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# Assessing Access to Online Course Choice Among Brick-and-Mortar K-12 Students

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Many K-12 brick-and-mortar public schools now grant students the option of taking some of their courses online. Yet, a scant academic literature probes where online course choice exists and why it is utilized. We partnered with a market research firm to solicit 450 responses from a nationally representative group of American parents of public school-educated children to begin to understand the predictors of districts adopting course choice, disparities in access, and why families utilize course choice. Overall, there were no clear intrastate predictors of which districts provide parents the option to avail online course choice. Among several options provided, respondents emphasized the importance of scheduling flexibility or simply believing that their child would learn more in their decision to utilize online course choice.

Key words: online learning; K-12; course choice; elective course; school choice

## INTRODUCTION

Many philanthropists, education reformers, policymakers, and activists anticipated that the internet would revolutionize American public education (Cain, 2021; Moe & Chubb, 2009). In many regards this revolution has not come to pass. Cuban (2018) noted that while teachers are more comfortable using educational technology in their lessons than they were 30 years ago, the classroom norm remains in-person direct instruction. Indeed, fewer than one percent of American students are enrolled in fully online schools (Keaton, 2021). But while sweeping changes in American public education may not have materialized, the digital age has precipitated some noteworthy changes in what, where, and how students learn. A 2013 Pew research poll, for example, observed that 92% of teachers claim that the internet has had a "major impact" on their ability to access content, resources, and materials for teaching (Purcell et al., 2013). Nearly 7 in 10 reported the internet has also had a major impact on sharing ideas with other teachers and interacting with parents. And while in-person learning overwhelmingly remains the preferred method of content delivery, many districts have made some online courses available to students.

Gemin and colleagues (2015) defined online course choice as occurring when "students… take one or more online courses from a provider other than the student's district of enrollment and have their funding flow to the provider" (p. 62). In their annual report on the state of online learning, the Evergreen Educational Group (2017) referred to this occurring when "supplemental online courses are used to augment a student's educational program or campus class schedule" (p. 9). Taken together, online course choice involves students who are enrolled in traditional brick-and-mortar schools enrolling in one or more online courses both to supplement (i.e., take courses not available at the school) or supplant (i.e., take courses that are available at the school) their in-person education.

When COVID-19 forced schools to close for in-person learning in March 2020, teachers and students alike were forced into a mode of learning for which they were unprepared (Marshall et al., 2020). The pandemic and associated school adoption of emergency remote online learning could accelerate the adoption of blended learning[1] (i.e., in-person courses have online components) and online course choice (i.e., fully online courses for students in brick-and-mortar schools). Though brick-and-mortar schools struggled in their delivery of online learning (Kingsbury, 2021), the experience perhaps normalized it as an instructional delivery method and highlighted its potential utility.

1 Online course choice should not be confused with blended learning, which while difficult to define (Hrastinski, 2019; Moskal et al., 2013; Taybinik & Puteh, 2013), generally refers to courses that blend elements of in-person and online learning, not schools that offer both fully in-person and online courses.

On a macro level, access to online courses is largely determined by state-level policy. In Alabama, for example, all public school students are required to take at least one online or "technology-enhanced" course to graduate (Digital Learning Collaborative, n.d.). In New York, meanwhile, former Governor Andrew Cuomo's promise to "reimagine education" in the wake of COVID-19 spurred speculation about greater infusion of technology into classrooms (New York State, 2020), but no such statewide plan came to fruition. Access to online course offerings in New York K-12 schools remains somewhat elusive and is generally reserved for credit recovery (Clements et al., 2015). Providers and funding for online courses also vary depending on local context. Some districts delegate teachers to teach one or several courses online, whereas others pay fees to established online schools or other districts already established in offering online courses. Overall, "at least 35 states offer part-time online public schooling through course access, which allows students to use online coursework to supplement their education with specific classes." (National School Choice Week, 2022).

