

After 27 years of school choice in Milwaukee, the debate over private school vouchers has shifted away from their mere existence towards whether – and how – accountability provisions should impact the ability of private schools to participate in the program. The education community is divided over this question. Some argue that test-based accountability should sanction poor-performing schools of all types, others argue that parental school choice, fiscal, and market forces are the strongest forms of accountability and are the measures that should be utilized.

Yet despite the amount of ink spilled on the topic, there has been little quantifiable research conducted. This study addresses that research gap. It comprehensively reviews the extent and impact of accountability regulations affecting the Milwaukee Parental Choice Program (MPCP) and also analyzes the role of parental accountability. This pioneering report describes the scope of the accountability regime and presents a statistical analysis that estimates its impact. We find, through the use of a rigorous econometric model, that the accountability system culls poor-performing and unsafe schools from the program and allows high quality schools to grow. The system anticipates factors associated with poor-performing schools and their eventual failure. Specifically, we find:

EXISTING ACCOUNTABILITY LAWS

PRIVATE MPCP SCHOOLS ARE SUBJECT TO ACCOUNTABILITY LAWS

Schools participating in the MPCP are required to be in compliance with many regulations, especially regarding fiscal, auditing, and accreditation matters. DPI has the ability to sanction schools that violate these accountability measures. The following is a list of what DPI can do and how they have exercised that power, according to records obtained from DPI:

WITHHOLD PAYMENT FROM A SCHOOL

Since 2005-06, payments have been withheld from schools 375 times for violating accountability measures. While 76% of the schools eventually took corrective actions and received funding, 24% of schools did not.

REMOVE A SCHOOL FROM THE MPCP

Since 2003-04, 57 schools have been removed from the MPCP and denied further voucher payments. Many schools were removed for failing to achieve or maintain accreditation (14 instances), failing to complete or submit an audit (10 instances), and not filing a continuing eligibility report (9 instances). On average, schools removed from the program participated in the program for 5.3 years.

DENY A SCHOOL ENTRY INTO THE MPCP

Since 2007-08, 33 private schools have been denied entry into the MPCP due primarily to fiscal, budgetary, and accreditation issues. Of these schools denied, 21 never opened. In other words, these accountability measures likely prevented some "fly-by-night" schools.

SCHOOLS THAT ARE "START-UP" SCHOOLS ARE MORE LIKELY TO BE FOUND INELIGIBLE FOR THE MPCP AND BE REMOVED FROM THE MPCP

Ninety-two percent of schools removed from the MPCP were new, start-up schools. Eighty-eight percent of schools found ineligible to participate in the MPCP were start-up schools.

SCHOOLS WITH LOW PERFORMANCE ON STATE EXAMS ARE MORE LIKELY THAN HIGH-PERFORMING SCHOOLS TO LEAVE THE MPCP, SUGGESTING THAT THE CURRENT LAWS ARE EFFECTIVE

School closures in the MPCP are not the result of random chance, but rather of predictable factors that are expected in an effective accountability system. The following are the results of an econometric model ("survival model") that measures the importance of certain factors – such as test scores, safety, religious affiliation, and enrollment – in determining the risk of failure (i.e. rate of private schools exiting the MPCP) for a private school:

SCHOOLS WITH LOW ACADEMIC PERFORMANCE ARE MORE LIKELY TO LEAVE THE MPCP

A one-point decline in test scores is related to an 85% increase in the rate of schools exiting the MPCP.

SCHOOLS WITH LOW ACADEMIC PERFORMANCE ARE MORE LIKELY TO BE REMOVED BY DPI

Even though the law allows for removal primarily related to financial mismanagement, there is a correlation between a school's removal from the program – due to financial issues – and the school's academic performance. A one point decline in test scores is related to an 98% increase in the rate of legal removal.

PARENTS CHOOSE SCHOOLS BASED PRIMARILY ON THEIR SAFETY AND RELIGIOUS AFFILIATION

When we study enrollment trends at a school, we find that a unit increase in 911 calls leads to a decrease in enrollment of more than 65 students. In addition, schools affiliated with the Catholic or Lutheran churches experienced significantly higher enrollment growth than schools not affiliated with these churches.

PARENTS MAKE DECISIONS THAT MOVE THEIR CHILDREN TOWARDS HIGHER PERFORMING ACADEMIC SCHOOLS

Both safety and religious affiliation are strongly correlated with academic performance. Schools in the MPCP that perform well academically tend to also be religious and have better safety records, meaning that decisions based on religion and safety lead parents to selecting better academic schools as well.

This is coupled with parental accountability through which parents and children vote with their feet. Although these accountability measures are not test-based, our findings show that they are associated with a school's academic performance.

The Milwaukee Parental Choice Program (MPCP) is the oldest voucher program in the United States. Since its creation in 1990 with seven schools and less than 500 participating students, the program has grown to include more than 100 schools and 27,000 students today – nearly 25% of all students residing in Milwaukee.¹

Despite the continual growth of the program over time, a significant number of schools have closed their doors or left the MPCP. These stories often serve as fodder for the news media which periodically add up the total taxpayer cost of vouchers given to these failed schools. Moreover, these closures have provided ammunition for voucher opponents who make claims that the program is "unaccountable." For example, in their voucher FAQ, the Wisconsin Association of School Boards claims:²

"Public, tax payer dollars could clearly flow to unaccountable private enterprises with little educational accountability."

However, the fact that schools close does not mean there is no accountability in the choice program. Rather, the closure rates may be emblematic of a functional accountability system, where high quality schools grow and poor-performing schools close. The theory that a private school choice program is able to function better through the use of self-selected schooling rather than through residentially assigned government schools has been explored by numerous studies.³ But, to our knowledge, no studies have been able to fully account for all of the factors necessary to test for the existence of such a system.

In this paper, we highlight the many laws and regulations that private schools are required to adhere to in order to remain in the program. Next, we highlight the regulations on the front end that limit the ability of many schools to gain entry into the MPCP. In an econometric survival analysis, we find that the current accountability system works to cull poor-performing schools from the sector. Good schools flourish and poor-performing schools are put on a path towards eventual failure.

¹ Figure does not include students in private schools not in the MPCP. Pugh, Christina. 2017 "Wisconsin Budget Paper 25: Private School Choice Programs." Wisconsin Legislative Fiscal Bureau.

² http://wasb.org/websites/advoc_gov_relations/File/vouchers/vouchers_faq.pdf

³ Friedman, Milton. 1955. "The Role of Government in Education." In *Economics and the Public Interest*. Eds. Robert Solo. & Chubb, John and Terry Moe. 1990. "America's Public Schools: Choice is a Panacea." *The Brookings Review* 8:4-12.

"There has been some prior research that has examined the extent to which parents are responsive to information about the quality of the educational options available to their children. Research by Ford (2011) immediately following of the passage of the report card law provides preliminary evidence that such information is useful to parents.⁴ Studying the exits of schools from the MPCP, he finds that schools that experience declining enrollment are more likely to leave the program which suggests that parental accountability may work in concert with legal accountability.

Additionally, the extensive literature on the link between school administrator quality and academic outcomes is illuminating. There are a number of studies (Ouchi 2009; Branch, Hanushek and Rivkin 2013) that correlate effective principals and school leadership with better academic outcomes.⁵ School administrative quality has also been linked to the effectiveness of the implementation of educational best practices within schools (Prasertcharoensuk and Promrakone 2014).⁶ In other words, when a school is ineffective at administration, it is also likely to be ineffective at the classroom level.

