

## **School Infrastructure Inequality and the Reproduction of Educational Disadvantage: A Bourdieusian Analysis of Cultural Capital Formation in Marginalized Regions**

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### **Abstract**

Educational inequality remains a persistent challenge in disadvantaged regions, where disparities in school infrastructure continue to shape unequal learning opportunities and educational outcomes. This study investigates how infrastructural inequalities contribute to the reproduction of educational disadvantage among senior high school students in Wonogiri, Indonesia, through the lens of Pierre Bourdieu’s Social Reproduction Theory. Employing a qualitative case study design, data were collected through in-depth interviews, participant observation, and document analysis involving students, teachers, school leaders, and local education stakeholders. Data were analyzed using the Miles and Huberman interactive framework to identify patterns linking material conditions to educational experiences and outcomes. The findings reveal that unequal access to educational infrastructure—including laboratories, libraries, digital technologies, and internet connectivity—creates significant disparities in students’ opportunities to acquire cultural capital. Students in rural and geographically marginalized schools experience limited exposure to academic practices, digital competencies, and skill-development opportunities compared with their counterparts in better-resourced schools. These disparities constrain educational achievement and reduce students’ capacity to compete in higher education and labor markets. The study demonstrates that infrastructural inequality functions not merely as a resource deficit but as a structural mechanism through which educational disadvantage is reproduced across generations. This research extends Bourdieu’s framework by highlighting the mediating role of school infrastructure in the conversion of economic capital into cultural capital within disadvantaged educational settings. The findings suggest that equitable infrastructure investment is essential for disrupting cycles of educational inequality and promoting inclusive human capital development. Consequently, policies aimed at reducing regional disparities must prioritize the redistribution of educational resources to ensure more equitable learning opportunities and social mobility.

### **Keywords:**

*kesenjangan*

### **ABSTRACT**

*Ketidaksetaraan pendidikan tetap menjadi tantangan yang terus-*

pendidikan,  
infrastruktur  
sekolah,  
teori reproduksi  
sosial,  
modal budaya.

menerus di daerah-daerah yang kurang beruntung, di mana kesenjangan dalam infrastruktur sekolah terus membentuk kesempatan belajar dan hasil pendidikan yang tidak setara. Studi ini menyelidiki bagaimana ketidaksetaraan infrastruktur berkontribusi pada reproduksi ketidakberuntungan pendidikan di kalangan siswa SMA di Wonogiri, Indonesia, sebagai desa yang khas dengan nilai keislamannya, melalui lensa Teori Reproduksi Sosial Pierre Bourdieu. Dengan menggunakan desain studi kasus kualitatif, data dikumpulkan melalui wawancara mendalam, observasi partisipan, dan analisis dokumen yang melibatkan siswa, guru, kepala sekolah, dan pemangku kepentingan pendidikan lokal. Data dianalisis menggunakan kerangka kerja interaktif Miles dan Huberman untuk mengidentifikasi pola yang menghubungkan kondisi material dengan pengalaman dan hasil pendidikan. Temuan menunjukkan bahwa akses yang tidak setara terhadap infrastruktur pendidikan—termasuk laboratorium, perpustakaan, teknologi digital, dan konektivitas internet—menciptakan kesenjangan yang signifikan dalam kesempatan siswa untuk memperoleh modal budaya. Siswa di sekolah-sekolah pedesaan dan terpencil secara geografis mengalami paparan terbatas terhadap praktik akademik, kompetensi digital, dan kesempatan pengembangan keterampilan dibandingkan dengan rekan-rekan mereka di sekolah-sekolah yang memiliki sumber daya lebih baik. Kesenjangan ini membatasi prestasi pendidikan dan mengurangi kapasitas siswa untuk bersaing di pendidikan tinggi dan pasar tenaga kerja. Studi ini menunjukkan bahwa ketidaksetaraan infrastruktur tidak hanya berfungsi sebagai defisit sumber daya, tetapi juga sebagai mekanisme struktural yang mereproduksi kerugian pendidikan lintas generasi. Penelitian ini memperluas kerangka kerja Bourdieu dengan menyoroti peran mediasi infrastruktur sekolah dalam konversi modal ekonomi menjadi modal budaya dalam lingkungan pendidikan yang kurang beruntung. Temuan menunjukkan bahwa investasi infrastruktur yang adil sangat penting untuk menghentikan siklus ketidaksetaraan pendidikan dan mendorong pengembangan modal manusia yang inklusif. Akibatnya, kebijakan yang bertujuan mengurangi kesenjangan regional harus memprioritaskan redistribusi sumber daya pendidikan untuk memastikan kesempatan belajar yang lebih adil dan mobilitas sosial.

