

Urban and Rural Education Gaps and the Moderating Role of Location in Education Attainment

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Abstract. This paper examines how geographic location, specifically the urban-rural divide, moderates the relationship between household income and educational outcomes. While income is a predominant determinant of academic outcomes, this paper argues that regional differences exacerbate or constrain the influence of education and foster inequality; rural areas often suffer more due to a lack of funding for social infrastructure. This research focuses primarily on the United States' public schooling system, examining years K-post-secondary with a specific emphasis on infrastructure access, socioeconomic and cultural involvement, all of which vary by location. Based on federal data sources, peer-reviewed studies, and education policy reports, this paper shows that rural students face barriers not only because of poverty, but also because of the opportunities – or lack thereof – that specific locations can bring. From a methodological standpoint, this thesis employs a policy-based approach through a critical sociological lens to examine how structural forces, such as funding formulas, broadband access, and community engagement, perpetuate inequality. Ultimately, the findings of this report support the conclusion that regional differences play a primary role in determining educational reform.

Keywords: Urban and rural education gaps, education attainment, public schooling system

1. Introduction

From a conflict theory perspective, the institution of education isn't one that is neutral or meritocratic. Although the idea of a meritocracy in education has been perpetuated through practices like standardized testing, which claims to measure intelligence and effort equally, it is a false notion that falls short under critical review. Instead, these ideals are designed and maintained to reproduce class structures and maintain elite control; the rich are privy to opportunities and resources inaccessible to their underprivileged counterparts. When analyzing varying regions, rural students from low-income households are systematically disadvantaged by a school system financed through property taxes, which inherently favors wealthy, urban communities with higher land values. On the microscopic level, this is why many more fortunate families choose to move to more affluent neighborhoods in search of the educational opportunities that accompany such areas. Those in power – urban elites and state-level decision-makers – benefit from maintaining a system where resource concentration is normalized and redistributive policies are rare or symbolic. Only when the innate structure of society is questioned – on the verge of reform – do the rich respond in criticism of unfair

treatment, attempting to legitimize accumulated assets through false ideals and conventions [1]. This unequal structure serves the dominant class – typically white – by ensuring that economic capital – material resources – translates directly into educational capital, giving urban students better access to top-notch facilities, teachers, and, in the long term, networking advantages. Furthermore, the weak political voice that rural communities hold, caused by geographic isolation, low voter turnout, and weaker lobbying power, means that structural disadvantages are left undressed or further entrenched. Such disparities in resource and opportunity availability drive classes apart and forcibly segregate classes, often race being a latent byproduct of such inequality as well. The hidden curriculum – the implicit values, norms, and expectations embedded in schooling – further alienates rural students who lack access to cultural capital, such as college-preparatory guidance or insider knowledge about academic success [2].

2. Conceptual framework and theoretical anchors

To fully understand educational inequality in the United States, it is not enough to focus solely on income; this paper argues that geographic location serves as a key moderator in the income-education relationship. In the context of this paper, the term moderator is defined as a variable that influences the strength or direction of the relationship between two other variables. And within even this standing, geography determines how effectively income translates into educational opportunity, without outright denying the possibility of such. For example, low-income students who reside in an urban district can access subsidized AP courses, school counselors, and internet-enabled homework help by making sacrifices in other areas. In contrast, a family with the same household income but residing in a rural area would struggle to find available AP courses, lack access to broadband internet, and have no college readiness programming through available resources. This further shows the impact location had on income – strengthening it in well-resourced schools and areas and detracting from under-resourced ones.

When referring to educational outcomes in this text, it guides to the measurable academic indicators such as GPA, standardized test scores, diploma completion rates, and/or post-secondary enrollment or completion. While these are just a few of the benchmarks that comprise educational attainment, they serve as examples of opportunity and success within the broader public education system.

