Narrowing the Racial Achievement Gap: Policy Success at the State Level

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FOREWORD

This report is the result of collaboration between the Robert M. La Follette School of Public Affairs at the University of Wisconsin–Madison and the Wisconsin Department of Public Instruction (DPI). Our objective is to provide graduate students at La Follette the opportunity to improve their policy analysis skills while contributing to the capacity of DPI to improve the quality of public education in Wisconsin.

The La Follette School offers a two-year graduate program leading to a master's degree in public affairs. Students study policy analysis and public management, and they can choose to pursue a concentration in a policy focus area. They spend the first year and a half of the program taking courses in which they develop the expertise needed to analyze public policies.

The authors of this report are all in their last semester of their degree program and are enrolled in Public Affairs 869 Workshop in Public Affairs. Although acquiring a set of policy analysis skills is important, there is no substitute for doing policy analysis as a means of learning policy analysis. Public Affairs 869 gives graduate students that opportunity.

This year the students in the workshop were divided into six teams. One other team completed a project for DPI, and the other teams completed projects for the Division of Budget and Management of the City of Milwaukee; the Wisconsin Department of Children and Families and the Department of Health Services; the Wisconsin Department of Revenue; and the Wisconsin Legislative Council. After soliciting possible research ideas from throughout DPI, Superintendent of Public Instruction Tony Evers chose the topic of this report.

Although the academic achievement of Wisconsin's public school students has increased over time, the gap between the achievement of White students, as measured by scores on standardized tests, and Black students, and between White and Hispanic students is larger than in most other states. The authors of this report have provided an analysis of policies pursued in other states that have shown promise in reducing racial achievement gaps.

This report would not have been possible without the support and encouragement of Laura Pinsonneault. Laura, who served as the project liaison, is the Director of the Office of Educational Accountability at DPI. A number of other people contributed to the success of the report. Their names are listed in the acknowledgments.

The report also benefited greatly from the support of the staff of the La Follette School. Marjorie Matthews contributed logistic support and Karen Faster, the La Follette School Publications Director, managed production of the final bound and online document.

By involving La Follette students in the tough issues confronting state governments, I hope they not only have learned a great deal about doing policy analysis but have gained an appreciation of the complexities and challenges facing state government in Wisconsin and elsewhere. I also hope that this report will contribute to the policymaking process at DPI.

Andrew Reschovsky
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Madison, Wisconsin

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EXECUTIVE SUMMARY

Academic achievement gaps between Black and White students and between Hispanic and White students are consistently larger in Wisconsin than in other states or at the national level. Although the overall performance of Wisconsin's K-12 students has improved over the past decade, the state has one of the highest graduation rates in the country, and Wisconsin students consistently score higher than average on national standardized tests, the state's progress in narrowing racial achievement gaps has stalled or reversed course over the past two decades. In 2007, Wisconsin had the largest Black-White achievement gap in the nation, according to a national comparison of student performance on the National Assessment of Educational Progress (NAEP) from that year. Wisconsin's Hispanic-White achievement gap, while narrower, also persists and has barely decreased in the last 20 years. The achievement gaps present in Wisconsin and elsewhere have generated concern among educators, with many states pursuing a variety of policies designed to narrow racial and ethnic academic disparities. These efforts are the focus of this report.

As part of its efforts to improve minority academic achievement and close achievement gaps, the Wisconsin Department of Public Instruction commissioned our team to research efforts to close the gap in other states by reviewing policies and programs at the state level as well as the district and school levels. To narrow our research and more succinctly report our findings, we focused primarily on state-level education policies that helped reduce Black-White and Hispanic-White achievement gaps. We considered NAEP data from 2003 to 2011, as well as dropout rates from 2001 to 2009, in four states that exhibited such academic improvement and are similar to Wisconsin, based on key socioeconomic and demographic characteristics: Iowa, Kansas, North Carolina, and Oklahoma. For each state, we summarize the program's design, analyze the available evidence pertaining to program success, and include a brief assessment of the ease with which a similar policy could be adopted in Wisconsin.

In addition, we have included policies from other states that either have less in common with Wisconsin or have not exhibited as much statewide academic improvement over the years. These initiatives, while often implemented too recently or in too few districts to result in a statewide gap closure, also offer promise for reducing racial achievement gaps and bear watching in the future.

INTRODUCTION

Wisconsin's Department of Public Instruction (DPI) is responsible for managing the curricula, assessments, resources, and facilities for over 871,000 students across the state (Wisconsin Department of Public Instruction [DPI] 2013b). Its primary challenge is to ensure all children's access to high-quality education.

Like other state education agencies (SEAs), DPI is operating in an environment where resources for K-12 education are growing very slowly. The agency must search for state- and district-level policies that improve academic achievement for all students in grades K-12, especially underachieving student groups, while working within a tight budget. In line with the language of 2001's *No Child Left Behind* (NCLB), SEAs often define these targeted groups of students by race/ethnicity, family income, English proficiency, and disability status. An "achievement gap" is defined as the difference in academic performance between subgroups within one or more of these categories. Since the 2001 passage of NCLB, these gaps have been well researched, with academic researchers and SEAs paying particular attention to the negative consequences of underperformance. In the short term, low achievement impedes academic success and decreases the likelihood of attaining higher education. In the long term, achievement gaps have the power to reinforce existing societal and economic inequalities by limiting students' employment skills and entrenching negative social norms.

There can be considerable variation in the size and nature of academic achievement gaps within individual states. For example, disparities between racial groups measured at the state level may be larger or smaller than those in particular schools or districts. Gaps between racial groups may also differ by subject matter and grade level. These variations within a given group suggest that the root causes for achievement gaps may include differences in school- and district-level curriculum, policy implementation, and education funding, as well as a community's socioeconomic conditions and the relative density of Black and Hispanic populations.

Despite broad success, such as its comparatively high graduation rate, declining dropout rate, and the fact that its students often outperform peers in other states on standardized assessments, Wisconsin has some of the largest academic achievement gaps in the nation. They are especially large for racial minority students and, in contrast to the progress made in many other states, have grown in recent years. In this report, we will focus on the academic performance of Black and Hispanic students compared to that of White students in Wisconsin.

The Black-White achievement gap in Wisconsin is large and persistent. According to a 2009 Institute of Education Statistics report (U.S. Department of Education 2009), Wisconsin has the largest Black-White achievement gap in the nation as measured by the National Assessment of Educational Progress (NAEP), with no improvement over the past 20 years. More specifically, gaps in fourth-

and eighth-grade mathematics, which were equally large in 1992, have widened over time. Although comparable to the national average in 1992, by 2007[1] Wisconsin's Black-White achievement gap was significantly larger than the national average.[2] This trend continued in 2009 (U.S. Department of Education 2013). Gaps on the reading assessments, while smaller than those for math, were significant in 1992 and have remained large. In 2007, Wisconsin's reading gaps were larger than the national average (U.S. Department of Education 2009); they remained so despite narrowing by 6 points (eighth-grade reading) and 8 points (fourth-grade reading) in 2011 (U.S. Department of Education 2013).

From 1992 to 2011 Black-White achievement gaps decreased nationally in both math and reading. They widened or decreased only slightly in Wisconsin during that time. For example, Table 1 shows that the average eighth-grade mathematics score for Black students was 39 points lower than that for White students in Wisconsin in 2011, while the gap was 31 nationally.

Table 1: Black-White Achievement Gaps 1992-2007 (in points)

	1992		2009		2011	
	Wisc.	**U.S.**	**Wisc.**	**U.S.**	**Wisc.**	**U.S.**
Fourth-grade mathematics	37	35	38	26	34	25
Eighth-grade mathematics	37	40	45	31	39	31
Fourth-grade reading	28	32	38	27	30	25
Eighth-grade reading	35*	29	38	26	32	25

*We have used 1998 data here, since that is the earliest year reported
for eighth-grade reading for Black students in Wisconsin.
Table adapted from: NAEP data provided by the National Center for Education Statistics.

We also focused on academic differences between Hispanic and White students because, though less severe than the Black-White achievement gaps, gaps between these groups are also sizable and persistent. In 2009,[3] the state's gaps on mathematics assessments for both fourth and eighth grade were on par with the national averages, but had not declined by as much since 1992 when compared to the national figures (U.S. Department of Education 2011a). In fact, from 1992 (fourth-grade assessment) and 1998 (eighth-grade assessment) to 2011 the gaps

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[1] 2007 is the most recent year for which there is detailed analysis comparing the national and state-specific trends in the Black-White achievement gap.
[2] All Black-White achievement gaps as reported by National Assessment of Educational Progress (NAEP) in 2007 (and presented in Table 1) are statistically significant at the .05 level.
[3] 2009 is the most recent year for which there is detailed analysis comparing the national and state-specific trends in the Hispanic-White achievement gap.

between Hispanic and White students in reading increased by 6 and 11 points, respectively. While both figures are considerable, the increase of 11 points in a 19-year period constituted nearly 100 percent of the original gap size.[4] However modestly, reading assessments gaps at the national level declined during that same period (U.S. Department of Education 2013). Although there has been some fluctuation in Wisconsin's Hispanic-White achievement gaps over time, with occasional slight narrowing, progress has stalled, or even reversed, in recent years (U.S. Department of Education 2011a; U.S. Department of Education 2013). Current figures for the state are comparable to the national averages. See Table 2 for greater detail.