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## INTRODUCTION

Ideally, the education system in Wonogiri should act as an inclusive and equitable social improvement tool, where every student attending high school, whether located in the city center or in a mountainous area, has equal access to adequate educational facilities such as science laboratories, digital library, and stable internet connection. Adequate facilities are an important foundation so that the competence of graduates is not disturbed due to limited infrastructure, so that the principle of meritocracy can be carried out fairly. However, the existing social reality is in contrast to the vision of educational justice, creating a sharp irony. In Wonogiri, there is a clear difference between favorite schools in the district center and schools in remote areas that have minimal modern learning support facilities (Calista & Syakirah, 2025). This disparity is geographically and socially entrenched; schools in southern highland districts such as Pracimantoro, Giritontro, and Ngadirojo frequently operate with deteriorating classroom conditions, outdated laboratory equipment, and intermittent internet connectivity, while urban schools in Wonogiri town benefit from continuous infrastructure upgrades. Socioeconomically, the majority of households in these remote areas depend on subsistence agriculture and informal labor, limiting parents' capacity to supplement school-based learning with private tutoring, learning devices, or digital data packages. Consequently, students in these regions face a dual barrier: inadequate public infrastructure and constrained household educational capital.

These limitations are not only physical, but also structural barriers that significantly slow down the academic progress of students in the region in competing at the global level. Signs of objection in the community are also evident when the noble goal of education to build social mobility is actually disrupted by the persistent inequality of access. Students whose educational facilities are poorly equipped are competitively lagging behind their peers in the city, even though their intellectual potential is actually the same (Vito & Resnawaty, 2016). This creates a new cycle of injustice in which infrastructure inequality strengthens economic inequality, so that education, which should be the main solution to overcome social inequality, actually strengthens the existing social structure (Azkiyah & Lukitoaji, 2025). The community is beginning to realize that without a truly radical equitable distribution of facilities, the vision of social mobility through education is just an illusion for students in the disadvantaged areas of Wonogiri, which triggers frustration over the loss of golden opportunities for the younger generation for a fairer future and hinders the sustainable development of regional human resources. Local education forums, village head meetings, and parent-teacher associations have increasingly voiced concerns over the stagnation in university admission rates from remote high schools, reflecting a growing social awareness that facility deficits are systematically filtering out capable students

from higher education trajectories.

This phenomenon has caught the attention of researchers, as evidenced by several recent studies that support the importance of this issue. One study found that laboratory facilities had a significant positive relationship with students' science achievements, while another study highlighted the important role of the internet in improving students' digital literacy in underdeveloped areas (Dharmayanti & Lestari, 2017). Further research confirmed the difference in physical facilities between schools in cities and suburban areas in Central Java. Meanwhile, there are also those who emphasize that the lack of books in libraries hinders students' ability to study independently. In addition, other research revealed that education budgets in the regions are not distributed fairly for small schools (Susanti, 2017). Collectively, these literature facts establish a robust empirical consensus that infrastructure quality directly correlates with learning outcomes, digital competency acquisition, and equitable resource allocation across Indonesian secondary education. However, scholarly attention has predominantly concentrated on correlational analyses between facility availability and short-term academic metrics, such as national exam scores or semester grades.

While these findings are accountable, there are significant gaps in existing research. Some of these studies have mostly focused only on measuring the impact of infrastructure on short-term learning outcomes or academic grades, and none have examined in depth the impact on long-term academic success, such as the continuation of studies to higher education, especially in the social context of the Wonogiri community (Karoluslina & Nurjannah, 2026). Existing research tends to be quantitative and functionalist, ignoring how infrastructure constraints shape social stratification and hinder vertical mobility for students from lower-middle-to-lower economic backgrounds in these areas (Fitriyani & Fatayan, 2025). Most studies have focused only on analyzing the availability of facilities, without exploring how the absence of such facilities can systematically limit access to higher education for students from disadvantaged families. Therefore, it is important to conduct research that directly links physical limitations to students' futures, in order to fill the gap in analysis of how poor infrastructure conditions not only lower academic scores, but also structurally damage the chain of opportunity for the young generation of Wonogiri and maintain poverty through educational injustice and hinder regional development (Hendrik Dewantara, 2024). Furthermore, the literature remains largely silent on the intersectional dynamics of geographic isolation, teacher distribution, and household economic capital in Central Java's hilly regions, leaving a critical theoretical and empirical void regarding how facility deprivation reproduces intergenerational educational inequality in contexts like Wonogiri.