After discussing the importance of conflict theory and how educational institutions do not truly function as a bipartisan mechanism of opportunity, we can examine how, within American contexts, select urban residents benefit from policy structures that concentrate funding, resources, and institutional support within already advantaged communities. Once again, it is crucial to reiterate that these benefits do not stem from merit or need, but rather from a system that allocates resources through local property taxes, political lobbying, and strategic gerrymandering and zone creation [3]. Thus, established families, higher up the social ladder, expand advantages at the cost of already underfunded districts. Only by way of this critical lens can we bring a normative dimension to this thesis – it asks not just what is happening, but why it is unjust, who benefits, and what must change. This aligns with the penultimate goal of proposing valid solutions to long-standing policies that are redistributive and place-sensitive, addressing inequality from its structural roots and not just its symptoms. By grounding this research in critical theory, the thesis is not merely descriptive of issues, but also transformative, aiming to challenge existing assumptions and power structures and inform meaningful reform. As a wise man once said, give a man a fish and he will eat for a day; teach a man to fish and he will eat for a lifetime.

3. Analysis

With the conceptual framework and basis of the study now established, we can organize our analysis in the remainder of the thesis and clarify how geography influences educational institutions and perpetuates inequality. With a concrete framework, we are provided with a multi-dimensional lens through which these inequities can be examined, enabling the thesis to explore how educational disadvantage is embedded in site-based systems.

3.1. Funding disparities

The framework first highlights inequities in how schools are funded, specifically in the reliance on local property taxes, which disproportionately contrast when tied to neighborhood wealth [4]. In rural areas – where properties are valued lower due to worse social infrastructure, this is frequently a cause of decades of segregation by race, and dispersed populations – this funding model leads to the identification of chronic under-allotment of public schools in impoverished neighborhoods. With state equalization measures only comprising between 8-10% of the budget*, rural school districts are forced to operate with significantly lower per-pupil spending; the obvious outcomes of such a drop are illustrated by outdated facilities, fewer extracurricular programs, and limited course offerings. Once again, these differences are by design, built into the fiscal configuration of the American public education system, disproportionately impacting low-income and rural American students unfairly to keep a class system intact. While re-equitization policies like affirmative action, previously used race and socio-economic background as factors in admission, need-blind admissions, admission of students without considering payment ability, and programs like quest bridge, connecting high-achieving, low-income students with top colleges, existed and still do exist, it is paramount to understand what causes the need for programs like these and the ingrained barriers that stand in the way of equal opportunity and outcomes.

3.2. Infrastructure access

The second domain of this framework identifies educational infrastructure – both physical and institutional – as key players in shaping outcomes and opportunities, linked to geography [5]. Urban schools typically benefit from a higher concentration of certified staff, advanced coursework, and digital connectivity, all of which are products of stronger local funding and proximity to state or city-level institutions. A general example would be a public school in the heart of Manhattan receiving greater financing as opposed to a small local high school in Cattaraugus County. While the latter would be more likely to provide Advanced Placement courses, competent laboratories, extracurricular programming, and reliable transportation to and from school, the former would operate under conditions of scarcity – lacking full-time teachers, offering few to no APs or dual-enrollment course, and face recruiting challenges in finding qualified educators due to the surface-level drawback of isolation and low salary competitiveness. Thus, while one school thrives, the other falters – both reduced to the umbrella term of “public education.” It wouldn’t be problematic to assume that the impact of this divide was made ever more visible during the COVID-19 pandemic, when rural students likely lacked access to the tools needed for remote learning, ushering in a wave of declining academic performance. Beyond classroom materials and internet access, infrastructure also includes institutional support systems, such as guidance counselors, school psychologists, special education coordinators, and college advisors, of whom many underfunded rural schools do not have access to – burdened with untenable caseloads or split among multiple

campuses. These effects can be felt during pivotal transitional periods, such as graduation or post-secondary planning. Ultimately, educational infrastructure does not entirely refer to the physical manifestations of educational tools – it also encompasses institutional presence and preparedness, which, together, holistically define a student's capacity for successfully navigating future academic endeavors and goals. This domain reinforces the argument that income alone isn't the end-all be-all in unlocking opportunity, but instead relies on a functional, supportive educational environment to succeed, which is often less accessible in rural regions.

