

The Landscape of Financial Aid Access in Iowa: An Examination of FAFSA Completion Rates Across the Urban-Rural Continuum

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Citation: Haines, S. M. (2026). The landscape of financial aid access in Iowa: An examination of FAFSA completion rates across the urban-rural continuum. *Journal of Research in Rural Education*, 42(4), 1-16. <https://doi.org/10.4148/jrre.20784>

Rural students historically have attended college at lower rates than their suburban and urban counterparts, and previous research has shown that uneven access to financial, social, and cultural capital contributes to lower college enrollment. To further complicate college access, the FAFSA overhaul in the 2024–2025 cycle was rife with problems, and it is not clear which students and communities were most acutely affected. Using Iowa as a case study, this article examines how rurality is associated with FAFSA completion across public high schools immediately before and during the FAFSA overhaul. Descriptive statistics and regression analyses show that rural Iowa public high schools were associated with higher FAFSA completion rates than public high schools situated in other locales. After controlling for school characteristics—including free or reduced-price lunch enrollment, an interaction term for locale and free or reduced-price lunch enrollment, graduation rate, the percentage of students proficient in math and English, total high school enrollment, and race—an increase in the percentage of students receiving free or reduced-price lunch was associated with a steeper decline in FAFSA completion rates in suburban schools compared to rural schools. This study offers further insights into the landscape of resource allocation across the urban-rural continuum.

It is well documented that rural students in the United States enroll in college at lower rates than their suburban and urban peers, despite having stronger high school graduation rates (Byun, Meece, & Irvin, 2012; National Center for Education Statistics [NCES], 2023). It is also clear that financial concerns are salient for many rural students who are considering college (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018; Tillapaugh & McAuliffe, 2019). An important step toward addressing those concerns and making college a reality is to complete the Free Application for Federal Student Aid (FAFSA), which is used to determine eligibility for federal sources of financial

aid, including Federal Pell Grants and Federal Direct Loans. Many state governments and higher education institutions also use FAFSA data to determine eligibility for state and institutional financial aid. In short, completing the FAFSA is a key part of the college enrollment process, particularly for rural students with limited financial capital.

Given the FAFSA's important role in providing access to a college education, Congress passed the FUTURE Act and the FAFSA Simplification Act in 2019 and 2020, respectively, with the goal of streamlining the FAFSA process (Collins & Dortch, 2022). These two laws were implemented over the course of several years, culminating in a significant overhaul of the FAFSA process in 2024–2025. The 2024–2025 overhaul was rife with problems and delays, which negatively affected the student experience and required high school counselors, financial aid professionals, and community-based organizations to deploy additional resources to help students and families through the form (Knott & Knox, 2024). Fortunately, the 2025–2026 FAFSA process has been much smoother, primarily due to the resolution of many of the catastrophic problems that arose in the 2024–2025 cycle, and feedback so far suggests that the FAFSA process is now generally easier than it was prior to the FAFSA overhaul (Mehta, 2024).

The author is grateful to Dr. Christine Cain, Dr. Cecilia Orphan, Dr. Wendy Pfrenger, Dr. Robert Reason, William Redding, and Dr. Jonathan Turk for their invaluable feedback.

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The botched rollout of the simplified FAFSA provides an opportunity to examine how different communities experience the financial aid process and who is more acutely affected when the process is disrupted. Spatial inequality literature has argued that the inequitable distribution of resources has contributed to education-related inequalities across the urban-rural continuum (Ardoin & McNamee, 2020; Rhodes, 2022; Tieken, 2017). Resources relevant to this study include financial capital (e.g., money to pay for college), social capital (e.g., knowing people who can assist with the financial aid process), and cultural capital (e.g., knowledge about financial aid and broader college application processes). Given prior evidence that rural communities have more limited access to these resources, I hypothesize that rural schools had lower FAFSA filing rates and experienced greater decreases in FAFSA filing rates during the 2024–2025 FAFSA cycle, even though need for financial aid among students in these communities is documented (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018; Rhodes, 2022; Tillapaugh & McAuliffe, 2019). Access to financial aid is important because everyone should have an equal opportunity to pursue a college education and be equipped with the resources necessary to earn their degree, and society benefits economically and socially when more individuals attend college (Heckman et al., 2018; Ripstein, 2005; Skinner & Doyle, 2021; Trostel, 2017). Examining one state with a sizable rural population as a case study, the purpose of this study is to understand the relationship between rurality and FAFSA filing rates among Iowa public high schools, controlling for percent of the school’s student body that receives free or reduced-price lunch, an interaction term for locale and free or reduced-price lunch enrollment, graduation rate, the percentage of students proficient in math and English, total high school enrollment, and race. I explored two research questions:

1. How do demographic characteristics differ among Iowa public high schools situated in rural, town, suburban, and city contexts?
2. Controlling for school characteristics, what is the relationship between rurality and FAFSA filing rates among Iowa public high schools in the 2023–2024 and 2024–2025 FAFSA cycles?

