Does Rural Differ?

Comparing Parent and Student Reasons for Choosing Cyber Schooling

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Cyber-schooling offers potentially greater benefits for rural than urban students, by providing a broader range of courses, ending long commutes, and offering more developed special education services than typically found in rural public schools. We survey students (n=269, 53.7% response rate) and parents (232, 48.7%) at a cyber-charter school dubbed SunTech, to test whether rural subjects choose cyber schooling for distinct reasons. Factor analyses and OLS regressions indicate that rural parents are more apt to choose SunTech for structural reasons such as its broader range of classes and to avoid long commutes to school. In contrast, students were more likely to rank curricular reasons as driving their decision to choose SunTech. Rural status did not affect how either students or parents graded the school (A-F).

Keywords: cyber schooling, rural schooling, parental choice, parent satisfaction, student satisfaction, rural charter schooling, rural education markets, rural cyber schooling

Nearly a third of U. S. public schools are designated as rural (Johnson & Strange, 2007), with rural schools being relatively small, underfunded, isolated, and likely to serve low income populations. Rural schools typically serve students with relatively low technology acumen. These experiential deficits often stem from a shortage of teachers, a narrow curricular focus, and small school size forcing teachers to play multiple roles. Rural schools often face challenges in recruiting and retaining teachers (Hammer, Hughes, McClure, Reeves, & Salgado, 2005; Hobbs, 2004; Jimerson, 2006; Provasnik et al., 2007).

Additionally, rural teachers tend to have lower academic expectations of their students, utilize more conservative pedagogical methods and enjoy fewer professional development opportunities than their urban and suburban counterparts (Capper, 1990; Monk & Carlson, 1992; Office of Special Education, 1995; Stringfield & Teddlie, 1991). Breadth of course availability and depth of course difficulty are particular issues in rural schools (Alspaugh, 1998; Aronson & Timms, 2004; Barbour & Mulcahy, 2006; Bouck, 2004; Edington & Koehler, 1987; Gruber, Wiley, Broughman, Strizek, & Burian-Fitzgerald, 2002; Hallinger & Murphy, 1986; Hammer et al., 2005; Hudson & Shafer, 2002; Monk & Haller, 1993). Yet rural schools play an important role in sustaining rural communities and have the potential to unite different ethnicities (Allen, 2014; Tieken, 2014). They also often act as protective factors for rural youth against risky behaviors. Despite their under-resourced status, they tend to outperform urban schools (Hodge, Cardenas & Montoya, 2001; Sullivan, Kung, & Farrell, 2004).

Technology has the potential to enhance, but not supplant traditional public schools in rural communities. Practitioners and social scientists posit that cyber schooling has the potential to supplement traditional schooling, with notably positive impacts on rural students (Maranto & McShane 2012; Beck & Maranto, 2014; Hess, 2010; Moe & Chubb, 2009; Peterson, 2010; Vander Ark, 2012). The central fact of cyber schooling is that it has the potential to decouple public education from geographic constraints. Depending on state regulations, cyber schooling may allow schools to hire teachers from anywhere to teach children who are anywhere, reducing local teacher shortages and allowing schools to offer broader ranges of classes. This could have a positive impact on rural schools, which often have difficulty attracting and retaining qualified teachers (Maranto & Shuls, 2014). Secondly, cyber schooling can allow for more efficient use of time, by eliminating commuting to and from schools, and easing class transitions within the school day. The former is likely to benefit rural schools.
Third, cyber schooling has the potential to reduce in-person bullying, much of which occurs during bus rides. Cyber education also permits teachers and parents to monitor classrooms to a greater degree than possible in brick and mortar schools (Englander, 2013).\footnote{Arguably, this may have an Orwellian quality, with parents and teachers monitoring student peer interactions whenever they wish. Also, principals may have unlimited access to review student and teacher performance, as discussed by Beck and Maranto (2014).} This may have positive impacts in rural districts both because of their longer commutes, and also because of research finding higher reported incidence of bullying in rural schools (Stockdale, Hangaduambo, Duys, Larson, & Sarvela, 2002). Fourth, special education services are often quite costly, and cyber schooling has the potential to provide special services at lower cost (Ong-Dean, 2009). Cyber schooling could also enable schools to overcome local shortages in special education teachers. Finally, cyber teaching methods typically allow students to replay classes again and again until they master the material, something potentially useful for students with disabilities such as ADHD. Due to low population density, it is likely that rural students lack a variety of schooling options. Accordingly, the addition of cyber options may have more impact than if those options were added to an existing menu of school choices, as likely exist in urban and suburban setting.