3.3. Sociocultural involvement

The final, and most often overlooked, player in shaping educational outcomes is sociocultural improvement, which encompasses elements such as family engagement, community support, and cultural expectations surrounding education. Although often underestimated, it plays a crucial role in shaping results. Sociocultural involvement refers to both the tangible and intangible ways that parents, caregivers, and communities participate in a child's education. Aspects such as meetings, academic planning, cultural expectations, and exposure to role models are just a few examples. It is in urban areas that students are physically proximate to schools, typically have better access to transportation and flexible work schedules, and have more exposure to college-educated peers and adults [6]. They maintain stronger connections to institutional systems, which in turn facilitate higher levels of engagement. In contrast, rural families travel long distances to schools, lack access to valid workshopping and college preparation programs, and harbor limited access to local mentors and or college-graduate role models. Crucially, rural parents may bear distrust for educational institutions, alienated by urban or middle-class counterparts and norms. A student living on a farm is likely to experience cultural dissonance with urban and upper-class peers. Likewise, urban families often possess innate cultural capital – a result of their environments – that accumulates “school-valued” knowledge, ranging from AP Planning, SAT preparation models, and FAFSA accommodations. It is ultimately this lived experience that embeds knowledge within certain families and not others, not a question of intelligence but of what systemic institutions benefit. These sociocultural dynamics result in a situation where rural students are no less capable than urban students, but are less equipped and supported in navigating the hidden expectations of the school system. When schools fail to recognize these differences, or worse, interpret them as signs of disinterest or low ability, they inadvertently reproduce inequality. Behaviors associated with urban/middle-class life are rewarded, while those in rural areas suffer from a lack of alternative engagement styles [7]. Ultimately, rural students are less supported, often failing to capitalize on available infrastructure and income, largely due to a lack of cultural navigation. Effectively, a revamp of the system is essential to the success of both parties; for equity to be actualized, place-based strategies must emerge, including tailored family outreach and cultural liaisons. Otherwise, alternative reforms may simply fall flat, leading to a perception of wasted time and resources. Without sociocultural scaffolding, educational access will rarely be converted into long-term success.

4. Solutions

This section will provide several solutions based on the issues.

4.1. Funding disparities

Reliance on local property taxes results in disparate funding receptions, ~10% less per-pupil spending [8]. The Education Trust.), while state-level aid compensates for only 8-10% of total budgets [9]. It is this widely uneven distribution of resources that drives differences in education, being directly correlated to outdated facilities, course offerings, teacher shortages, and smaller extracurricular programs – factors closely related to student performance. This system channels funds based on student need rather than district wealth, thereby compensating for the systemically inequitable allocation of capital. Nevada experienced a 0.12–0.24 standard increase in math and reading test scores through the implementation of a WSF system [10]. By utilizing Title I-style grants to target underfunded rural districts, better outcomes can be achieved for those in non-urban communities. Districts receiving similar targeted funds and integrated student resources recorded reductions in dropout rates [11]. Introducing audits that compare rural and urban spending can trigger corrective resource allocations when gaps exceed a set threshold. Under the watchful eye of the government or supervising institution, actions towards spending equality are more likely to be reached [12].

4.2. Infrastructure access

Rural communities face a significant digital divide that hinders educational equity. 61.9% of rural households have broadband access, compared to 77.6% of non-rural households [13]. Similarly, a substantial number of rural houses lack access to basic 25/3 Mbps speeds, at 22.3%-50% [14]. This issue was aggravated during the COVID-19 pandemic, where a staggering 69% of rural students reported insufficient home internet access Same as 2 above. This problem will only worsen as the world transitions to one that is even more reliant on technology; issues that arose during the pandemic were merely a snapshot of the crises to come.

4.2.1. Broadband expansion

By expanding the number of people who have access to the internet, let alone high-speed internet, both students and those in the workforce, as well as network providers, would benefit from the benefits of connectivity through restructuring policies. Public investment in underserved rural areas increased rural household broadband adoption, with increases in municipal fiber being linked to a 1.5%-point rise in adoption [15]. Despite being low, federal programs should continue to strive for widespread adoption, a key step in closing the rural-urban digital divide.

4.2.2. Resource hubs

Suppose the cost and viability of implementing widespread access are called into question, at the very least. In that case, governments should establish remote learning centers equipped with high-speed internet and tutoring services. With these services available, students are more willing to take control of their learning. In Guilford County, North Carolina, an internal study of connectivity/learning hubs showed declines in chronic absenteeism – 34.89% in 21'-22' vs 31.05% 22'-23' and support from student organizations, which assisted them in enhancing their academic performance and taking charge of their education [16].