The question of the nature, and necessary extent of legal accountability has been subject to greater study. Catt (2014) produced a ranking of school choice programs around the country based on the severity of their accountability measures.⁷ The MPCP was ranked as the most regulated school choice program in the country, though the Louisiana program may have subsequently surpassed it.⁸ Studies of the effect of accountability in voucher programs find that over regulation leads to lower levels of innovation, and a reduction in the extent of specialization offered in those schools. Sude, DeAngelis and Wolf (2017) found that heavy regulatory environments restricted the number of high quality voucher schools that chose to enter the program, particularly in Louisiana.⁹

This study builds on the existing research on regulation by examining the effects of the existing regulatory environment in Milwaukee on school entry and exits. We cannot make claims regarding the outcomes that would have been observed in a less regulated environment, though existing research suggests the outcomes might have been even better.

⁴ Ford, Michael. 2011. "School Exits in the Milwaukee Parental Choice Program: Evidence of a Marketplace?" *Journal of School Choice* 5: 182-204.

⁵ Branch, Gregory, Eric Hanushek and Steve Rivkin. 2013. "School Leaders Matter: Measuring the Impact of Effective Principals." *EducationNext* 13: 62-69. Ouchi, William. 2009. *The Secret of TSL: The Revolutionary Discovery That Raises Performance.* New York: Simon & Schuster.

⁶ Prasertcharoensuk, Thanomwan and Dhatthakan Promrakone. 2014. "Relationship between Administrators' Competencies and Internal Quality Assurance." *Procedia Social and Behavioral Sciences* 116: 808-814.

⁷ Catt, Drew. 2014. "Public Rules on Private Schools: Measuring the Regulatory Impact of State Statutes and School Choice Programs." *EdChoice*.

⁸ Peshek, Adam. 2016. "Over-Regulation in Louisiana's School Voucher Program." *ExcelinEd Blog*.

⁹ Sude, Yujie, Corey DeAngelis, and Patrick Wolf (2017). "The Unintended Impact of 'Quality Control' on School Quality: An Analysis of School Participation Decisions in Three Voucher Programs in the United States. Forthcoming, *Journal of School Choice*."

WITHHOLDING PAYMENTS FROM CHOICE

Schools participating in the MPCP are required to meet certain financial and academic standards in order to enter the program and maintain participation. As noted above, some research deems the MPCP to be the most regulated voucher program in the country. Over the years, additional regulations have been added to limit participation to only include schools that have proven themselves to be financially viable. These regulations have gotten smarter over time. We find that the quality of regulations is more important and effective than the quantity.

In 2003, Act 155 created many barriers to entry for schools. The act tightened the financial audit requirements, required schools to have occupancy permits and mandated financial training. Additionally, this law gave the state superintendent the power to withhold payments from a school if they are not compliant with program regulations.¹⁰

We submitted an open records request to the Department of Public Instruction (DPI) for "a list of all MPCP participating schools that have been issued a legal notice that their payments were being withheld." The records show that DPI has withheld payments from private schools in the MPCP 375 times between 2005-06 and 2015-16.¹¹ Of these instances, 284 (75.7%) were vacated (i.e. settled) and 91 were not (24.3%). Overwhelmingly, the most commonly cited reason for withholding payment is issues stemming from the Financial Information Report (FIR).¹² There are 130 instances of DPI sending notice to schools that payments would be withheld due to violations relating to the FIR. Other frequently occurring infractions include failure to refund or late refund to the state for any overpayments and failure to obtain or submit proof of insurance on time.

BARRING SCHOOLS FROM THE MPCP

Act 155 also gave DPI the authority to bar a school from continued participation in the program during the current year.¹³ Schools can be terminated from the program for the following reasons:

- ✓ Misrepresentation or failure to provide certificate of occupancy, evidence of financial viability, or proof of administrator completing fiscal management training
- ✓ Failure to complete intent to participate form and pay nonrefundable fee
- ✓ Failure to submit GAAP financial audit (previously the FIR)
- ✓ Failure to provide evidence of sound fiscal and internal control practices
- ✓ Failure to refund the state any overpayments
- ✓ Failure to meet selected standard for the continuing eligibility report
- ✓ Failure to provide school information and policy handbook to parents of applicants
- ✓ Retention of a disqualified person

¹⁰ 118.60(10)(d) and 119.23(10)(d).

¹¹ The 2005-06 school year is the earliest data DPI has available. Many schools have had payments withheld multiple times.

¹² The FIR was a special purpose audit that schools were required to annually submit to DPI. Completed by an independent CPA, the FIR audited a school's finances and calculated the per pupil cost to educate. In the 2015 state budget the FIR was replaced with the industry standard GAAP audit.

¹³ 118.60(10) and 119.23(10).

- ✓ Failure to administer state testing, adopt academic standards, have a written visitor policy, ensure teacher's aides have high school diploma and annually have two advertised board meetings
- ✓ Failure to allow religious opt-outs
- ✓ Failure to maintain progress records for five years
- ✓ Failure to issue high school diplomas for eligible students
- ✓ Situation of imminent threat to the health or safety of pupils

DPI can bar a school from participating in the program in the following year if any of the following occur:

- ✓ Failure to annually provide proof of preaccreditation or accreditation
- ✓ Denial of accreditation
- ✓ Failure to gain accreditation within a three-year preaccreditation period

Accreditation must be acquired by a school from an approved list of academic accrediting agencies recognized by the state. A list of these agencies is provided in Wisconsin law.¹⁴ Though accreditation requirements may differ between accrediting agencies, accreditation generally requires schools to have degreed or licensed teachers, appropriate curriculum, board governance, maintenance of student records and a school environment that is conducive to learning.

As of October 2016, a total of 268 schools have – at some point – participated in the MPCP. **Of those, 57 schools have been formally removed from the program since 2003-04.**¹⁵ Since the start of the program, other schools have exited on their own accord.¹⁶ The Appendix outlines every MPCP school that has been removed from the program and details the reason for their removal. While each situation varies, there are some overarching themes. Many schools were removed for failing to achieve or maintain accreditation (14 instances), failing to complete or submit an audit (10 instances), and not filing a continuing eligibility report (9 instances). All of the schools that have been barred from participating in the MPCP are no longer operating in any capacity.

By law, new private schools are schools that have been in continuous operation in the state for less than 12 consecutive months (i.e. brand new schools) or are schools that serve fewer than 40 students in two or fewer grades.¹⁷ If a school was not registered as a private school with DPI the year before they first joined the choice program, we assumed the school to be a start-up school.¹⁸

¹⁴ 118.60(1)(ab) and 119.23(1)(ab) provide the list of accreditors.

¹⁵ DPI did not keep records of removed schools prior to the 2003-04 school year.

¹⁶ There are a variety of reasons why schools that once participated in the MPCP no longer do so. Some consolidate with other schools or become part of a larger school system. Some are converted to charters. Some choose to no longer participate due to personal preference and some decide to shut down operations altogether, often due to dwindling enrollment.

¹⁷ 118.60(1)(bn)1. and 119.23(1)(ai)1.

¹⁸ Private school registration data by year can be found here: https://dpi.wi.gov/wisedash/download-files/type?field_wisedash_upload_type_value=Enrollment-Private-School&field_wisedash_data_view_value=All

Of the 51 schools removed with available data, 47 schools (92%) were schools that first opened the year they joined the MPCP.¹⁹ Of the four closed schools that were not brand new operations, two had enrollments of less than 40 students between two grades and by today's standards would be considered start-up schools.