The purpose of this study is to provide a limited test of the proposition that cyber schooling options may have distinct benefits for rural students and parents compared with their urban and suburban peers. We use survey methodology to compare rural, suburban and urban parents and students regarding their reasons for choosing and satisfaction with their cyber school. We stress that this is an exploratory study of a single cyber school meant to guide further research.

**Literature Review**

Even prior to widespread use of the Internet, distance education existed, particularly in sparsely populated settings in the U.S. and in other countries. Student academic performance in distance education environments has been a concern. Generally, findings suggest mixed results in Canada, Australia, and New Zealand, with negative results in the U.S. (Barbour, 2005, 2007; Barbour & Clark, 2009; Barbour & Mulcahy, 2006, 2008, 2009; Bernard et al., 2004; Cavanaugh et al., 2004; Cradler, McNabb, Freeman, & Burchett, 2002; CREDO, 2015; Hobbs, 2004; Hubbard & Mitchell, 2011; Miron & Urschel, 2012; Mulcahy & Barbour, 2010; Ritter, 2012; Tucker, Dillon, & Jambulapati, 2011; Wang & Woodworth, 2011; Waxman, Lin, & Georgette, 2003; Woodworth et al., 2015).

Traditional public schools in rural settings already make some use of distance education (Hannum, Irvin, Banks & Farmer, 2009). A disproportionate share of the increase in cyber schooling comes from the charter school sector. Charter schools are less encumbered by regulations and existing cultural practices, and thus better able to exploit changing technologies (Moe & Chubb, 2009; Peterson, 2010). This may pose challenges to rural traditional public schools in particular, by further reducing student enrollments (and thus state funding) in unpredictable ways, leading rural public schools to oppose the spread of cyber charter schools (Schaft et al., 2014). Students and parents may choose charter schools for a variety of reasons, including race, academic quality, parental involvement, non-bureaucratic school culture and family structure (Buckley & Schneider, 2007; Milliman & Maranto, 2009). Unfortunately, little research has been found regarding parent and student reasons for choosing a cyber charter school. Marsh, Carr-Chellman and Sockman (2009) did a phenomenological analysis including interviews and observations of seven parents in one cyber charter school. They discovered that parents primarily chose cyber schools because of their ability to customize learning experiences for their children, and to lower the costs of homeschooling. This study is limited in its generalizability due to its focus on homeschool parents, who comprise only a small slice of the cyber school population. Clearly, we need more research exploring the reasons parents and students choose cyber schooling.

**Theoretical Framework**

Our framework is drawn from social theory works that portray human and non-human elements of society as inextricably intertwined (Latour, 1993; Law, 1994, 2007). We thus consider how society is produced through networks that include both humans and technology, in which the properties of both co-develop. As a result, technology cannot be viewed as a fixed object impacting humans in fixed ways. Rather, its impact and nature depend much on the contexts in which it is used (Bingham, Holloway & Valentine, 1999). In this case study, rural students and cyber schooling intersect, developing through a complex pattern of interactions that involve the reasons parents and students choose a school, as well as their satisfaction with that school.
We also pull from Janelle’s (1973) concept of extensibility, which refers to the ability of people to overcome the barriers of physical space through technology. Rural parents often envisage technology as some kind of sine qua non that can enable their children to surmount their geographic remoteness and physical limitations (Valentine & Holloway, 2001). However, children tend to use and perceive online technologies in more mundane ways, communicating with their offline peers, making new online acquaintances, and for identity play (Turkle, 2011; Valentine & Holloway, 2002). Rather than using online technologies to equip themselves for the future, children use them to get through their present, whether dealing with course assignments, negotiating a relationship, or dealing with a school bully. While parents often focus on their kids’ future and maximizing their potential, kids focus more on existing social relations and activities of everyday life. Thus, rural students’ reasons for choosing a cyber school may differ from those of their rural parents, and from those of non-rural counterparts. Accordingly, we will test the following hypotheses:

H1. Compared to non-rural peers, rural parents and students are more likely to note structural characteristics such as the range of classes offered, and long commute times to traditional public schools, as important criteria in school selection.