The evolution and adoption of instructional technology is also not as linear as the conventional wisdom or prognosticators of revolution might have predicted. In 2011, New York City Mayor Michael Bloomberg and School Chancellor Joel Klein kicked off an innovation initiative which aimed to foster, among other things, greater adoption of instructional technology and the personalized learning that it enables. By 2017, however, the program had its budget cut by more than 90% and was largely an afterthought to the progressive reforms heralded by Mayor de Blasio (Abamu, 2017). In 2022, amidst resurgent interest in online learning due to COVID-19, Chancellor David Banks announced that the city would create two online schools (Zimmerman, 2022). Given the renewed interest in online education, it is worth exploring who is currently accessing online course choice, where the demand for this choice exists, and why families are choosing it.

### Purpose of the Study

This study aimed to understand the prevalence of online course choice in K-12 schools. This work was guided by the following three research questions:

1. Who can access online course choice?
2. Among those who cannot access online course choice, who wants it?
3. Why do families utilize online course choice?

## LITERATURE REVIEW

Online course choice options have increased substantially over the past decade, even before the COVID-19 pandemic created necessity. The number of online course enrollments tripled between 2009 and 2015 (Lin et al., 2019). As of 2017-18, 21 percent of public schools- including 58.9 percent of high schools- offered courses entirely online (NCES, 2022). A Digital Learning Collaborative (2020) report noted that although there did not exist a national database that included all of the online courses that were completed in the United States, "a reasonable guess is that the number is several million." Overall, students from different race/ethnicity groups participate in online course choice at statistically similar rates, with Asian students as the lone exception, as they elect online courses less often than students from other race/ethnicity groups (Heinrich et al., 2019). Online course choice is primarily used for credit recovery purposes[2] (Borup & Kennedy, 2017; Darling-Aduana, 2021; Heinrich & Darling-Aduana, 2021), especially among low-income students and racial minorities (Darling-Aduana, 2021). Students in grades 11 and 12 are more than twice as likely to take online courses (Heinrich et al., 2019), and more likely to recover missing credits to graduate.

There are several reasons students elect to take online courses in addition to credit recovery. Barbour (2017) has touted the possibilities of online course choice, likening it to purchasing a fast-food meal. A consumer who visits a single restaurant is forced to purchase their beverage, sandwich, and fries from a single vendor, whereas a consumer who visits a food court can purchase their beverage and sandwich from one vendor and get a salad from another vendor if that better met the consumer's needs and the first vendor only offered fries as a side item. Similarly, online course choice offers the ability for students to take courses not offered at their school to supplement their academic program of study. Rural school districts use online course choice to make Advanced Placement (AP) or foreign language courses available when they otherwise lack the number of students or a dedicated teacher available to offer such a course (Digital Learning Collaborative, 2020; Marietta & Marietta, 2020). Online course choice eliminates temporal boundaries placed on where teachers must live, potentially expanding and improving the pool of teachers that students in each school district can learn from (Barbour, 2017; Moe & Chubb, 2009). Online course choice can also alleviate scheduling conflicts (Borup & Kennedy, 2017) and provide safe harbor for students who experience bullying in their brick-and-mortar classes (Borup & Kennedy, 2017; Heinrich et al., 2019). Course choice is also often touted for its ability to personalize learning, allowing students to work one-on-one with their teachers and sometimes at their own pace (Borup & Kennedy, 2017).

2 Credit recovery programs allow students who are missing credits needed for high school graduation to get back on track for graduation. Many schools "use online courses to allow students to retake failed courses in an effort to help get students back on track and keep them in school" (Rickles et al., 2018, p. 481).