The number of years a school has participated in the program correlates to the rate of program exit. The schools that have been removed from the MPCP generally only operate in the MPCP for a few years before being barred. On average, schools removed from the program participated in the program for 5.3 years.²⁰

DENYING ENTRY TO THE MPCP

Not only can DPI remove schools, it can also deny them program entrance. As noted above, 2005's Act 125 further regulated which schools were able to participate in the MPCP by requiring schools to obtain accreditation within three years of joining the program. This provision was enhanced in 2009's Act 28, which required schools to receive preaccreditation prior to entering the program. The preaccreditation process, at a minimum, evaluates whether a school meets the private school definition in state statute and requires that a school's educational plan be reviewed and approved by a preaccreditation entity. Act 28 also mandated that schools participating in the program offer a set number of hours of instruction and adopt pupil academic standards. Staff credentials were also tightened.

We submitted an open records request to DPI asking for "a list of all schools that submitted an Intent to Participate form for the Milwaukee Parental Choice Program (MPCP) but were issued a legal order that they did not meet eligibility requirements for the program" and "records as to what eligibility requirement(s) they failed to meet."

From that request, we received a list of 33 private schools²¹ that have been denied entry to the MPCP due to these accountability measures from 2007-2008 to 2016-17.²² Of these instances, 21 schools failed to gain admittance to the MPCP and never opened. Of the 12 schools that did join the MPCP, eight were later removed from the program, one voluntarily left the program (but was flagged by DPI) and three are still participating in the program. Table 1 below outlines the reasons why schools have been found ineligible and the frequency.²³ Most schools were deemed ineligible for multiple reasons, not one isolated infraction.

¹⁹ DPI does not have data before the 1992-93 school year. We were unable to determine whether or not three closed schools that opened before the 1992-93 school year were start-ups. Additionally, the prior year status of three other schools could not be verified. These six schools are not included in the calculation.

²⁰ Lifeskills Academy, Emmaus Lutheran, and Daughters of the Father are not included in the calculations, graphs, or tables as these schools voluntarily closed. Please see the Appendix for additional information.

²¹ Three schools were found ineligible for multiple years and those schools are counted for each year they were denied entrance.

²² DPI does not have data before the 2007-08 school year.

²³ Over the years, DPI has changed the format and level of detail of its legal notices. It may be the case that some schools on the list failed to meet other credentials that are not formally outlined on DPI's legal notice.

The table highlights which barriers to entry are most often used. For example, data show that preaccreditation, which is often regarded as an ineffective regulation, is actually utilized quite often as a reason for denial of entry. Of the 11 schools that were denied entrance due to lack of preaccreditation, only three were able to later join the program. From that group, two were removed from the program and one is still participating and in good standing.

Similarly, obtaining a certificate of occupancy can prove to be challenging. This document, which is issued by the City of Milwaukee, is required to ensure that a building is safe for its intended use. Individuals who are looking to open a school in a building that is available for rent or purchase are required to bring the space up to code in order to receive an occupancy permit. This process can be exceedingly expensive and can discourage individuals from pursuing it as a school site. Additionally, the building must be approved by the city's Board of Zoning Appeals to be zoned as a school site in order to receive a certificate of occupancy. Combined, these two measures can be too difficult of an undertaking and thus prevent a school from joining the program or even opening. Of the 14 schools that were ineligible due to not having a certificate of occupancy, five were eventually able to obtain it. Of those five schools, four schools were removed from the MPCP and are now closed, and one is still in the program. The other nine schools never opened.

Act 237 in 2013 required schools joining a choice program for the first time to submit an anticipated budget to DPI for review. A school cannot join the program without DPI's signoff on the budget. As noted in the table above, there were 19 instances of incomplete budgets being submitted.

TABLE 1. REASONS FOR DENIAL OF ENTRY INTO MPCP

FINANCIAL VIABILITY/SOUND FISCAL PRACTICES ²⁴	27
INCOMPLETE/NO BUDGET	19
NO CERTIFICATE OF OCCUPANCY	14
DENIED/FAILED TO OBTAIN PREACCREDITATION	11
NO FIDELITY BOND	9
NO CERTIFICATE OF INSURANCE	4
ADMINISTRATOR/STAFF DID NOT MEET REQUIREMENTS AND/OR COMPLETE NECESSARY TRAINING	3
DID NOT PAY AUDITOR FEE	2
DID NOT MEET NEW PRIVATE SCHOOL REQUIREMENTS/DEADLINES	1
DID NOT FILE INTENT TO PARTICIPATE FORM	1
RETAINED A DISQUALIFIED PERSON	1
FAILED TO MEET PRIVATE SCHOOL DEFINITION (CURRICULUM ISSUES)	1
FAILED TO MEET HOURS OF INSTRUCTION	1

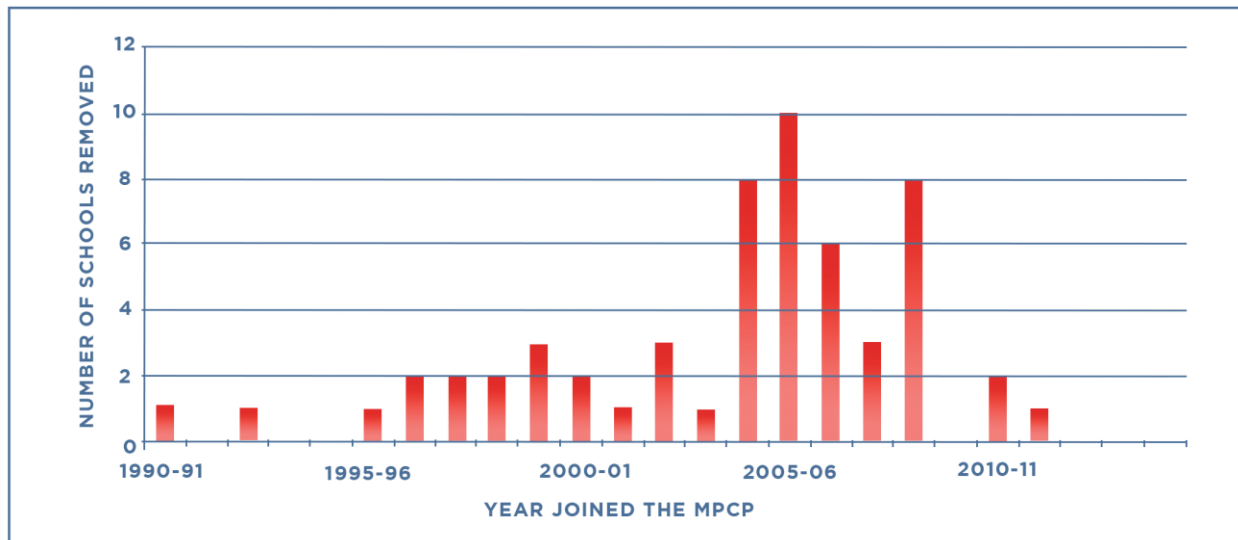
²⁴ Several DPI legal notices explicitly note financial viability as an issue for nonparticipation. Other notices do not include this even if a budgetary issue is specifically mentioned. For the purpose of this report, any school that was determined by DPI to have an incomplete or no budget is automatically marked as having financial viability issues.

