



# **NEPC REVIEW: MAKING NEXT YEAR COUNT: EQUITY IN SCHOOL ACCOUNTABILITY (BELLWETHER EDUCATION PARTNERS, SUMMER 2020)**



**Reviewed by:**  
Edward J. Fuller  
Penn State University

October 2020

**National Education Policy Center**

School of Education, University of Colorado Boulder  
Boulder, CO 80309-0249  
(802) 383-0058  
[nepc.colorado.edu](http://nepc.colorado.edu)

## Acknowledgements

---

### NEPC Staff

Kevin Welner  
Project Director

William Mathis  
Managing Director

Academic Editor  
Patricia Hinchey

Alex Molnar  
Publications Director

---

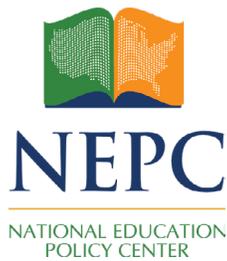
**Suggested Citation:** Fuller, E.J. (2020). *NEPC Review: “Making Next Year Count: Equity in School Accountability.”* Boulder, CO: National Education Policy Center. Retrieved [date] from <http://nepc.colorado.edu/thinktank/school-accountability>

**Funding:** This review was made possible in part by funding from the Great Lakes Center for Educational Research and Practice.



This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.

This publication is provided free of cost to NEPC’s readers, who may make non-commercial use of it as long as NEPC and its author(s) are credited as the source. For inquiries about commercial use, please contact NEPC at [nepc@colorado.edu](mailto:nepc@colorado.edu).



# NEPC REVIEW: MAKING NEXT YEAR COUNT: EQUITY IN SCHOOL ACCOUNTABILITY (BELLWETHER EDUCATION PARTNERS, SUMMER 2020)

Reviewed by:

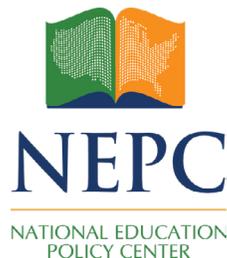
Edward J. Fuller  
Penn State University

October 2020

---

## Executive Summary

Bellwether Education Partners' four-part series on accountability reviews the historical roots, theory of change, and impact on student outcomes of school accountability systems as well as the effect of COVID-related school closures on testing and accountability. The series notes that state accountability systems have not improved student achievement or closed achievement gaps over the last decade. Despite this conclusion, the series insists state testing and accountability systems must be reinstated in 2020-21 and must focus on schools with the lowest performance levels. In addition to this perplexing inconsistency, the reports are problematic for a number of reasons. Most importantly, they do not adequately review the existing literature; even as they overstate some research conclusions, they ignore a large body of research about factors that influence student outcomes. The reports do not, for example, acknowledge that access to quality educators and fiscal resources are critical to improving student outcomes. Moreover, the reports focus very narrowly on test scores as the primary outcome of schooling and ignore outcomes such as critical thinking, media literacy, and civics that are more important than ever. For these reasons, policymakers are advised to ignore this series and access more nuanced reviews and recommendations regarding school accountability in the coming years.



# NEPC REVIEW: MAKING NEXT YEAR COUNT: EQUITY IN SCHOOL ACCOUNTABILITY (BELLWETHER EDUCATION PARTNERS, SUMMER 2020)

Reviewed by:

Edward J. Fuller  
Penn State University

October 2020

---

## I. Introduction

In the summer of 2020, Bellwether Education Partners released a four-part series of reports focused on school accountability, starting with *The Historical Roots and Theory of Change of Modern School Accountability*,<sup>1</sup> followed by *The Impact of Standards-Based Accountability*<sup>2</sup> and *Assessment and Accountability in the Wake of COVID-19*,<sup>3</sup> and ending with *Refocusing the Priorities of Accountability*.<sup>4</sup> Four Bellwether authors wrote the series: Alex Spurrier, Chad Aldeman, Jennifer O’Neal Schiess, and Andrew Rotherham. All four authors collaborated on the first three reports while only the first three authors collaborated on the last report.

As a group, the reports review the past 25 years of school accountability efforts, the impact of school accountability systems on student test scores and graduation rates, the implementation of assessment and accountability during *COVID-19* interruptions of schooling, and the development of improved school accountability systems going forward.