Online course choice also features some notable limitations. While supplemental online courses can help school districts expand their course offerings, there may be limits to the range of courses that are offered in this manner (Barbour, 2017). Moreover, the quality of online courses can vary since the approval and evaluation processes for online course vendors is often minimal (Barbour et al., 2014). Online courses assume that students read at a certain grade level, so students enrolled in online courses that read at a lower grade level than the material is presented may struggle (Heinrich et al., 2019). A study conducted in Michigan found that students who enrolled in one or more online courses performed 14 points better in their brick-and-mortar coursework than they did in their online courses (Freidhoff, 2015). Online course choice is associated with improved high school graduation outcomes (Heinrich & Darling-Aduana, 2021), but educators sometimes lodge concerns about the academic integrity of online courses (Clements et al., 2015).

Compared to in-person learning, online learning requires strong self-regulation skills, the dearth of which is a common reason for students to struggle with online courses (Borup & Kennedy, 2017). Course sizes are also often larger in online courses than they are in brick-and-mortar courses. Lin and colleagues (2015) found that class size has a negative effect when more than 45 students are enrolled in a course. When these findings were disaggregated by subject, the negative effects were found for math and social science courses, but not for English, foreign languages, or science. Finally, online learning can leave students feeling isolated, which can deter academic motivation (Pallof & Pratt, 2007). Previous researchers have found that online students who engage with and collaborate with their peers experience greater levels of success (Novak & Thibodeau, 2016; Scott et al., 2015). Qualitative research from Borup and colleagues (2020) has also found that online school students who form friendships and collaborate with peers demonstrate improved academic motivation. In aggregate, online course choice has notable benefits and drawbacks, but undoubtedly holds the potential to benefit students.

## CURRENT STUDY

The current study seeks to understand who can access online course choice, who could not access online course choice but wanted it, and why families were opting for online course options.

### Research Questions

Online course choice may feature the greatest utility in settings with a stronger demand for credit recovery, and in rural settings that sometimes lack the scale to offer the diverse range of course options featured elsewhere

(Evergreen Education Group, 2016). Therefore, we probed whether residing in a zip code designated as rural locale is positively correlated with access to and demand for online course choice, and whether zip code-level median household income is associated with access and demand. Students from low socioeconomic backgrounds are at higher risk of dropping out of school compared to the general population (Chapman et al., 2011; Franklin & Trouard, 2016; Marshall, 2022; Rumberger, 2011) and online credit recovery has been identified as one potential mechanism for closing the dropout gap (Darling-Aduana et al., 2019).

### Data Sources and Collection

To answer our research questions, we devised a survey that asked adult respondents (18+) about a variety of school-related topics, including access to and utilization of online course choice. The survey was administered by Roscow Market Research, a market research firm headquartered in Bethesda, MD. The nationally representative survey required that respondents were the guardians of school-aged children (K-12), and it consisted of 1,200 participants.

The online course choice questions winnowed responses down to guardians with children in grades 6-12[3] and those enrolled in public schools, including magnet[4] and charter schools[5] (i.e., it excluded students in private schools or homeschooled children). The sample excluded the handful of respondents who had children enrolled in full-time online schools. These restrictions ultimately resulted in the participation of 450 parents responding to questions about online course choice. Parents with multiple school-aged children were advised to answer the survey on behalf of their oldest child in primary or secondary school. A majority of the sample was White (76.5%), had completed at least some college (80.6%), and had a household income of less than $100,000 (73.6%). The sample was evenly divided in terms of its political preference, which is relevant given how politicized online coursework became during the COVID-19 pandemic (e.g., Grossman et al., 2021). See Table 1 for descriptive statistics for the study's sample.

3 Supplemental online course offerings are typically reserved for older grades because primary school students typically have a prescribed course schedule that does not invite customization. Moreover, young students often require supervision or even direct assistance from an adult to participate in online courses.