Iowa is an appropriate case study because it is predominantly rural: It ranks among the top 15 states for the highest percentage of rural schools and highest percentage of rural students (Showalter et al., 2025). Moreover, approximately one-third of rural Iowa students attend remote rural school districts, which is the most rural designation in the NCES geographic locale code framework. However, it is worth noting that students who attend rural Iowa school

districts are more racially and ethnically homogenous than most states’ rural school districts, have relatively low rural poverty rates, and have relatively high standardized test scores compared to rural school districts in other states. Despite these markers of relative privilege in rural parts of the state, since 2018, Iowa has experienced a steady decline in the percentage of public high school graduates who attended college within one year of high school graduation (Iowa’s State Longitudinal Data System, 2025), and the state’s FAFSA completion rates have not kept pace with national trends (National College Attainment Network, n.d.). For example, prior to the 2024–2025 FAFSA cycle, Iowa’s ranking for the percentage of graduating high school seniors who completed the FAFSA fell from 23rd for the class of 2022 to 27th for the class of 2023. During the tumultuous 2024–2025 cycle, Iowa fell further behind to 31st. Notably, Iowa is one of the only states in the country to send regular reports of student-level FAFSA completion data to all public and participating private high schools to help schools provide targeted support to students, and the Iowa Department of Education also provides statewide training and resources to students (Midwestern Higher Education Compact, 2025). However, these efforts have not been enough for Iowa’s FAFSA completion rates to keep up with most other states (National College Attainment Network, n.d.).

This study contributes to a better understanding of the role that high schools play in FAFSA completion and a preliminary understanding of the influence of the 2024–2025 FAFSA overhaul across different locales. Previous research on how rural students navigate paying for college has rarely focused on the high school and community in which a student is situated (a notable exception is Musoba & Lopez, 2024). The present study provides further insight into how rural schools may or may not be supporting their students through the financial aid process by examining FAFSA completion rates within public high schools. Furthermore, relatively few recent quantitative studies have examined rural college access and choice, and fewer still have explicitly focused on the role of financial aid. This study contributes a quantitative inquiry into the relationship between rurality and financial aid access that can be replicated to understand other states’ contexts. Moreover, it is too early for research to be published on the widespread effects of the 2024–2025 FAFSA overhaul, and this study contributes to an early understanding of how the simplified FAFSA and its botched implementation have affected communities along the urban-rural continuum differently.

Findings are relevant to policymakers and policy implementers who shape the financial aid process and allocate resources, and they also are useful to practitioners who assist students and families with the financial aid process. Specifically, this study can inform future adjustments to

the FAFSA Simplification Act and shed additional light on lessons learned from the poor implementation of the FAFSA Simplification Act and the FUTURE Act. Furthermore, findings can shape outreach efforts that encourage individuals who decided to forego college because of FAFSA-related roadblocks to reconsider pursuing higher education. Findings also can provide preliminary insight into how to proactively respond to new barriers arising in today's political landscape. Although results from this study cannot be extended to other states, findings may be relevant in states that have similar demographic characteristics and FAFSA completion data-sharing policies to Iowa.

Literature Review

Spatial inequality goes beyond examining differences in geographical place and expands the conceptualization of space as both a product and source of social inequality (Tieken, 2017). Prior to the simplified FAFSA rollout, the literature on how rural students and institutions approached and depended on financial aid has supported spatial inequality researchers' overall argument that resources, including financial, social, and cultural capital, are inequitably distributed across rural and nonrural spaces (Ardoin & McNamee, 2020; Rhodes, 2022; Tieken, 2017). This discrepancy has implications for how rural communities understand and experience the financial aid process, which can ultimately influence college access and choice. Therefore, spatial inequality serves as an appropriate frame for the literature review.

Previous literature has shown that rural students' environments shape their desire to attend college (Agger et al., 2018; Bernsen et al., 2022; Meece et al., 2014; Miranda & Rodriguez, 2022; Strayhorn, 2009), which undoubtedly informs whether they apply for financial aid and whether and where they attend college. Among rural students who want to attend college, cost is an important consideration, yet evidence suggests misunderstandings among rural students regarding financial aid (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018) and an underrepresentation of rural students among FAFSA filers (Prins & Kassab, 2017). Rural students also experience unequal access to financial capital and support for navigating the financial aid process (Means et al., 2016; Prins & Kassab, 2017; Yang & Venezia, 2020).

Educational Aspirations, College Access, and College Choice for Rural Students

Spatial inequality is a useful lens through which to consider educational aspirations, college access, and college choice, and how these three concepts are related. One conceptualization of aspirations includes educational

and occupational goals that are rooted in "hopes, desires, ambitions, and inspirations" that guide an individual's behaviors (Meece et al., 2014, p. 239). Additionally, college access refers to the ability to attend college at all, whereas college choice is the ability to choose the best fit institution (Renn & Reason, 2021). Rural students' environments differentially shape their educational aspirations, as well as their ability to access college and choose the best college for their individual needs.

Educational Aspirations

Several studies have found that rural students, especially rural boys, have lower college aspirations than their peers (Agger et al., 2018; Bernsen et al., 2022; Meece et al., 2014; Miranda & Rodriguez, 2022; Strayhorn, 2009). However, aspirations do not develop in a vacuum and have been linked to the inequitable distribution of financial, social, cultural, and political capital (Tieken & San Antonio, 2016). Macro-level policymaking directly influences environmental and economic realities at the local level, which also shape aspirations (Corbett, 2016; Tieken, 2016; Tieken & San Antonio, 2016). In short, spatial inequality influences rural students' educational aspirations, which in turn influences whether they complete the FAFSA and take other steps necessary to attend college. Fortunately, studies have consistently found that educational experiences and parents' and educators' expectations influence rural students' aspirations (Agger et al., 2018; Bernsen et al., 2022; Byun, Meece, Irvin, & Hutchins, 2012; Miranda & Rodriguez, 2022). In other words, school environments affect whether students aspire to college and take necessary steps like completing the FAFSA, even if broader political, environmental, and economic actions are necessary for more systemic change (Corbett, 2016; Tieken & San Antonio, 2016).