This is a study that thoroughly explores the dynamics of educational inequality in Wonogiri, with a special focus on the effect of infrastructure limitations on the

academic success of students in high school. In order to achieve these strategic goals, this research aims to solve three core questions: first, what is the form of educational inequality in Wonogiri? Second, what are the impacts of limited educational infrastructure in Wonogiri? Third, what challenges do the limitations of educational infrastructure pose to students' academic success? This research needs to be carried out in Wonogiri District, Wonogiri Regency, Central Java, because this area reflects a typical and urgent miniature of educational inequalities. As the center of the district adjacent to a remote mountainous area, Wonogiri District is an important point where the difference in facilities between schools in the city center and the suburbs becomes very clear and has a comprehensive impact. The hilly geographical conditions and uneven distribution of the population create great logistical challenges in the equitable distribution of infrastructure, so that its influence on the academic mobility of students is more pronounced than in other lowland areas. In addition, the local phenomenon shows a stagnation in the number of graduates who proceed to public universities from schools located in villages, indicating that there are structural barriers that have not been fully resolved. By targeting this specific location, the research is expected to provide relevant policy recommendations to local governments to break the cycle of inequality, ensure that geographical conditions are no longer a major factor in academic failure, and realize social justice for all students in the Surakarta Residency area, especially in Wonogiri, to support sustainable and equitable human resource development without spatial discrimination. This is very important so that the potential of the young generation is not wasted due to facility constraints that should be overcome through appropriate policy interventions and based on data collected in the field (Aderempas & Emmi, 2025).

This research is very crucial and urgent to be carried out immediately because it is related to the basic rights of the young generation of Wonogiri to an equal future in the context of increasingly fierce global competition. The limitation of educational infrastructure is not only a problem of inadequate and damaged physical facilities, but also a social threat that can prolong structural poverty in the long term through the education pathway (Siahay & Maitimu, 2023). If this is left unchecked, this disparity will widen further, causing the loss of intellectual potential of students in areas who actually have good abilities, but are hampered by a lack of supporting facilities. The importance of this research is even clearer considering changes in regional education policies that are often general and do not address fundamental problems in complex areas, especially in remote locations such as Wonogiri. In the absence of accurate data on the influence of infrastructure on academic success directly, government intervention risks being ineffective and only symbolic. In addition, the lack of previous research that has not linked facilities to students' long-term pathways makes this study critical to

complement gaps in the relevant academic literature. This research is urgent because every year of missed graduation without systemic improvement means the loss of a generation of students who have the potential to fail to compete in modern times. Therefore, this study is not only an academic demand, but also a moral necessity to ensure social justice for all students, prevent the accumulation of increasingly sharp social stratification, and provide a strong data base for policymakers to carry out radical and sustainable reforms of education infrastructure for the sustainability of human resource development in Central Java as a whole and reduce the economic burden (Prihatin & Izfs, 2025).

## **METHODS**

This research essentially uses a qualitative method with a single case study design to investigate in depth the phenomenon of educational disparities that occur in real life in the field. The qualitative method was chosen because of its ability to understand the meaning behind human social actions that cannot be measured only through statistical numbers (Ulfatin 2022). In this case, the case study design provides the researcher with the opportunity to limit the scope of his research to a specific context, namely a high school in the Wonogiri area, so that the analysis can be carried out in a thorough and in-depth way without losing focus on that context. Thus, the application of this methodology places the researcher as the main tool that plunges directly into the environment of the research subject to observe the social interactions that occur. Researchers not only collect surface data, but also seek to understand the actual experiences of students and educators related to infrastructure issues. This flexibility in design allows for the adjustment of data collection strategies as new themes emerge during the course of the study. This is especially important considering that the dynamics of education disparities are complex and involve several dimensions, including interrelated cultural, geographical, and economic factors. Through the use of this design, the research aims to produce an in-depth description that is rich in context, so that the recommendations produced are truly based on the empirical reality that exists in the Wonogiri community, not just theoretical assumptions that are separate from the actual root of the local socio-cultural problems. This approach also allows for an understanding of dynamic social processes, giving researchers the opportunity to capture emotional and social nuances that are often overlooked in quantitative studies (Radianto & Kom, 2025).

The main techniques for collecting data were carried out through in-depth interviews, direct observation and analysis of related documents to obtain a comprehensive picture. Semi-structured interviews were conducted in three sessions with eight key informants including parents, teachers and students in a balanced manner.