4 Magnet schools are public schools of choice that enroll students from within and across different school districts

5 Charter schools are publicly funded but privately operated schools of choice

**Table 1**
**Sample Characteristics**

| | N | % |
|---|---|---|
| Race | | |
| Asian | 36 | 7.6 |
| Black | 50 | 11.7 |
| Hispanic | 48 | 10.0 |
| Native American | 4 | 1.0 |
| White | 343 | 76.5 |
| Education | | |
| Less than high school | 6 | 1.3 |
| High school diploma | 91 | 20.2 |
| Some college | 182 | 40.4 |
| College graduate | 171 | 40.3 |
| HH income | | |
| <$25,000 | 37 | 9.6 |
| $25,000-$49,999 | 119 | 25.9 |
| $50,000-99,999 | 175 | 39.0 |
| $100,000-$149,999 | 77 | 16.3 |
| $150,000-$199,000 | 30 | 6.4 |
| >$200,000 | 12 | 2.9 |
| Political Affiliation | | |
| Democrat | 150 | 35.8 |
| Independent | 142 | 31.6 |
| Republican | 148 | 32.4 |
| N | 450 | |

## RESULTS

### Research Question 1: Who can access online course choice?

Overall, 152 of 450 respondents (38.2%) responded affirmatively to the question: "Does your child have the option of taking courses fully online for course credit?" Just over half of respondents (51.4%) report that their child does not have access to online course offerings, while 16.9% were not sure.

To better understand disparities in access to online course choice, we construct a linear probability model that expresses access as a function of several zip code-level geographic and demographic characteristics,

including median household income, racial composition, and whether the zip code is deemed rural by the Federal Office of Rural Health Policy. Data for the first two categories was purchased from databyzipcode.com, a data package that coalesces data from the US Census American Community Survey. The rural indicator was coded manually using the search function in the Rural Health Information Hub (https://www.ruralhealthinfo.org/).

All models use a state fixed effect so that observed differences are not statistical artifacts of state-level policy. In models that only use one covariate plus the state fixed effect, we observe that individuals in a zip code with a higher proportion of white residents are less likely to report access to online course offerings, and that those with a higher proportion of Black residents are more likely to report access.

To better understand potential causal pathways, we combine all zip-code level covariates into a single model, formally:

$$Access_i = \beta 1 rural_i + \beta 2 hhincome_i + \beta 3 x_i + \beta 4 u_i + \varepsilon_i$$

X denotes a vector of race variables while u denotes a state fixed effect. Respondents who reported being unsure about whether their child had access to online course offerings were coded as missing for the dependent variable.

Overall, within the fully specified model, only median household income remains predictive of access to online course offerings, as seen in Table 2. Specifically, a one thousand dollar increase in median household income is associated with a .2 percentage point decrease in the likelihood of access to online course choice, all else equal.

**Table 2**
**Predictors of Access to Online Course Offerings**

| | I | II | III | IV | V | VI | VII |
|---|---|---|---|---|---|---|---|
| Rural | .005 | - | - | - | - | - | -.021 |
| | (.056) | | | | | | (.065) |
| Median hh income | - | -.003*** | - | - | - | - | -.002** |
| | | (.001) | | | | | (.001) |
| Black | - | - | .002 | - | - | - | -.008 |
| | | | (.001) | | | | (.008) |
| Asian | - | - | - | -.001 | - | - | -.009 |
| | | | | (.002) | | | (.009) |
| Hispanic | - | - | - | - | .003* | - | -.008 |
| | | | | | (.001) | | (.008) |
| White | - | - | - | - | - | -.002** | -.009 |
| | | | | | | (.001) | (.008) |
| State FE | Y | Y | Y | Y | Y | Y | Y |
| N | 446 | 442 | 442 | 442 | 442 | 442 | 441 |

**Research Question 2: Among those who cannot access online course choice, who wants it?**

Parents of students in grades 6-12 who reported not having access to online course content were asked, "Do you wish your child had the option of taking some courses online for course credit?" Among the 278 respondents, 145 responded "yes" to the question (52.2%) while 133 (47.8%) responded "no."