H2. Rural parents and students offer higher subjective evaluations (grades) of cyber schooling than their non-rural peers.

Methodology

We selected SunTech (a pseudonym) for our study because it was a cyber charter secondary school (Grades 7–12) serving a mix of urban and rural students. SunTech was an online cyber charter high school with about 700 students, originally founded by the leader of a small social services nonprofit serving at-risk youth in the state’s largest city. Like other charter schools in the state, SunTech could not selectively admit students. The school had never had a waitlist; instead admitting all applicants and expanding to meet demand. The founder intended to use online technology to teach and tutor students who had dropped out or were at risk of dropping out. Though the school was founded to serve urban young people, informants reported that within 2 years of its opening a disproportionate share of students came from rural and small town settings, which had previously lacked educational options.

We conducted five days of fieldwork at SunTech during separate visits to the school in July 2010, September 2010 (two days), September 2011, and June 2014. During these visits we attended classes (watched teachers teaching in live, synchronous sessions), attended staff meetings including a meeting of the 10th grade At-Risk Team coordinating outreach to potential dropouts, and interviewed 22 teachers, administrators, and other staff. We attended nine of the monthly meetings of the SunTech board in the August 2010-January 2012 period, two in-person and seven virtually. We also conducted document analysis using the school’s application for charter reauthorization, technology plan, organization chart and rulebook.

We used a survey methodology as typifies public opinion research (Czaja & Blair, 2005). The following subsections include information on instrument choice and development, data collection, and data analysis methods.

Instruments

Parent surveys had 67 items; student surveys, 66 that assess three scales (Reasons for Choosing This School, Involvement, and Satisfaction) and general demographic data. Question types included Likert scale, multiple choice, rank order, short text answer, and long text answer. Some of these questions were taken from Liu et al. (2010). An online survey tool, Qualtrics, was used. In adapting student survey for parents, the researchers changed the wording from “your” to “your child” and added one extra question to ascertain guardian status (mother, father, unrelated guardian, etc.) to indicate the relationship between parent and child. Therefore, the parent survey had 67 items. Once developed, the surveys were sent to seven expert reviewers who examined the survey items for methodological and content considerations. Based on their suggestions, the items were revised for consistency of terminology, specificity of questions and responses, and additional items that should be included.

Data Collection

Implementing Dillman’s Tailored Method Design (2010), the researchers sent out notification emails to the potential respondents who had been at SunTech for at least one year. SunTech administrators emailed the population of parents and students in early September, 2011, asking them to participate in a forthcoming online survey, and promising $10 gift cards in exchange for that participation. Surveys were emailed a week later. Non-participating subjects were emailed two follow-up reminders, followed by an automated call from the school. In addition, a small number of parents who
lacked email access were mailed paper surveys with stamped, addressed return envelopes. Participants and non-participants were assigned individual identifier numbers to ensure that researchers could not identify individual respondents. In all communications to subjects, both the researchers and SunTech administrators made it clear that individual respondents could not be identified by school staff. SunTech administrators and employees did not receive access to the raw data to assure respondent confidentiality. 269 students (53.7% response rate) and 232 parents (48.7% response rate) participated. These response rates provide confidence in the internal validity of findings (Dillman 2010). Data received from the surveys from September through December 2011 were recorded in Qualtrics and analyzed using STATA. Data was then analyzed using descriptive statistics for closed items. The researchers compared responses of general education and special education students using t-tests that assume equal variances between the distributions of populations under study. Bartlett’s test for equal variances confirmed that this was the most appropriate test. See Table 1 for parent and student demographics.

Data Analysis Methods

The survey data was downloaded in MS Excel format and thereafter imported in STATA (data analysis software). We used the five digit zip code of parents and students in concert with zip code data from the U.S. Postal Service website. This dataset was then cleaned and variables were renamed and labels were assigned in STATA. Using the Common Core of Data (CCD) provided by NCES website, we downloaded the district and school level datasets for the state. Thereafter in each dataset we combined the zip code to generate a 9 digit zip code by concatenation of the five digit and four digit zip code. The many to many option in STATA was utilized to merge the survey and CCD datasets and the resulting data sets were cleaned. The rows for which CCD data did not have adequate information (mostly new schools) were deleted. Thus we were able to match the survey data to the closest school in that location.