The first report reviews the history of school accountability of the past quarter, the theory of change underlying school accountability, and some of the components of school accountability systems. The report concludes with an initial discussion of the potential paths going forward for school accountability, particularly in the midst of a global pandemic. This conversation is taken up in the third and fourth reports.

The second report, *The Impact of Standards-Based Accountability*,<sup>5</sup> reviews research on the relationship between school accountability systems and improvements in student test scores and graduation rates as well as the strengths and weaknesses of accountability systems. Within the conversation of strengths and weaknesses, the report discusses eight components of school accountability systems: clear, rigorous expectations; annual statewide

testing of students; effects of testing on teachers and teaching; ability of tests to measure expectations; incentives and consequences in accountability systems; data transparency; identification of low-performing schools; and intervention types. The report ends with a discussion of the need to re-create a political coalition of both conservatives and liberals to support school accountability going forward.

The third report, *Assessment and Accountability in the Wake of Covid-19*,<sup>6</sup> reviews the current circumstances in which all states received waivers from administering state testing and argues that school accountability is now more important than ever. Within this discussion, the report raises questions about how states should proceed regarding five topics. These topics include: the identification of low-performing schools; measuring and communicating student progress; testing all students; meeting needs of English Language Learner and special education students; and efforts to measure student outcomes.

The final report, *Refocusing the Priorities of Accountability*,<sup>7</sup> examines three options for new accountability approaches during the coming COVID-19 impacted year. The three options include: “Prioritizing accountability as a means for policymakers to improve low-performing schools,” “Prioritizing accountability as a vehicle to improve instruction,” and “Prioritizing accountability as an informational tool to support school choice.”

Based on a historical review of accountability systems and the impact of accountability systems on student outcomes, the four reports argue that states must reinstate testing and accountability this year to ensure schools are held accountable for teaching all children. This review critically examines the arguments and evidence presented in the four reports and, importantly, the arguments and evidence *not* included in the four reports.

## II. Findings and Conclusions of the Reports

The overall conclusion of the first report is that school accountability systems have historically improved student outcomes, at least when defined narrowly as improvements in test scores. The report also concludes, although with much less evidence, that school accountability systems have also helped close the achievement gap. In addition, the report made conclusions about the efficacy of federal school accountability plans over time. Specifically, the report concludes school accountability policy became increasingly rigorous over time through the Race to the Top and NCLB Waiver eras, but that the *Every Student Succeeds Act* (ESSA) allows states to reduce the pressure on schools and educators. Indeed, the report concludes that after the passage of ESSA, “[i]t became clear that simply mandating these systems in states would not be enough to fully realize the ultimate goal: improved and more equitable student performance” (p. 7).<sup>8</sup>

The second report, *The Impact of Standards-Based Accountability*, reviews the research on the relationship between school accountability systems and improvements in student test scores and graduation rates as well as the strengths and weaknesses of accountability systems. The report draws three major conclusions. The first is that school accountability systems have historically improved student outcomes, at least when defined narrowly as

improvement in test scores. For example, the report states, “Contrary to widespread perception, NCLB-era accountabilities produced meaningful improvement in student achievement, particularly for traditionally underserved groups” (p. 2).<sup>9</sup> The second is that, despite these improvements, “[T]he impact of standards-based accountability has not fully lived up to its initial promise” (p. 2).<sup>10</sup> And, the third is that the political coalition supporting school accountability has fractured, but the coronavirus crisis has created an imperative to form a new coalition to ensure that testing and accountability continue in the years ahead.

The second report also draws a number of minor conclusions. First, the report concludes that clear, rigorous learning standards are critical to the efficacy of any school accountability systems in improving student achievement. However, the report also notes that learning standards are not sufficient on their own to ensure equitable access to quality education. Second, the report concludes that the disaggregation of data into student subgroups is a critical feature of effective school accountability systems because such data reveals gaps in learning opportunities across different types of students. Third, the report concludes that testing does not, in fact, take up an inordinate amount of classroom time. Fourth, the report concludes that the focus on mathematics and reading has not had any detrimental effect on the teaching of other subject areas. Fifth, the report concludes that there is widespread support for the transparency of data generated by school accountability systems, data which helps both to indirectly pressure schools to improve and to assist parents in making better choices about schools. Sixth, the report concludes that singular numeric scores or letter grades (A-F) generate pressure on schools to improve and often have positive effects on student achievement. Finally, the report concludes that school accountability systems must continue to focus on low-performing schools but that turning around low-performing schools is quite difficult in the absence of “serious, dramatic reform efforts” (p. 11).<sup>11</sup>