To better understand the unfulfilled demand of access to online courses, we employ the same linear probability models used to probe who can access course choice, the difference being that the dependent variable becomes their response to whether parents desire access to online courses.

In considering the impact of zip-code level geographic data, the models that only feature one variable in addition to a state fixed effect reveals that a higher share of Hispanic residents is associated with a statistically significant increase in demand for online options (Table 3) whereas the share of White residents was negatively associated with demand. In the fully specified model, however, none of the predictors are statistically significant, as seen in Table 3.

**Table 3**
**Regional Predictors of Desiring Online Course Offerings**

| | I | II | III | IV | V | VI | VII |
|---|---|---|---|---|---|---|---|
| Rural | .018 | - | - | - | - | - | .053 |
| | (.083) | | | | | | (.095) |
| Median hh income | - | -.001 | - | - | - | - | -.000 |
| | | (.001) | | | | | (.002) |
| Black | - | - | .002 | - | - | - | -.025 |
| | | | (.002) | | | | (.022) |
| Asian | - | - | - | .001 | - | - | -.023 |
| | | | | (.004) | | | (.023) |
| Hispanic | - | - | - | - | .006*** | - | -.019 |
| | | | | | (.002) | | (.022) |
| White | - | - | - | - | - | -.003*** | -.025 |
| | | | | | | (.001) | (.021) |
| State FE | Y | Y | Y | Y | Y | Y | Y |
| | 275 | 273 | 273 | 273 | 273 | 273 | 272 |

In addition to considering regional characteristics and how they predict desire to access online course choice, we also consider the individual characteristics of the respondents. Specifically, we express the indicator variable for desiring access as a function of ethnicity and self-reported political affiliation of the respondent, whether the child for whom their answering has an individualized education plan (IEP) and whether they qualify for free or reduced-price lunch (FRL). We also consider whether the student is enrolled in a magnet, charter, or traditional public school. Overall, the results highlight differences by ethnicity that are practically and statistically significant if the model only controls for one state and one ethnicity (see Table 4). Specifically, African American respondents are 25.8 percentage points more likely to express a desire for online course choice compared to all others whereas White respondents are 21.1 percentage points less likely to express interest. In raw terms, 18 of 26 (69.23%) African American respondents responded that they wish they had access to online course offerings compared to 104 of 213 (48.83%) White respondents.

**Table 4**
**Personal Predictors of Desiring Access to Online Course Choice**

| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IEP | -.072 | - | - | - | - | - | - | - | - | - | - | -.047 |
| | (.079) | | | | | | | | | | | (.084) |
| FRL | - | .084 | - | - | - | - | - | - | - | - | - | .068 |
| | | (,069) | | | | | | | | | | (.072) |
| White | - | - | -211*** | - | - | - | - | - | - | - | - | .071 |
| | | | (.076) | | | | | | | | | (.174) |
| Black | - | - | - | .258** | - | - | - | - | - | - | - | .218 |
| | | | | (.110) | | | | | | | | (.200) |
| Asian | - | - | - | - | .155 | - | - | - | - | - | - | .249 |
| | | | | | (.123) | | | | | | | (.191) |
| Hispanic | - | - | - | - | - | .159 | - | - | - | - | - | .145 |
| | | | | | | (.107) | | | | | | (.161) |
| Independent | - | - | - | - | - | - | .022 | - | - | - | - | -.139 |
| | | | | | | | (.071) | | | | | (.219) |
| Dem | - | - | - | - | - | - | - | .036 | - | - | - | -.145 |
| | | | | | | | | (.071) | | | | (.220) |
| GOP | - | - | - | - | - | - | - | - | -.100 | - | - | -.160 |
| | | | | | | | | | (.071) | | | (.221) |
| Charter | - | - | - | - | - | - | - | - | - | -.344* | - | -.367* |
| | | | | | | | | | | (.177) | | (.207) |
| Magnet | - | - | - | - | - | - | - | - | | | .473 | .202 |
| | | | | | | | | | | | (.307) | (.391) |
| State FE | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| N | 278 | 260 | 278 | 278 | 278 | 278 | 278 | 278 | 278 | 278 | 278 | 260 |

