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Virtual Schools Reconsidered: Methodological Limits and Broader Outcomes

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Researchers and journalists evaluating virtual schools have long treated standardized test-score gaps with traditional public schools as near-definitive evidence of failure. That conventional wisdom is flawed. The students who enroll in virtual programs differ systematically (and often in unobserved ways) from their brick-and-mortar peers. A broader lens is required that accounts for the populations served and the full range of outcomes that matter to families. This mini-report examines those limitations and argues for a more careful, context-sensitive assessment..

Executive Summary

Virtual schools are often assessed primarily through standardized test-score comparisons with traditional public schools, but such evaluations are incomplete and potentially misleading. Existing research relies heavily on observational methods that are vulnerable to selection bias, since students who enroll in

virtual schools differ in important, often unobserved ways from those in traditional settings.

In addition, virtual schools serve a distinct population of students whose families frequently choose them for reasons beyond academics. As a result, a narrow focus on test score outcomes might not be sensible.

Finally, evidence on governance and management models is mixed, with little consistent support for the view that nonprofit status or operator type alone determines quality.

Overall, virtual schools should be evaluated using a broader set of outcomes that reflects the diversity of students they serve and the reasons families choose them.

1. Existing Research Has Important Methodological Limitations

Much of the criticism directed at virtual schools relies on studies that attempt to compare virtual-school students with students in traditional public schools. While these studies are frequently cited, their conclusions should be interpreted with caution.

Important concerns relate to measuring both demographics and achievement within virtual schools. Specifically, virtual schools feature a significant undercounting of students eligible for free or reduced price lunch, a phenomenon explained by the fact that the schools do not provide lunch and parents therefore have no incentive to complete the forms that demonstrate eligibility. [2] The consequence is a distorted picture of the students served by virtual schools and a bias against them in evaluations since socioeconomic characteristics are predictive of student achievement and growth.[3]

When it comes to measuring achievement, concern arises from the observation that virtual school students perform significantly worse when they test in unfamiliar facilities rather

than at home, their familiar learning and testing environment.[4] The observed penalty is at least partially mediated by the anxiety that virtual school students feel when testing in unfamiliar locations.[5] While more than a dozen states have adopted remote proctoring for virtual school students since the COVID pandemic, most still require students to test in unfamiliar settings.

Researchers have also noted important limitations in commonly used charter-school evaluation methods. As one review of charter-school research explains, matching techniques used in the oft-cited CREDO studies “do not require a pre-treatment match,” raising concerns about whether comparison groups are truly equivalent before enrollment.[6] This challenge is particularly significant in virtual education, where students often select into schools for reasons that are difficult to observe and measure.

Even studies that control for prior achievement cannot fully address these concerns. As researchers at the University of Arkansas have argued, virtual-school students differ from their peers in ways that may not be captured by available data (e.g. mental or emotional difficulties), creating persistent selection-bias problems.[7]

The problem is compounded by the tendency to treat test scores as the definitive measure of school quality. A review published by the American Enterprise Institute concluded:

“Test scores should be put in context and should not automatically occupy a privileged place over parental demand and satisfaction as short-term measures of school choice success or failure.”[8]

For policymakers, the implication is straightforward: test-score comparisons alone provide an incomplete basis for judging the effectiveness of virtual schools.

2. Virtual Schools Serve Students Whose Needs Often Differ from Traditional Populations

Virtual charter schools serve a population that differs substantially from the students enrolled in most traditional schools. Research finds that virtual schools enroll many students whose educational experiences, family circumstances, or personal needs differ from those of the average public-school student, making direct comparisons challenging.[9][10][11][12]. As an oped in *City Journal* argues, “Thanks to the type of students they disproportionately serve, virtual schools...are likely to feature low levels of observed achievement and high rates of mobility. They probably won’t offer many media-friendly stories of remarkable academic triumph...Yet for a select number of families, virtual schools represent a vital option.” [13].

As a result, evaluating virtual schools solely through standardized test outcomes risks missing much of the value families seek. Parents are uniquely positioned to assess whether a school is meeting their child's needs because they observe the effects of schooling every day. For many families, success includes not only academic growth but also improved attendance, reduced anxiety, greater engagement, and a learning environment in which the student can thrive.[14]

This helps explain why parental satisfaction with virtual schools often remains high even when critics point to disappointing test-score results. Families are frequently evaluating a broader set of outcomes than those captured by state assessments.

3. Evidence on Operations and Performance Is More Mixed Than Commonly Assumed

The conventional narrative surrounding virtual schools often assumes that organizational characteristics—particularly the involvement of for-profit operators—are strong predictors of educational quality. The evidence is considerably more complicated.

Studies examining charter-school governance have found little consistent evidence that nonprofit status alone produces superior academic outcomes.[15][16] Organizational form, by itself, appears to be a weak proxy for school effectiveness.

Similarly, recent research has found that Education Management Organization (EMO)-operated charter schools demonstrated notable resilience during the disruptions associated with the COVID-19 pandemic.[17][18] At a time when many schools struggled to adapt, these organizations often benefited from established online-learning infrastructure and operational flexibility.

Research has also found that schools utilizing for-profit management providers may allocate a larger share of expenditures to instruction and provide more instructional time than comparable schools.[19] Whatever one thinks about for-profit participation in education, these findings suggest that assumptions about inefficiency or inferior service are not supported by the available evidence.

Taken together, the research presents a more nuanced picture than is often reflected in public debate.

4. Virtual Schools as a Safety Valve for At-Risk Students

Virtual schools frequently function as a critical safety valve or last resort for students who have struggled in traditional brick-and-mortar settings. Research indicates that families often turn to virtual education after experiencing bullying, social or emotional challenges, academic difficulties, or other circumstances that make conventional schooling untenable. For instance, a study of parent perceptions in a large virtual school network found that many at-risk students enroll as a “last resort” prior to dropping out, with parents highlighting the value of flexible, personalized supports that traditional schools often failed to provide. [20] Another study specifically found that sexual minority students are among those who enroll in virtual schools due to push factors (i.e. bullying or lack of acceptance) in brick and mortar schools. [21]

Data suggest that the number of students who fit an “at-risk” profile is substantial. A 2010 survey dispensed to virtual school leaders observed that 25% of respondents considered at least 75% of their student population to be at-risk, and an additional 21% considered at least half of their student population to be at-risk. [22]

Conclusion

The conventional critique of virtual schools rests heavily on achievement studies that face significant methodological challenges when applied to a highly self-selected student population. It also places disproportionate weight on standardized test outcomes while giving comparatively little attention to parental preferences, student well-being, school fit, and other outcomes that matter to families.

None of this proves that every virtual school is effective. It does suggest, however, that policymakers should be cautious about drawing sweeping conclusions from test-score comparisons alone. A more balanced evaluation would consider who virtual schools serve, why families choose them, and whether they are successfully meeting the needs that traditional schools often struggle to address.

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