curriculum, which renders nearly impossible to formulate a single, universally accepted definition. Etymologically, the term "curriculum" was derived from the Latin word "currere," which was originally understood as a racetrack or path, but subsequently interpreted broadly by figures like Cicero as the journey of human life. This evolution of meaning shows that the curriculum is not only a formal structure but also a multidimensional concept inherent in student development.

Based on the perspective of modern educational theory, the curriculum is understood as various interconnected dimensions. Abdurrahmansyah[4] proposed four main dimensions of the curriculum, including: (1) curriculum as an idea or a set of concepts that reflects educational goals; (2) curriculum as a written document containing learning plans; (3) curriculum as an implementation process that involves in teaching and learning activities; and (4) curriculum as the learning outcomes achieved by students. In addition, the curriculum is additionally seen as an accumulation of learning objectives, subjects, learning activity designs, and experiences that students participate within formal, non-formal, or informal education.

Furthermore, the implementation of the curriculum in educational practice not only includes the official curriculum outlined in government documents, but also the curriculum that actually occurs inside the classroom. Abdurrahmansyah[5] explained that the levels of the curriculum consist of the recommended curriculum, the written curriculum, the taught curriculum, the tested curriculum, and lastly, the curriculum learned by students as an actual experience. He additionally emphasized the existence of the hidden curriculum, which are the values and norms students acquire via school culture, and the excluded curriculum, which are learning materials or experiences that are not provided either intentionally or unintentionally. This framework illustrates that the curriculum is a social construct influenced by philosophical, political, cultural aspects, and the needs of society in achieving educational objectives.

The Independent Curriculum is an educational policy intended to offering learning flexibility, strengthening basic competencies, and emphasizing student-centered learning. This curriculum is designed to ensure that students have in-depth learning experiences by using differentiated instruction, the Pancasila Student Profile Strengthening Project and Rahmatan lil 'Alamin (P5RA) and optimum application of technology.[6] The implementation of this curriculum requires that educational institutions be prepared to provide a suitable

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[2] Suherman, A., *Implementasi Kurikulum Merdeka: Teori dan Praktik Kurikulum Merdeka Belajar Penjas SD* (Jakarta: Indonesia Emas Group, 2023).

[3] Abdurrahmansyah, *Kajian Teoritik dan Implementatif Pengembangan Kurikulum* (Jakarta: RajaGrafindo Persada, 2021).

[4] *Ibid.*

[5] *Ibid.*

[6] Ministry of Education, Culture, Research and Technology, *Panduan Implementasi Kurikulum Merdeka*, 2022.

learning environment, including the availability of facilities and infrastructure that support many different learning activities. In the context of the national education system, facilities and infrastructure occupy an extremely strategic position.

Bafadal emphasized that infrastructure and facilities are an important component in the educational process due to the function as both direct and indirect media that enable effective learning activities.[7] Barnawi and Arifin differentiate between facilities as tools utilized during learning, and infrastructure as basic facilities that support the educational process.[8] The lack of availability of facilities and infrastructure often impacts the low quality of educational services, limited teacher creativity, and decreased student learning motivation.

Various studies demonstrate a significant correlation between the completeness of infrastructure and the quality of learning. Megasari found a significant relationship between infrastructure conditions and the academic achievement of elementary school students.[9] However, UNESCO emphasizes that the implementation of competency-based curriculum in developing countries is greatly impacted by the availability of sufficient classrooms, modern technological facilities, and an environment that encourages learning.[10] This condition becomes exceedingly relevant when looking at Indonesian infrastructure gap, especially in private schools and madrasahs that have limited facilities.

Madrasah Ibtidaiyah (MI) is one of the primary school institutions that plays a strategic role in transferring religious values and shaping students' character. However, many madrasas, especially private institutions, have quite complex infrastructure challenges, such as limited classrooms, insufficient sanitation, and a lack of technological facilities. The same circumstances were also found at MI Al-Ishlah Palembang, which has infrastructure limitations during attempts to implement the Merdeka Curriculum. This situation has a direct impact on the effectiveness of learning, especially in project-based instruction, differentiated learning, and the use of digital technology.

