

# The Geography of Education: A Comparative Study of Academic Resource Access in an Urban U.S and a Rural Taiwanese High School

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## ABSTRACT

This study examines how high school students in two contrasting educational contexts—an urban public high school in the United States and a rural private high school in Taiwan—experience access to academic resources and academic pressure. Using a qualitative comparative research design, data were collected through an anonymous online survey administered to 26 students (n = 11 U.S.; n = 15 Taiwan). The survey included both scaled questions and open-ended prompts addressing technological resources, non-technological resources, academic pressure, and support systems. Responses were analyzed using thematic analysis to identify recurring patterns and cross-contextual differences. Findings indicate that Taiwanese students experience limited technological and curricular resources alongside high levels of exam-related pressure, while U.S. students report broader access to institutional and technological resources but heightened stress related to college admissions and competitive academic environments. Across both contexts, students emphasized the importance of interpersonal support in coping with academic demands. These results show how resource availability and academic pressure intersect differently across educational systems, underscoring the value of student perspectives in understanding educational inequality.

**Keywords:** Education; Taiwan; America; USA; Phenomenology; Comparative; Survey; Academic Resources

## INTRODUCTION

Educational inequality remains a persistent challenge across national contexts, shaping students' access to academic resources, support systems, and experiences of academic pressure. While schooling is often framed as a mechanism for social mobility, students' educational

experiences are deeply influenced by structural factors such as geographic location, funding models, and institutional expectations. Prior research has shown that disparities between urban and rural schools affect not only material resources, such as technology and course offerings, but also less tangible aspects of schooling, including student stress, motivation, and perceptions of opportunity (1).

In the United States, educational resources are unevenly distributed due to a decentralized funding structure that relies heavily on local property taxes. As a result, students attending urban public high schools in affluent areas often benefit from advanced technology, extensive extracurricular programs, and specialized

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support staff such as counselors and advisors (2). At the same time, these resource-rich environments frequently foster highly competitive academic cultures shaped by college admissions, standardized testing, and advanced coursework. Consequently, access to opportunity in the U.S. context may coexist with elevated levels of academic pressure and stress.

Taiwan presents a contrasting educational context. Its centralized national curriculum and standardized entrance examinations create uniform academic expectations for students across the country. However, rural schools often struggle to meet these expectations due to limited technological infrastructure, fewer course offerings, and reduced access to institutional support services (4, 5). Despite these constraints, Taiwanese schools, particularly in rural regions, are frequently characterized by close teacher–student relationships that serve as important sources of academic and emotional support.

Although existing scholarships have extensively documented structural inequalities and policy differences within and across educational systems, much of this research relies on large-scale quantitative data or institutional analyses. Less attention has been given to students’ own perspectives on how these inequalities are experienced in daily school life. This study addresses this gap by examining the lived experiences of high school students at an urban public high school in the United States and a rural high school in Taiwan. The objective of this research is to understand how students in these contrasting contexts perceive access to academic resources, experience academic pressure, and rely on support systems within their schools.

## **LITERATURE REVIEW**

### **Urban–Rural Educational Inequality in the United States**

Research on U.S. education consistently shows that geographic location plays a significant role in shaping students’ access to resources. Because public schools are largely funded through local property taxes, disparities often emerge between schools serving wealthier communities and those in lower-income or rural areas. The U.S. Department of Education reports that differences in funding contribute to unequal access to technology, extracurricular programs, and specialized staff such as counselors and advisors (2). Roscigno, Tomaskovic-Devey, and Crowley argue that educational inequality in the U.S. is tied to “inequalities of place,” where students’

opportunities are constrained or expanded based on geographic context (3). While urban schools may benefit from greater funding and institutional support, they can also foster highly competitive academic environments that intensify stress and pressure.

### **Educational Resources and Inequality in Taiwan**

Taiwan’s education system differs significantly from that of the United States due to its centralized national curriculum and standardized entrance examinations. Hsieh identifies a persistent digital divide in Taiwan, noting that rural schools typically have fewer computers, limited internet access, and reduced support for technology-based learning compared to urban schools (4). Huang similarly finds that rural Taiwanese students have fewer course offerings and extracurricular opportunities, which can limit academic exploration and preparation for higher education (5).