College Access

Despite evidence of lower educational aspirations among rural students, studies have shown mixed results when examining rural college access. For example, in line with rural aspirations research, Koricich and colleagues (2018) found that students from rural high schools are only 84.6% as likely to attend college as students from nonrural high schools. However, Prins and Kassab (2017) offered evidence that rural Pennsylvania students who enroll in college access specific degree types (e.g., bachelor's degree) at rates similar to nonrural students. Although findings in Pennsylvania cannot be extended to other states, these studies have highlighted the unevenness of rural college access across contexts.

College Choice

Limited geographic access to higher education institutions is a product of spatial inequality that manifests in rural communities (Koricich et al., 2018; Lopez & Musoba, 2024; Prins & Kassab, 2017). This reality significantly narrows rural students' choices if they want to attend college nearby, which has implications related to educational quality, fit, and cost. Similar to findings in college access literature, the type of institutions that rural students can easily access varies depending on where their community is situated. Although a national-level study found that rural students are more likely to choose two-year colleges, less selective colleges, and colleges that do not focus on graduate degrees, others have found different patterns in state-specific contexts (Koricich et al., 2018; Prins & Kassab, 2017). Nuances undoubtedly exist across states, but many rural students restrict their higher education choices to institutions nearby regardless of academic, social, and financial fit.

How Rural Students Think About Costs and Financial Aid

Many qualitative studies have highlighted cost as a primary concern among diverse populations of rural students who want to attend college, demonstrating uneven access to financial capital across geographic contexts (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018; Tillapaugh & McAuliffe, 2019). One challenge that contributes to cost-related anxiety is that some rural students perceive college to be much more expensive than it really is, and the perception of affordability can be just as influential in a student's decision-making process as whether college is actually affordable (Means et al., 2016; Morton et al., 2018). Moreover, several qualitative studies that focused on diverse groups of rural high school students have demonstrated a widespread lack of concrete knowledge about the financial aid process, exemplifying a gap in access to the social and cultural capital necessary to navigate the complex financial aid system (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018). Although some students who participated in these studies identified that cost was an important factor in determining whether and where to attend college, acknowledged that financial aid was crucial to affording college, and perhaps knew some financial aid terms (e.g., Pell Grant), they generally did not understand how to secure the financial aid they knew they needed (Means et al., 2016; Morton et al., 2018). In contrast, the Latine students in Lopez and Musoba's (2024) study were skeptical of financial aid, equating it with loans or stigmatized forms of government assistance like welfare, and planned to work their way through college instead.

These qualitative findings were supported by Prins and Kassab's (2017) quantitative research in Pennsylvania, where they found that rural residents were underrepresented among FAFSA filers overall. Together, these qualitative and quantitative findings have suggested that rural college students in diverse contexts may leave financial aid funds on the table at a higher rate than their suburban and urban counterparts.

Uneven Access to Financial Capital and Financial Aid Support

As previously discussed, rural students with diverse identities highlight cost as a primary barrier to attending college (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018). However, quantitative literature has illustrated a more complex financial picture when comparing rural and nonrural students and institutions. Studies that focused on financial aid distribution at rural community colleges suggested that students at those institutions heavily rely on grants and loans, but simultaneously that some of those institutions could not provide financial support to keep up with rising costs (Hardy & Katsinas, 2008; Kennamer et al., 2009). Meanwhile, other quantitative studies that focused on rural students across institution types have suggested that rural students' financial circumstances generally fall between suburban and urban groups (Prins & Kassab, 2017; Yang & Venezia, 2020). In summary, research examining large-scale differences among rural and nonrural access to financial capital has been mixed.

For rural students with limited financial resources, access to financial aid is critical. However, consistent with the central tenet of spatial inequality, rural high school students in past studies tended to have fewer resources available to assist them with completing the financial aid process (Means et al., 2016; Prins & Kassab, 2017). Since rural communities have lower college attainment rates, it follows that parents and other family members have not necessarily had the social, cultural, or financial capital to help students complete the financial aid process and attend college, even if they were supportive of their students' educational goals (Means et al., 2016; Morton et al., 2018; Prins & Kassab, 2017; Tillapaugh & McAuliffe, 2019). To fill these gaps, students and counselors have identified the dedication of school-based resources to assist with applying for financial aid—including hiring college counselors (separate from guidance counselors) and implementing financial aid workshops—as helpful (Morton et al., 2018; Musoba & Lopez, 2024). However, in a landscape of scarce resources, diverting funds toward these efforts is not always feasible, further exacerbating gaps in access to the social, cultural, and financial capital necessary to attend college.

Conceptual Model

Perna's (2006) conceptual model of college access and choice brings together economic and sociological influences on decision making, acknowledging that the decision of whether and where to attend college is shaped by economic considerations such as perceived payoff (an example of a benefit) and forgone earnings (an example of a cost) and sociological realities that inform an individual's attitude toward higher education. Perna (2006) identified four layers that capture individual- through societal-level influences on decision making, and these layers include habitus (layer 1); school and community context (layer 2); higher education context (layer 3); and social, economic, and policy context (layer 4). The present study focuses on the second layer, which aligns with the unit of analysis (public schools). Furthermore, since previous literature has highlighted the importance of school and community support for rural students to complete college admission and financial aid processes (Means et al., 2016; Morton et al., 2018; Musoba & Lopez, 2024; Prins & Kassab, 2017; Tillapaugh & McAuliffe, 2019), focusing on the second layer of Perna's (2006) model allows for an examination of how school-level resources relate to FAFSA completion. Perna's (2006) model has been widely used in previous research on financial aid, rural students' access to and success in higher education, or both, and it is appropriate for the present study that focuses on both topics and a specific layer within the model.