4.2.3. Teacher incentives

In schools where funding is limited, thus limiting teacher wages and benefits, a lack of qualified instructors is evident. As the famous saying goes, “There is no bad student, only a bad teacher.” Without talented teachers who are passionate about their craft, passionate about teaching, or passionate about kids, there can be no expectation for students to achieve exceptional results. However, with financial incentives, improvements in student performance are likely to follow. In a controlled experiment in Israel, high-school teachers of English, Hebrew, and mathematics were offered cash bonuses based on their students’ performance on national matriculation exams [17].

4.3. Sociocultural involvement

Finally, rural-urban standards and norms make the decisive difference between achieving and disappointing outcomes. Expectations, the availability of mentorship, extracurricular programming, and counselor availability are just a few of the standards often absent in many rural schools. About 25% of rural parents expect their children to earn a diploma or professional degree, a low figure when likened to the 42% of their urban counterparts [18]. Equally, 15% of rural parents expected their child to complete no more than high school, versus just 9% of city parents [19]. Besides negligible expectations, rural households confer less cultural capital, making it difficult for their children – as culture is frequently reproduced through familial relations – to convert their experiences into academic progress.

4.3.1. Mobile parent academies

Providing parents with access to vital information is the first step in sociocultural change. By supporting parents, students benefit from newfound resources and backing that were previously lacking due to their background or lack of cultural capital. Creating workshops for parents, particularly those focusing on financial aid and college planning, is among the most effective strategies for increasing parent involvement. Understanding the concept of parental influence on a child, it is safe to assume that with well-informed parents comes a more well-informed, engaged child [20].

4.3.2. Rural mentorship

Having guidance is a key player in developing one’s trajectory in school, work, and life; without proper counsel, individuals may be led astray, tracking a path that does not necessarily suit them. Pairing students with local mentors would be a much-needed support mechanism for students who lack sound guidance, allowing them to make informed decisions under the guidance of a knowledgeable advisor. A comprehensive 2025 study by Big Brothers Big Sisters of America – in partnership with Harvard and the U.S. Treasury – encountered an improvement of upwards of 20% higher college attendance rates among young people who participated in the mentoring program; when the data was evaluated in comparison to peers who didn’t have access to extended partnerships a strong correlation was confirmed for application rate growths in paired parties [21]. Only with the emergence of community-based mentoring programs can we see continued improvement being made in parent-youth reported outcomes.

4.3.3. State-mandated counselor ratios and FAFSA coaches

Many hidden barriers lie in the wake of rural students seeking higher education. Only with directed counseling improvements and FAFSA coaching can we see an increase in college enrollment rates, a direct result of renewed college registration aid, and a decrease in student debt. Without mandates, the ratio of counselors to students can exceed the 500:1 threshold; the sheer quantity of advisees can reduce the overall quality and time committed to each unique student. Certain studies have found that optimal counseling can improve post-secondary outcomes by as much as 10% [22]. A better ratio of counselors to students, similar to that of teachers to students, leads to higher graduation rates, university enrollment, and student well-being. Comparably, the current FAFSA landscape structurally disadvantages low-income students who lack the familiarity and knowledge required to complete it – a lack of awareness, logistical barriers, or uncertainty often hides the process under a guise of accessibility, while ensuring systemic exclusion. Completing FAFSA functions as a key prerequisite for future educational outcomes, at least for many underprivileged students. 90% of students who completed FAFSA enrolled in college immediately after high school, compared to 55% of non-completers [23]. In other words, the FAFSA is one of the key components in accessing higher education, breaking down the underlying obstacles that deter financially insecure students. Ultimately, by introducing both FAFSA coaches and school counselors, students' rates of matriculation increase dramatically, surpassing the often-discouraged circumstances that rural areas impose on students.

5. Conclusion

This paper has shown that educational inequality is not merely a reflection of income but is fundamentally shaped and magnified by geographic location. By examining funding models, infrastructure access, and sociocultural dynamics, the research highlights how rural students face structural barriers that urban counterparts often avoid. True reform must be place-based, redistributive, and grounded in critical theory to dismantle the systemic injustices that continue to marginalize rural communities. Via a lack of learned cultural capital, symbolic hierarchies are created that equate urban/developed schooling with “better” or more legitimate forms of education. In this view, educational inequality by location is not accidental – it is an intentional consequence of maintaining power in the hands of the already advantaged, designed to protect and extend privilege to those, particularly, in urban, high-income enclaves. Ultimately, while instances of social mobility and escaping cyclical poverty do exist, many individuals struggle and inevitably fail in their pursuit of a better future.

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