Though the Hispanic population in Wisconsin constitutes just over 6 percent of the overall population, it has grown quickly over the last decade and will likely continue to do so: The 2010 census showed that Wisconsin's Hispanic population grew by 74 percent from 2000 to 2010 (Ennis et al. 2011). Given these statistics, there are concerns within DPI that such growth will result in greater academic disparities between Hispanic and White students if schools, teachers, and policymakers are not prepared to educate this growing population effectively by providing appropriate English learning supports (Pinsonneault 2013a).

Table 2: Hispanic-White Achievement Gaps 1992-2009 (in points)

	1992		2009		2011	
	Wisc.	**U.S.**	**Wisc.**	**U.S.**	**Wisc.**	**U.S.**
Fourth-grade mathematics	25	26	22	21	23	20
Eighth-grade mathematics	28*	29	26	26	25	23
Fourth-grade reading	18	28	25	25	24	24
Eighth-grade reading	13**	27	21	24	24	21

*We have used 2003 data here, since that is the earliest year reported for eighth-grade math for Hispanic students in Wisconsin.

**We have used 1998 data here, since that is the earliest year reported for eighth-grade reading for Hispanic students in Wisconsin.

Table adapted from: NAEP data provided by the National Center for Education Statistics.

While a sample of students in each state takes the NAEP exams every two years, knowledge about the academic performance of nearly all public school students at the state level comes from the Wisconsin Knowledge and Concepts Examinations. These exams are part of the larger Wisconsin Student Assessment System (WSAS). Students take the WSAS in reading and mathematics in third through

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[4] Similar to the Black-White achievement gaps, all Hispanic-White achievement gaps reported by NAEP in 2009 (and presented in Table 2) are statistically significant at the 0.05 level.

eighth grades, and again in the tenth grade. They also complete assessments in non-core subjects (e.g., social studies) in the fourth, eighth, and tenth grades. Taken together these exams are "used to determine the adequate progress of students at the school, district, and state levels" (DPI n.d.a). Although gaps in mathematics and reading as reported by the WSAS differ slightly from those documented by the NAEP, they tell a similar story. See Tables 3 and 4 for details on the racial achievement gap breakdown from 2008 to 2013 according to the WSAS.[5] While Black, Hispanic, and White students' proficiency on the exam increased during that time, the Black-White achievement gaps widened for both reading and mathematics over those five academic years. The Hispanic-White achievement gap, meanwhile, declined slightly before increasing again.

Table 3: Black-White Achievement Gaps 2008-2013
(difference in percent proficient)*

	2008-09	2009-10	2010-11	2011-12	2012-13
Math	35.9	36.4	36.1	37.0	37.3
Reading	28.8	29.2	29.0	28.5	29.0

*Gap analysis presented across all grade levels.
Table adapted from: WSAS data provided by DPI 2013b.

Table 4: Hispanic-White Achievement Gaps 2008-2013
(difference in percent proficient)*

	2008-09	2009-10	2010-11	2011-12	2012-13
Math	27.6	26.8	26.2	26.8	27.3
Reading	25.3	25.2	24.6	24.3	24.8

*Gap analysis presented across all grade levels.
Table adapted from: WSAS data provided by DPI 2013b.

In addition to student performance on national and Wisconsin-specific assessments, we also considered differences in academic persistence through high school. The rate at which minority students drop out compared to their White peers is also a significant concern in the academic community. Nationally, Hispanics exited high school prior to graduating at a rate nearly three times that of Whites in 2010, according to the National Center for Education Statistics (U.S. Department of Education 2012b). Although Wisconsin's four-year graduation rate was tied for second best in the nation according to 2010-2011 school year data

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[5] Please note that though we discuss 2007 in reference to Black students' performance on the NAEP, we do not include WSAS data from that academic year here. This is because DPI released new proficiency figures in April 2013 that included the College and Career Readiness Expectations, according to the newly-adopted Common Core Standards, but only adjusted WSAS figures back to the 2008-2009 academic year. Including 2007-2008 figures would not align with the information presented for the subsequent years and may appear to be misleading. The racial achievement gaps in Wisconsin, however, are long standing, and evidence suggests they are on par with the size of gaps seen in other years (http://dpi.wi.gov/files/eis/pdf/dpinr2012_48.pdf).

(DPI 2013a), Black students are about seven times more likely to leave high school prematurely compared to Whites. This trend has remained consistent from 2001 to 2009 (authors' calculations based on U.S. Department of Education data). Table 5 provides additional details.

Table 5: Dropout Rates, 2001-2002 and 2008-2009 (in percent)

	2001-2002				2008-2009			
	Total	**White**	**Black**	**Hisp.**	**Total**	**White**	**Black**	**Hisp.**
Wisconsin	1.9	1.2	8.3	5.6	2.3	1.3	8.0	5.2
National	3.9*	2.9*	6.4*	5.9*	4.1	2.7	6.6	6.0

*Data was not available for the national dropout rate for the 2001-2002 academic year. Therefore, we used 2003-2004 dropout rates.

Table adapted from: U.S. Department of Education data (2005, 2007, and 2011b).

With these achievement gaps and the students most significantly affected in mind, the goal of this report is to provide a systematic review of other states' policies for narrowing the Black-White and Hispanic-White academic achievement gaps. We hope it will help inform DPI policies to improve its comparatively low-performing minority students without negatively impacting the achievement levels of their White peers. In order to provide a comprehensive collection of options to DPI, we primarily considered initiatives implemented at the state level, but also researched district- or even school-level policies and programs that could prove effective in reducing racial achievement gaps.

METHODS

To identify states that have been successful in reducing racial achievement gaps using methods that could work in Wisconsin, we followed a three-phase procedure. In the initial phase, we analyzed how similar other states' contexts are to Wisconsin's. In the second phase, we determined the extent to which states deemed similar to Wisconsin made progress in reducing their Black-White and Hispanic-White achievement gaps on NAEP scores and their high school dropout rates. In the third phase, we attempted to confirm the preliminary NAEP and high school dropout data by communicating with SEAs directly and by reviewing state-level data. If a state satisfied the conditions defined in each of these three phases, we designated it a "target state." Our research team then utilized a case study approach to identify policies that contribute to gap reductions in each of the states. Data gathered for each case study consisted of email and phone interviews with education experts and SEA administrators, an electronic search for empirical research on state-specific policies, a scan of peer-reviewed journals for related published works, and a review of each state's website for internally developed reports and publications. This three-phase process is described in more detail below.

State Similarity[6]

After reviewing numerous United States Census reports that include statewide data in numerous education and non-education areas, we generated a list of 20 general categories of state characteristics to be considered. We then submitted this list to Laura Pinsonneault, Director of the Office of Educational Accountability at DPI, requesting that she rate these areas according to their applicability to our research and to the weight they carry within DPI's policy circles. Laura's ratings reduced this list to 10 broad areas, which we translated into the following 17 specific variables:

- Total Population
- Unemployment Rate
- Percentage Hispanic
- Median Household Income
- Percentage African American
- Per Capita Income
- Percentage Non-White
- Percentage in Poverty, All

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[6] Due to the limited space and time available to us, we cannot provide extensive detail about the demographic breakdown of the school systems in the states we discuss. The National Center for Education Statistics' School District Demographic System may be used to learn more about a particular district and compare details across districts or within a given region.

- Population Density
- Percentage in Poverty, Under 18
- Percentage with Some College
- Median Housing Value
- Percentage with Associate's Degree
- Homeownership Rate
- Percentage with Bachelor's Degree
- Percentage of Annual Housing Move, Under 18
- Percentage with Graduate/Professional Degree

Our communications with the agency suggested that demographic and economic variables carry the most weight with DPI. The final list as presented here represents this interest.

We then calculated the percentage by which all other states differ from Wisconsin for each of these 17 variables and, weighing them equally, averaged the percent of variance across all variables. Each variable was given equal weight as a means of acknowledging the subjective nature of DPI's ratings and of statewide comparisons in general. Next, we ranked states according to this average, and decided that only those states ranked in the top 30 of this similarity metric would be considered for more intensive examination. We display the average differences between each of these 30 states and Wisconsin in Table 6.

Table 6: Wisconsin Similarity Index

Rank	State	Statistical Difference	Rank	State	Statistical Difference
1	Minnesota	12.8%	16	Wyoming	30.5%
2	Iowa	17.8%	17	Vermont	31.2%
3	Indiana	18.7%	18	Oregon	31.5%
4	Missouri	19.2%	19	Tennessee	32.1%
5	Nebraska	20.0%	20	North Dakota	32.6%
6	Kansas	21.8%	21	Michigan	33.4%
7	Kentucky	23.7%	22	New Hampshire	33.6%
8	Maine	24.6%	23	West Virginia	34.3%
9	Washington	25.4%	24	Ohio	34.9%
10	South Dakota	26.8%	25	Alaska	36.2%
11	Montana	28.6%	26	Colorado	38.3%
12	Idaho	28.6%	27	Arkansas	38.9%
13	Utah	29.3%	28	North Carolina	42.5%
14	Oklahoma	29.3%	29	Virginia	43.6%
15	Pennsylvania	29.4%	30	Alabama	45.0%

Source: Authors' calculations.

After taking a holistic qualitative view of the similarity index and discussing its results, we determined that the state rankings contained a high degree of policy-related validity. One reason for this determination was the methodology that went into the rankings, but perhaps more importantly, that the results appear to be closely aligned with public perception of state similarity. That is, policymakers and state administrators frequently compare Wisconsin to states within close proximity. Given that the highest rankings within our similarity matrix coincide with numerous states in the upper Midwest, from a political perspective, this high level of agreement between the similarity index and mainstream public opinion is likely to give our findings more weight with policymakers and stakeholders.