The lack of budget usually indicates some financial red flags. This occurred with 18 individual schools.²⁵ Of the 18 schools, only two were ever admitted participation in the MPCP – one school has since been removed from the program by DPI and the other is currently operating. All but the currently operating school in this category were start-up schools.

Act 237 also created stronger measures specifically for start-up schools wanting to participate in a parental choice program. First, it moved many application timelines to the prior year in order to ensure that new schools have appropriately planned in advance. The theory is simple – have the school be fully approved by DPI prior to accepting any students in an open enrollment period. It also required schools to continually maintain accreditation. **Of the schools that were denied participation to the MPCP, 29 were start-up schools (88%).**

These requirements seem to have had an impact on the viability of schools admitted to the program. Many schools that have been barred from the program by DPI were schools that joined the program early when there were limited accountability measures. Figure 1 below shows the frequency with which schools removed from the program has changed over the years.

FIGURE 1. NUMBER OF SCHOOLS REMOVED FROM THE MPCP BY YEAR JOINED



Forty-seven percent of schools that were barred from the MPCP joined before 2005-06 school year (when Act 125 first took effect). These tightened regulations led directly to a spike in schools being removed from the program the following school year. Ninety-four percent of schools that were removed joined before the 2009-10 school year (when Act 28 first took effect). **No school that has joined the MPCP after the passage of Act 237 has been removed from the program (18 schools joined the MPCP between 2014-15 and 2016-17).**

²⁵ One school was found ineligible twice with budgetary concerns noted each time.

Only one school participating in the Racine Parental Choice Program (RPCP)²⁶ has been removed from the program and no Wisconsin Parental Choice Program (WPCP) schools has been removed.

There are also consequences for the individuals responsible for a school being removed from the program; they are labeled "disqualified persons."²⁷ A disqualified person distinction limits a person's ability to be involved in a school that participates in a choice program; the schools are prohibited from retaining a disqualified person "as an owner, officer, director, trustee, administrator, person designated by the administrator to assist in processing pupil applications, or person responsible for administrative, financial, or pupil health and safety matters" for a seven-year period.²⁸ This level of accountability does not exist in the public sector.

The accountability system may see future gains in efficiency with the recent passage of 2017 Act 36, which streamlines existing regulations. The act eliminated unnecessary administrative burdens for schools joining or already participating in a choice program. Some of the removed compliance reports include the Continuing Eligibility Report, the updated budget due November 1, and the report on the number of pupils attending the school in the previous year. DPI has deemed these regulations to be either ineffective or redundant.²⁹ Act 36 also created a \$100,000 threshold for necessitating a GAAP financial audit. Creating this threshold eliminates a huge financial burden for small schools wanting to participate in the program. Similarly, this act gives schools joining a choice program an option of how to prove their financial viability.

New laws that will further increase accountability on the program were created under this act. A fiscal accountability provision was included that requires schools to refund their reserve balances to DPI if they do not maintain a cash and investment balance that is at least equal to their reserve balance. In addition, now all private schools participating in a choice program are required to conduct background checks on employees and prohibit them from hiring an individual who would be ineligible for a teaching license based on his or her criminal history. Future research will be required to analyze the impact of these new streamlining measures.

Legal changes have increased the extent to which parents are able to judge the quality of schools. In 2009, Act 28 required choice students to take the state assessment and have their results submitted to DPI. Beginning with the 2015-16 school year, all schools that participate in a choice program were required to have a student information system (SIS) for their choice pupils. This system allows DPI to track individual students via their ID number to monitor aspects such as their school enrollment, demographics, test scores and attendance, all while maintaining student privacy.

The 2015-16 school year was the first year in which choice students' results were used to create a state report card, identical to the report card public schools receive. Though no choice schools received an overall score in 2016 (due to two years of data being needed to measure student growth), a substantial amount of information was made available to parents for the first time.

²⁶ The school also participated in the MPCP.

²⁷ The legal definition of a disqualified person can be found in 118.60(1)(ag) and 119.23(1)(ag).

²⁸ https://dpi.wi.gov/sites/default/files/imce/sms/Choice/DQ_List_2017-02-14_-_MPCP.pdf

²⁹ While schools have been removed from the program for failing to turn in reports, no school has ever been removed due to failure to meet one of the selected standards reported in the Continuing Eligibility Report.

METHODOLOGY

The preceding sections have established that the law provides mechanisms for accountability to both the state and to parents. But do these mechanisms effectively promote growth among high quality schools and decline among poor-performing ones? The final section of this paper uses a unique dataset on school closures over an extended period to answer this question for the first time.

In order to statistically examine what factors lead to program exit, we conducted a survival analysis.³⁰ A survival analysis is a common method in medical research examining the effect of various characteristics on patient survival or death. In this case, we apply the model to examine the factors that predict the failure (i.e. death) of a school. DPI's year list of MPCP schools was used to determine which schools left and which schools persisted in the program from year to year. Additional data were gathered on the subset of those schools that were forced out of the program under current law. In this research, both are counted in separate models as a school failure.³¹

Data were gathered on a number of factors that are likely to affect the risk that a school will exit the MPCP. These factors include the share of students in the school who utilize a voucher and the academic performance of the school during the four years for which data are available on the Wisconsin Concepts and Knowledge Exam (WKCE). The two sections of the WKCE that existed throughout the time frame of this analysis are science and social studies. The WKCE mathematics test ended in 2012-13, reducing the years in our dataset if included. However, math scores are highly correlated with scores in the other subjects. Each portion of the exam is scored on a four-point scale where higher values are indicative of greater success. To create the most comprehensive measure of academic quality possible from the available data, the average scores of each school on each portion of the test were added together. This creates an eight-point scale for the academic quality variable. The WKCE was replaced with the Badger Exam in 2015 and then the Wisconsin Forward Exam in 2016, which meant that we could not extend the analysis past 2015. During the time frame of analysis, 14 schools left the program for any reason, and nine of these were forced out by legal regulations.

Other important variables include a measure of the safety of the environment of the school. This data was gathered through an open records request to the Milwaukee Police Department for the number of 911 calls at each school. These data were incorporated on a yearly basis.

³⁰ Cox, D.R. and D. Oakes. 1984. "Analysis of Survival Data." New York: Chapman and Hall.

³¹ Another alternative would be to separately examine only those schools that left voluntarily. While the small number of such schools give us concerns about statistical power ($n=5$), such models show that enrollment volatility is the chief driver of leaving the program among these schools rather than the academic and safety variables that drive leaving under other circumstances.

Additionally, we account for the religious affiliation of the school, which Ford and Andersson (2016) have previously shown to be related to the risk of closure.³² We control whether the school is a high school, the share of students in the school who utilize a voucher, the percentage of students in a school who come from minority backgrounds and the income of the neighborhood surrounding the school.³³ Data on the share of minority students were provided by Public Policy Forum from their annual survey of the MPCP in which racial data are gathered.

Formally, for each school s at time t , let the hazard (i.e. risk of short term removal) for school s be denoted by $h_s(t)$.

Then the $h_s(t)$ is given by:

$$h_s(t) = h_0(t) * e^{\beta_1(Academic)_s + \beta_2(Safety)_s + \beta_3(Enrolled)_s + \beta_4(Controls)_s}$$

Where $h_0(t)$ is equal to the baseline hazard function and the rate ratio of two schools is not dependent on time, t .