The third report, focused on the impact of COVID-19 on testing and accountability, concludes that policymakers should not allow states to go another year without testing. The report, in fact, argues, “Another year of missing data, lost opportunities, or blanket waiver on accountability systems would be a disaster for our youngest, most vulnerable children” (p. 10).<sup>12</sup> The report concludes that this year’s accountability systems should focus on “prioritizing accountability as a means for policymakers to improve low-performing schools.”<sup>13</sup> Further, the report concludes that another year without testing and accountability would “imply that schools should not be held responsible for the work they do this year in mitigating and overcoming [the] impact [of COVID-19]” (p. 1).<sup>14</sup>

The final report, *Refocusing the Priorities of Accountability*, argues that states must resume testing of students and holding schools accountable for their efforts in improving student outcomes. Indeed, the report states,

Using the operational uncertainty of next year [2020-21] as an excuse to suspend assessment and accountability would cripple our ability to understand the impact of COVID-19 on student learning and imply that schools should not be held responsible for the work they do this year in mitigating and overcoming that impact.

The report concludes that, of the three options for constructing a school accountability sys-

tem for this year and years to come, states should choose to focus on “prioritizing accountability as a means for policymakers to improve low-performing schools.”

### **III. The Reports’ Rationale for Their Findings and Conclusions**

The conclusions made across the four reports are based on a combination of reviews of the literature and theoretical justifications. Thus, the rationale for the conclusions and the recommendations made in each of the reports is the existing body of research on school accountability and the theory of action regarding school accountability.

### **IV. The Reports’ Use of Research Literature**

The four reports rely primarily on reviews of the literature as the evidence for their conclusions. The last study of the four also employs a theoretical examination of various proposals for accountability systems going forward. There are, however, four major issues with the literature reviews used in the reports. These are discussed below.

#### **Paucity of Research Articles**

First, the majority of the works cited are not research articles. For example, in the report *The Impact of Standards-Based Accountability*,<sup>15</sup> only 12 of the 64 citations are associated with unique research reports published in research journals or by nonpartisan research institutions such as RAND or NBER. Similarly, in *The Historical Roots and Theory of Change of Modern School Accountability*,<sup>16</sup> there were only five unique research citations of the 26 citations of the report. Many of the other citations were from trade journals such as Education Week or think tanks such as The Fordham Foundation. Given the research focus of these two briefs and the plethora of articles published on school accountability systems, one would expect a greater number of research citations to be used in these four reports—especially the two reports that are more focused on the historical background and research evidence regarding school accountability.

#### **Lack of Comprehensive Review of Research**

Closely associated with the first issue is the problem that the reviews of literature in the four reports do not cover the full breadth of research on the reports’ topics. For example, the second report (*The Impact of Standards-Based Accountability*) provides only two citations regarding the association between school accountability and student achievement. There are, however, a number of studies that support—at least to some degree—the general conclusions of the report that school accountability is associated with test score improvements.<sup>17</sup>

More troubling is the existence of research that contradicts the conclusions of the report. For example, Lee and Reeves<sup>18</sup> found that, from 1990 to 2009, there was no evidence that school accountability systems were independently associated with generalizable improvements in reading and mathematics achievement. Similarly, in their study of high-stakes testing of 1971 through 2004, Grodsky, Warren, and Kalogrides<sup>19</sup> found no discernible effects on student achievement for students at any point along the distribution of achievement. Further, Smith and Mickelson<sup>20</sup> found no effect of accountability on test score improvement in the Charlotte-Mecklenberg school district relative to other North Carolina districts. In a more subtle analysis, Jennings and Lauen<sup>21</sup> found that school accountability systems were associated with improvements in student scores on high-stakes tests, but not on low-stakes tests, a finding similar to the study of the Texas school accountability system by Klein and his colleagues.<sup>22</sup> Further, the finding of Jennings and Lauen call into question the degree to which school accountability systems drive real improvement in learning or just improvements in test scores.