Methods

I used descriptive statistics and ordinary least squares (OLS) regression to answer my research questions. Perna's (2006) conceptual model and previous literature informed the variables that I included in my regression models, and I brought together several federal and state data sources.

Data and Sample

Since this study analyzed FAFSA completion rates among Iowa public high schools, I combined multiple federal and state data sources. The federal sources included FSA's school-level data on FAFSA submission and completion rates and NCES geographic locale codes (FSA, 2025; NCES, 2024). I derived all school-level data from the following Iowa Department of Education data sets: 2022–2023 and 2023–2024 public school building enrollment data by school, grade, race, and gender (Iowa Department of Education, 2023a; Iowa Department of Education, 2024b); 2023–2024 public school building students eligible for free or reduced-price lunch (Iowa Department of Education, 2024c); class of 2023 public school four-year

cohort graduation rates by student group (Iowa Department of Education, 2024a); and 2021–2022 and 2022–2023 Iowa State Assessment of Student Progress (ISASP) data by school and grade (Iowa Department of Education, 2022; Iowa Department of Education, 2023b).

I drew FAFSA completion data from FSA's (2025) data set of school-level 2024–2025 FAFSA submission and completion through December 31, 2024. This data set also included 2023–2024 FAFSA data through December 31, 2023. Although many higher education institutions typically have FAFSA deadlines well before December 31, which is in the middle of the academic year, most institutions delayed their normal deadlines due to the significant challenges that many FAFSA filers faced in the 2024–2025 cycle (Blake, 2024). Given the delayed opening of the 2024–2025 FAFSA and the hurdles that many students had to clear once the form was available, analyzing FAFSA completion rates through the middle of the academic year allowed me to capture students who may have filed much later than they would have in a less challenging FAFSA cycle.

Since public school buildings were the unit of analysis, I selected NCES (2024) geographic locale codes to capture rurality. NCES assigns one of 12 geocodes to each public school building in the United States annually, and I used the 2023–2024 public school file to determine the geocode for each Iowa public school in my data set. The 12 geocodes include city, suburban, town, and rural, with three subclassifications within each category to capture greater granularity. The three subclassifications within the city and suburban categories are large, midsize, and small, and the three subclassifications within the town and rural categories, from least to most rural, are fringe, distant, and remote. NCES has developed locale codes based on the U.S. Census Bureau's definition of an urban area and defines each locale based on population and distance from an urban area (Geverdt & Maselli, 2024). Since the 2020 census, the U.S. Census Bureau has defined an urban area as having at least 5,000 people or 2,000 housing units and having "a housing unit density of 425 housing units per square mile" (U.S. Census Bureau, n.d., p. 3). Although it has been somewhat common to combine the rural and town categories in previous rural-focused education research (Sowl & Crain, 2021), I opted to maintain the distinction between the two categories since most Iowa school districts are in rural areas or towns.

For school-level characteristics, I drew data from the following Iowa Department of Education data sets: 2022–2023 and 2023–2024 public school building enrollment data by school, grade, race, and gender (Iowa Department of Education, 2023a; Iowa Department of Education, 2024b); 2023–2024 public school building students eligible for free or reduced-price lunch (Iowa Department of Education, 2024c); class of 2023 public school four-year cohort

graduation rates by student group (Iowa Department of Education, 2024a); and 2021–2022 and 2022–2023 ISASP data by school and grade (Iowa Department of Education, 2022; Iowa Department of Education, 2023b). These sources provided the data for the descriptive statistics and the control variables in the regression model.

I excluded Iowa public schools that were missing data or had fewer than five students complete the FAFSA in either cycle examined from the final data set, the latter of which is consistent with other recent studies using FAFSA completion data (see Deneault, 2023; Kim, 2025). Once schools that did not meet these criteria were removed, this study included 319 Iowa public schools. The FAFSA completion data file included 339 public high schools, meaning that approximately 94% of all Iowa public high schools with FAFSA completion data were included in this study (FSA, 2025).

Dependent Variables

The dependent variables in this study were 2023–2024 FAFSA completion rate and 2024–2025 FAFSA completion rate. I selected FAFSA completion rates as the dependent variables because previous research has emphasized that completing the FAFSA is a critical yet sometimes challenging step toward attending college, especially for many rural students (Means et al., 2016; Morton et al., 2018; Prins & Kassab, 2017). Moreover, FAFSA completion has been a commonly measured outcome in recent quantitative financial aid and college access literature (Daun-Barnett, 2023; Denault, 2023; Kim, 2025; Page et al., 2020). In other words, FAFSA completion is a crucial intermediate step toward college access and choice that warrants its own focus.

To determine each Iowa public school's FAFSA completion rate for the 2023–2024 and 2024–2025 cycles, I divided the number of students who completed the FAFSA through December 31 by 12th grade enrollment in 2022–2023 and 2023–2024, respectively.¹ FSA's (2025) data set provided the number of students at each school that submitted and completed the FAFSA. For the numerator, I used the number of students who completed the FAFSA (as opposed to the number who submitted the FAFSA) because it is necessary to complete the FAFSA process entirely to access federal financial aid (Fotuhi et al., 2022; Page et al., 2020).² I drew the denominator from the Iowa

Department of Education's 2022–2023 and 2023–2024 public school building enrollment data by school, grade, race, and gender data sets (Iowa Department of Education, 2023a; Iowa Department of Education, 2024b). Ideally, I would have used the number of graduates from each public school building as the denominator because it is a more accurate representation of the number of students who can attend college (Koricich et al., 2018). However, the Iowa Department of Education had only published these school-level data through 2023. Consequently, I used 12th-grade enrollment instead.