We also estimate the factors that are most important to parents in where to send their children based on the changes in enrollment that occur in each school between the years of analysis. This model is a simple change-score regression with fixed effects for each school-year pairing with additional controls for year and clustering by school:

$$\Delta Enrollment = \beta_1(Academic_{t-1})_s + \beta_2(Safety)_s + \beta_3(Enrolled)_s + \beta_4(Controls)_s$$

RESULTS: SCHOOL REMOVAL

Results for the effect of our key variables on the risk of overall program exit are presented in Table 2 below. Negative coefficients indicate that higher values of the variable put schools at a lower risk of failure. Stars indicate that a variable is significantly related to school failure, meaning that the observed relationships are unlikely to be the product of chance.

³² Ford, Michael and Fredrik Andersson. 2016. "Determinants of Organizational Failure in the Milwaukee School Voucher Program." *Policy Studies Journal*.

³³ These data were gathered from the Census Bureau at the Census Tract level (www.census.gov).

From the table, we can see that our measure of academic quality, WKCE test scores in social studies and science, is significantly related to school failure. We can convert these numbers into percentage changes in the risk of failure for easier interpretability. **A one point shift in academic quality is associated with an 85% increase in the rate of removal from the program for any reason.**

Schools that are growing are less likely to fail than schools that have negative enrollment changes or stagnate growth.

The only other significant variable ($p < .1$) in the model is school size: the measure of the school's enrollment. This variable suggests that smaller schools are more likely to fail than larger ones, which is sensible when one considers that size can have an impact on financial viability, one of the preeminent causes of removal by DPI and removal in general.

TABLE 2. EFFECT OF VARIABLES ON RATE OF PROGRAM EXIT (ANY REASON)

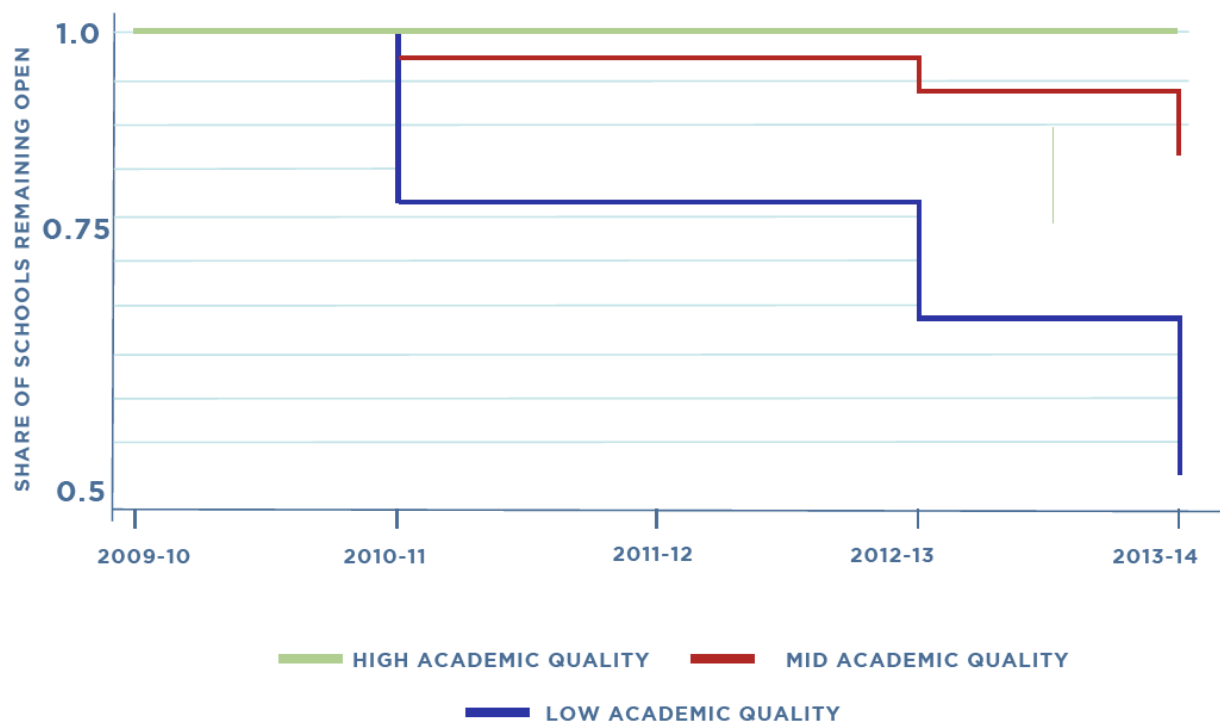
VARIABLES	HAZARD RATIO
ACADEMIC QUALITY	-1.925** (0.896)
PERCENT CHANGE IN ENROLMENT	-2.656* (1.544)
SCHOOL SIZE	-0.0111* (0.00660)
PERCENT MINORITY	1.145 (6.888)
VOUCHER DEPENDENCY	-0.874 (5.333)
NEIGHBORHOOD INCOME	8.50e-06 (3.27e-05)
SAFETY	-0.769 (2.313)
HIGH SCHOOL	0.216 (0.888)
CATHOLIC/LUTHERAN	(0.206) (1.561)
OTHER RELIGIOUS SCHOOL	(0.0156) (0.841)
FIRST YEAR	(0.360) (1.641)
OBSERVATIONS	318

STANDARD ERRORS IN PARENTHESES

*** $P < 0.01$, ** $P < 0.05$, * $P < 0.1$

Figure 2 below shows the share of schools that left the program over the four-year period of analysis from three levels of academic quality. "High Academic Quality" schools score a five or above on the eight point scale of the variable. "Low Academic Quality" schools score below a three on the eight point scale.³⁴

FIGURE 2. SHARE OF SCHOOLS REMAINING OPEN BY YEAR & ACADEMIC QUALITY



The graph shows that schools with low academic quality are far more likely to leave the program than mid - and high quality schools. In fact, no high quality schools closed during the time frame of the study. The lack of significance for the Catholic/Lutheran School variables might be surprising, given the existing evidence that these schools are less likely to close. A potential reason for this is that these schools are the main drivers of positive test achievement in the choice program.³⁵ Catholic and Lutheran schools are highly correlated with academic quality in this analysis, which in turn is predictive of failure.

A different way to conceptualize this effect is through mediation analysis which allows us to examine the relationships between a number of variables simultaneously.³⁶

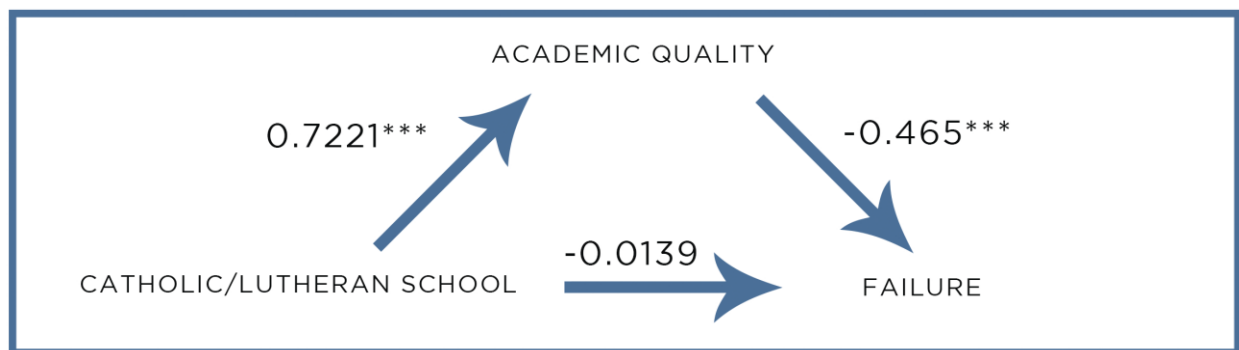
³⁴ 44 school-year pairs are in the lowest performance category. 120 school-year pairs are in the middle performance category, and 188 school-year pairs are in the high performance category. The higher categories have more school-year pairs because higher quality schools are less likely to close.