The CCD uses Geographic Information Science (GIS) to record locale. We recoded the locale variable into four initial categories (City, Suburb, Town and Rural), and after initial analyses, three categories: City, Suburb and Town (where Town represented Town and Rural from the CCD data). Recoding was also done for the categorical variables of overall grade for SunTech and previous school.

Given the uncertainties regarding how parents and students make decisions regarding which schools to attend (Buckley & Schneider, 2007), we used factor analyses to identify underlying attitudinal structures associated with the decision to leave traditional public schools to attend SunTech. Factor analysis is the preferred statistical technique to make sense of observed and unobserved patterns among independent variables, summarizing their impacts through a smaller number of factors. We did a factor analysis and retained the first three factors in the rotated factor loadings (pattern matrix) and unique variances for all variables. Values greater than 0.35 in absolute were highlighted and three groupings were made based on the analysis for both the parent and student datasets (Crocker & Algina, 1986). After identifying the factors driving parent and student decisions to attend SunTech, we then used Ordinary Least Squares (OLS) regression to test whether rural, suburban and urban parents and students selected SunTech for different reasons. We chose OLS regression rather than ANOVA because of uncertainty as to whether the independent variables would have any effect, and since OLS allows us to compare the coefficients for the locale variable, and employing F-tests for joint hypotheses. Finally, we tested whether rural and non-rural parents and students differed in their subjective evaluations (A through F grades) of SunTech.

Results

Why Parents Choose SunTech?

Factor analyses identified three factors influencing why parents chose SunTech, Curricula (questions rating learning style, teachers, curricula, and personalization), Behavior (behavioral problems at previous school, special needs not being served at previous school, and child bullied at previous school) and Structural (broad range of classes, flexible schedule, not having to commute).
Table 1.

Demographic Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Parents</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants</td>
<td>116</td>
<td>238</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>52 (44.8%)</td>
<td>83 (34.9%)</td>
</tr>
<tr>
<td>Female</td>
<td>64 (55.2%)</td>
<td>155 (65.1%)</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>88 (75.9%)</td>
<td>168 (70.6%)</td>
</tr>
<tr>
<td>Latino</td>
<td>8 (6.9%)</td>
<td>25 (10.5%)</td>
</tr>
<tr>
<td>African American</td>
<td>17 (14.7%)</td>
<td>33 (13.9%)</td>
</tr>
<tr>
<td>Asian</td>
<td>3 (2.6%)</td>
<td>4 (1.7%)</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>8 (3.4%)</td>
</tr>
<tr>
<td>Special Education a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>28 (24.1%)</td>
<td>46 (19.3%)</td>
</tr>
<tr>
<td>No</td>
<td>88 (75.9%)</td>
<td>192 (80.7%)</td>
</tr>
</tbody>
</table>

Note. *For parents this question refers to their child’s special education status.

Table 2.

Rotated factor loadings for parental reasons for choosing SunTech

<table>
<thead>
<tr>
<th>Variable</th>
<th>Curricula</th>
<th>Behavior</th>
<th>Structural Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>The online format suits my child's learning style</td>
<td>0.4646</td>
<td>0.0929</td>
<td>0.1944</td>
</tr>
<tr>
<td>The Teachers</td>
<td>0.8083</td>
<td>0.1801</td>
<td>-0.0054</td>
</tr>
<tr>
<td>The Curriculum</td>
<td>0.8299</td>
<td>0.0397</td>
<td>0.1221</td>
</tr>
<tr>
<td>My child was experiencing behavior problems at his/her previous school</td>
<td>0.0565</td>
<td>0.5453</td>
<td>0.1635</td>
</tr>
<tr>
<td>My child’s special needs were not being served at his/her previous school</td>
<td>0.2262</td>
<td>0.6693</td>
<td>0.1136</td>
</tr>
<tr>
<td>Broader range of classes than my child’s previous school (For example: AP classes)</td>
<td>0.2918</td>
<td>0.2485</td>
<td>0.4754</td>
</tr>
<tr>
<td>I wanted my child to experience a more personalized curriculum</td>
<td>0.5703</td>
<td>0.1139</td>
<td>0.349</td>
</tr>
<tr>
<td>My child’s previous school closed down</td>
<td>-0.0021</td>
<td>0.1317</td>
<td>0.0585</td>
</tr>
<tr>
<td>Not having to commute to school</td>
<td>0.1446</td>
<td>0.2355</td>
<td>0.4048</td>
</tr>
<tr>
<td>Flexible Schedule</td>
<td>0.1362</td>
<td>0.1053</td>
<td>0.5856</td>
</tr>
<tr>
<td>My child was being bullied at his/her previous school</td>
<td>0.2334</td>
<td>0.4666</td>
<td>0.0738</td>
</tr>
<tr>
<td>It was my child's decision</td>
<td>0.0797</td>
<td>0.0674</td>
<td>0.0782</td>
</tr>
</tbody>
</table>