### **Academic Resources and Support Systems**

Beyond technology and coursework, support systems play a crucial role in shaping student experiences. In the United States, access to counselors, mental health professionals, and academic advisors varies widely depending on school funding. Carey and Dimmitt show that schools with more comprehensive counseling services tend to support students’ academic and emotional development more effectively (6). In Taiwan, formal support systems are less common, and students often rely on close relationships with teachers and peers for guidance and support (5).

### **Academic Pressure and Student Stress**

Academic pressure is a shared feature of both education systems, though it emerges for different reasons. In the United States, students often experience stress related to college admissions, standardized testing, and competition within highly ranked schools. In Taiwan, academic pressure is closely tied to the national curriculum and high-stakes entrance examinations. Shih finds that Taiwanese adolescents frequently experience academic burnout regardless of geographic location (7).

Existing research demonstrates that both the United States and Taiwan face educational inequalities shaped by geography, access to resources, and academic pressure. However, few studies directly compare student perspectives across national contexts using qualitative methods. This study addresses that gap by focusing on student voices from one urban U.S. high school and one rural Taiwanese high school.

## **METHODS AND MATERIALS**

### **Study Design**

This study employs a qualitative comparative research design grounded in phenomenology. Phenomenology focuses on understanding how individuals interpret and make meaning of their lived experiences, making it appropriate for examining students' perceptions of academic resources, pressure, and support systems across different educational contexts. A comparative approach was used to explore similarities and differences between students attending an urban public high school in the United States and a rural high school in Taiwan. Rather than seeking statistical generalization, the goal of this design is to capture depth, context, and student voice.

A qualitative survey was selected as the primary data collection method. This approach allowed participants to reflect on their experiences in their own words while avoiding logistical barriers such as time zone differences and scheduling constraints associated with interviews. The survey format also supported comparison across respondents while preserving the phenomenological emphasis on subjective experience.

### **Participants and Sampling**

Participants were recruited through convenience sampling using existing school and personal networks. A total of 26 high school students participated in the study: 11 students from Gretchen Whitney High School, an urban public high school in California, and 15 students from Stella Maris Ursuline, a rural high school in Hualien, Taiwan. This sampling strategy was chosen due to the exploratory nature of the study and limited access to broader populations.

Efforts were made to include participants from different grade levels and gender identities in order to capture a range of student perspectives. While the sample size is relatively small and not representative of all students in either country, it is sufficient for a qualitative, phenomenological study focused on identifying shared themes rather than making population-level claims.

### **Survey Design**

The survey was designed specifically for this study based on themes identified in prior literature on educational inequality, academic resources, and student stress. Questions focused on five core areas: technological resources, non-technological academic resources, academic pressure, peer relationships, and

support systems. Each section included a scaled question (rated from one to five) followed by an open-ended prompt inviting participants to explain their response in detail.

This structure allowed for both comparison across participants and deeper insight into individual experiences. Scaled questions provided a general sense of perceived access or pressure, while open-ended responses offered contextual explanations that clarified how students interpreted their ratings. The survey was reviewed for clarity and age-appropriateness prior to distribution.

### **Data Collection Procedure**

Data was collected using Google Forms over a period of two weeks. Students at Gretchen Whitney High School were invited to participate through direct messages, while students at Stella Maris Ursuline received the survey through a teacher who distributed the link to students. Participation was voluntary, and students were informed that they could skip any questions or withdraw at any time.

All responses were collected anonymously. No names, email addresses, or identifying information were recorded. Survey data were stored securely and accessed only by the researcher.

### **Ethical Considerations**

Because the study involved minor participants, particular attention was given to ethical considerations. Participants were informed of the purpose of the study and provided informed assent prior to completing the survey. Parental consent and/or school approval were obtained in accordance with school requirements. Participation was voluntary, and no incentives were provided. This study was conducted as an independent student research project and was not reviewed by a formal Institutional Review Board (IRB) but was approved by the principals of each high school. The study also posed minimal risk to participants, and followed standard ethical guidelines for educational research, including anonymity, confidentiality, and informed consent. All data were de-identified at the point of collection.