The second report does correctly conclude there are inconsistent gains in student achievement by subject matter and grade level—a conclusion supported by many of the aforementioned studies. Indeed, most of the improvements in student achievement have occurred in mathematics and, in particular, earlier grades such as on the fourth grade National Assessment of Educational Progress (NAEP) assessment. This finding calls into question the efficacy of school accountability systems to improve achievement across grade levels and subject areas.

Overall, the report likely overstates the relationship between school accountability and student achievement when claiming, “NCLB-era accountability policies produced meaningful improvements in student achievement” (p. 2).<sup>23</sup> A more accurate conclusion might be that some evidence, although not all evidence, suggests school accountability systems are associated with improvements in student test scores, but mostly in mathematics and in lower rather than higher grade levels.<sup>24</sup>

The report does accurately capture more recent evidence over the last 10 years regarding trends in student achievement—at least with respect to NAEP scores. Specifically, the report states, “[S]tudent achievement has stalled over the past decade, with growing gaps between high- and low-performing students” (p. 2).<sup>25</sup> This statement, however, raises questions about why the reports contend states must continue testing and accountability policies to ensure greater student achievement. If testing and accountability have not elicited improvements in student achievement, why would the continuation of an ineffective policy be expected to improve student achievement in the future?

### **Absence of Related Research**

In addition to the above issues, the four reports do not address important issues related to student achievement. Most notable of these absences are two of the strongest influential factors on student outcomes: access to a cadre of stable and effective educators (teachers, principals, and counselors) and fiscal resources.

### *Teacher Turnover*

The preponderance of research evidence suggests teacher turnover has negative effects on the organizational efficiency and efficacy of a school as well as on student outcomes. Indeed, a number of studies from the past decade reach the conclusion that teacher turnover—regardless of the quality of the teacher lost to the school—has negative impacts on student outcomes.<sup>26</sup> For example, research by Ronfeldt, Loeb, and Wyckoff<sup>27</sup> indicates that high turnover rates have a negative effect on student achievement disruptive beyond what would be expected on the basis of replacing experienced with inexperienced teachers alone. Moreover, a number of studies have found that school accountability systems can influence teacher turnover rates.<sup>28</sup> In particular, the identification of a school as low-performing is associated with greater teacher turnover.<sup>29</sup> Importantly, there is some evidence that the most effective teachers are the most likely to leave,<sup>30</sup> thus exacerbating the negative impact of teacher loss.

### *Principal Turnover*

As with teacher turnover, research typically suggests principal turnover has a negative association with student outcomes. Recent research finds principal turnover tends to be associated with increased teacher turnover, thus negatively impacting school fiscal resources through expenditures on recruitment, organizational efficacy, and student achievement.<sup>31</sup> Indeed, recent research has found that, similar to teacher turnover, principal turnover also has a direct negative effect on student outcomes.<sup>32</sup> There is some evidence that both student achievement levels and school accountability ratings are associated with greater odds of principal turnover.<sup>33</sup> While some might argue that principal turnover is a positive outcome, such an argument assumes that the identification of the school as low-performing is accurate and the newly hired principal is more effective than the departing principal.

### *Access to School Counselors*

There is a growing body of research that access to a school counselor and smaller student-counselor ratios are associated with improved student outcomes, particularly for students living in poverty and students of color. Indeed, recent research confirms prior studies about the influence of counselors—specifically, counselors are associated with improvements in student achievement, graduation rates, college readiness, and college attendance.<sup>34</sup> This is particularly true for students living in poverty and students of color,<sup>35</sup> who are disproportionately enrolled in lower performing schools. Most recently, Mulhern<sup>36</sup> found that counselors have a causal effect on these outcomes, meaning counselors positively influence these outcomes apart from the influence of other related factors. Fuller<sup>37</sup> has found that students living in poverty and students of color have less access to a counselor and are less likely to be enrolled in a school with lower student-counselor ratios.