State Progress

For these 30 states, we chose a layered approach to determine if a state had made statistically significant progress—defined as residing outside a 95 percent confidence interval—on reducing its racial achievement gaps. The primary layer consists of (A) the change in NAEP scores between 2003 and 2011 for fourth-grade reading, fourth-grade mathematics, eighth-grade reading, and eighth-grade mathematics scores; and (B) the change in high school dropout rates between 2001 and 2009. The second layer consisted of holistically evaluating the consistency of these initial markers with data from each state's own standardized test scores and with NAEP scores from 2005, 2007, and 2009. If a state's 2003-

2011 NAEP progress could be corroborated with these other metrics, we determined that it had made significant progress on its Black-White or Hispanic-White achievement gaps during the time in question. Two examples illustrate this process more clearly:

- Oklahoma's Hispanic-White gap in NAEP fourth-grade reading scores closed by approximately 30 percent between 2003 and 2011, and subsequent review of the Oklahoma School Testing Program showed comparable results. Because of this consistency (in addition to similar findings on other grade-level assessments and subject areas), we labeled Oklahoma a "high progress" state.
- Michigan's Black-White gap on NAEP's eighth-grade reading test closed by approximately 17 percent between 2003 and 2011. However, scores on the Michigan Educational Assessment Program did not show any progress in closing racial achievement gaps, and our conversations with officials in Michigan's Department of Education did not indicate an internal belief that progress had been made. Michigan was therefore not labeled a "high progress" state.

Our team elected to focus on states that made significant progress on both their Black-White and Hispanic-White achievement gaps in at least one level of their K-12 system. This means that we considered positive effects on the size of the racial achievement gaps at the elementary, middle, and high school levels. More specifically, we labeled a state "high progress" if it was able to *either* reduce both its Black-White NAEP gaps by a total of at least 20 percent across the four tests and its Hispanic-White NAEP gaps by a total of at least 20 percent across the four tests (thereby noting improvements in the elementary and middle school years) *or* reduce both its Black-White high school dropout rate by at least 20 percent and its Hispanic-White high school dropout rate by at least 20 percent (thereby noting improvement in the high school years).

Summary of Process

For us to consider a state as part of our case study approach, it needed to (A) be ranked in the top 30 on the state similarity index; (B) have either significantly reduced both its Black-White and Hispanic-White NAEP scores gaps or significantly reduced both its Black-White and Hispanic-White high school dropout rates; and (C) have its NAEP progress confirmed by a team member using additional data. Upon completion of this process, four states met these

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criteria: Iowa, Kansas, North Carolina,[7] and Oklahoma. We present the changes seen in these states' racial achievement gaps and dropout rates in Tables 7 and 8.

Table 7: Changes in Achievement Gaps (in points)

	Black-White				Hispanic-White			
	4th gr Rding	8th gr Rding	4th gr Math	8th gr Math	4th gr Rding	8th gr Rding	4th gr Math	8th gr Math
Iowa**	2	-4	-5	1	3	-9	-2	-12
Kansas*	-3	-3	-5	-12	2	-8	1	-6
N. Carolina**	-2	0	-2	-5	6	-12	-2	-9
Oklahoma*	-3	-8	-5	-5	3	2	0	-6

*Notable decline in Black-White achievement gap.

**Notable decline in both Hispanic-White and Black-White achievement gaps.

Source: Authors' calculations based on NAEP data.

Table 8: Percent Changes in Dropout Rates 2001-2009[8]

	Black-White			Hispanic-White		
	2001	2009	Change	2001	2009	Change
Iowa	4.7	5.2	0.5	5	2.6	-2.4
Kansas	2.7	1.3	-1.4	3.3	1.2	-2.1
N. Carolina	2.1	1.4	-0.7	4.5	2.7	-1.8
Oklahoma	2.9	0.4	-2.5	5.6	1.4	-4.2

Source: Authors' calculations based on the Common Core of Data from the National Center for Education Statistics.

As previously noted, we also put the 45 "non-target" states through a less-intensive review process; states similar to Wisconsin that did not make state-level progress were examined for district- or school-level policies that have the potential to be scaled up, and states that made statewide progress but are not similar to Wisconsin were examined for policies that could withstand the translation to Wisconsin's context.

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[7] Even though North Carolina placed 28th (out of 30 states) according to our similarity index, we include it as one of our "target states" because it fulfilled the second and third parts of our process: our designated academic achievement requirements. Between 2003 and 2011 racial achievement gaps closed in all subjects and grade levels, with the exception of 4th grade reading (Hispanic-White) and 8th grade reading (Black-White). Its dropout rate also declined from 2001 to 2009.

[8] Though we did not have access to dropout data through 2011, as we did for NAEP data, to mediate this difference we considered similar 8-year windows that largely overlap. This was to give states the same amount of time to address dropout trends as they do subject assessment trends.

Finally, we analyzed policies within both the targeted case study states and the less-intensive review states according to two crucial measures: (1) the resources demanded by the policy, and (2) the legislative/procedural authority required of the SEA for effective implementation. This information guided our detailed investigation of policies that could conceivably be implemented in Wisconsin.

In the following sections we summarize the results of our case study approach. In the State Analysis section, we present detailed analyses of initiatives from the four target states. In Other Policy Initiatives, we provide a broad overview of promising efforts in other states.

STATE ANALYSIS

To best focus our research, we concentrated on policies in four states aimed at improving student achievement, especially that of minority students. These policies include early childhood interventions as well as initiatives during elementary, middle, and high school. By conducting a cross-national review of policies directed at different school levels, we present a discussion of promising methods that may help to narrow Wisconsin's Black-White and Hispanic-White achievement gaps.

Iowa – Statewide Voluntary Preschool Program

Iowa's most notable education priority is its SEA's focus on early childhood education. In 2007, the state established a Statewide Voluntary Preschool Program (SWVPP) for four-year-olds, thereby providing equitable, consistent funding to increase all children's access to and use of early education opportunities regardless of family income. The primary objective of this initiative is to provide instruction at this early academic stage that is as high quality as that available in other Iowa public schools and at other grade levels. The SWVPP therefore requires instruction by licensed early education teachers, as well as the implementation of research-based child education standards. Schools may use one of three approved program standards. One of these is the Iowa Quality Preschool Program Standards, which was developed by a team of early childhood education consultants under the direction of the Iowa Department of Education (Iowa Department of Education 2012a).

The SWVPP requires rigorous and age-appropriate curricula that align with the state's K-12 academic standards. The Iowa Department of Education also mandates quality assessments of the children participating. By using Dynamic Indicators of Basic Early Literacy Skills, the state conducts a Kindergarten Literacy Assessment to evaluate its prospective kindergarten students. Normally conducted in early October, the results of this analysis are available by January 1, allowing preschool teachers to tailor their instruction for the rest of the academic year as necessary (Iowa Department of Education 2012b).

Student Performance

Its recent implementation prevents Iowa's preschool program's effects from being captured on standardized assessments such as NAEP, but the state has nevertheless measured notable proficiency gains. A 2012 report notes that proficiency among all kindergarteners that completed the state program was 8 percentage points higher than those who did not, as measured using the literacy assessment. Comparable gains were seen when a student's poverty level was taken into account; children in poverty who participated in the SWVPP were 7 percent more proficient than those who did not. Given the high correlation between income level and race, this suggests improvement for Iowa's minority students (Iowa Department of Education 2012b).

This program has been rolled out to 316 of 351 Iowa school district. In addition, the emphasis on quality components within the program influences non-state preschool programs in the state to increase their standards and performance as well (Iowa Department of Education 2012b). The result has been a greater emphasis on preschool education statewide and noticeable gains in overall proficiency (Iowa Department of Education 2011).

Applicability to Wisconsin

According to the Wisconsin Council on Children and Families, Wisconsin may be the only state that designated the education of four-year-olds in its original constitution (Wisconsin Council on Children and Families [WCCF] 2010). Despite the fact that the 1828 document stipulates that "schools shall be free and without charge for tuition to all children between the ages of 4 and 20 years" (WCCF 2010), Wisconsin does not currently have a statewide preschool or four-year-old kindergarten program. As of the 2010 school year, 80 percent of Wisconsin school districts offered 4K programs (WCCF 2010). The number of districts offering services has risen slightly over the last two academic years, accounting for nearly all Wisconsin districts in 2011-2012 (DPI 2012b; DPI 2013b). However, only 56 percent of Wisconsin four-year-olds were enrolled in state pre-kindergarten classes during the 2011-2012 school year (authors' calculations based on U.S. Census and KIDS COUNT data).[9]

While individual districts most often provide early educational services in Wisconsin, collections of community agencies throughout the state also provide access to pre-kindergarten programs. The latter "community approach" brings together local agencies, childcare services, and programs like Head Start to offer instruction to four-year-olds. The 2010 Wisconsin Council on Children and Families report suggests that the quality of preschool education likely varies throughout Wisconsin due to the high level of local direction and the diversity of actors involved. Additionally, the National Institute for Early Education Research (2011) reports that Wisconsin currently fulfills only five of ten benchmarks pertaining to quality early education; most notably the state does not cap classroom enrollment at 20 students or require a 1:10 child-to-teacher ratio.

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[9] Despite a thorough research review, questioning staff at DPI, and contacting the Applied Population Laboratory, the most recent academic year for which we found information on Wisconsin students' enrollment in state pre-kindergarten is 2011-2012. We calculated the percentage of four-year-olds enrolled using the total enrolled according to KIDS COUNT and the total number of four-year-olds in the state, according to the U.S. Census estimates for 2011. The total of 56 percent is only slightly higher than the 54 percent the National Institute for Early Education Research reported in its 2011 preschool yearbook report (since cited in reports as recently as March 2013 and cited throughout this report), but likely an underestimation, given the continual expansion of 4K services in Wisconsin over recent years.