So that the data remains authentic and the sources feel comfortable, the entire interview process uses everyday Javanese, then is carefully transliterated into Indonesian with the consent of the sources before being translated into English for international scientific publications. The names of the sources are disguised with the initials A1 to A8 in order to maintain the security of their personal data in accordance with research ethics. Observations were carried out to directly check the physical condition of school facilities such as laboratories and libraries. Document analysis included school reports and academic data to support interview findings. This multi-layered translation process ensures local cultural nuances are maintained when data is presented internationally. Researchers recorded field notes during observations to complement the data obtained from interviews. This combined technique aims to reduce researcher bias and ensure that all informant statements can be confirmed with physical evidence or official documents. It forms a robust and academically and ethically accountable database for researching sensitive issues such as educational disparities. Each interview session was recorded with special permission to maintain the accuracy of the transcription. Data protection protocols are strictly implemented to protect participants' identities from potential external risks. The documents analyzed include archives of student grades and attendance records for the last three years to analyze emerging academic trends (Rusli & Harmonedi, 2025).

Data collection used methodological triangulation (in-depth interviews, participant observation, and document analysis) to ensure construct validity and minimize researcher subjectivity. In-depth interviews were chosen to explore the real meaning behind the informants' experiences regarding education gaps related to infrastructure; direct observation is necessary to objectively verify the physical condition of school facilities; and document analysis serves as administrative evidence to corroborate long-term academic trends. This multi-method approach ensures that the findings obtained are not merely descriptive but are able to reveal systemic mechanisms that reproduce educational disparities. Field data collection was carried out in March 2026. Each informant participated in three interview sessions interspersed between periodic observation intervals to validate the consistency of statements and dynamically monitor facility conditions. Selection and Justification of Informants: The eight informants were selected using purposive sampling based on the following criteria: (1) direct involvement in the high school education ecosystem in Wonogiri, (2) balanced representation between urban and rural/mountain areas, and (3) direct experience in dealing with infrastructure limitations. The subjects are teachers (PNS and contract employees), parents, and students because these three groups are the main actors who experience directly the impact of physical facilities on the quality of learning, academic motivation, and access to further education.

**Table 1: Informant profile**

No	Initials	Gender	Place	Profession
1	R1	Male	Wonogiri	Public High School Teacher (Civil Servant)
2	R2	Male	Wonogiri	Parent of Student (Rural Area)
3	R3	Women	Wonogiri	Grade 11 High School Student
4	R4	Male	Wonogiri	Contract Teacher (Remote Area)
5	R5	Women	Wonogiri	School Committee Member / Parent Representative
6	R6	Women	Wonogiri	School Librarian / Literacy Coordinator
7	R7	Male	Wonogiri	Senior Teacher / Academic Coordinator
8	R8	Male	Wonogiri	Alumni / Early-Stage University Student

The data collected is then validated using a triangulation approach of sources and techniques so that the results of field research can be ascertained for accuracy before further analysis is carried out. This triangulation process is carried out by comparing information obtained from interviews with various informants and matching it with direct observations and official documents from schools (Malik & Dzulkarnain, 2025). After the validation stage is completed, the existing data is analyzed using an interactive model from Miles and Huberman that includes three steps that take place simultaneously. The first step is data reduction, where the researcher selects, focuses attention, and simplifies the initial data into relevant thematic codes. The second step is data presentation, which involves organizing the information that has been reduced in a matrix or flowchart format to facilitate understanding the relationship between these variables. The third step is conclusion drawing and verification, in which the researcher seeks to find meaning from the data presented to answer the research questions. The analysis process takes place iteratively, meaning that the researcher returns again and again to each stage during the research process until all the data is considered complete. The application of this model successfully ensures that the conclusions generated are truly based on valid and tested empirical data. Therefore, findings related to the impact of infrastructure on academic success are not purely theoretical, but are based on strong evidence (Lumbu & Ardiansyah, 2026). This methodology also assists researchers in finding patterns that are not directly visible, thus making a significant contribution to the educational study of the influence of facilities on the social mobility of students in developing areas such as Wonogiri in depth. The validity of the construct is guaranteed through peer review to avoid possible bias in interpretation that could damage the integrity of the results of this study. Consistency in analysis ensures that the results remain relevant as the times progress.

## **RESULT**

### **A. The Shape of the Education Gap in Wonogiri as Indonesia Islamic Village**

The results of this study reveal that there is a significant education gap in Wonogiri Regency, especially between urban areas and remote areas. Field data shows that schools in the city center have access to adequate learning infrastructure, including computer labs, well-equipped libraries, and stable internet. On the other hand, educational units in mountainous areas such as Pracimantoro still lack basic facilities, and even some classrooms are not feasible due to budget limitations. The R1 informant stated, "Schools in the city are complete, we are here difficult," which illustrates the inequality of access to physical facilities experienced by students. R6 added, "Our classrooms have been damaged," confirming the degradation of the learning environment in the suburbs. R3 revealed, "The facilities here are very minimal," thus hindering the process of exploring independent knowledge for students. R5 concluded, "The government must pay more attention," as an urgent urge for the improvement of physical facilities for the equitable distribution of the quality of education throughout the Wonogiri Regency area.