## *School Spending*

There is a growing body of research and near consensus among the research community that access to greater fiscal resources are associated with improvements in student outcomes, particularly for students living in poverty and students of color.<sup>38</sup> Indeed, as noted by Jackson,<sup>39</sup> “The recent quasi-experimental literature overwhelmingly supports a causal relationship between increased school spending and student outcomes.” Further, research consistently shows that many state school finance systems, as well as the distribution of funding within school districts, is inequitable.<sup>40</sup> As a number of recent state school finance court cases have shown, judges have ruled that inequitable school finance systems create systems in which there is inequitable access to resources which, in turn, result in disparate outcomes that are not driven solely by factors under the influence of district or school personnel.<sup>41</sup>

## **Absence of Other Outcomes**

The four reports focus almost exclusively on student achievement as measured by standardized test scores. Indeed, much of the second report discusses the relationship between school accountability and test scores, while the other three reports frequently mention that school accountability is needed primarily to improve student test scores and close the test score gaps between sub-groups of students. The reports also briefly mention graduation rates and student attendance as other important student outcomes, and they note as well that ESSA allows states to include a wide array of different cognitive and non-cognitive outcomes in their school accountability plans. However, the reports largely ignore the wide array of important schooling outcomes and simply appear to assume without evidence that test scores proxy important schooling outcomes such as citizenship, ethics, and critical thinking.<sup>42</sup> In fact, given the current state of affairs—with a largely unchecked pandemic wreaking havoc on society, with arguments about the science of wearing masks to curb COVID-19, with rampant acceptance of unsubstantiated conspiracy theories, and with the rise of “news” not based on facts—one could easily argue that outcomes such as citizenship, ethics, and critical thinking are more important than test scores.

## **V. Review of the Reports’ Methods**

The four reports rely on reviews of the literature and on theories of how accountability systems can improve student outcomes. When executed well, such an approach can be appropriate. However, as noted elsewhere, there are serious issues with the reviews of literature. Moreover, none of the reports discuss the important issues of construct validity and fairness with respect to school accountability systems.

## **Fairness**

As Polikoff and colleagues<sup>43</sup> note, “A fair accountability system would be one that holds schools accountable for only the portion of student achievement they can control” (p.46).

A number of studies have found that NCLB-era accountability systems were decidedly unfair in this respect because of their reliance on status measure scores, such as percent proficient.<sup>44</sup> Even the student growth measures, such as value-added measures and student growth percentiles used in more contemporary school accountability systems, have been found to be unfair in that they can still be biased against schools enrolling certain types of students.<sup>45</sup> Further, unadjusted attendance and graduation rates—metrics mentioned by the four reports—were also found to be biased against certain types of schools and, thus, considered to violate the fairness measure.<sup>46</sup>

Interestingly, the third report that focuses on the impact of Covid-19 notes that wealthier families were less impacted than other families by school closures and the move to remote instruction in the 2019-20 school year because of differential access to computers, internet, and other resources. Thus, the report implies that, had testing and accountability been applied last spring, the results would have been considered unfair. What the Bellwether reports do not acknowledge, however, is that the same circumstance is likely to occur this year and, more importantly, the same circumstances occur every year. The reports claim not administering testing and accountability would “amplify existing inequities in our school system” (p. 1),<sup>47</sup> yet they do not discuss such issues as how testing will even occur if students are at home, or how holding schools accountable for student performance would be fair when some schools will have substantially greater percentages of students at home who lack computer and Internet access. In fact, rather than recognizing these issues and proposing some solution, the reports simply blame school districts for the problems and argue that schools must be held responsible for ensuring all students learn during the COVID-impacted 2020-21 school year. Importantly, the report assumes schools will have enough financial resources to provide all students with a laptop, Internet access, and/or paper copies of assignments. This was not the case in the spring and certainly will not be the case in the fall as states face severe revenue shortages and are cutting investments in K-12 education. It stretches the imagination to think of how holding schools accountable for student learning when many students do not have the means (computers and Internet) to access instruction would be fair.<sup>48</sup>

## **Construct Validity**

One major issue with all four reports is the lack of any discussion about the construct validity of school accountability systems. In the realm of school accountability, Polikoff and colleagues<sup>49</sup> note that, “School classifications made under an accountability policy have construct validity if the performance measures adequately cover the latent set of desired student outcomes, and if the inferences made on the basis of those measures are appropriate (p. 46).” If a school accountability system has construct validity, then the system captures the array of outcomes determined by society to be important for schools and the inferences about those outcomes are accurate. Research on NCLB- and Waiver-era accountability systems suggest a lack of construct validity because the systems did not capture many of the important outcomes of the education system, nor were the outcomes across schools captured accurately<sup>50</sup>—a point not mentioned by the four reports.