Nevertheless, Wisconsin has made strides that can ease the adoption of universal early childhood education. Enrollment in four-year-old programs increased by nearly 36 percent from 2001-2002 to 2010-2011 (NIEER 2011). Additionally, the Wisconsin Model Early Learning Standards are now in effect to direct Wisconsin preschool instruction (Wisconsin Model Early Learning Standards Steering Committee 2011), and in 2012 the Legislature passed Act 166, which requires school boards to annually assess kindergarten students' reading readiness with the Phonological Awareness Literacy Screening system (Wisconsin Legislative Council 2012). The Wisconsin Model Early Learning Standards appear to be comparable to Iowa's preschool standards, with both considering the interplay between a child's physical well-being, learning styles, social development, and communication skills, among other considerations, for educational success. Both models also present a longitudinal focus, aligning efforts from birth to first grade (Early Childhood Iowa 2013; Wisconsin Model Early Learning Standards Steering Committee 2011).

In Wisconsin, next steps may include the implementation of new preschool services and the refinement of those already in place. This would likely require more SEA oversight, increased incentives at the district and school levels, and greater program standardization. Combined with the state's compliance with the National Institute for Early Education Research's suggested standards, these efforts will benefit the state's youngest students, especially minority students who consistently underperform compared to their White peers.

Kansas – Data Literacy

While officials at the Kansas State Department of Education were unable to identify a single policy initiative responsible for the state reduction in achievement gaps between minority and White students, one of the more prominent elements they mentioned deals with student-level academic data. However, unlike many states that focus on data *usage*, Kansas focuses on data *literacy*. That is, Kansas devotes a significant portion of its professional development resources to helping educators develop skills in data analysis. Colleen Riley, Special Education Services Team Director, feels this training helps teachers move beyond the simplistic views of student performance that were too prevalent in past years. She notes, "Our educators really understand what's there now—they can dive down deep with the data and know what they're looking at" (Riley 2013). According to Riley, the crucial distinction is that data usage allows teachers to identify student shortcomings, whereas data literacy allows teachers to identify the root causes that lead to the shortcomings; significant and widespread improvement is possible only by attacking such causes. While this initiative is not specifically targeted at racial gaps, its emphasis on more accurately identifying the root causes of student deficiencies is likely to benefit minority students more than their peers because more Hispanic and Black students underperform academically.

The focus on data literacy also serves as the foundation of Kansas's Multi-Tier System of Support, a comprehensive matrix of "increasingly intense, research-based interventions provided to learners that helps them learn by [teachers and staff] responding to their academic and/or behavioral needs." The system is built on the notion that perpetual data feedback allows educators to serve as a rapid-response team that can aid students who are falling behind or making poor choices. This preemptively reduces gaps by identifying student issues as soon they arise. Such a system is only possible in the context of widespread data literacy, as evidenced by the enthusiasm for it in Kansas. Although the program is not mandated, nearly 75 percent of Kansas's districts have voluntarily adopted Multi-Tier System of Support since it was introduced in 2008 (Kansas Multi-Tiered System of Support 2013).

Applicability to Wisconsin

Shifting DPI's focus from data usage to data literacy would require that a comprehensive and high-quality data system be in place, but DPI and the Wisconsin legislature have already taken the first step to data literacy: building a single statewide student information system. Such a system would allow Wisconsin educators to have a universal platform on which to view student information, thereby allowing for cross-district collaboration and reducing the disruption that can accompany teacher mobility. These include DPI's efforts to offer services in the area of data usage through a contract with Infinite Campus Inc., as well as the agency's agreement with the state's Cooperative Educational Service Agencies to provide professional development materials on data literacy. Some additional investment will likely be necessary to (A) improve this system further by generating the specificity required for true data understanding, such as specific skill markers rather than broad subject area scores, and (B) to provide the additional training needed to move educators toward quantitative fluency. Another way in which Wisconsin has already begun working on these issues is its Response to Intervention program, a data-driven early warning system that identifies middle school students who are at risk. Taken together, these efforts indicate that additional investment in the data initiatives would simply extend trends that already exist in Wisconsin.

Kansas appears to be similar to Wisconsin in its level of legislative and administrative control. More specifically, Kansas's education system relies heavily on local control and district-level authority, and its teachers are unionized. As such, it is plausible that a reform enacted in Kansas could also be accepted here. More specifically, the State Department of Education made the crucial choice to have its data-driven Multi-Tier System of Support be optional in its early stages, thereby requiring only the resource capability to develop it, not the statutory authority to implement it.

Kansas – Accreditation Model

In addition to its focus on data literacy, Kansas attempts to reduce racial achievement gaps by changing the state's school accreditation model to account for culturally relevant factors. According to Tom Foster, Research and Evaluation Team Director, the decision to improve the accreditation model originated in an achievement gap task force that meets annually to discuss ways to address racial disparities. As he notes, the task force will "first look for places of 'positive deviance' across the state—places where their actual achievement outperforms the projected achievement based on their student population. It's a real data-heavy process" (Foster 2013). Once the task force identifies these locations, Kansas administrators build case studies of success by talking to school administrators, interviewing superintendents, and performing multiple site visits. The findings from these investigations suggested that Kansas should develop a more comprehensive system for school accreditation. As Foster (2013) explained, "[Accreditation] was just based on reading and math, but now it also has things like college preparedness, career readiness, behavior and character development, social development, student engagement, and school engagement." Internal studies suggested that the likelihood of dropping out of high school was only loosely correlated with grade point average, lending credence to the argument that an intrinsic connection to schooling is as important to student success as academic ability.

Task force officials feel that the new consideration of student engagement represents the most important one in a time of growing diversity. Based on its desire to increase schools' cultural sensitivity, Kansas's task force identified numerous actions that could build healthier relationships with underserved and underperforming student populations. These include:

- Partnering with local businesses and community-based non-profit organizations to give education a more local/grounded feel.
- Developing a communication plan that goes through community leaders (for Hispanic and Black communities) or tribal elders (for Native American communities) in addition to, and occasionally instead of, talking directly with students and families.
- Systematically building detailed case studies of effective school improvement models, rather than simply gathering information via word-of-mouth, and broadcasting those cases more vigorously.
- Developing specialized assistance for at-risk students rather than conducting interventions that conform to a prescribed model in which all interventions appear similar despite the variety of student needs.

Taken together, these and other steps illustrate the shift in Kansas State Department of Education policy away from one that relies on a command-and-comply approach by the SEA to one that supports long-term investment by districts and schools. Foster (2013) likened SEAs in local-control states (such as Kansas and Wisconsin) to the parents of teenagers: "You can try to tell them what

to do, and that might work for a little while on some things, but it's far more effective in the long run if you can convince them to make good decisions on their own."

Applicability to Wisconsin

A change in state school accreditation appears to require only an incremental increase in resource allocation. DPI is in the midst of introducing a new statewide educator evaluation system. While changes in accreditation criteria would also require statutory change, rolling out a new statewide accreditation model would be an extension of the efforts already in place. Rather than being financially costly, most additional resource requirements would take the form of organizational commitment and administrative development.

Regarding authority, Kansas's new accreditation model allows for metrics to be district and community dependent. This provides a superior overall model integrated with local choice, leading to the type of long-term investment to which Foster referred. The success of Kansas's program illustrates the importance of local buy-in to state initiatives. Perhaps more importantly, it aligns with the local control authority outlined in Wisconsin statutes.

North Carolina – Early College High Schools

In 2003, North Carolina passed the Innovative Education Initiatives Act, which allowed for the creation of Cooperative Innovative High Schools (CIH). These schools are designed to follow the Early College High School model, which introduces high school students to college courses, and result from partnerships between colleges and universities and local school districts. Seventy-four CIH schools educated more than 13,000 students throughout the state as of 2011-12, or about 3 percent of the state's high school students (North Carolina Department of Public Instruction [NCDPI] 2012).

The New School program, an initiative from the governor's office, oversees the creation of CIH schools across the state under the auspices of the North Carolina Department of Public Instruction. Each CIH school is physically located at a partner college or university campus, unless that requirement is specifically waived by the local school board. Whereas the local school district and the state board of education must approve partnerships between community colleges and the North Carolina University System, the state board of education has sole authority to approve partnerships with private universities (N.C. Stat. § 115C-238.51 2013). The local school board owns or leases the buildings that house the CIH, and all CIH schools must have fewer than 100 students per grade level (N.C. Stat. § 115C-238.50A 2013).

Students are not required to pay tuition for the college courses they take while in CIH schools. Instead, the state board of education reimburses the participating college or university for the classes these students take. The CIH schools receive grant money from the North Carolina Department of Public Instruction to help

cover some of their additional expenses. During the 2010-2011 academic year, the grant total per school was $307,650. CIH schools use these funds to pay for teacher and principal professional development and college textbooks, as well as one guidance counselor, one career counselor, and one college liaison each. Local school boards provide the remainder of the schools' operating budgets (NCDPI 2012).