### **Analytic Approach**

Data was analyzed using thematic analysis. First, all responses were read multiple times to gain familiarity with the data. Initial codes were generated manually by identifying recurring ideas, phrases, and concepts

within the open-ended responses. These codes were then grouped into broader themes corresponding to the study's research questions, such as access to resources, academic pressure, and support systems.

Coding was conducted by a single researcher. Due to the exploratory nature of the study and the small sample size, intercoder reliability was not assessed. Data saturation was evaluated informally; themes began to recur consistently across responses in both samples, suggesting that the data were sufficient to address the research questions. Throughout the analysis, attention was paid to maintaining participants' original language and centering student voices in the interpretation of results.

## **RESULTS**

### **Respondent Information**

The final sample included students from both an urban public high school in the United States and a rural high school in Taiwan. Most respondents were in grades 9–11, with juniors making up the largest group. Students self-identified across genders and reported living in urban, suburban, and rural settings. Some Taiwanese students identified their location differently, suggesting variation in how "rural" is interpreted depending on local infrastructure and proximity to city centers.

### **Technological Resources**

Students in the United States generally reported consistent access to personal devices such as school-issued laptops or tablets. Technology was described as a routine part of daily instruction, with assignments frequently relying on online platforms. One U.S. student explained, "Most of my classes assume we have a laptop, so it's kind of expected that we're always online for homework" (U.S. Student, Grade 11). However, some students noted differences in technology quality across classrooms or subjects.

In contrast, students in Taiwan reported more limited and uneven access to technology. While computers were available at school, access was often shared or restricted to specific rooms. A Taiwanese student noted, "We can use computers, but not all the time, and usually only in certain classes" (Taiwan Student, Grade 10). Several respondents emphasized that technology was supplementary rather than central to instruction.

### **Non-Technological Resources**

U.S. students commonly described access to non-

technological academic resources such as tutors, counselors, and office hours. These supports were seen as helpful but sometimes overburdened due to large student populations. One student shared, "The counselors are helpful, but it's hard to get an appointment because so many students need them" (U.S. Student, Grade 11).

Taiwanese students placed greater emphasis on teacher-led instruction and after-school study time. Many described long hours spent in class or school-sponsored study sessions, with less individualized academic support. As one student stated, "If you don't understand something, you usually have to figure it out yourself or ask friends" (Taiwan Student, Grade 9).

### **Academic Pressure and Stress**

Academic pressure was reported by students in both contexts, though the sources differed. U.S. students frequently linked stress to college admissions, advanced placement (AP) courses, and balancing academics with extracurricular activities. One respondent explained, "It feels like everything you do matters for college, so even small assignments can be stressful" (U.S. Student, Grade 11).

Taiwanese students described pressure as more constant and exam-centered, often tied to standardized testing and class rankings. A student commented, "Even if I do well, I still feel pressure because exams keep coming and scores matter a lot" (Taiwan Student, Grade 10). Stress was described as normalized and widely shared among peers.

### **Support Systems**

Students in the United States generally reported mixed experiences with support systems. While many felt teachers were approachable, others noted that large class sizes limited personal attention. Peer support varied, with some students describing competitive environments. One student noted, "People help each other, but there's still a lot of competition, especially in harder classes" (U.S. Student, Grade 10).

In Taiwan, students emphasized peer solidarity as a key form of support, especially during exam periods. Teacher support was described as structured but less personalized. A Taiwanese respondent shared, "We're all stressed together, so friends are really important for getting through school" (Taiwan Student, Grade 11). All results are summarized in Table 1, which presents a comparative overview of the key themes identified in student responses across the two school contexts.

**Table 1.** Summary of survey responses on academic pressure and access to educational resources among students in Taiwan and the United States.