### Research Question 3: Why do families utilize online course choice?

A final set of questions probes why families opt to utilize online course choice, which 52 of the 172 (30.23%) respondents that have access report doing. Likert-scale questions ask them to consider the importance of several potential explanations, as seen in Table 5. Given the small sample size, the results should be treated with some caution. To the extent that the results

are representative of the general population of parents, they indicate that flexible scheduling and a more thorough learning experience stand out as the most important factors informing choice. Indeed, more than half of respondents cited those two reasons as either important or very important. Preference for the teacher in the online course to the one the student would have otherwise been assigned is ascribed the least importance, and yet just over one quarter of respondents cite it as an important or very important factor. Meanwhile, more than one third of respondents characterize social emotional factors or the course being unavailable as either important or very important. These results suggest that the decision to utilize online course choice is multifaceted and not driven by one solitary factor.

**Table 5**
**Reasons for Utilizing Online Course Choice**

| | Very important | Important | Somewhat important | Neutral | Somewhat unimportant | Unimportant | Very unimportant | Don't know/Not Applicable |
|---|---|---|---|---|---|---|---|---|
| "I wanted my child to have more scheduling flexibility" | 26 (32.1%) | 23 (28.4%) | 15 (18.5%) | 7 (8.6%) | 3 (3.7%) | 0 (0%) | 5 (6.2%) | 2 (2.5%) |
| "I felt my child would learn more taking the course online" | 31 (38.3%) | 24 (29.6%) | 9 (11.1%) | 4 (4.9%) | 5 (6.2%) | 0 (0%) | 6 (7.4%) | 2 (2.5%) |
| "I preferred the teacher in the online course" | 21 (25.9%) | 15 (18.5%) | 13 (16.1%) | 9 (11.1%) | 5 (6.2%) | 3 (3.7%) | 9 (11.1%) | 6 (7.4%) |
| "The course was not available through my child's school" | 22 (27.2%) | 15 (18.5%) | 8 (9.9%) | 12 (14.8%) | 5 (6.2%) | 4 (4.9%) | 6 (7.4%) | 9 (11.1%) |
| Social-emotional concerns | 23 (28.4%) | 20 (24.7%) | 10 (12.4%) | 11 (13.6%) | 5 (6.2%) | 3 (3.7%) | 6 (7.4%) | 3 (3.7%) |

## DISCUSSION

Online course choice is an oft utilized but rarely studied development in the American education reform landscape. Here, we take a first pass at understanding where it is offered, to whom, and why it is utilized. We also examine who desires access and the rationale participants share for choosing online courses. We conclude by posing important questions that remain unanswered.

### Who Chooses Online Courses

As expected, zip-code level household income is negatively and significantly correlated with access to online course choice, which we hypothesize is likely an indicator that districts are more likely to offer it when there is greater demand for credit recovery. Still, our data does not allow us to rule out other possible explanations for the observed correlation, and indeed other possibilities like school safety (i.e., greater uptake where school safety is worse) should not be ruled out. On the other hand, our hypothesis that access is more prevalent in rural communities is not supported by our estimates. Perhaps our observation reflects stronger deference toward the traditional education practices in rural settings or, more broadly, comparatively tepid attitudes toward the role of the internet in everyday life (Vogels, 2021). It may also be the case that lack of access to sufficient broadband internet dampens enthusiasm for online education. According to the Federal Communications Commission (2020), 22.3 percent of Americans in rural areas lack broadband coverage that reaches 25/3 Mbps, compared to only 1.5% of Americans in urban settings. Our estimates indicate that families in localities with a relatively greater proportion of Hispanic residents are more likely to have access to online course choice but also more likely to desire access if they lack it. Conversely, families in localities with a relatively greater proportion of white residents are less likely to have access and also less likely to desire access if they lack it. However, the zip-code level ethnicity coefficients are modest and sensitive to model specification, so they do little to inform our research question. In terms of respondent characteristics, African Americans were appreciably more likely than white respondents to express interest in online course choice (69.2% versus 48.9%). Sample size limitations preclude definitive conclusions, but the stark difference is certainly suggestive and highlights a need for further research. Notably, neither eligibility for free or reduced-price lunch or special education status predict desire for access to online course choice. Special education students are disproportionately represented in full time virtual schools, often due to issues with bullying in brick-and-mortar schools (Beck, Egalite & Maranto, 2014). It qualifies as something of a surprise that parents of special education students do not report greater demand for online courses, which could serve as a refuge from specific problematic classrooms.