Based on these conditions, this research focuses on analyzing the inequality of facilities and infrastructure as a challenge in implementing the Independent Curriculum at MI Al-Ishlah Palembang. This research is expected to provide an in-depth analysis of how infrastructure conditions affect the readiness and implementation of the Independent Curriculum, in addition to provide recommendations to improve the quality of education in madrasas.

RESEARCH METHOD

This research utilizes a descriptive qualitative approach that aims to present an accurate description of the condition of educational facilities and infrastructure at MI Al-Ishlah Palembang. The research location is in Ilir Timur Tiga District, selected relates to the study's focus on the readiness of madrasas to implement the Independent Curriculum. Data is collected through in-depth interviews with Islamic Religious Education (PAI) teachers as the primary informants who directly understand the implementation of learning and the utilization of infrastructure and facilities. Additionally, the researcher conducted direct observations of the school environment to observe the condition of classrooms, libraries, computer rooms, sanitation facilities, and other learning support facilities without taking

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[7] Ibrahim Bafadal, *Manajemen Perlengkapan Sekolah* (Jakarta: Bumi Aksara, 2014).

[8] Barnawi & M. Arifin, *Manajemen Sarana dan Prasarana Sekolah* (Yogyakarta: Ar-Ruzz Media, 2012).

[9] Megasari, "Hubungan Sarana Prasarana dengan Prestasi Belajar Siswa," *Jurnal Pendidikan Dasar,* 2019.

[10] UNESCO, *Global Education Monitoring Report* 2020: *Inclusion and Education,* (Paris: UNESCO Publishing, 2020).

photos or visual documentation. This observation is carried out to obtain an objective understanding of the factual condition of the infrastructure and facilities. The data are analyzed by the stages of reduction, data presentation, and drawing conclusions, so the research results can systematically, relevantly to actual conditions.

RESULTS AND DISCUSSION
Results

Based on interviews with one of the teachers at the school, it has been determined that the school has been established since 1991. In the early days of its establishment, teaching and learning activities were conducted under a tiny chapel room before eventually having an official school building after receiving the support provided by the foundation. Geographically, this school is located in Ilir Timur Tiga District, Palembang City. The number of students indicate higher numbers annually, with a total of approximately 200 students divided into ten learning groups, consisting of two groups for grade I, two groups for grade II, two groups for grade III, one group for grade IV, two groups for grade V, and one group for grade VI. The limitation of learning room can be solved by implementing a two-session learning system such morning and afternoon.

Viewpoint of readily available facilities and infrastructure in this school already has a number of supporting facilities for learning activities, including classrooms, teacher rooms, principal's office, computer room, place of worship, School Health Unit, library, and sanitation facilities such as toilets and learning equipment like whiteboards, tables, chairs, and Wi-Fi network connection. The responsibility for maintaining the facilities is handled cooperatively by the principal and teachers by a mechanism of mutual collaboration, although there is no systematically organized maintenance schedule.

The challenges the school endures involve a limited number of classrooms, a lack of toilet facilities (there are currently only two restrooms available), and a lack of educational tools such as computers. The teacher who became a resource emphasized the importance of facilities and infrastructure to fostering the effectiveness of learning, noting that "a school without facilities and infrastructure is comparable to a house without furniture," which demonstrates the vital function of educational facilities to provide comfort and effectiveness in the teaching and learning process. As a transformation action, the school has taken the initiative to submit a proposal for assistance as part of the School Operational Assistance funds, however it has yet to be fully implemented because of inadequate allocation and the priority needs of other schools that are also require similar support.