	<b>Urban U.S. High School (Gretchen Whitney High)</b>	<b>Rural Taiwan High School (Stella Maris Ursuline High)</b>
Technological Resources	Widespread access to personal devices, school-issued laptops, and reliable internet; frustrations with school-provided device quality reported.	Limited access to personal devices; reliance on shared or school-provided desktops; slower or unreliable internet
Non-Technological Resources	Wide range of courses, AP offerings, extracurriculars, and institutional supports	Fewer electives and extracurriculars; limited specialized courses; reliance on evening tutoring ran by the school
Academic Pressure	Pressure driven by college admissions, competition, AP coursework, and parental expectations	Pressure driven by national exams, rigid academic tracking, and fear of limited higher-education access
Support Systems	Strong institutional support (counselors, advisors, teachers), though less personalized	Strong relational support through close teacher–student and peer relationships

## DISCUSSION

While the two systems differ substantially in structure, funding, and governance, the findings reveal that students in both contexts experience significant stress shaped by their respective educational environments. These results show that educational inequality is not solely a matter of material resources, but also of how expectations, competition, and support systems are organized.

In the Taiwanese context, students consistently described limited access to technological and curricular resources alongside uniformly high academic expectations driven by a centralized national curriculum and entrance examinations. These findings align with prior research on Taiwan’s rural–urban digital divide and standardized academic pressure, which suggests that rural schools face difficulty meeting national expectations despite fewer resources (3,4). Students’ concerns about university admissions and exam performance reflect what Shih describes as widespread academic burnout among Taiwanese adolescents (6). At the same time, strong teacher–student relationships emerged as a key source of emotional and academic support, partially mitigating structural disadvantages. This supports Huang’s argument that rural Taiwanese schools often compensate for resource limitations through closer interpersonal support (4).

In contrast, students in the United States reported broad access to technological tools, advanced coursework, extracurricular opportunities, and institutional support such as counselors and advisors. However,

these advantages were closely tied to competitive academic environments, particularly for upper-grade students navigating college admissions. Consistent with Roscigno et al., the findings suggest that geographic and institutional advantage in the U.S. does not eliminate stress, but instead reshapes it (2). Students described pressure stemming from comparisons, leadership expectations, and standardized testing, illustrating how opportunity and stress often coexist in well-resourced settings.

Across both cases, the findings reinforce Hannum and Buchmann’s argument that educational expansion does not necessarily lead to equity (7). Whether through limited resources paired with uniform standards, or abundant resources paired with intense competition, students experience pressure that shapes their daily academic lives. By centering student perspectives, this study extends existing literature beyond policy analysis and achievement data, showing how structural inequalities are felt at the individual level.

## CONCLUSION

This study demonstrates that students in both urban U.S. and rural Taiwanese high schools experience academic pressure shaped by unequal but distinct educational conditions. Taiwanese students faced high standardized expectations despite limited resources, while U.S. students benefited from extensive academic support but reported stress tied to competition and college admissions. These findings suggest that neither

centralized nor decentralized systems are immune to producing inequality-related stress.

These findings also suggest several policy-relevant considerations. In Taiwan, expanding curricular diversity beyond exam-oriented subjects and improving technological infrastructure could help align national academic expectations with students' lived learning conditions. Strengthening school-based counseling and normalizing emotional support may further mitigate the sustained pressure associated with high-stakes examinations. In the United States, the results highlight the need to address academic stress linked to college admissions and Advanced Placement coursework by providing clearer guidance, balanced workload expectations, and continued investment in accessible mental health services. Across both contexts, policies that prioritize student well-being alongside academic achievement may better support equitable and sustainable educational outcomes.

The key contribution of this research lies in its phenomenological focus on student voices. By examining how students describe their lived experiences, this study shows the need for educational policies that address not only access to resources, but also academic culture and student well-being. Future research could expand this comparison across more schools, include perspectives from teachers and parents, or combine qualitative insights with larger-scale quantitative data. Even at a small scale, this study shows the importance of listening to student voices when evaluating educational equity.

## CONFLICTS OF INTEREST

The author declares no conflicts of interest related to this study. Though the author is a student at Gretchen Whitney High School and Stella Maris Ursuline, these relationships involved no financial compensation nor institutional authority. Steps were also taken to minimize potential biases through anonymous data collection and reflexive analysis.

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