Independent Variables

Rurality was the primary independent variable of interest in this study. I recoded NCES geocodes to a scale of one through four. One included all city codes, two included all suburban codes, three included all town codes, and four included all rural codes. Recoding and collapsing this variable into four groups made results more easily interpretable and allowed for dummy coding for the purposes of this study, while balancing the importance of maintaining some level of distinction among geographic contexts.

The conceptual framework and previous related studies informed the selection of the remaining independent variables. According to Perna's (2006) conceptual model of college access and choice, the second layer recognizes the importance of the school and community context in students' decision making, including availability and types of resources, structural supports, and structural barriers. The independent variables that reflected aspects of the second layer include the percentage of students in the school building receiving free or reduced-price lunch in 2023–2024, an interaction term for geographic locale and the percentage of students receiving free or reduced-price lunch, graduation rate for the class of 2023, the percentage of students proficient in math and English according to the classes of 2023 and 2024's respective 11th-grade ISASP scores, total high school (grades 9–12 only, even if additional grades are housed in the same school building) enrollment in 2022–2023 and 2023–2024, and racial makeup of the classes of 2023 and 2024. The percentage of students who received free or reduced-price lunch served as a proxy for the community's poverty level, which reflected previous quantitative studies' emphasis on

¹ Notably, undocumented students are not eligible for federal financial aid, which can affect FAFSA completion rates. The American Immigration Council (n.d.) estimates that 1.8% of Iowa's population is undocumented.

² A FAFSA may be submitted but not complete if, for example, the FAFSA is rejected by the U.S. Department of Education.

Examples of what triggers FAFSA rejections include missing a signature or declining to consent to the U.S. Department of Education accessing IRS data, the latter of which is relevant only in the 2024–2025 cycle and later. The cause of a rejected FAFSA must be resolved before a student's FAFSA can be considered complete and the student can receive federal financial aid funds.

controlling for socioeconomic status (Koricich et al., 2018; Perna, 2006; Prins & Kassab, 2017). Considering the well-documented and complex relationship between rurality and socioeconomic status (Prins & Kassab, 2017; Yang & Venezia, 2020) and rural students' heightened concerns about the cost of college (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018), I also included an interaction term for geographic locale and the percentage of students with free or reduced-price lunch. Additionally, previous quantitative literature controlled for academic preparation and background, and graduation rate and English and math proficiency provided measures of college readiness and academic background at the school level (Koricich et al., 2018; Perna, 2006; Williams & Luo, 2010). Enrollment size (Perna, 2006; Yang & Venezia, 2020) and racial makeup of the student body (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018) accounted for resources that may have been available within the school. Although race is typically part of the first layer of Perna's (2006) model, this variable has commonly been examined in previous literature, regardless of the unit of analysis and across both quantitative and qualitative studies (Koricich et al., 2018; Lopez & Musoba, 2024; Means et al., 2016; Prins & Kassab, 2017; Williams & Luo, 2010; Yang & Venezia, 2020). Furthermore, the use of school-level race data reflected the unit of analysis in the present study. Since the state of Iowa is predominantly White, the reference group for race was White. Together, these independent variables controlled for resource-related characteristics at the school level.

Analytic Technique and Diagnostics

Descriptive statistics answered the first research question, and OLS regression analyses addressed the second research question. I developed models 1 and 2 to understand the relationship between rurality and Iowa public schools' FAFSA completion rates. I used these models for both the 2023–2024 and the 2024–2025 FAFSA cycles to answer the second research question. Model 1 was a regression model to estimate the association between rurality and FAFSA completion rates, and model 2 added the school-level controls to model 1. I dummy coded the locale categories, and rural served as the reference category for both models.

$$M1. \hat{Y} = b_0 + b_1 \text{city} + b_2 \text{suburban} + b_3 \text{town} + \varepsilon$$

$$M2. \hat{Y} = b_0 + b_1 \text{city} + b_2 \text{suburban} + b_3 \text{town} + b_4 \text{FRL} + b_5 (\text{FRL} * \text{locale}) + b_6 \text{gradrate} + b_7 \text{enroll} + b_8 \text{math} + b_9 \text{English} + b_{10} \text{race} + \varepsilon$$

To ensure that the analyses met the most important assumptions of multiple regression, I tested for multicollinearity by examining variance inflation factors,

independence of residuals by conducting Durbin-Watson tests, normally distributed residuals by examining a histogram of residuals, and heteroscedasticity by conducting Breush-Pagan/Cook-Weisberg tests.

Limitations

One limitation of this study is the choice to exclude from the sample nearly 6% of Iowa public high schools in the FAFSA completion data file, especially because approximately half of those excluded were small rural schools. Of the 339 Iowa public high schools and programs that were included in the FAFSA completion data file, I dropped 20. I excluded 14 public high schools and programs from the data set because fewer than five students completed the FAFSA in one of the cycles examined, and FSA does not report FAFSA completion data for schools with fewer than five completions. Although this approach is supported by prior research (see Deneault, 2023; Kim, 2025), it is admittedly a more sensitive choice in a study focusing on rurality. Those removed included seven small rural schools and seven alternative schools or special programs. I dropped five additional public schools, most of which were missing substantial state-level data: two special schools, one tribally controlled school, and two rural schools. I dropped one final public school due to data integrity concerns. The 12th-grade enrollment at eight of the nine rural schools that I dropped ranged from 8 to 19 for the academic year in which data were missing, and the remaining rural school was missing 12th-grade enrollment data. Excluding some of the smallest rural schools in the sample is a limitation of this study.