Inequality of Facilities and Infrastructure in the Perspective of Educational Theories

The gap in facilities and infrastructure experienced by MI Al-Ishlah Palembang can be examined as the perspective of educational theory, which argues that facilities and infrastructure are essential components of the learning process input. Bafadal stated that facilities and infrastructure are fundamental elements that determine the feasibility of effectively conducting the learning process.[11] When educational expenses are disproportionate, what is expected from learning become challenging to achieve. This condition matches Tilaar's ideas, who identified the gap in facilities and infrastructure as one of the fundamental causes of disparities in the quality of among education institutions.[12]

A Report from the Ministry of Education, Culture, Research, and Technology in the year of 2022 notes that the infrastructure gap remains a major challenge in equalizing the

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[11] Ibrahim Bafadal, *Manajemen Perlengkapan Sekolah* (Jakarta: Bumi Aksara, 2014).
[12] H. A. R. Tilaar, *Manajemen Pendidikan Nasional* (Bandung: Remaja Rosdakarya, 2009).

quality of education in Indonesia, particularly in private madrasas.[13] At MI Al-Ishlah, the limited availability of classrooms, minimal bathroom facilities, and lack of technological devices indicate that educational inputs have not yet reached ideal standards. This imbalance has a direct impact to the madrasah's capacity to conduct learning according to the standard of the Independent Curriculum. The problem in facilities and infrastructure is not only a physical problem, but also a structural issue that can minimized improvement of the quality of education.

Disparities of facilities and infrastructure at MI Al-Ishlah Palembang compared to National Education Standards

Referring to National Education Minister Regulation Number 24 of 2007, primary education units are required to provide supporting facilities including classrooms, libraries, sanitation facilities, and information and communication technology facilities.[14] However, the research findings indicate that MI Al-Ishlah has not yet in the level of these standards. The shortage of three classrooms that imposing the learning process have two learning sessions which reduces the effective learning duration. Meanwhile, the availability of sanitation that have only two toilets for 200 students, is below the established national standard. Emzir emphasizes that when the minimum standards for facilities and infrastructure are not met, educational institutions are unable to create a safe and conducive learning environment.[15] This disparity indicates those structural gaps require policy support, funding allocation, and prioritization of strengthening educational infrastructure so the madrasas can achieve minimum service standards as same government regulations.

Challenges to the Implementation of Differentiated learning

Differentiated learning is a central concept in the Independent Curriculum that requires flexible rooms and facilities that support to grouping students based on individual needs. Tomlinson explained that implementing differentiation requires a learning class rooms that facilitates student mobility, the use of varied media, and flexible group arrangements.[16] Meanwhile, the limited availability of classrooms at MI Al-Ishlah and the number of learning groups that higher than the available space capacity which made teacher difficult to implement it. As a result, the learning process often reverts to the conventional method of lecturing. This condition contradicts the principles of the independent Curriculum which encourages group discussions, exploration, and collaborative activities. Limitations rooms also restrict the use of creative learning media that require a wider movement area.

Implications for the Implementation of the P5RA Project

The Pancasila Student Profile Strengthening and Rahmatan lil 'Alamin (P5RA) project requires practice room, creativity-supporting equipment, and sufficient multimedia facilities. Rahmawati emphasized that the project can only be implemented effectively if educational institutions have adequate practice rooms and facilities for collaborative activities.[17] But at MI Al-Ishlah, the limited number of classrooms and the shortage of an exclusive area for projects have rendered the implementation of P5RA less than optimal. Projects that are

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[13] Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, *Laporan Kinerja Kemendikbudristek* Tahun 2022 (Jakarta: Kemendikbudristek, 2022).

[14] Permendiknas Nomor 24 Tahun 2007 tentang Standar Sarana dan Prasarana untuk Sekolah Dasar/Madrasah Ibtidaiyah.

[15] Emzir, *Metodologi Penelitian Pendidikan* (Jakarta: RajaGrafindo Persada, 2013).

[16] Carol Ann Tomlinson, *The Differentiated Classroom* (Virginia: ASCD, 2014).

[17] Rahmawati, "Implementasi Projek Penguatan Karakter," *Jurnal Pendidikan Karakter,* 2022.

supposed to encourage student creativity are often limited to classroom discussion activities. The lack of digital devices also hinders the implementation of technology-based projects. As a result, the implementation of P5RA does not reflect the principle of interactive education, which is an essential feature of the Independent Curriculum.