### Who Desires Access to Online Courses

Overall, more than half of respondents who lack access to online course choice express a desire for access. Our findings suggest that, at least in the interest of parental satisfaction, districts that do not currently offer access would be wise to adopt it. Enrollment in traditional public schools fell substantially during the first two years of the COVID-19 pandemic in part because parents felt that traditional public schools were less nimble and adept in their delivery of online learning (Marshall & Neugebauer, 2022). Making online courses available then could provide a hedge against the frustrations associated with the bureaucratic and comparatively unmalleable nature of the traditional public school system. Moreover, online course choice allows traditional public schools to embrace the merit of parental choice while steering clear over more politically contentious battles over school choice (Hess, 2022). Among all the changes that were made in K-12 schooling during the crisis, the increased use of educational technology is among the most likely to persist beyond the crisis (Marshall et al., 2022a; 2022b).

Sample size restrictions preclude determinative analysis, but our findings hint at the possibility that demand for online courses is particularly strong among African American families. Though emergency remote online learning was especially harmful for students of color (Goldhaber et al., 2022), anecdotal accounts indicate that African American parents have comparatively warm feelings toward educational technology. These attitudes likely reflect frustrations with the status quo education system and stronger appetite for reform, as well as a desire among African American parents to more closely observe and participate in their child's education (Hickman, 2021; Miller, 2021). To be sure, future research should seek to better understand the potentially unique demand for online course choice in African American communities.

### Rationale for Choosing Online Courses

Finally, it's notable that parents who utilize online course choice cite a variety of reasons for their uptake. The multifaceted nature of their decision highlights the potential peril in conceiving of online course choice as a solution to one particular problem (e.g., lack of access to advanced placement courses) and reveals that it should be thought of and implemented as a tool that can address multiple issues for diverse stakeholders. It is important to note that our sample size represents a limitation to this work. This is especially true for the final set of analyses. As such, future work should continue to explore trends in online course choice demand and enrollment.

While our findings offer some clues as to where online course choice is available, important questions remain. For one, does access to online course

offerings in theory ensure access in practice? In Missouri, for example, all public school students can access the Missouri Course Access and Virtual School Program, but districts must authorize enrollment and have been accused of restricting access out of financial self-interest (Pendergrass, 2020). Second, for those students who have access, what is the quality of courses to which they have access? Just like in-person learning, teacher quality, instructional materials, and pedagogy vary substantially (Barbour et al., 2014), and access to online offerings is only as good as the quality of the offerings themselves. Third, do the same factors that sometimes pose a challenge to success in a fully online learning environment also pose challenges to students in brick-and-mortar schools that take courses online? For example, students who succeed in online schools tend to be highly self-regulated (Archambault & Kennedy, 2017; Carter et al., 2020). Does the fact that in-person students operate in a more structured learning environment alleviate the need for their self-regulation, or does their unfamiliarity with online learning exacerbate the issue? Answers to these questions would bring greater clarity to the role that online learning can and should play in the American public education system.

## DECLARATIONS

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