A second limitation is the availability of FAFSA completion data for the year after the implementation of the simpler FAFSA process. Although the 2024–2025 FAFSA cycle was tumultuous, most of the problems were resolved for the 2025–2026 FAFSA cycle, and FAFSA completion rates have rebounded (Knott, 2025). Although this study estimates the relationship between rurality and FAFSA completion immediately before and during the policy implementation, it does not capture the cycle during which many of the promises of a simpler FAFSA were realized.

It also is important to acknowledge the limitations of focusing on the second layer of Perna's (2006) model. The layers are interconnected and nested within one another, and the other three layers undoubtedly shape FAFSA completion. However, they are not explicitly accounted for in this study. That said, other studies have taken a similar approach and focused on selected layers of Perna's (2006) model (e.g., Koricich et al., 2018; Means et al., 2016).

Results

Prior to answering the research questions put forth, I tested the regression models with the dependent variables for the 2023–2024 and 2024–2025 cycles for multicollinearity, independence of residuals, normally distributed residuals, and heteroscedasticity. Although they met the first three assumptions and I did not remove any variables due to multicollinearity, each model failed the homoscedasticity assumption for at least one of the FAFSA cycles. To account for this result, I ran robust OLS regression for all models.

Descriptive Statistics

Descriptive statistics answered the first research question about how demographic characteristics differed among Iowa public high schools situated in rural, town, suburban, and city contexts. For ease of presenting the descriptive statistics in Table 1, I included only the most recent year available for all characteristics that were not FAFSA completion rates.

Table 1

Descriptive Statistics of Iowa Public High Schools' Characteristics

Variable	Rural	Town	Suburban	City	Full sample
	<i>N</i> = 215	<i>N</i> = 56	<i>N</i> = 19	<i>N</i> = 29	<i>N</i> = 319
	Mean	Mean	Mean	Mean	Mean
2023–2024 FAFSA completion rate (%)	63.72 (11.94)	59.46 (11.68)	61.97 (12.09)	52.78 (17.57)	61.87 (12.88)
2024–2025 FAFSA completion rate (%)	56.34 (10.88)	52.76 (10.78)	55.52 (12.47)	43.41 (15.24)	54.49 (11.96)
2023 graduation rate (%)	92.46 (5.72)	87.59 (9.04)	92.53 (6.10)	75.01 (19.03)	90.02 (9.80)
2023–2024 free/reduced-price lunch enrollment (%)	35.28 (11.87)	40.61 (12.55)	28.70 (13.29)	53.16 (16.99)	37.45 (13.76)
2023–2024 grade 9–12 enrollment	261.13 (231.18)	599.23 (296.26)	1169.32 (485.86)	1295.45 (605.16)	468.61 (469.62)
2022–2023 grade 11 math proficiency (%)	70.95 (11.78)	67.94 (13.06)	72.72 (14.00)	49.40 (18.93)	68.57 (14.28)
2022–2023 grade 11 English proficiency (%)	72.74 (10.68)	69.40 (10.48)	71.10 (12.15)	55.27 (14.63)	70.47 (12.15)
2023–2024 enrollment by race (%)					
Hispanic	7.42 (10.05)	14.01 (15.26)	10.02 (4.70)	17.85 (11.34)	9.68 (11.56)
Native American	0.27 (0.71)	0.34 (1.05)	0.23 (0.17)	0.36 (0.36)	0.29 (0.74)
Asian	0.43 (0.71)	1.36 (2.20)	3.17 (3.22)	3.73 (3.77)	1.06 (2.05)
Black	0.99 (1.30)	2.71 (2.97)	5.19 (3.34)	19.32 (9.26)	3.21 (6.17)
Pacific Islander	0.19 (0.76)	0.65 (1.72)	0.12 (0.19)	0.93 (1.30)	0.33 (1.06)

Table 1 (continued)

Variable	Rural	Town	Suburban	City	Full sample
	<i>N</i> = 215	<i>N</i> = 56	<i>N</i> = 19	<i>N</i> = 29	<i>N</i> = 319
	Mean	Mean	Mean	Mean	Mean
White	88.23 (10.87)	77.17 (17.59)	75.82 (7.00)	49.53 (16.50)	82.03 (16.99)
Multiracial	2.41 (1.52)	3.65 (2.47)	5.26 (1.34)	7.77 (2.86)	3.29 (2.46)

Note. Standard deviations are in parentheses.

Rural schools had the highest FAFSA completion rates in both the 2023–2024 and 2024–2025 cycles, followed by suburban, town, and urban schools, in that order. However, rural and urban schools experienced the steepest declines, 7.38 and 9.37 percentage points, respectively, in their average FAFSA completion rates during the FAFSA overhaul that was implemented in 2024–2025. The mean FAFSA completion rate for the entire sample fell from 61.87% in the 2023–2024 cycle to 54.49% in the 2024–2025 cycle.

Regarding other demographic characteristics, rural schools tended to have high graduation rates, relatively low free and reduced-price lunch enrollment, relatively high English and math proficiency rates, and little racial diversity. Rural and suburban schools had the highest graduation rates, at about 92.50%, and had the lowest rates of free and reduced-price lunch enrollment. Additionally, urban schools had noticeably lower English and math proficiency rates than suburban, town, and rural schools. With regard to

racial diversity, rural schools were the least racially diverse, with an average of 88.23% of their enrolled students being White, and urban schools were the most racially diverse, with an average of 49.53% of their students being White. Schools in town and suburban settings fell in between with similar racial diversity characteristics to one another. In summary, rural schools had higher-than-average graduation rates and English and math proficiency rates and lower-than-average free and reduced-price lunch enrollment and racial diversity.