Challenges in Implementing Technology-Based Learning

Technology-based learning is a fundamental component of the Merdeka Curriculum, especially regarding the development of digital literacy. However, the availability of computer devices at MI Al-Ishlah is currently extremely limited. UNESCO emphasizes that technology is a fundamental prerequisite for the implementation of competency-based curricula.[18]

Data from the Ministry of Education, Culture, Research, and Technology's Data and Information Technology Center in 2021 shows that 45% of primary education units in Indonesia maintain limited opportunities for using educational technology devices.[19] Rusli et al. in their research reported that the availability of ICT infrastructure is positively correlated to the academic success of learners, particularly for the development of 21st-century competencies.[20]

The limitations of devise represent that digital learning can only be executed out during periods, therefore rendering it inefficient. Educators also face difficulties in providing application-based or digital simulation materials due to a lack of facilities. Keengwe and Bhargava emphasize that integrating technology into learning requires not only the availability of devices, but also supporting infrastructure such as stable internet connections and supportive environments for learning.[21] This condition has the potential for expanding the digital literacy gap between madrasah students and students from other schools which have more complete facilities and infrastructure.

Impact of the Two-Session System on Learning Effectiveness

The two-session learning system caused by a lack of classroom space can impact the reduction of effective learning hours. Handayani and Putra found that educational institutions with a two-session system experienced a decrease in learning effectiveness due to the shorter learning duration.[22] A similar situation occurred at MI Al-Ishlah, where educators had to complete the learning material within a limited time. This situation reduces students' opportunities for in-depth exploration, group discussions, and project activities. Time constraints also hinder the implementation of formative assessments, which are highly recommended in the Independent Curriculum to continuously monitor students' learning progress.

Lack of Bathrooms and Student Welfare Facilities

School sanitation facilities are a significant factor influencing students' health and comfort. The WHO emphasizes that poor sanitary conditions impact students' health and

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[18] UNESCO, *Global Education Monitoring Report* 2020.

[19] Pusat Data dan Teknologi Informasi Kemendikbudristek. (2021). *Survei Penetrasi TIK di Satuan Pendidikan Tahun 2021*. Jakarta: Kemendikbudristek, hlm. 34-38.

[20] Rusli, M., Hermawan, D., & Supuwiningsih, N. N. (2021). "Understanding the impact of intensive use of internet-based communication technology on students' academic performance*." International Journal of Emerging Technologies in Learning,* 16(3), 34-49.

[21] Keengwe, J., & Bhargava, M. (2014). "Mobile learning and integration of mobile technologies in education." *Education and Information Technologies,* 19(4), 737-746.

[22] R. Handayani & T. Putra, "Dampak Kekurangan Sarana terhadap Efektivitas Pembelajaran," *Jurnal Manajemen Pendidikan*, 2020.

their ability to concentrate on learning.[23] Using only two toilet units available for 200 students, MI Al-Ishlah is exposed to the risk of long queues and health issues. Some students even choose to hold their bladders, which may consequence in urinary tract infections. This condition additionally impacts the comfort and well-being levels of students, even though the Independent Curriculum emphasizes well-being as an essential component of the learning process.

Insufficient Management of Facilities and Infrastructure

The management of facilities and infrastructure at MI Al-Ishlah is still effortless, particularly in regards to inventory, maintenance, and planning. Bafadal explained that ideal facilities and infrastructure management includes systematic inventory, procurement, maintenance, and disposal of facilities.[24] Gunawan and Benty added that effective infrastructure management requires an integrated system of planning, organizing, implementing, and supervising.[25] However, the madrasas do not yet have a digital inventory system or a structured maintenance schedule, so facilities and infrastructure get damaged rapidly and are difficult to prioritize in purchasing decisions. Prastyawan emphasized that unsystematic management of infrastructure may contribute to financial inefficiency and shorten the lifespan of educational assets.[26] The lack of long-term planning also impacts the slow fulfillment of strategic infrastructure needs. The Ministry of Education and Culture's 2020 technical guidelines provide a framework for managing government assets that can be customized by private madrasas to improve asset management effectiveness.[27]

Inequality The Infrastructure as an Obstacle to the Implementation of the Merdeka Curriculum