Student Performance

North Carolina's high school graduation rate has increased every year since the introduction of the CIH schools, increasing from 70 percent with the 2004-2005 freshman year cohort to 80 percent in the last school year.[10] The graduation rates for Black and Hispanic students increased from 63 percent and 57 percent, respectively, to 75 percent and 73 percent in the same time period (NCDPI 2013). CIH schools led the way in this statewide increase in graduation, showing a higher graduation rate compared to other schools in the state. In the 2011-2012 school year, CIH schools had a collective graduation rate of 91 percent compared to the state average of 78 percent, and eight CIH schools graduated 100 percent of their students (NCDPI 2012). CIH schools have also had consistently lower dropout rates than the state as a whole. Last year, these schools had a collective 0.5 percent dropout rate compared to the 3 percent dropout rate for the entire state (North Carolina New Schools 2013).

Graduation and retention are not the only measures of academic success exhibited by CIH schools. According to a study by the University of North Carolina-Greensboro, the minority achievement gap for both Algebra I and English I is lower in these schools than in other schools in the state. In CIH schools, the gap between minority and White students who successfully completed Algebra I was 2 percent for the 2010-2011 school year, while it was 14 percent in traditional high schools. There was no racial gap in the rate for successfully completing English I in CIH schools versus a 9 percent gap in the rest of the state's schools (SERVE 2010). Such gap closures also persist into later grades and other subjects. During 2010-2011, minority tenth-graders in CIH schools outperformed their non-minority peers in geometry and biology on state achievement tests, and both groups had higher passing rates than traditional high school students (NCDPI 2012). Another study specifically looked at the Black-White achievement gap and found that Black students at CIH schools passed the state end-of-course exams at higher rates and with smaller gaps between their White peers when compared to Black students attending traditional high schools (Kaniuka 2011).

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[10] These graduation rates are calculated according to the North Carolina Department of Public Instruction method. The department has used this method since the 2004-2005 cohort. The state method is in line with the federal method the U.S. Department of Education put forward in 2010. More information about how North Carolina calculates the graduation cohort rate is available on its website: http://www.dpi.state.nc.us/docs/accountability/reporting/abc/2010-11/cohortgradratecalc11.pdf

Any student in the district is eligible to go to a CIH school, and the schools use an application process to select students for admission. Because students are not automatically enrolled in these schools, it is necessary to consider how selection bias affects the academic results of the CIH schools. One study by Ongaga (2010) investigated this issue using data from one CIH school. He led focus groups and interviewed individual students to learn what motivated them to attend. Most of the students said that their parents had strongly influenced their decision, and that the potential for reducing up to two years of college costs provided a significant incentive for parents to send their children to CIH schools (Ongaga 2010). Although this study looked at only one school, the demographic and economic backgrounds of the participants were diverse enough to represent all groups. Nevertheless, the interview results indicate the types of students and parents attracted to such a program, and suggest that this program may be best suited to helping already highly motivated parents and students achieve further success.

Applicability to Wisconsin

Wisconsin already has the Youth Options Program, which allows high school students to take college-level courses and receive credits from local colleges and universities. Under this program, the local school board covers students' tuition expenses as long as they pass the class(es) (Wis. Stat. § 118.55 2013). Unlike the CIH schools in North Carolina, the Youth Options Program requires that students secure transportation to the college campus where the classes are taught, but financial assistance for the cost of transportation is only available to low-income students (DPI 2011).

The University of Wisconsin-Oshkosh and the University of Wisconsin-Green Bay have partnerships with local school boards to provide dual-credit courses in local high schools rather than on the university campus. Wisconsin also has one early college high school in Milwaukee: Centro Hispano High School is a small charter school that partners with Milwaukee Area Technical College to provide dual-credit courses onsite (DPI 2011). As a bilingual school where over 80 percent of students are Hispanic, Centro Hispano is moving to an early college model with sponsorship from local Hispanic community groups. It is too soon to see the results of this shift to the early college model, but the school has shown improvements in Hispanic students' mathematics and language scores on the Wisconsin Knowledge and Concepts Examination through 2012, the most recent year for which data are available (Milwaukee Public Schools 2012).

While early college charter high schools are permissible under current Wisconsin state law, creating schools according to the North Carolina model would require statutory authorization. The state would also need to create a dedicated funding mechanism and policies to govern such an arrangement in Wisconsin.

Oklahoma – ACE Act

In 2005, the Oklahoma Legislature passed the Achieving Classroom Excellence (ACE) Act, which placed a strong emphasis on improving students' performance on mathematics assessments. A particular goal was increasing sixth- through eighth-graders' proficiency on the Priority Academic Student Skills assessment, the statewide exam, in part by creating the Mathematics Improvement Program to increase teachers' mastery of the subject matter content. The ACE Act designated additional remediation resources and math labs as part of the program. The program also expanded the mathematics curriculum overall, requiring three years of mathematics in high school (with an opt-out option), and offering $1,000 stipends to teachers who passed mathematics subject-area tests. More broad-based initiatives within the ACE Act were additional full-day kindergarten requirements, other content changes to the required curriculum, and state support for high school seniors wanting to take college courses. Regarding the latter, the state offered to finance up to six college credit hours per student per semester (Achieving Classroom Excellence Act 2005, Okla. Stat. 70 § 1210.521; Education Commission of the States n.d.).

Student Performance

The ACE Act emphasized improved mathematical performance, and our analysis of NAEP data from 2005 and the following years suggests that the act may have had an impact. Though causality is difficult to parse out, eighth-grade mathematics scores (the most appropriate to consider given ACE's focus on the middle school years) for Blacks, Whites, and Hispanics all increased from 2005 to 2007. The improvement among Blacks was more significant than that of the other cohorts, and change for all was much more modest when comparing 2007 to 2009. Most significant is the change in the gaps between these groups. While the Hispanic-White achievement gap narrowed by two points on the NAEP from 2005 to 2009, the Black-White achievement gap narrowed by eight points during that same time period. It is important to note, however, that there was a slight widening of these two gaps again in 2011 (U.S. Department of Education 2009, 2011a) (see Table 9). According to Oklahoma's Department of Education, student performance on ACE end-of-year assessments has risen most steadily since 2008 (Oklahoma Department of Education 2012).

**Table 9: Changes in Oklahoma's Achievement Gaps
in Eighth-Grade Mathematics, 2005-2011 (in points)**

Year	Black-White	Hispanic-White
2005	29	21
2007	22	21
2009	21	19
2011	24	22

Table adapted from: NAEP data provided by the National Center for Education Statistics.

In 2008, Senate Bill 1769 succeeded the ACE Act and offered similar measures for reading achievement. In particular, it focused on the funding, availability, and structure of remediation programs. The bill was signed into law as Oklahoma Statute 70 § 1210.526. The NAEP data from 2009 to 2011 suggest that improvements in Oklahoma students' reading scores were not as substantial or as consistent as they were on mathematics assessments following the ACE Act. From 2009-2011, Hispanic students improved their performance most significantly on both the fourth- and eighth-grade reading assessments, with the gaps between these students and their White counterparts narrowing slightly during those years. Similar effects were not seen for Black students (U.S. Department of Education 2009, 2011a).

Applicability to Wisconsin

Oklahoma's ACE Act targets improving student performance on middle school mathematics assessments, a significant problem area for Wisconsin. To implement something comparable to Oklahoma's ACE Act would require statutory change to state curricula standards at the middle school level. Additionally, attempts to sustain any improvements seen in that subject area resulting from an increased emphasis on mathematics would also require adjustments to the state's high school curriculum requirements. This change at the high school level would effectively alter Wisconsin's current structure, which dates back to the 1980s and requires students to complete only two mathematics credits in order to graduate (see Table 10). At a minimum, pursuing a model similar to ACE would require three mathematics credits. According to Pinsonneault, DPI included a plan to increase mathematics and science requirements to three credits in its 2012 Elementary and Secondary Education Act flexibility waiver (DPI 2012a; Pinsonneault 2013b). This shift in graduation requirements has since been proposed in Senate Bill 51. However, Sarah Archibald, Education Policy Advisor to Senator Luther Olsen, current chair of the Wisconsin Senate Committee on Education, predicts that requirements will not change via that bill. Instead, Olsen and his committee recently decided to work with DPI, the Governor's office, and the Assembly's education leadership to establish a more comprehensive college and career readiness proposal that would increase the number of required credits for both science and mathematics. She predicts that the results of this collaboration will be available by late summer or early fall 2013 (Archibald 2013).

Table 10: Wisconsin's Minimum Curriculum Requirements

Subject	Credits
English/Language Arts	4
Math	2
Science	2
Social Studies	3
Physical Education	1.5
Health & Wellness	0.5*
Electives	Not specified
TOTAL	**13 credits**

*The 0.5 health & wellness credit may be earned anytime from grade 7 to grade 12, and is therefore not strictly a high school credit requirement.

Table adapted from: Wis. Admin. Code PI 18.03

Embracing a policy similar to the ACE Act may also require additional resources and oversight from DPI. As part of its new standards, Oklahoma emphasized quality mathematics instruction by providing for merit-based pay. The state rewards teachers with better pay if their students exhibit improvement in mathematics. In addition, the ACE Act offers stipends to teachers to cover additional training in mathematics education. Therefore, implementation of a similar policy in Wisconsin would require funding that would either have to be newly appropriated or diverted from another area. In addition to the cost of payments to teachers, identifying applicable courses and tracking participants' successful completion of such curricula would increase the agency's responsibilities in the area of teacher professional development. To be most effective, additional efforts would need to be made to cooperate with local districts and schools to ensure that educators are fulfilling necessary requirements, are properly evaluated, and receive appropriate compensation as part of the merit-based incentive system.