Note. Values greater than 0.35 in absolute magnitude have been highlighted.

Generally the locale of parents is not a significant determinant of parents’ choice for SunTech. OLS analyses testing whether Curricula and Behavior differ by locale found no statistically significant differences. Table 3 shows OLS analysis using urban parents as the constant and testing whether suburban and rural parents differ in their reasons for choosing SunTech according to Structural Factor (broader range of classes, flexible schedule, no commute). The OLS regression for the Structural Factor did not differ by locale, although the coefficients on the rural and suburban variables had opposite signs. Therefore, an additional F-test was conducted in order to determine if rural parents were more likely than suburban parents to rate the Structural Factor as key to their decisions to choose SunTech. Relative to suburban parents, rural parents choose SunTech positively and significantly differently (F (1, 96) = 4.23, p = 0.04). This suggests that the Structural Factor (broader range of classes, flexible schedule, and reduced commuting time) plays a significant role in decisions of rural parents to move from a traditional public school to a cyber school, again offering some support for H2. We must
note, however, that the very modest R-squares suggest caution.

**Why Students Choose SunTech?**

We again did a factor analysis and retained the first three factors in the rotated factor loadings (pattern matrix) and unique variances for all variables. Values greater than 0.35 in absolute were highlighted and three groupings were made based on the analysis.

As Table 4 shows, three factors were identified influencing why students chose SunTech, Curricula (broader range of classes as compared to previous school, more personalized curriculum), Behavior (behavioral problems at previous school, special needs not being served at previous school, and bullied at previous school) and Structural Issues (flexible schedule, parent/guardian’s decision). In short, the same three general factors influence why parents and students choose SunTech. However, the individual items loading into those factors vary. The same items for students and parents load into the Behavior Factor. For Curricula, only one of the four items loading for parents load for students; for Structure, one of three of the items loading for parents load for students. These distinctions in decision criteria offer limited support to H1.

Table 3
*OLS regression results comparing Suburban and Rural parents’ choice for choosing SunTech (Curricula, Behavior and Structural Issues)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1) Curricula</th>
<th>(2) Behavior</th>
<th>(3) Structural Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburb</td>
<td>-0.197</td>
<td>0.271</td>
<td>-0.217</td>
</tr>
<tr>
<td></td>
<td>(0.212)</td>
<td>(0.298)</td>
<td>(0.240)</td>
</tr>
<tr>
<td>Rural</td>
<td>-0.402</td>
<td>0.268</td>
<td>0.343</td>
</tr>
<tr>
<td></td>
<td>(0.253)</td>
<td>(0.355)</td>
<td>(0.287)</td>
</tr>
<tr>
<td>Constant</td>
<td>4.174***</td>
<td>2.202***</td>
<td>3.202***</td>
</tr>
<tr>
<td></td>
<td>(0.160)</td>
<td>(0.224)</td>
<td>(0.182)</td>
</tr>
<tr>
<td>Observations</td>
<td>99</td>
<td>98</td>
<td>99</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.026</td>
<td>0.010</td>
<td>0.042</td>
</tr>
</tbody>
</table>