³⁵ Flanders, Will. 2017. "Apples to Apples: The Definitive Look at School Test Scores in Milwaukee and Wisconsin." Wisconsin Institute for Law & Liberty.

³⁶ Baron, R. M. and D.A. Kenny. 1986. "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations." *Journal of Personality and Social Psychology*, 51: 1173-1182.

Figure 3 depicts a mediation analysis using the same control variables found in Table 2. The arrows point in the theorized direction of causation (e.g. Catholic/Lutheran schools *cause* higher academic quality rather than higher academic quality causing a school to be Catholic/Lutheran). Pathways that are significantly related to each other are depicted with stars. One can see that, while the direct effect of Catholic/Lutheran schools on failure is insignificant, the pathway from Catholic/Lutheran to academic quality to failure is strongly significant ($p < .01$ in both paths).

FIGURE 3. CAUSAL PATHWAYS OF SCHOOL EXIT FROM MPCP



A similar, though less strong, story is found in the case of the safety variable. Schools that experience high numbers of 911 calls also experience lower levels of academic quality, perhaps due to the increased distractions in such schools. The results here highlight the high level of correlation between all of our key variables, and the difficulty in clearly teasing out which, if any, variable is the main driver of the results we see.

RESULTS: LEGAL REMOVAL

During the time frame of analysis, it should be noted that the majority (61.5%) of schools that left the MPCP exited due to legal removal. In this section, we run the same model as above looking exclusively at those schools DPI removed from the MPCP. Table 3 below repeats the same analysis as Table 2 with 'failure' only defined as legal removal, with the only difference being that the variable for Catholic and Lutheran schools must be excluded from the model because none of those schools were closed during this time frame.

The same factors that are relevant to overall closure risk are relevant for legal removal, but the effect sizes are significantly magnified. **A unit change in the academic quality increases the rate of removal by 98%.** The only other significant variable here is school size, which once again suggests that smaller schools are more likely to leave the program than larger ones.

TABLE 3. EFFECTS OF KEY VARIABLES ON RATE OF EXIT (LEGAL REMOVAL)

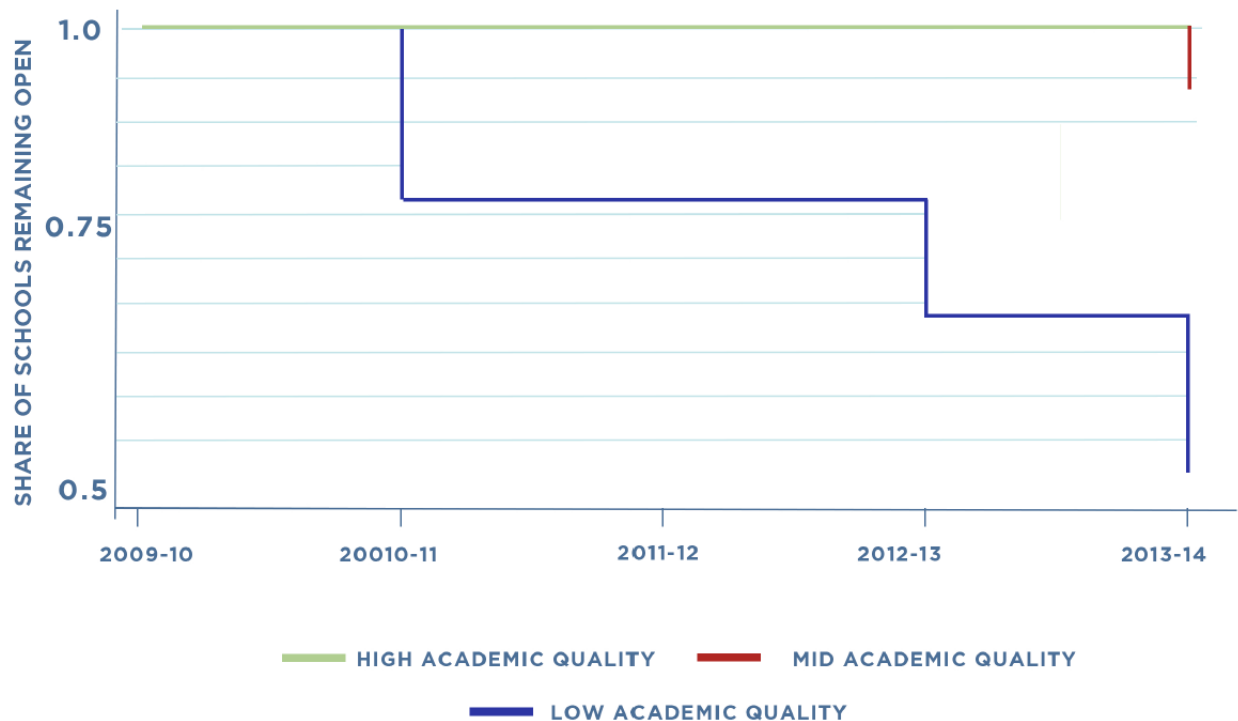
VARIABLES	HAZARD RATIO
ACADEMIC	-4.038** (1.811)
PERCENT CHANGE	-2.893* (2.398)
SCHOOL SIZE	-0.0243* (0.0138)
PERCENT MINORITY	-6.815 (8.418)
VOUCHER DEPENDENCY	6.418 (7.505)
INCOME	5.44e-05 (6.42e-05)
SAFETY	3.051 (3.683)
HIGH SCHOOL	-1.147 (1.612)
OTHER RELIGIOUS SCHOOL	-0.464 (1.548)
FIRST YEAR	(1.226) (3.732)
OBSERVATIONS	318

STANDARD ERRORS IN PARENTHESES

*** P<0.01, ** P<0.05, * P<0.1

Figure 4 on the next page shows the risk of removal over time among the same three subsets of schools identified in Figure 3. In this case, high and mid – academic quality schools face very low closure risk over time. Until the fourth year of the study, both types of schools remain open 100% of the time. In contrast, low quality schools follow essentially the same trajectory as in Figure 3, remaining open only about 50% of the time by the end of the analysis in 2014. DPI appears to cull the lowest of the low performers through their financial and accreditation requirements, whereas mid-tier schools appear to be removed more often by other market forces.

FIGURE 4. SHARE OF SCHOOLS NOT CLOSED BY DPI BY YEAR & ACADEMIC QUALITY



RESULTS: PARENT-BASED ACCOUNTABILITY

In order to better understand the factors that influence the decisions that parents make about where to send their children to school, the final portion of this analysis looks at the effect of the factors outlined above on year-to-year changes in school enrollment. More so than our data on closure, this measure is the closest approximation possible to which factors parents find important in evaluating their children's school options, as many schools experience growth and decline without experiencing removal from the MPCP.

Table 4 looks at the effect of the key variables mentioned above on enrollment growth (Δ enrollment). Unlike our analysis of overall removal and DPI removal, we see that different variables come to the fore. Academic quality does not appear to be a significant driver of enrollment changes. Instead, we see that **safety (recall this is measured as per student 911 calls) is a significant, positive predictor of school growth**. An increase of one 911 phone call per student is expected to lead to a decline in enrollment of nearly 65 students.