Oklahoma – Universal Preschool

Oklahoma's universal preschool program began as a pilot program in 1980 and was part of a larger plan to extend preschool services to all four-year-olds in the state. It expanded in 1990 due to increased state funding, but enrollment was limited to preschoolers eligible for Head Start, and institutions could charge tuition (NIEER 2011). Oklahoma's preschool program became its modern version in 1998, when the state implemented a voluntary universal preschool program, which is free for participants and includes full- or part-day programs. The state prioritizes instructional quality, requiring early education teachers to have a college degree and compensating them with pay rates equal to that of teachers at higher school levels (Gormley et al. 2005; NIEER 2011).

Oklahoma's preschool program is well known and nationally recognized; in 2011, the National Institute for Early Education Research ranked it second nationwide in terms of access offered to four-year-olds (NIEER 2011). In 2013, the Obama

Administration cited it as a model for the plan to expand pre-kindergarten education across the nation (Banchero 2013). Data and analyses documenting the success of the program, which educates 74 percent of the state's four-year-olds in 98 percent of districts (NIEER 2011), are widespread, with many reputable studies describing its success and applauding it as a national model for early childhood education.[11] In one such study, Gormley et al. (2005) considered student performance on three subtests of the Woodcock-Johnson Achievement Test, a widely used assessment in early education. The authors compared the scores of roughly 1,500 preschool children to those of roughly 3,100 kindergarten students, the latter having previously been enrolled in Oklahoma's state preschool program. Because both groups took the same test at the beginning of the 2003 academic year, Gormley et al. (2005) were able to construct a control group and a treatment group. They found Oklahoma's initiative to be particularly beneficial for the minority children enrolled, with the program's positive effects being higher for Blacks and Hispanics than for their White peers, a result that was statistically significant at all confidence levels. While these results are promising, selection bias is still possible because Oklahoma's preschool program is voluntary. Additionally, the treatment and control groups, while similar to each other and the larger preschool population, may differ in some ways that cannot be wholly controlled (Gormley et al. 2005).

A follow-up study that focused exclusively on Hispanic students' participation in the state preschool program found similar positive results. Using a method similar to that in the study described above, Gormley and Gayer (2005) compared the test results of kindergarteners who had attended state-sponsored pre-kindergarten to those of a younger cohort about to enroll in pre-kindergarten. All participants took the test at the same time, regardless of cohort (and therefore, regardless of age). The primary benefit of this model is that it controls for selection bias; parents within both groups chose to send their children to preschool, and to state-sponsored preschool specifically. Additionally, they found no statistically significant differences in variables such as gender, free and reduced-priced lunch eligibility, and mother's education, among others. Overall, they found that the state program has a positive effect on Hispanic students' cognitive and language skills, especially for those who speak Spanish at home. The assessment scores for the latter were consistently higher than the scores of students who do not speak Spanish at home and more often statistically significant compared to predominantly English-speaking students. According Gormley and Gayer's analysis (2005, 19), "The Tulsa pre-K program is reaching a higher percentage of Hispanic four-year-olds than other preschool programs, it offers higher instructional quality than other school-based pre-K programs, and it provides substantial benefits to Hispanic students."

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[11] In addition to those described here, many studies are available from Georgetown University's Center for Research on Children in the United States at http://www.crocus.georgetown.edu

Much like Iowa's SWVPP, which has demonstrated notable academic improvements among its participants, Oklahoma's universal preschool program shows how comprehensive state-funded early childhood education can grant access to minority children and provide them with the opportunity to begin on an academic footing comparable to their White peers. This is a trend seen in other states with similar, though arguably smaller-scale, initiatives as well (Ackerman and Barnett 2006). Despite the well-documented positive effects of early childhood education, a 2013 Equity and Excellence Commission[12] report to Secretary of Education Arne Duncan notes that nationally "only 65 percent of 4-year-olds from the lowest-income backgrounds attend preschool (with many attending low-quality programs), compared with 90 percent from the highest-income backgrounds" (Equity and Excellence Commission 2013). Given the high correlation between income level and race, this suggests that Oklahoma's minority students are well served by the free universal preschool system in the state.

As with many early education interventions, there is concern about the extent to which positive effects in the early years persist throughout the later school years (Hill et al. 2012). To be most effective, many experts recommend that preschool programs be coupled with equally intensive academic resources and instruction through at least the third grade (PreK-3) (e.g., Kauerz 2006; Shore 2009). This is especially crucial for low-income and minority students, who are more likely to attend low-quality schools (Wilson et al. 2006). We include further discussion of PreK-3 programs in other states in our Other Policy Initiatives section below.

Applicability to Wisconsin

Many of the considerations associated with the transferability of Oklahoma's universal preschool program to Wisconsin are similar to those related to the SWVPP. Although preschool education is widespread within the state (WCCF 2010), no statewide preschool initiative is currently in place. Additionally, just over 50 percent of Wisconsin four-year-olds were enrolled in pre-kindergarten during the 2011-2012 school year (authors' calculations based on U.S. Census and KIDS COUNT data), suggesting the need and opportunity for expansion.

To expand preschool services to all districts and increase student participation within Wisconsin would require statutory authorization as well as additional coordination among DPI, local districts, and community agencies. The state would also have to formulate a funding mechanism and revise its early education policies. In 2007, economist Robert Lynch analyzed how much it would cost to phase universal preschool into each state. Adjusted to 2013 dollars, his estimate of

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[12] The Equity and Excellence Commission is "is a federal advisory committee chartered by Congress, operating under the Federal Advisory Committee Act (FACA); 5 U.S.C., App.2" (as quoted in Equity and Excellence Commission 2013).

the annual cost of a fully phased-in program in Wisconsin would be $590 million. The program, he posited, would pay for itself within 14 years of implementation with what he called "budget benefits," defined primarily as avoided costs of other intervention programs for at-risk children that universal preschool would reduce. Other benefits for the students and society could include positive social results such as increased lifetime earnings and reduced crime (Lynch 2007).

It is likely that there would be some federal financial support for preschool expansion in Wisconsin. Because the Obama administration has made early childhood education a cornerstone of its education initiatives, the President recently requested $75 billion over 10 years to finance universal preschool nationwide. Assuming that Wisconsin's preschool enrollment accounts for 2.7 percent of the national enrollment, as it did in 2009 (authors' calculations based on U.S. Department of Education and KIDS COUNT data), then the state would receive $202.5 million (2.7 percent of the $75 billion) in funding from the federal government over 10 years. The federal government's level of support would begin at over 90 percent of the required funds in the first year and gradually decrease each year thereafter, increasing the share for which the state would be responsible (Carolan & Barnett 2013).

Lynch conducted his analysis in 2007, when fewer districts in Wisconsin offered preschool services than do now (DPI 2013b). This suggests that "scaling up" in 2007 would have cost more than it would today, and his calculation might be an overestimation. Additionally, his study includes calculations for universal preschool for three- *and* four-year-olds, so Wisconsin's program costs would be less if only directed at the latter group. However, some economists, including James Heckman, advocate earlier intervention, suggesting that preschool for three-year-olds (3K) has even larger economic and social payoffs than 4K in the long-run (see Figure 1) (Heckman 2008). If Wisconsin were to embrace a 3K educational initiative in addition to 4K, Lynch's figures (adjusting for inflation) would be most applicable. Costs would be even greater should Wisconsin implement a PreK-3 education initiative or something in line with the Kauerz (2006) and Shore (2009) recommendations.

Figure 1: Return on Investment in Human Capital at Different Ages

a) Return on investment in human capital at different ages,
assuming the same amount initially invested at each age.
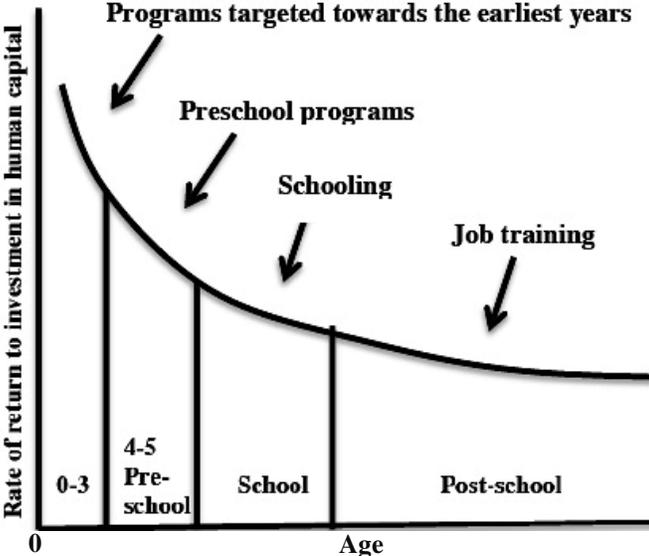
Source: Heckman (2008)

OTHER POLICY INITIATIVES

In addition to those states we specifically targeted because they met our similarity and progress criteria, numerous other states offer policy alternatives that show significant promise. Some of these alternatives were implemented in contexts too different from Wisconsin to be considered directly applicable. Others were implemented only in selected districts and thus cannot drive statewide results. What follows is a summary of these initiatives.

Competitive Grants Programs

Using methods similar to the federal education initiatives such as Race to the Top and the Teacher Incentive Fund, several states have implemented state-level competitive grants programs to spur innovative reforms at the district level. For example, Tennessee authorized a program to improve the performance of its after-school programs by allowing districts and schools to apply for funds to design locally responsive reforms. West Virginia is experimenting with a comprehensive program, backed by a competitive grants process, that creates "School Innovation Zones" in which the state awards district-level leadership more freedom in program design, additional authority to design and redesign school settings, and a relaxation of certain statutory limitations. Utah's grant competition is unique in that it does not deal with classroom teaching and learning, but rather with increasing resource efficiency by allowing districts to experiment with their human resource and capital spending budgets. The philosophy of these approaches is that (A) local districts are more likely to possess a clearer picture of what reforms their students and schools need to improve, and (B) freedom from at least some layers of bureaucracy will allow and encourage districts to pursue these reforms with more vigor and efficiency.