*Note. Standard errors in parentheses*

*** p<0.01, ** p<0.05, * p<0.1
### Table 4

**Rotated factor loadings for students' reasons for choosing SunTech**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Curricula</th>
<th>Behavior</th>
<th>Structural Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>The online format suits my learning style</td>
<td>0.282</td>
<td>-0.0318</td>
<td>0.0565</td>
</tr>
<tr>
<td>The Teachers</td>
<td>0.0209</td>
<td>0.2453</td>
<td>-0.0432</td>
</tr>
<tr>
<td>The Curriculum</td>
<td>0.0608</td>
<td>0.0126</td>
<td>0.0465</td>
</tr>
<tr>
<td>I was experiencing behavior problems at my previous school</td>
<td>0.1567</td>
<td>0.5981</td>
<td>-0.0287</td>
</tr>
<tr>
<td>My special needs were not being served at my previous school</td>
<td>-0.0379</td>
<td>0.5542</td>
<td>-0.0076</td>
</tr>
<tr>
<td>Broader range of classes than my previous school (For example: AP classes)</td>
<td>0.4261</td>
<td>0.2313</td>
<td>-0.0416</td>
</tr>
<tr>
<td>I wanted to experience a more personalized curriculum</td>
<td>0.4837</td>
<td>0.1417</td>
<td>0.0133</td>
</tr>
<tr>
<td>My previous school closed down</td>
<td>0.0274</td>
<td>0.0174</td>
<td>-0.0665</td>
</tr>
<tr>
<td>Not having to commute to school</td>
<td>-0.0168</td>
<td>0.2745</td>
<td>0.1234</td>
</tr>
<tr>
<td>Flexible Schedule</td>
<td>0.1344</td>
<td>-0.0433</td>
<td>0.4436</td>
</tr>
<tr>
<td>I was being bullied at my previous school</td>
<td>0.0868</td>
<td>0.5847</td>
<td>-0.0084</td>
</tr>
<tr>
<td>It was my parent/guardian's decision</td>
<td>0.122</td>
<td>0.0179</td>
<td>-0.4621</td>
</tr>
</tbody>
</table>

*Note. Values greater than 0.35 in absolute magnitude have been highlighted.*

Table 5 shows OLS analysis using urban students as the constant and testing whether suburban and rural students differ in their reasons for choosing SunTech. OLS analyses testing whether the three factors influencing students’ decisions to attend SunTech differ by locale found that rural students were more likely to cite the Behavior Factor as influencing their decisions. Suburban students were less likely to cite the Structural Factor in their decision. We must add the caveat, however, that F-tests indicate that rural and suburban students do not differ significantly on the impact of the Behavioral and Structural factors on their choices. In this instance we may have more confidence in the F-test because it isolates the independent impacts of the key hypothetical independent variable, locale.

The OLS regression for the Curricula Factor did not differ by locale, although the coefficients on the rural and suburban variables had opposite signs. Therefore, an additional F-test was conducted in order to determine if rural students were more likely than suburban students to rate the Curricula factor as key to their decisions to choose SunTech. Students in rural areas are more likely than suburban students to choose SunTech because of Curricula \(F(1, 190) = 5.30, p = 0.02\).

**Does Locale Affect How Parents and Students Grade SunTech?**

Tables 5 and 6 display the OLS analyses of how locale affects parent and student subjective evaluations of SunTech, that is the grade (A through F) they assigned to SunTech. Here findings are unequivocal, disproving H2. We find no statistically significant differences between how rural, suburban and urban students and parents evaluate SunTech. Additionally, we repeated this analysis using the difference between subjective evaluations of SunTech and those of the prior traditional public schools as the dependent variable. Results were essentially the same.
Table 5

**OLS regression results comparing Suburban and Rural students’ choice for choosing SunTech**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Curricula</th>
<th>Behavior</th>
<th>Structural Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburb</td>
<td>-0.197</td>
<td>0.304</td>
<td>-0.363**</td>
</tr>
<tr>
<td></td>
<td>(0.202)</td>
<td>(0.214)</td>
<td>(0.145)</td>
</tr>
<tr>
<td>Rural</td>
<td>0.293</td>
<td>0.601**</td>
<td>-0.202</td>
</tr>
<tr>
<td></td>
<td>(0.223)</td>
<td>(0.238)</td>
<td>(0.161)</td>
</tr>
<tr>
<td>Constant</td>
<td>3.159***</td>
<td>2.000***</td>
<td>3.452***</td>
</tr>
<tr>
<td></td>
<td>(0.150)</td>
<td>(0.159)</td>
<td>(0.109)</td>
</tr>
</tbody>
</table>