Kurniawan emphasized that private madrasas are susceptible to deficiencies in facilities and infrastructure due to financial constraints and inadequate backing from the community.[28] In her investigation, Alawiyah identifies that the disparity in fulfilling National Education Standards between public and private schools, especially madrasahs, persists as a crucial issue in the Indonesian education system.[29] MI Al-Ishlah experienced a similar situation, where a lack of classroom accommodations, technology, and restrooms prevented the implementation of the Independent Curriculum. Pramana found that 73% of madrasas in Indonesia face challenges regarding to infrastructure preparedness for the implementation of the Independent Curriculum, such the most significant limitations relating to the areas of learning technology and project practice rooms.[30] The gap in facilities and infrastructure causes madrasahs difficult in implementing project-based learning, differentiation, and technology-based learning, which are the core of the curriculum. World Bank report in 2020 confirms that inadequate school infrastructure contributes to learning achievement gaps of

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[23] WHO, *Water, Sanitation and Hygiene in Schools,* 2019.

[24] Bafadal, *Manajemen Perlengkapan Sekolah.*

[25] Gunawan, I., & Benty, D. D. N. (2017). *Manajemen Pendidikan: Suatu Pengantar Praktik.* Bandung: Alfabeta, hlm. 123-128.

[26] Prastyawan. (2016). "Manajemen Sarana dan Prasarana Pendidikan." Al-Idarah: *Jurnal Kependidikan Islam*, 6(1), 33-46.

[27] Kemendikbud. (2020). *Petunjuk Teknis Pengelolaan Barang Milik Negara di Lingkungan Kemendikbud.* Jakarta: Sekretariat Jenderal Kemendikbud, hlm. 15-22.

[28] M. Kurniawan, "Kondisi Sarpras Madrasah Swasta di Indonesia," *Jurnal Madrasah*, 2022.

[29] Alawiyah, F. (2017). "Standar Nasional Pendidikan Dasar dan Menengah." Aspirasi: *Jurnal Masalah-Masalah Sosial,* 8(1), 81-92.

[30] Pramana, I. P. A. E. (2022). "Kesiapan Madrasah dalam Implementasi Kurikulum Merdeka: Analisis Sarana Prasarana." *Jurnal Pendidikan Agama Islam*, 19(2), 145-162.

up to 30% in Indonesia and private madrasas is facing the greatest challenges.[31] This has the potential for widening the quality disparity between private madrasas and public schools.

Optimizing the Strategy for Limited Facilities and Infrastructure

Despite limited facilities and infrastructure, madrasas can optimize existing resources by flexibly utilizing space, using simple learning media, collaborating with other educational institutions to share facilities, and inviting school committees and alumni. In her research, Wahyuningrum identified various creative strategies to the schools which have limited budgets including repurposing multifunctional spaces, developing local material-based learning media, and strategic partnerships to stakeholders.[32] These strategies may assist to reduce obstacles to the implementation of the Independent Curriculum. Kompri stated that the importance of innovation in infrastructure management is including optimizing the use of space and time to maximize limited resources.[33] Developing a simple digital inventory system will additionally assist madrasas plan the procurement of facilities and infrastructure more effectively and accurately. Nawawi and Martini proposed a participatory approach to infrastructure management which include the entire school community, the committee, and the public to improve management effectiveness with limited resources.[34]

CONCLUSION

Based on the research findings, it can be concluded that the inequality in infrastructure and facilities at MI Al-Ishlah Palembang is a determining factor preventing the successful implementation of the Independent Curriculum. Limited availability of classrooms is caused learning divided into two sessions, thus reducing effective time and preventing the implementation of differentiated learning. The lack of bathroom facilities reduces student comfort and well-being, while the lack of technological devices hinders the implementation of digital-based learning and the P5RA project, which requires collaborative activities. The unsystematic management of infrastructure and facilities further aggravates this condition. Therefore, improving the quality of facilities and infrastructure has become an urgent need to support effective learning processes and fulfilling the requirements of the Independent Curriculum. Improvements can be implemented by optimizing infrastructure management, increasing funding support, and strengthening collaboration among schools, committees, communities, and the government.

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