Choice Architecture

Focusing on how options are presented, rather than on the final decision, is known as choice architecture. Borrowed from behavioral economic work, such as *Nudge: Improving Decisions about Health, Wealth, and Happiness* by Richard Thaler and Cass Sunstein (2008), choice architecture can be applied to education settings in numerous ways. Research shows that the manner in which a decision is reached can influence social and institutional processes, and this relatively new concept has the potential to significantly improve school performance. One way emphasizes that default settings are a powerful tool for change because personal inertia makes opting out of a pre-determined setting somewhat difficult. This has played out in a variety of ways for many of the SEAs we contacted.

For example, Maria Flores, Associate Director of Innovation at Washington State's Office of the Superintendent of Public Instruction, explained that her state recently altered the manner in which students enroll in high school AP classes: Rather than having students register for AP classes, the office establishes a cutoff

score, above which eighth grade students are automatically enrolled in pre-AP courses or high school students are automatically enrolled in AP courses. By changing the default setting from "AP and pre-AP coursework must be opted into" to "students are placed in AP and pre-AP coursework unless they opt out of it" (Flores 2013), the state has seen an increase in the percentage of students taking high-level coursework in high school. Similar initiatives are in place in Florida and Texas, and on a smaller scale, in Massachusetts.

In addition to encouraging students who show academic promise to increase the rigor of their coursework, choice architecture can also be used to elevate students on the margins of academic sufficiency. For example, Kathleen Smith, Director of the Office of School Improvement at Virginia's Department of Education, explained that her office analyzed data from the National High School Center in order to identify students at risk of not graduating from high school as they *enter* ninth grade. Typically, the determination of a student being "at risk" occurs much later in high school, when it is frequently too late to salvage the child's academic career. By utilizing data to determine academic placement proactively rather than reactively, the state of Virginia has improved its ability to effectively target its resources for at-risk students (Smith 2013).

Educator Support

As some states try to influence the structures and processes within their schools, others have focused on improving teacher and administrator training. While professional development is a major emphasis of SEAs in all states, a common complaint among on-the-ground educators is that professional development offerings are stale and broad. Hence, novel approaches can create substantial improvements, as is beginning to occur in several states (Hill 2009).

One example is Idaho, which implemented reforms to improve academic performance in 2007 by fostering a more comprehensive approach to leadership. More specifically, the Idaho State Department of Education selects retired teachers, administrators, and other "distinguished educators" to serve as Capacity Builders who coach district and school leadership teams on an ongoing basis. As part of the Idaho Building Capacity Project, these teams are empowered to create and implement a customized school improvement plan. While demand for the program exceeds available funding, Idaho maximizes its impact by prioritizing schools and districts with the greatest academic and financial need (Underwood 2013). Recently released data indicate that the Hispanic-White achievement gap in eighth-grade reading narrowed more in Idaho between 2009 and 2011 than in any other state (Idaho State Department of Education 2013b). Our review of NAEP data from 2003 to 2011 confirms this trend for eighth-grade students; gaps in both mathematics and reading on the eighth-grade assessment narrowed considerably during that time.

Massachusetts provides another example of how educator support can lead to significant improvement. To better educate its burgeoning population of Hispanic

students, Massachusetts recently revised its requirements for all Sheltered English Immersion teachers and administrators (Deninger 2013). As part of the larger Rethinking Equity and Teaching for English Language Learners program, which combines Sheltered English Immersion professional development with new curriculum standards and assessments, teachers and administrators must take specific courses to refine their understanding of the complexities of educating minority students (Massachusetts Department of Elementary and Secondary Education [MDESE] 2013). Course development and completion requirements will be put into place gradually from 2013 to 2016.

All teachers and administrators who complete the necessary requirements will receive Sheltered English Immersion endorsements, meaning that they have "met the subject matter and requirements necessary" to instruct English language learners or supervise and evaluate those who do, respectively (MDESE 2012, iii). This initiative complements Massachusetts' Achievement Gap Act of 2010 and the SEA's increased emphasis on Gateway Cities,[13] where many Hispanics have settled (Deninger 2013). Although this program is too new to provide rigorous empirical data, early returns suggest that minority students benefit from teachers who are aware of the unique learning challenges that accompany their cultural and familial backgrounds (e.g., National Education Association 2008).

High School Persistence

In addition to policies that change default practices in favor of increased academic rigor, it is worth considering efforts intended to improve academic persistence.

For example, in 2005 Indiana revised its policy addressing student dropouts by raising the compulsory school attendance age from 16 to 18. As a result of this change, students hoping to leave school before graduation have to consult with their parents and principal about the economic, professional, and personal impacts that result from failing to complete high school. To deter students from dropping out, the law enables principals to limit students' driver's licenses and work permits if they do not complete the required counseling procedure before leaving school (National Conference of State Legislatures [NCSL] 2013; Spradlin 2013).

Additionally, to encourage persistence and matriculation, the Indiana legislature created nontraditional academic routes to graduation in 2005 and 2006. These

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[13] Twenty-four Massachusetts cities constitute the state's "Gateway Cities," eleven of which were identified and discussed in a 2007 joint MassINC and Brookings Institution report available at: http://www.massinc.org/Research/Gateway-Cities.aspx. According to the Massachusetts Department of Elementary and Secondary Education, "most students who disproportionately face an achievement gap reside in the Commonwealth's 24 Gateway Cities" (http://www.mass.gov/bb/h1/fy14h1/exec_14/hbudbrief1.htm). Minorities are more highly concentrated in these cities.

routes include a flex program, allowing juniors and seniors to complete either a college or technical program or enroll in employment. Participating students must attend high school courses at least part time, fulfill general diploma requirements, avoid disciplinary action, and graduate on time. Alternatively, high school students may pursue a fast track or a double-up program, both of which provide access to college curriculum. The former includes special consideration for 19-year-olds hoping to graduate from high school, while the latter is a dual-degree program that results in a high school diploma and an associate's degree (NCSL 2013).

Though causality can be difficult to demonstrate, Indiana's graduation rate increased consistently from 2005 to 2011, the most recent year for which data are available; in addition, the dropout rate decreased during that time. This occurred for all racial and ethnic groups, but particularly for Black and Hispanic students, whose graduation rates increased by roughly 17 and 19 percent, respectively, during those six years (Center for Evaluation and Education Policy 2011; U.S. Department of Education 2012a). Terry Spradlin (2013), Director for Education Policy at Indiana University's Center for Evaluation and Education Policy, identified this multifaceted policy as a key driver in reducing the state's dropout rate.

Wisconsin has alternative pathways to graduation available to its high school students as well (DPI n.d.b).

State-Run Schools

The traditional model of school governance in the United States places most of the control over school policy at the local level. In recent years, a few states have become more assertive in their treatment of schools that do not perform well. Massachusetts, Michigan, Louisiana, and Tennessee have all implemented policies that allow the state to take over failing schools and implement managerial, financial, and other personnel changes. With the exception of Louisiana, the programs in these states are too new to provide useful data. Although the express purpose of this type of intervention is to increase total student performance, the disproportional representation of minorities in low-performing schools means that such programs should have an impact on racial achievement gaps.

One of the earliest examples of such a policy comes from Louisiana. In 2003, the state legislature passed Act 9, which created the Recovery School District (RSD). The RSD is a statewide program under the direct administration of the Louisiana Department of Education. In 2005, after Hurricane Katrina, Louisiana passed Act 35, which made it easier for the state to take over low-performing schools (Cowen Institute for Public Education Initiatives 2011).

Schools that receive a failing grade for four consecutive years, based on Louisiana's academic assessment program, are removed from the local school

district and transferred to the RSD (LA Stat. Act 35 2013). Each school placed in the RSD must remain there for a minimum of five years. Funding for the RSD comes from state appropriations, and is twice the amount that each school would have received under the former district's tax policy (LA Stat. Act 35 2013).

Three-quarters of the schools in the RSD are in New Orleans, which makes results in that city a key driver of the entire district's performance numbers. The RSD shows marked improvement in student performance over the rest of Louisiana. By 2010, over 60 percent of the schools in the district had moved out of failing status (N. Smith 2012). From 2007 to 2010, the RSD showed at least a 25 percentage point improvement in the number of students receiving a Basic or higher score on state fourth-grade and eighth-grade mathematics and reading tests. The increase on these tests in other schools in the state during the same time was less than half that amount (Cowen Institute for Public Education Initiatives 2012a).

The impact on Louisiana's Black-White achievement gap is an indirect one because the RSD does not directly target the racial gap (Cowen Institute for Public Education Initiatives 2012a). However, because 95 percent of students in the RSD in New Orleans schools are Black, the program has a significant impact on their achievement. Louisiana did, in fact, see improvement in its Black-White gap from 1999 to 2011, the most recent year for which data are available (Cowen Institute for Public Education Initiatives 2012b).

State takeover of local school districts is a drastic measure meant to address institutional and structural problems within chronically failing schools. States are turning to this method of school reform for cases where the problems may be more administrative than educational. State takeover relies on a case-by-case approach because each situation that warrants such action requires flexibility in addressing unique problems. In the case of New Orleans, corruption among school board members and mismanagement of funds contributed to the district's shortcomings (Cowen Institute for Public Education Initiatives 2011). Although we cannot define exactly what actions are the most effective in turning a failing school or district around, it seems worth highlighting the way in which one state is taking a more active role in local governance.