Observations 193
R-squared 0.027

Note. Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 6

**OLS regression results comparing Suburban and Rural parents’ subjective evaluations of SunTech**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburb</td>
<td>-0.0758</td>
</tr>
<tr>
<td></td>
<td>(0.189)</td>
</tr>
<tr>
<td>Rural</td>
<td>-0.258</td>
</tr>
<tr>
<td></td>
<td>(0.226)</td>
</tr>
<tr>
<td>Constant</td>
<td>4.485***</td>
</tr>
<tr>
<td></td>
<td>(0.143)</td>
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Observations 99
R-squared 0.014

Note. Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

**Limitations**

We must note five important limitations. First, our findings are from a single cyber school in one mid-Atlantic state. We cannot say with confidence that these findings are generalizable to the population of cyber charter schools and those they serve. Second, we must acknowledge the usual limitations of survey research. Ideally, this work will be supplemented with additional fieldwork exploring what goes on inside cyber classrooms. Third, this study does not make use of achievement or attainment data. Fourth, we do not explore how this or other cyber charter schools affect rural traditional public schools, though as noted above, there are reasons to think that rural schools are particularly vulnerable to competition from cyber charter schools. Finally, these findings have limited effect sizes.

**Implications for Practice**

As discussed above, cyber schooling has the potential to revolutionize rural education by offering more flexibility, as well as a wider range and depth of courses, eliminating commute times, reducing bullying and better serving students with specific special education needs. Such positive impacts should be more pronounced in rural settings, which prior to the widespread advent of cyber schooling, often lacked distinct education options. Compared to non-rural schools, rural traditional public schools were less able to provide enriched curricula with substantial special education services. Rural students are also more likely to cope with long commutes. In this study, residing in a rural setting does not affect how parents and students at SunTech grade their cyber school. Rural students and parents do not grade SunTech differently than their non-rural peers. Additionally, the survey research presented here suggests that in the sample as a whole, parents and
students differ in their stated reasons for choosing SunTech.

Results indicate that rural parents and students select SunTech for distinct reasons, compared to their non-rural peers. Rural parents were particularly likely to choose SunTech for structural reasons, such as its broader range of classes, flexible schedule and to avoid long commutes. In contrast, rural students were more likely to cite curriculum (and possibly behavioral) issues as driving their decisions to choose SunTech. These differences may reflect a parental orientation toward the structural and managerial aspects of schooling, including commuting and scheduling. In contrast, students place greater emphasis on classroom concerns, which center on human relationships. This accords with the work of Janelle (1973), Valentine and Holloway (2001), and Turkle (2011), who have observed that parents’ vision for their children’s technology use tends to be materialistic and occupational, in contrast to their children’s more immediate usage addressing immediate issues. These findings accord with both quantitative and qualitative work on school choice in urban settings (Buckley & Schneider, 2007; Stewart & Wolf, 2014; Shuls, in press). This body of work indicates that students and parents choose schools for distinct reasons, reflecting individual preferences as well as local school context. Contextual factors typically include perceived academic quality, safety, community ownership and school culture.

Further, the impact and nature of the interactions between rural students, schools, and cyber schools depends on their specific context (Latour, 1993; Law, 1994). As Schaft et al. (2014) discuss, most of the cyber schools in the state in question had weaker standardized test performance in both mathematics and reading than the rural school from which students transferred. These researchers suggest that these rural students do not in reality have good cyber choices, which could be the reason that locale does not affect the grade given to the school in our study. We should note, however, that a disproportionate number of the students attending SunTech had been reading well below grade level in their prior traditional public schools, and in many cases reported choosing SunTech as a “last chance” to earn a high school degree.

Conclusions

The purpose of this study was to provide a limited test of the proposition that cyber schooling options may have distinct benefits for rural students and parents compared with their urban and suburban peers. This was an exploratory study of a single cyber school meant to guide further research. Findings suggest the need for large n research exploring how student choice differs from parental choice and how rural settings may influence each.

Education markets in rural settings, as in urban settings, may reflect complex tradeoffs between systemic and individual pressures and concerns. Losing students and hence funding to charter schools may disproportionately harm rural traditional public schools. However, market options may also provide a better fit for some students which rural schools have difficulty serving. Researchers and practitioners need to acknowledge these tensions, and study the potential for partnerships between cyber charter and rural traditional public schools, in order to better serve both individual student needs and community anchoring institutions.

References


education and general education cyber students perceptions. *Computers and Education* 76 (July): 70-79.


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