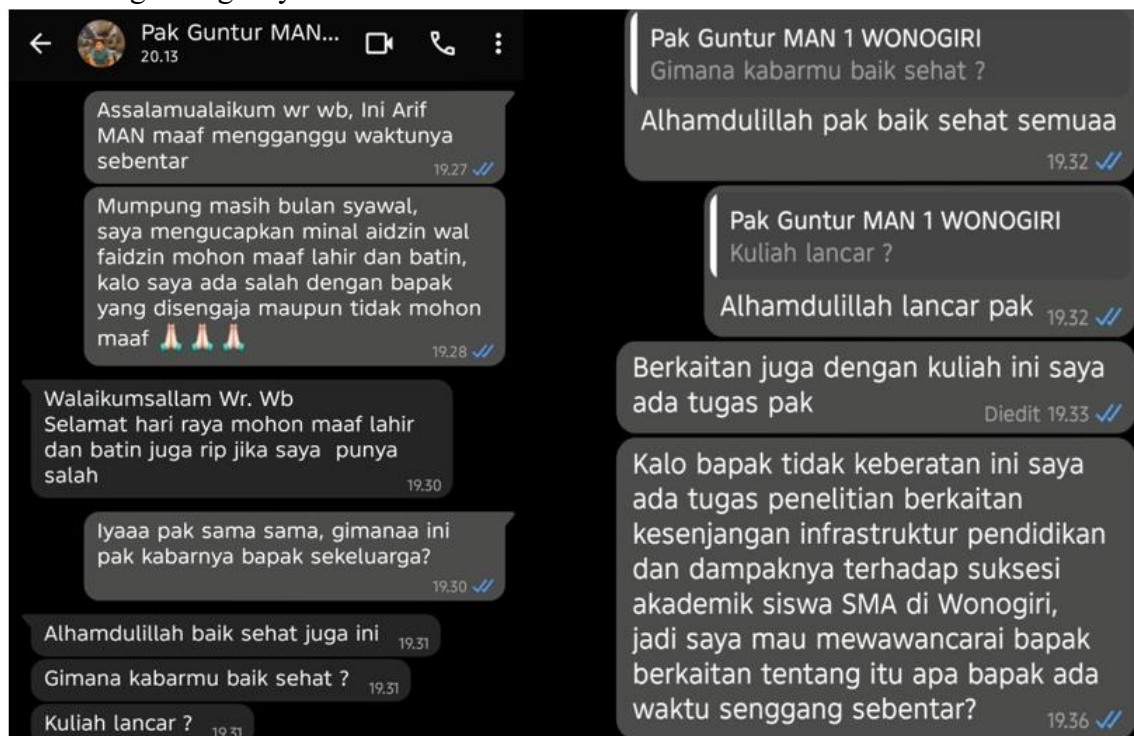


Figure 1: Online interview with MAN 1 Wonogiri Teacher.

In addition to infrastructure, the distribution of educators is a crucial factor. Certified teachers tend to be concentrated in favorite schools in urban areas, leaving suburban areas with limited quality human resources. R7 observed, "Certified teachers rarely want to go to the village," which causes an imbalance in teacher competence between regions. R8 mentioned, "The workload of honorary teachers is heavy," so that the focus on developing learning methods is neglected due to administrative pressure.

R1 argues, "The quality of teaching is very different," which is directly felt by students in understanding complex subject matter. R2 states, "Teacher training is very lacking," making it difficult for innovations in the classroom to be optimally implemented by educators. Consequently, R3 feels, "Students in rural areas receive unequal educational services," which creates an inequity of opportunity early on for children. R5 emphasizes, "Incentives are needed for teachers," as a solution to attract quality educators to areas that need help the most.

The digital divide has widened the gap, with students in remote areas finding it difficult to access online learning materials for self-enrichment compared to their peers in cities. R2 noted, "The internet often goes down during exams," which shows the vulnerability of the online learning system in the area. R4 emphasized, "Children have difficulty accessing the internet," which has implications for the lagging behind of the latest learning materials. R6 explains, "Students in areas have difficulty accessing online learning materials," which limits their insight into global scientific developments. R8 admits, "Hardware limitations are also a major obstacle," so school assignments often cannot be completed optimally. R1 said, "Parents in remote areas are generally not technologically literate," which exacerbates the existing digital divide. As a result, R2 emphasized, "Students' learning independence is hampered," which has a long-term impact on their readiness for the world of work.