Wisconsin state law already has a procedure for the State Superintendent to intervene in low-performing districts. However, the law only allows the Superintendent to work with and through the local school board to implement changes (Wis. Stat. § 118.42 2013). A full state takeover of low-performing schools in Wisconsin would require a new state law that expanded the authority of the DPI.

PreK-3 Alignment

As discussed above, there is growing support for aligning preschool services with instruction through the third grade (PreK-3). Evidence suggests that consistent reinforcement of high-quality educational instruction limits "fade out" effects and

contributes to higher achievement and greater success later in life. The Chicago Child-Parent Centers constitute one example of a comprehensive, multi-grade intervention. Since 1986, Arthur Reynolds of the University of Minnesota has collected data on students enrolled in the centers, which provide high-quality public education to low-income children in the city's urban core. Located in designated public schools throughout Chicago, the centers provide services beginning in preschool and extending through the third grade. In his "age 28" follow-up, Reynolds found that "participation was independently linked to higher educational attainment, income, socioeconomic status, and health insurance coverage, as well as lower rates of justice-system involvement and substance abuse" (Reynolds et al. 2011b, 360). Another example of PreK-3 intervention is the Harlem Children's Zone educational initiative. Like the Chicago centers, Harlem Children's Zone provides PreK-3 education and has been successful. The Obama administration used the Harlem-based program as a model for its 2010 Promise Neighborhoods agenda (Whitehurst and Croft 2010).

Because Child-Parent Centers and Harlem Children's Zone offer free social services that complement educational instruction, they require considerable funding and other resources. The Chicago centers, for example, receive both state and federal monies, but the program is primarily funded through Title 1 of 2001's *No Child Left Behind* (Chicago Public Schools 2013): Although the Centers operate as part of the Chicago Public Schools, they still require significant financial support. The average cost per child for the average enrollment time of 3.86 years, adjusted to 2013 dollars, is $15,002, or about $3,887 per year (Reynolds et al. 2011a). The Harlem Children's Zone's operations, on the other hand, depend largely on private contributions, which account for 70 percent of its funding. The organization reported a $95 million budget for fiscal year 2012, stating that it spends $5,000 per child in a given year (Queens College n.d.). Additionally, due to these comprehensive approaches, the successes of the Child-Parent Centers and Harlem Children's Zone cannot be attributed to academic components alone. Nevertheless, these are consistently of high quality, and evidence suggests greater achievement among children who participate in these programs compared to those who do not (e.g., Reynolds et al. 2011a).

The Pre-K Coalition (2011) researched the effects of PreK-3 policies in several states across the country and found largely positive results. The Montgomery Public Schools in Maryland, for example, implemented PreK-3 in 1998. Between 1998 and 2010, the most recent year for which there are data, literacy increased among kindergarten (and later, third-grade) students; this included a 29 percentage point reduction in the third-grade racial and ethnic reading achievement gap (Marietta 2010; Pre-K Coalition 2011). This occurred during a 12-year period of challenges in which the size of the English language learner population and the number of students eligible for free or reduced-priced lunch grew by 103 percent and 44 percent, respectively (Marietta 2010). Georgia, Virginia, New Jersey, and Washington State also emphasize a PreK-3 approach, implementing additional PreK-3 curricula standards and instructor trainings for their schools (Pre-K Coalition 2011).

LIMITATIONS

Our analysis has several limitations. First, despite our best efforts and repeated attempts to contact them, we were not always able to speak directly with employees at SEAs or university research centers. While interviews could have provided access to information such as unpublished information and personal accounts of policies' success, complications, and feasibility, we relied heavily on data and information gathered from state and university websites. We also referred to academic databases and publications by national educational agencies, consistently using reputable and objective sources with the understanding that our analysis is only as strong as the information upon which we base it.

A second limitation is our use of dropout rates as an indicator of policy effects at the high school level. Because comprehensive high school-level data are not included in the NAEP, we had to find an alternate measure. We were unable to rely on graduation data due to limited information and the lack of a standard measurement across states before 2010. Using statewide dropout rates as a proxy for success or failure at the high school level is not ideal; it captures data that is distinct from what graduation rates capture, just as graduation rates are different from the information reported in assessments such as NAEP.

Finally, causality is a significant consideration in studies such as this, and one that we are not always able to identify definitively. This is largely due to the wide variety of ways in which states implemented programs, the amount of time that has passed since implementation, and the measures and means by which they are evaluated. This is a notable limitation to our analysis and something we struggled with throughout the project. To the best of our ability, we assessed the contribution made by a given policy to the reduction in a state's racial achievement gap(s), whether through staff testimonials, published reports, state assessments, or some combination of these. When possible, we also included information about academic improvement on smaller scales, such as increased participant proficiency. We do acknowledge, however, that very few studies in the area of education policy are able to establish a direct link between a given initiative, the role the SEA plays in the implementation of the initiative, and an eventual outcome. This is largely due to the complex process of creating student learning and the non-experimental context of most education reforms.

CONCLUSION

The preceding review of state agency and district initiatives in place to both improve Black and Hispanic students' academic achievement and address gaps between those students and their White peers demonstrates that there is no "silver bullet" to close academic achievement gaps. The programs we surveyed differ in the degree to which they are targeted at and tailored to minority student populations, as well as their overall comprehensiveness, level of state agency involvement, and applicability to Wisconsin's current education system. Nevertheless, programs showing promise in states similar to Wisconsin, as well as other states, can provide DPI with a range of policy options that—whether adopted individually or in combination—could help the agency narrow Wisconsin's Black-White and Hispanic-White student achievement gaps.

Several programs focus on expanding educators' capacity to monitor and respond to individual student needs through training, data literacy, and school accreditation standards. These programs are potentially beneficial to all students, but may be particularly useful in schools where students and teachers have diverse cultural backgrounds. For example, Kansas's Multi-Tier System of Support is intended to empower teachers on the job, allowing them to closely monitor individual student progress on both academic and other measures, thus allowing for early and individualized intervention by teachers who work closely with students. Efforts to assist teachers with ongoing monitoring and early interventions are echoed in Iowa's SWVPP and Virginia's early intervention program for ninth-graders.

Kansas's commitment to data literacy is intended to provide teachers with a tool to enhance its Multi-Tier System of Support. DPI could adjust its current student data collection and reporting efforts in order to more directly support Wisconsin's teachers. This would enable the agency to act using existing authority, but such adaptation would require additional funding for teacher training.

Kansas's school accreditation program requires that locally developed standards be included in order to address cultural relevancy and ensure that a college-oriented curriculum is provided to all students regardless of background. Given its current level of authority and Wisconsin's high level of local control, DPI could implement a similar program. Massachusetts's Rethinking Equity and Teaching for English Language Learners program echoes this emphasis on cultural sensitivity training for teachers working with immigrant Hispanic and other ELL students.

Several of the policies we considered focus heavily on early childhood development. Oklahoma's nationally recognized universal preschool program and Iowa's SWVPP both emphasize teacher accreditation and adherence to the National Institute for Early Education Research's benchmark standards for quality education. Iowa's program provides a balance of state-imposed curricula standards and local control by providing the latter with a "menu" of three pre-approved program

standard alternatives. Although Iowa's early education program is more similar to Wisconsin in its high level of local control and lack of universal 4K education, both the Iowa and Oklahoma models fit with Wisconsin's historic commitment to educate children as young as four. Nonetheless, the move toward a more comprehensive early education system and increased standards at that level would require additional resources and statutory changes to increase teacher accreditation, compensation, and program expansion.

North Carolina's CIH program offers high school students material assistance in beginning work on post-high school degrees. Similarly, Oklahoma's ACE Act serves as a potential model for holistic, K-12 school reforms regarding mathematics and also increases access to postsecondary courses. The state's SEA attempts to align standards for teachers, curriculum, and student achievement throughout a student's career. Wisconsin's existing Youth Options Program could provide the foundation for implementing similar programs that could be modified or expanded to fit the state's needs. The cost of these types of programs could be substantial, and some of the more complex approaches—including the CIH schools and the stipulations of the ACE Act—may require new statutory authority for DPI and additional oversight by the agency.

On a smaller scale, programs that change academic "defaults," such as AP "opt out" programs in Florida, Texas, and Washington State, emphasize students' increased accessibility to, enrollment in, and completion of challenging curricula. While lower family income and the accompanying depressed education and career aspirations are not exclusive to Black and Hispanic students, minorities are disproportionally part of lower income families and would benefit from the increased provision of high-quality instruction.

Finally, another noteworthy aspect of Kansas's school accreditation initiative is its "whole community" approach to education. In addition to the commitment to cultural relevance noted earlier, it emphasizes the role of the SEA and districts in identifying and disseminating best practices from other teachers, schools, districts, and even other states. This Kansas policy also attempts to include parents and community members in the state's efforts to improve schools. Idaho's Building Capacity program attempts to establish similar relationships.

While this report is far from exhaustive, we hope the policies we present and the analysis we provide will give DPI useful information that support its efforts to improve the performance of minority students and narrow the state's academic achievement gaps. Promising efforts in states with institutions and characteristics similar to Wisconsin, especially, provide evidence that overcoming achievement gaps, while daunting, is not impossible. More broadly, our review of a range of policies affirms that Wisconsin is not only not alone in its commitment to narrowing gaps, and in fact, is already pursuing policies similar to those seen in other states. In many ways, DPI therefore appears to be on the right track.

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