We also see evidence that parents are interested in sending their kids to schools that offer a religious education. Controlling for all other factors, schools affiliated with the Catholic or Lutheran churches experience enrollment growth of about 25 more students per year than schools not affiliated with these churches. In this model, neighborhood income is also significant, though to the lowest extent normally accepted in social science ($p < .1$), perhaps indicating that schools in poorer neighborhoods have more difficulty expanding.

Once again, because of the interrelationship of the key variables, we turn to mediation analysis to test whether we observe an indirect effect of academic quality on school growth that works through the safety variable. This test is depicted in Table 5 on the following page. Again, we see significant evidence of mediation. Academic quality is strongly predictive of safety ($p < .01$), while safety is strongly predictive of enrollment growth ($p < .05$). While the direct effect of academic quality on enrollment changes is insignificant, nearly a quarter of the total effect (about 23%) works through the pathway shown below. In other words, **while parents may be selecting schools primarily based on religion and safety, this leads their children to better academic schools in general.**

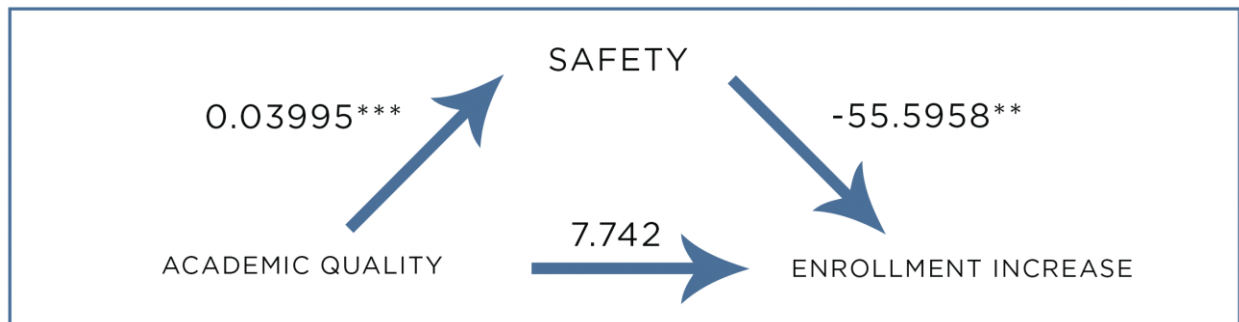
TABLE 4. EFFECT OF KEY VARIABLES ON ENROLLMENT GROWTH

VARIABLES	Δ ENROLLMENT
LAGGED ACADEMIC QUALITY	-4.450** (4.355)
SAFETY	-64.50*** (23.38)
PERCENT MINORITY	-8.589* (14.23)
HIGH SCHOOL	-10.80 (9.647)
CATHOLIC/LUTHERAN	25.77** (10.29)
OTHER RELIGIONS	15.00** (7.830)
FIRST YEAR	108.0*** (25.34)
VOUCHER DEPENDENCE	32.50 (27.71)
PRIOR ENROLLMENT	0.00444 (0.0369)
INCOME	-0.000554 (0.000312)
CONSTANT	-21.56 (37.18)
OBSERVATIONS	318
R-SQUARED	0.118

STANDARD ERRORS IN PARENTHESES

*** $P < 0.01$, ** $P < 0.05$, * $P < 0.1$

FIGURE 5. MEDIATION ANALYSIS OF THE EFFECT OF ACADEMIC QUALITY ON ENROLLMENT



CONCLUSION

In its 27 year history, the MPCP has had multiple regulations added that make it more difficult for schools to enter the program and easier to be removed from the program. Schools looking to participate in the MPCP face multiple barriers to entry and are directly accountable to DPI. Schools that fail to prove their financial viability or meet other standards are denied entry into the program. Schools that fail to meet the rigorous financial requirements of the program face consequences; they can have payments withheld and can be barred from participating in the MPCP program. Individuals who play a role in a school's termination from the program are forbidden from working at another voucher school for a seven-year period.

Our study identifies multiple ways that current accountability laws – combined with parental choice – have measured effectiveness at forcing low-performing schools out of the program. We find that the schools that are unable to join the program or that fail (via legal removal) are predominantly start-up schools. Added, smarter regulations have made it more difficult for start-up schools to participate in the programs. Data show that schools that close are more prone to be academically deficient, experience more 911 calls and do not have strongly established religious affiliations. Schools that are insufficient in these areas are more likely to leave the program, either through legal removal or parental accountability. Most of the closed schools also experienced high levels of enrollment volatility and were generally in operation for shorter amounts of time.

Accountability measures irrefutably exist for the MPCP, and they may work to close down some poor-performing private schools. Both legal and parental forces are drivers in the marketplace as they are intended to be. Even with stricter regulations and more data being made available to parents, the program has grown both in terms of participating schools and students, which clearly demonstrates strong demand for the program. School closure is not intrinsically bad; it successfully removes lesser quality choice schools and de facto increases the market share of successful choice schools.

SCHOOL	FIRST YEAR IN MPCP	LAST YEAR IN MPCP	REASON FOR BEING BARRED
ALEX'S ACADEMICS OF EXCELLENCE	1990-00	2003-04	AUDIT DID NOT MEET PROGRAM REQUIREMENTS
MANDELLA SCHOOL OF SCIENCE AND MATH	2002-03	2003-04	FAILURE TO RETURN MPCP CHECK
ACADEMIC SOLUTIONS LEARNING CENTER	1990-00	2004-05	STUDENT SAFETY ISSUES
LEARNING ENTERPRISE	1992-93	2004-05	WITHDREW MIDYEAR BUT HAD FINANCIAL VIABILITY ISSUES
LOUIS TUCKER ACADEMY	1997-98	2004-05	FAILURE TO RETURN MPCP CHECK, AUDIT AND MEMBERSHIP ISSUES
HOWARD'S LEARNING CENTER	2002-03	2005-06	FAILURE TO SUBMIT REQUIRED REPORTS
IDA B. WELLS	2004-05	2005-06	FAILURE TO SUBMIT CERTIFICATE OF OCCUPANCY
LEADER INSTITUTE	2004-05	2005-06	FAILURE TO RETURN MPCP CHECKS, IMPROPERLY CLAIMED SUMMER SCHOOL PAYMENTS, FINANCIAL VIABILITY ISSUES
MEDGAR EVERS CHRISTIAN ACADEMY	1995-96	2005-06	FAILURE TO REFUND THE STATE 2003-04 FIR PAYMENT
NORTHSIDE HIGH SCHOOL	2005-06	2005-06	FAILURE TO MEET PRIVATE SCHOOL REQUIREMENTS
SA'RAI AND ZIGLER UPPER EXCELLERATED ACADEMY	2004-05	2005-06	IMPROPERLY CLAIMED STUDENTS FOR PAYMENTS
TAHIR AHMADIYYA ELEMENTARY SCHOOL	2005-06	2005-06	DID NOT MEET CONTINUING ELIGIBILITY REQUIREMENTS
TUCKER'S INSTITUTE OF LEARNING	2004-05	2005-06	IMPROPERLY SUBMITTED FINANCIAL INFORMATION REPORT
CHRIST KIDS ACADEMY OF EXCELLENCE	2005-06	2006-07	DID NOT MEET CONTINUING ELIGIBILITY REQUIREMENTS
FAITH TEMPLE PENTECOSTAL	2005-06	2006-07	NO APPLICATION FOR PRIVATE SCHOOL ACCREDITATION