Socioeconomic factors of parents also contribute, where financial ability affects access to additional tutoring. R5 states, "Financial ability affects access to additional tutoring," which creates an economic-based stratification of education. R6 revealed, "Low-income families struggle," so their children rely only on learning in limited classes. R8 recounts, "Sometimes forcing children to help with their parents' work," which reduces effective time to do schoolwork. R1 feels, "Motivation to learn often drops due to limited costs," which hinders students' actual academic potential. Overall, these findings confirm that geographical and economic disparities are still the main obstacles to equitable distribution of education quality in Wonogiri. R5 emphasized, "Geographical and economic disparities remain major obstacles," which require comprehensive handling from various parties. Therefore, specific policy interventions are needed in the form of incentives for teachers in remote areas and equitable distribution of infrastructure budgets. R7 suggested, "Local governments need to prioritize the allocation of funds," so that the budget is not only concentrated in urban areas. R1 states, "Synergy between government, schools, and communities," is the main key in realizing an inclusive education ecosystem.

## **B. Implications of Limited Education Infrastructure in Wonogiri as Indonesia Islamic Village**

The findings of the study highlight that the limitations of education infrastructure in Wonogiri have serious implications for the quality of learning and the competitiveness of local human resources. The lack of vital supporting facilities such as science laboratories, well-equipped libraries, and stable internet access in schools in the suburbs hinders the process of knowledge transfer in an optimal and modern manner. R1 informant put it, "Lab facilities are very lacking here," which accurately describes the real conditions on the ground. Teachers are forced to rely on conventional methods due to the absence of modern teaching aids. R7 observed, "Teaching methods become monotonous," due to the absence of adequate visual aids for the explanation of subject matter. R8 mentions, "Students have difficulty understanding physics," which indicates specific difficulties in lessons that require intensive laboratory experiments. R3 states, "Libraries don't have new books," which shows the lack of reference resources for students to learn independently at home effectively.

The facility gap dramatically exacerbates the digital competency disparity between students in the region every year. R6 explained, "Regional students are lagging behind technology," which makes it difficult for them to keep up with the developments of this all-digital era. R7 states, "The unstable internet is often disrupted," so online learning cannot run smoothly and effectively. R8 admitted, "The disparity in digital competence is widening in," which leads to inequities in access to educational information. R2 added with concern, "The internet often dies completely," so access to digital materials becomes very limited for students who need the latest information. R4 admitted, "We are lagging behind technology a lot," compared to schools in downtown Wonogiri which have more advanced facilities.

The limitation of a decent classroom also affects physical comfort and study concentration, potentially increasing academic fatigue rates and decreasing school motivation. R4 complained, "The classroom conditions are very hot," which makes it difficult for students to focus during the day. R6 concluded, "Classrooms are no longer feasible," which is clear evidence of the degradation of educational facilities in remote areas that are in poor condition. This condition also lowers the morale of teachers. R5 stated, "Teacher morale is declining," because they feel that they are struggling alone without adequate facilities to teach. R1 feels, "Teachers feel unsupported," so that the spirit of innovation in learning decreases as time goes by slowly.

The long-term implication is the creation of a cycle of inequality of opportunity, where graduates from under-facilitated areas tend to have lower skills to enter the competitive workforce. R2 warns, "Graduates' skills are lower," which will significantly affect their competitiveness in the future workforce. R3 added, "The quality of the

workforce is inadequate," so investors are reluctant to enter the region to expand. R2 analyzed, "The quality of the workforce is inadequate," so that it is difficult for the region to develop economically and socially. R7 added, "Regional economic development is hampered," due to the quality of graduates that do not meet the needs of the industry. R6 warns, "A cycle of inequality of opportunity is created," which will be difficult to break without decisive policy intervention. Therefore, infrastructure improvement is not just a physical fulfillment of buildings, but a critical investment to break the chain of education lag. R4 emphasized, "Investment is critical to break the chain," which should be a top priority for local governments in the budget.

### **C. Challenges of Limited Educational Infrastructure on Student Academic Succession**

The findings of the study identified that the limitations of educational infrastructure are a significant challenge to the academic succession of students in this region. Inadequate facilities, such as outdated laboratories, limited library collections, and unstable internet connections, hinder the process of scientific exploration and the development of practical competencies significantly. R1 states, "Laboratories are very obsolete," indicating the condition of the equipment is no longer relevant to current industry standards. R3 complained, "Unstable Internet often breaks," which disrupts the process of downloading important international journal material. R5 mentions, "Access to online databases is minimal," which makes the literature review incomprehensive. R4 admits, "Scientific exploration is hampered a lot," due to the lack of adequate research tools in the laboratory. R6 concluded, "The learning environment is not supportive," so that the potential of student research is not explored optimally.