Regression Analyses

I used the same regression models with two different dependent variables to answer the second research question. Table 2 summarizes the results for 2023–24 FAFSA completion rates, and Table 3 summarizes the results for 2024–25 FAFSA completion rates.

Table 2
Regression Models Estimating 2023–2024 FAFSA Completion Rates

	Model 1		Model 2	
	b	β	b	β
Locale (reference = rural)				
City	-0.109** (0.033)	-0.245	0.040 (0.078)	0.090
Suburban	-0.018 (0.028)	-0.032	0.064 (0.054)	0.118
Town	-0.043* (0.018)	-0.126	0.007 (0.041)	0.020
Percent FRL			-0.002** (0.001)	-0.218
Percent FRL x locale (reference = rural)				
City			0.001 (0.002)	0.076
Suburban			-0.002+ (0.001)	-0.132
Town			0.000 (0.001)	0.006
Graduation rate			0.004** (0.001)	0.279
Grade 9–12 enrollment			-0.000* (0.000)	-0.192
Percent proficient in Math			0.003*** (0.001)	0.329
Percent proficient in English			-0.000 (0.001)	-0.026
Percent White enrollment			-0.050 (0.058)	-0.065
Constant	0.637*** (0.008)		0.269+ (0.152)	
<i>N</i> =	319		319	
Adjusted R ² =	0.057		0.349	

Note. Robust standard errors in parentheses. FRL = Free or reduced-price lunch. Percent FRL, grade 9–12 enrollment, and percent White enrollment reflected 2022–2023 school year data for the 2023–2024 FAFSA cycle. Graduation rate was for the class of 2023. English and math proficiency reflect 11th-grade test scores for the class of 2023.

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3
Regression Models Estimating 2024–2025 FAFSA Completion Rates

	Model 1		Model 2	
	b	β	b	β
Locale (reference = rural)				
City	-0.129*** (0.029)	-0.311	0.046 (0.039)	0.112
Suburban	-0.008 (0.029)	-0.016	0.069+ (0.040)	0.137
Town	-0.036* (0.016)	-0.114	0.039 (0.038)	0.124
Percent FRL			-0.001 (0.001)	-0.061
Percent FRL x locale (reference = rural)				
City			-0.000 (0.001)	-0.034
Suburban			-0.002* (0.001)	-0.152
Town			-0.001 (0.001)	-0.127
Graduation rate			0.004*** (0.001)	0.335
Grade 9–12 enrollment			-0.000 (0.000)	-0.090
Percent proficient in math			0.003*** (0.001)	0.338
Percent proficient in English			0.001 (0.001)	0.086
Percent White enrollment			-0.046 (0.050)	-0.066
Constant	0.563*** (0.007)		-0.012 (0.101)	
<i>N</i> =	319		319	
Adjusted R ² =	0.090		0.444	

Note. Robust standard errors in parentheses. FRL = Free or reduced-price lunch. Percent FRL, grade 9–12 enrollment, and percent White enrollment reflected 2023–2024 school year data for the 2024–2025 FAFSA cycle. Graduation rate was for the class of 2023. English and math proficiency reflect 11th-grade test scores for the class of 2024.

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

For the 2023–2024 FAFSA cycle, model 1 estimated a significant difference between rural schools and schools situated in city and town contexts (adj. $R^2 = 0.057$, $F(3, 315) = 5.03$, $p < 0.01$). Compared to rural high schools, high schools in cities were associated with a 10.9 percentage point decrease in FAFSA completion rate, and high schools in towns were associated with a 4.3 percentage point decrease in FAFSA completion rate. However, when controlling for other school characteristics in model 2, an increase of 1 percentage point in the percentage of students receiving free or reduced-price lunch was associated with a marginally significant 0.2 percentage point decrease in FAFSA completion rate for suburban schools compared to rural schools (adj. $R^2 = 0.349$, $F(12, 306) = 20.20$, $p < 0.001$). Moreover, graduation rate and math proficiency had a statistically significant, positive relationship with FAFSA completion rate across the entire sample when controlling for the other school characteristics. Specifically, an increase of 1 percentage point in graduation rate was associated with a 0.4 percentage point increase in FAFSA completion rate, and an increase of 1 percentage point in the percentage of students proficient in math was associated with a 0.3 percentage point increase in FAFSA completion rate. The beta coefficients showed that these two variables also had the greatest influence on FAFSA completion rate. The complete model explained 34.9% of the variance in FAFSA completion rates during the 2023–2024 cycle, and the overall model was statistically significant.

Findings were similar for the 2024–2025 FAFSA cycle. In model 1, schools located in cities were associated with a 12.9 percentage point decrease in FAFSA completion rate compared to rural schools, and schools in towns were associated with a 3.6 percentage point decrease in FAFSA completion rate compared to rural schools (adj. $R^2 = 0.090$, $F(3, 315) = 7.61$, $p < 0.001$). However, similar to the 2023–2024 cycle, an increase of 1 percentage point in the percentage of students receiving free or reduced-price lunch was associated with a statistically significant 0.2 percentage point decrease in FAFSA completion rate for suburban schools compared to rural schools when controlling for other school characteristics (adj. $R^2 = 0.444$, $F(12, 306) = 36.39$, $p < 0.001$). There were also other consistencies with the 2023–2024 cycle. For example, across the full sample, an increase of 1 percentage point in graduation rate was again associated with a 0.4 percentage point increase in 2024–2025 FAFSA completion rate, and an increase of 1 percentage point in the percentage of students proficient in math was associated with a 0.3 percentage point increase in 2024–2025 FAFSA completion rate when holding all other variables in the model constant. The beta coefficients showed that these two variables had the greatest overall influence on FAFSA completion rate in the 2024–2025 cycle. Overall, model 2 explained 44.4% of the variance in

FAFSA completion rates among Iowa public high schools in the 2024–2025 cycle and was statistically significant.