SCHOOL	FIRST YEAR IN MPCP	LAST YEAR IN MPCP	REASON FOR BEING BARRED
NUBIAN PREPARATORY LEARNING ACADEMY	2005-06	2006-07	FAILED TO MEET 2005-06 FIR REQUIREMENTS
DJ PERKINS ACADEMY OF EXCELLENCE	2004-05	2006-07	FINANCIAL CONCERNS WITH 2005-06 FIR
STS CHRISTIAN ACADEMY*	2006-07	2006-07	FAILED TO SUBMIT CERTIFICATE OF OCCUPANCY
ELIJAH'S BROOK GOD'S NATION CHILDREN SCHOOL*	2006-07	2006-07	HEALTH AND SAFETY ISSUES
NZINGHA INSTITUTE	2005-06	2007-08	FAILED TO RETURN 2005-06 STATE ADJUSTMENT PAYMENT
VERITAS ACADEMY	2003-04	2007-08	DID NOT FILE CONTINUING ELIGIBILITY REPORT
JESUS ACADEMY OF LEARNING	2007-08	2008-09	FAILED TO APPLY FOR ACCREDITATION
GRACE PREPARATORY SCHOOL OF EXCELLENCE	2000-01	2008-09	ACCREDITATION APPLICATION DENIED
INSTITUTE FOR CAREER EMPOWERMENT INC.	2004-05	2008-09	ACCREDITATION APPLICATION DENIED
AGAPE CENTER OF ACADEMIC EXCELLENCE, INC.	1996-97	2008-09	FINANCIAL VIABILITY ISSUES
BLYDEN DELANY	1998-99	2008-09	DID NOT FILE CONTINUING ELIGIBILITY REPORT
R & B ACADEMY*	2008-09	2008-09	HEALTH AND SAFETY ISSUES
THE YOUNG WOMEN'S INSTITUTE FOR GLOBAL STUDIES	2008-09	2008-09	CEASED OPERATIONS, FAILED TO APPLY FOR ACCREDITATION
FAMILY ACADEMY	1996-97	2008-09	CEASED OPERATIONS
COLLINS CHRISTIAN ACADEMY	2008-09	2008-09	IMMINENT THREAT TO SAFETY, FAILED TO APPLY FOR ACCREDITATION
EXCEL LEARNING ACADEMY	2004-05	2009-10	ACCREDITATION APPLICATION DENIED
JOHNSON CHRISTIAN ACADEMY	2006-07	2009-10	ACCREDITATION APPLICATION DENIED

* Indicates that the school closed the year it began and never received a choice payment.

SCHOOL	FIRST YEAR IN MPCP	LAST YEAR IN MPCP	REASON FOR BEING BARRED
KIDPRENEUR	2006-07	2009-10	ACCREDITATION APPLICATION DENIED
RESURRECTION CHRISTIAN ACADEMY	2005-06	2009-10	IMMINENT THREAT TO SAFETY, ALSO TERMINATED IN 2010-11 SCHOOL YEAR DUE TO NO SURETY BOND
VICTORY PREPARATORY ACADEMY	1999-00	2009-10	DID NOT FILE CONTINUING ELIGIBILITY REPORT
THE WAY AND THE TRUTH CHRISTIAN ACADEMY	2008-09	2009-10	DID NOT FILE CONTINUING ELIGIBILITY REPORT
TRINITY CHRISTIAN ACADEMY	2006-07	2009-10	NO SURETY BOND
HARAMBEE COMMUNITY SCHOOL	1990-91	2010-11	ACCREDITATION APPLICATION DENIED
GARDEN HOMES COMMUNITY MONTESSORI SCHOOL, INC.	2007-08	2010-11	ACCREDITATION APPLICATION DENIED
EXCEL ACADEMY	2004-05	2010-11	NO SURETY BOND
TUSKEGEE AVIATION ACADEMY	2008-09	2010-11	NO SURETY BOND
MORE THAN CONQUERORS PREPARATORY SCHOOL	2008-09	2010-11	DID NOT FILE CONTINUING ELIGIBILITY REPORT
MUSTARD SEED INTERNATIONAL SCHOOL	2007-08	2010-11	NO SURETY BOND
MILLS CHRISTIAN ACADEMY	2008-09	2010-11	DID NOT MEET PRIVATE SCHOOL REQUIREMENTS
MILWAUKEE INSTITUTE FOR ACADEMIC ACHIEVEMENT	2010-11	2011-12	HEALTH AND SAFETY ISSUES
THE MARGARET HOWARD CHRISTIAN LEADERSHIP INSTITUTE	2008-09	2012-13	ACCREDITATION DENIED
THE APPLECREST PREPARATORY LEADERSHIP ACADEMY	2005-06	2012-13	DID NOT FILE FINANCIAL AUDIT OR ENROLLMENT AUDIT
KINDERGARTEN PLUS	2000-01	2012-13	DID NOT FILE FINANCIAL AUDIT OR ENROLLMENT AUDIT

SCHOOL	FIRST YEAR IN MPCP	LAST YEAR IN MPCP	REASON FOR BEING BARRED
ST. JOHN FISHER ACADEMY	2011-12	2012-13	DID NOT FILE FINANCIAL AUDIT
DR. BRENDA NOACH CHOICE SCHOOL	2001-02	2013-14	FAILED TO MAINTAIN ACCREDITATION
LIFESKILLS ACADEMY	2008-09	2013-14	<i>VOLUNTARILY CLOSED</i> , BUT FAILED TO SUBMIT 3RD FRIDAY IN SEPTEMBER ENROLLMENT AUDIT AND FISCAL PRACTICES AND INTERNAL CONTROL REPORT
WASHINGTON DU BOIS CHRISTIAN LEADERSHIP ACADEMY	2005-06	2013-14	DID NOT FILE FINANCIAL AUDIT, ENROLLMENT AUDIT, OR FISCAL PRACTICES REPORT
EMMAUS LUTHERAN	1998-99	2013-14	<i>VOLUNTARILY CLOSED</i> , BUT HAD ISSUES WITH FIR
YOUNG MIND'S PREPARATORY SCHOOL	2005-06	2013-14	LACK OF BUDGET / LATE FISCAL PRACTICES REQUIREMENTS
LEARNING BRIDGES KINGDOM ACADEMY	2010-11	2014-15	FAILED TO GAIN ACCREDITATION
TRAVIS TECH HIGH SCHOOL	2006-07	2014-15	DID NOT FILE FINANCIAL AUDIT AND DID NOT GET A SURETY BOND
JARED C. BRUCE ACADEMY	2002-03	2014-15	FAILED TO COMPLY WITH FINANCIAL AND REPORTING REQUIREMENTS
DAUGHTERS OF THE FATHER	2007-08	2015-16	<i>VOLUNTARILY CLOSED</i> , BUT HAD NOT SUBMITTED CONTINUING ELIGIBILITY REPORT
CERIA M. TRAVIS ACADEMY	1997-98	2015-16	FAILED TO REPAY DPI THE AMOUNT CERTIFIED DUE
TEXAS BUFKIN CHRISTIAN ACADEMY ^Δ	1998-99	2016-17	FINANCIAL VIABILITY ISSUES; LATE AND INCOMPLETE BUDGET

^Δ School is in the final stages of appealing DPI's decision to bar. The school is included in closed school calculations.