The real impact can be seen in the skill gap of graduates and the prolongation of the study period experienced by students. R7 observed, "The study period often extends," due to data barriers during the work on the thesis or final project. R8 mentions, "The study period often extends," reflecting systemic academic barriers. R1 stated, "The study space is not conducive," so students prefer to study outside the campus area. R2 felt, "Stress due to the pressure of the curriculum targets," which was getting higher due to the lack of a comfortable discussion space. R5 mentioned, "Students' mental health is disturbed," due to the workload that is not supported by existing facilities.

The real impact is also seen in the skills gap of graduates resulting from institutions with minimal facilities. R7 explained, "Lack of mastery of the latest technology," so during internships they often lag behind other participants. R8 states, "Reducing competitiveness when entering the world of work," which is the main concern for prospective graduates. R4 warned, "The quality of graduates will continue to be questioned," by industry if there is no improvement in educational facilities. R5 stated, "The quality of graduates will continue to be questioned," by the industry if

facility standards are not improved. This challenge also affects intrinsic learning motivation. R1 felt, "Intrinsic learning motivation decreased," because it felt that the facilities provided were not on par with other universities. R2 added, "Limited access triggers a sense of injustice," which makes students feel like stepchildren by the government. R3 asserts, "Physical barriers create major barriers," which hinder a smooth transition from higher education to career professionalism. R8 states, "These physical barriers create major barriers," which hinder a smooth transition from higher education to career professionalism.

Overall, these physical barriers create major barriers in the flow of academic succession. R4 notes, "Cumulative achievement index is stagnant," reflecting systemic academic barriers. R7 states, "The cumulative achievement index also tends to be stagnant," indicating that the value does not reflect its true potential. R6 complained, "There are fewer tools available in the laboratory," so practicums have to be done alternately with limited time. Therefore, infrastructure revitalization is not only a physical need, but an absolute prerequisite to ensure the smooth academic trajectory of students towards success. R2 emphasized, "Infrastructure revitalization is not just a physical need," but a long-term investment of human resources. R6 emphasized, "Revitalizing infrastructure is not just a physical need," but an absolute prerequisite to ensure a smooth academic trajectory. R3 added, "An absolute prerequisite to ensure smooth running," so that students can focus on optimal self-development. R7 added, "Investment in learning support facilities is key," so that there is no more discrimination between facilities between regions. R8 mentions, "Their basic right to seek knowledge," which is often overlooked due to a minimal budget. R1 suggested, "Local governments should prioritize the allocation of funds," for the improvement of laboratories and libraries. R2 concluded, "Synergy between universities and government," is needed to address this problem in a sustainable manner.

## **DISCUSSION**

The findings of this study comprehensively reveal that the education gap in Wonogiri Regency is not merely a difference in physical facilities, but a structural inequality that directly shapes students' learning trajectories and future competitiveness. Schools in urban centers benefit from adequate laboratories, updated library collections, and stable internet, whereas remote areas such as Pracimantoro face severe infrastructure deficits that force educators to rely on conventional, monotonous teaching methods. This facility gap directly hinders the internalization of modern academic habits and digital competencies, resulting in graduates who struggle to compete at regional and national levels. Furthermore, the uneven distribution of certified teachers and heavy workloads of honorary staff exacerbate pedagogical disparities, while socioeconomic constraints limit students' access to supplementary learning resources.

Consequently, these intertwined barriers prolong study periods, increase academic stress, and create a tangible skills gap that undermines regional human resource quality. Theoretically, these empirical patterns strongly validate Pierre Bourdieu's Social Reproduction Theory, which posits that education systems perpetuate social stratification through the unequal distribution of capital across social classes (Yanti & Nihayah).

In this context, economic capital is manifested in the stark disparity of physical infrastructure between urban and rural schools. The deprivation of material capital such as functional laboratories, comprehensive libraries, and reliable internet directly obstructs the accumulation of cultural capital, specifically digital literacy, scientific exploration skills, and independent learning habits. Students in disadvantaged areas fail to develop the academic habitus required for higher education and modern labor markets, thereby reproducing a systemic cycle of structural poverty. When human resource quality stagnates, vertical social mobility is severely restricted, which ultimately slows regional economic development (Muttaqin & Wijayama, 2025). This confirms that infrastructural injustice is not a mere administrative oversight, but a systemic mechanism that maintains the social status quo by treating physical capital as a prerequisite for cultural capital conversion.