Discussion

Since rural public high schools in Iowa had the highest mean FAFSA completion rates and were associated with statistically significantly higher FAFSA completion rates than public high schools in cities and towns in the 2023–2024 and 2024–2025 cycles, the descriptive statistics and model 1 in this study support prior research that has shown that rural students need financial support to attend college (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018; Tillapaugh & McAuliffe, 2019). They also show that, compared to their peers in other locales, students at rural public high schools in Iowa are relatively successful at finding the resources they need to complete the FAFSA and access federal financial aid. The latter finding runs counter to previous studies that have found that rural students in other contexts struggled to overcome barriers to accessing the necessary social and cultural capital to navigate the financial aid process (Morton et al., 2018; Prins & Kassab, 2017). It also demonstrates that many rural Iowa students are taking an important step toward college enrollment, suggesting they are at least considering college as a postsecondary option.

The model 2 analyses offer a more nuanced understanding of FAFSA completion rates. Model 2 shows that, when controlling for the other school characteristics, the percentage of students receiving free or reduced-price lunch more negatively influences FAFSA completion rates in suburban schools compared to rural schools. In other words, as the percentage of free and reduced-price lunch recipients increases, suburban schools' FAFSA rates decline at a steeper rate than rural schools' FAFSA rates when holding other variables in the model constant. Notably, this finding is only marginally significant in the 2023–2024 FAFSA cycle but is statistically significant in the 2024–2025 FAFSA cycle. Moreover, other factors are not captured in the models: The model 2 analyses for the 2023–2024 and 2024–2025 cycles explain only 34.9% and 44.4% of variance in FAFSA completion rates among Iowa public high schools, respectively. However, this finding adds important nuance to the descriptive statistics and model 1 analyses and contributes a new wrinkle to the body of literature exploring the implications of the relationship between rurality and socioeconomic status and how that relationship differs across contexts.

In addition, the consistently significant relationships between FAFSA completion rate and graduation rate and math proficiency, respectively, support Perna's (2006) conceptual model. Specifically, Perna argued that school-level structural characteristics influence the college choice

process. Since completing the FAFSA represents a critical and sometimes challenging step toward college enrollment, the positive relationship between FAFSA completion rate and the school-level proxies for academic preparation and college readiness reinforce the importance of structural forces related to social and cultural capital.

Implications for Policy and Practice

As the present study has shown, rural underrepresentation among FAFSA filers is not ubiquitous across the United States. Although Iowa's overall FAFSA completion rates are not keeping up with national trends (National College Attainment Network, n.d.), other states that struggle with rural FAFSA completion might consider some of the interventions Iowa has implemented, including the Iowa Department of Education's initiative to share student-level FAFSA completion data with high schools (Midwestern Higher Education Compact, 2025). That said, the state of Iowa may want to more closely examine why a sizable number of high school seniors in all locales are opting not to complete the FAFSA. Considering previous evidence of widespread misunderstandings of financial aid, especially among rural students (Lopez & Musoba, 2024; Means et al., 2016; Morton et al., 2018), continuing to identify innovative ways to encourage FAFSA completion may influence some young Iowans who may have otherwise dismissed higher education as too costly to attend college.

Limitations and Future Research

The findings in this study present a complicated landscape of FAFSA completion rates across Iowa public high schools. To better understand the variance in FAFSA completion rates, future research should test more robust models that explicitly incorporate all nested layers of Perna's (2006) conceptual model. It also is important to repeat similar studies across different state contexts, especially in states with more geographic and racial diversity, to understand how FAFSA completion rate patterns differ. Relatedly, developing models that examine additional dimensions of difference in effects across place should be conducted in states with more geographic diversity. As the present study has demonstrated, rural Iowa is unique among other previously studied rural contexts (e.g., Prins & Kassab, 2017) in that rural schools have higher FAFSA completion rates than nonrural schools.

Moreover, it is important to examine how FAFSA completion patterns continue to evolve as the difficulties with the simultaneous implementation of the FAFSA Simplification Act and the FUTURE Act are resolved and as new barriers arise with the implementation of the

One Big Beautiful Bill Act (2025) and the second Trump administration's deep cuts to the U.S. Department of Education, which is responsible for administering the FAFSA (Knox, 2025; Knox et al., 2025). Knowing more about who was shut out of the higher education system because of the challenges with the 2024–2025 FAFSA can contribute to efforts to bring those individuals back into the fold now that many of the roadblocks they encountered have been resolved, and proactively countering the Trump administration's efforts to thwart access to higher education will be crucial for future students who want to attend college (Mehta, 2024).

Conclusion

Although the findings of this study complicate my hypothesis that rurality is associated with lower FAFSA completion rates and a greater decrease in FAFSA completion rates during the simplified FAFSA rollout, the findings exemplify the nuances of resource distribution across different contexts that have been highlighted in previous literature (Means et al., 2016; Morton et al., 2018; Prins & Kassab, 2017; Tillapaugh & McAuliffe, 2019). More broadly, these findings serve as a reminder that rural America is not a monolith, and that rural schools and communities have strengths that should be celebrated. Understanding the nuances across rural communities is key to allocating resources and support to those who need it most so that all rural students who want to attend college can access the financial, cultural, and social capital necessary to achieve their goals.

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