The findings of this study significantly support and extend several previous accredited studies that have identified insufficient infrastructure as a primary driver of educational disparities (Satria & Gusmaneli, 2025). There is strong consistency regarding the critical role of certified teacher distribution and digital access, which aligns with established national and regional literature on education inequality. Previous research consistently concludes that physical facilities are fundamental determinants of learning quality (Nelliraharti & Jarmita, 2025).

However, a fundamental distinction emerges: most prior studies focused predominantly on short-term academic outcomes at primary or secondary levels, without tracing the longitudinal impact on higher education succession and graduate employability. This research bridges that gap by directly linking high school infrastructure limitations to barriers in university continuation and workforce competitiveness (Gamaputra & El Rizaq, 2025). While existing literature often assesses impacts within a single educational tier, this study provides a comprehensive continuum showing how early-stage facility deficits cascade into diminished graduate readiness and hinder regional economic growth through sustained human capital depreciation (Sari, 2025). No previous study has meticulously mapped this cause-and-effect sequence within the specific geographical and socioeconomic context of Wonogiri, making this research a vital empirical contribution to understanding how infrastructural inequality drives socio-economic mobility in Indonesia's disadvantaged mountainous

regions (Ulumudin & Zakiyah, 2025).

Based on these findings, targeted policy interventions are urgently required to dismantle the reproductive cycle of educational inequality. District governments must implement affirmative budget allocation that prioritizes infrastructure revitalization in remote areas, ensuring stable internet connectivity, modern computer laboratories, and updated digital library systems (Sumar & Prasetyo, 2024).

Concurrently, special incentives and professional development programs must be established to attract and retain certified teachers in suburban schools, thereby equalizing pedagogical quality. At the institutional level, high schools should foster cross-institutional resource sharing, where urban centers provide digital learning modules and research databases to remote counterparts. Integrating structured digital literacy and practical skill programs into the local curriculum will equip students with foundational competencies before transitioning to higher education, mitigating future academic culture shocks. Strengthening partnerships with universities and industry sectors will further align school outputs with labor market demands. Finally, a transparent and participatory monitoring mechanism must be institutionalized to ensure budget efficiency and policy accountability (Muiz & Indrioko, 2024). Without immediate, coordinated action, the compounding effects of infrastructural neglect will continue to undermine both educational equity and sustainable regional development.

## **CONCLUSION**

This study conclusively demonstrates that the education gap in Wonogiri Regency operates as a systemic mechanism that perpetuates intergenerational inequality through the unequal distribution of educational capital. The limitations of basic infrastructure in remote areas not only suppress immediate academic performance but structurally hinder students' academic succession to higher education and diminish their competitiveness in the modern labor market. The deficit of physical and digital facilities at the secondary level accumulates into tangible skill gaps, reduced research capacity, and prolonged study periods, ultimately producing graduates who are underprepared for contemporary economic demands. These findings empirically validate Bourdieu's Social Reproduction Theory by illustrating how economic capital deprivation directly blocks cultural capital accumulation, thereby reinforcing social stratification. The research challenges fragmented policy approaches and underscores the necessity of holistic, equity-driven interventions that combine infrastructural investment, teacher distribution reforms, digital curriculum integration, and multi-stakeholder synergy. Equitable access to educational infrastructure must be recognized not as a discretionary option, but as a fundamental right and strategic imperative to break

the cycle of poverty and ensure that every student in Wonogiri can pursue academic and professional success without spatial or socioeconomic discrimination.

Despite its contributions, this study acknowledges certain methodological and geographical limitations. The single-case study design focused primarily on selected high schools in Wonogiri District and adjacent remote sub-districts, which, while providing in-depth contextual insights, limits the generalizability of findings across the entire regency's highly diverse topographical landscape. A cross-sectional approach also captures infrastructure disparities at a single point in time, without tracking longitudinal changes or policy impact trajectories.

To address these constraints, future research should adopt a multi-site comparative design incorporating stratified sampling across urban, peri-urban, and rural zones to capture broader socioeconomic and accessibility variations. Employing mixed-methods approaches would enrich quantitative disparity metrics with qualitative lived experiences, while longitudinal tracking would enable policymakers to evaluate the effectiveness of infrastructure interventions over time. Collaborative partnerships with local education offices, community leaders, and higher education institutions will further ensure that subsequent studies yield actionable, context-sensitive recommendations. By expanding geographical scope and deepening methodological rigor, future inquiries can provide more inclusive, accurate, and sustainable pathways toward education equity across all regions of Wonogiri, ensuring no community is left behind in human capital development.

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