## **Transparency**

As noted by the reports, school accountability has increased the transparency of school and district data. Indeed, a reasonable conclusion would be that the public now has more access to data about education systems than at any point in history. The reports, however, do not mention several important points about transparency. First, in many states, the data is returned to school personnel far too late to be useful in improving instruction or in aligning teacher strengths with student weaknesses.<sup>51</sup> Thus, the utility of the data is greatly diminished. Second, there is some evidence that access to data such as the percentage of students proficient or passing can exacerbate school segregation patterns.<sup>52</sup> Thus, while transparency has increased, the results of the transparency are not always realized and, in some circumstances, may actually cause harm.

## **VI. Review of the Validity of the Findings and Conclusions**

The findings, conclusions, and recommendations included in each of the four reports are not substantiated by the available research evidence. Indeed, one could argue that some of the evidence presented in the reports contradicts the very recommendations of the four-part series—namely, that states must reinstate testing and accountability systems this year and all years going forward.

## **VII. Usefulness of the Reports for Guidance of Policy and Practice**

Given the aforementioned problems, this report provides little useful guidance for policymakers. Taken as a whole, the four reports propose that policymakers have not yet devised effective school accountability systems, but that they should continue to try to build school accountability systems that actually improve student outcomes and close achievement gaps. The underlying problem with such a proposal is that school accountability systems have been in existence for three decades and have yet to fulfill the promise of those promoting such systems. Indeed, the second report acknowledges that, despite the continued use of school accountability systems, student achievement has been stagnant for at least a decade and there has been no decline in the racial or socioeconomic achievement gaps. The reports do not make a cogent argument as for why continuing the use of school accountability systems—especially absent any efforts to hold policymakers accountable for creating systems that provide an equal opportunity to learn for all children—will be successful going forward when there is no track record of success in the last decade.

## Notes and References

---

- 1 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The historical roots and theory of change of modern school accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-HistoricalRoots\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-HistoricalRoots_Final.pdf)
- 2 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 3 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *Assessment and accountability in the wake of COVID-19*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-COVID19\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-COVID19_Final.pdf)
- 4 Spurrier, A., Alderman, C., O'Neal Schiess, J. (2020). *Refocusing the priorities of accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-RefocusingPriorities\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-RefocusingPriorities_Final.pdf)
- 5 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 6 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *Assessment and accountability in the wake of COVID-19*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-COVID19\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-COVID19_Final.pdf)
- 7 Spurrier, A., Alderman, C., O'Neal Schiess, J. (2020). *Refocusing the priorities of accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-RefocusingPriorities\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-RefocusingPriorities_Final.pdf)
- 8 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The historical roots and theory of change of modern school accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-HistoricalRoots\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-HistoricalRoots_Final.pdf)
- 9 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 10 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 11 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 12 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *Assessment and accountability in the wake of COVID-19*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-COVID19\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-COVID19_Final.pdf)
- 13 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *Assessment and accountability in the wake of COVID-19*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-COVID19\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-COVID19_Final.pdf)

- 14 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *Assessment and accountability in the wake of COVID-19*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-COVID19\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-COVID19_Final.pdf)
- 15 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 16 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The historical roots and theory of change of modern school accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-HistoricalRoots\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-HistoricalRoots_Final.pdf)
- 17 Chiang, H. (2009). How accountability pressure on failing schools affects student achievement. *Journal of Public Economics*, 93(9-10), 1045-1057.  
  
Deming, D.J., Cohodes, S., Jennings, J., & Jencks, C. (2016). School accountability, postsecondary attainment, and earnings. *Review of Economics and Statistics*, 98(5), 848-862.  
  
Holbein, J.B., & Ladd, H.F. (2017). Accountability pressure: Regression discontinuity estimates of how *No Child Left Behind* influenced student behavior. *Economics of Education Review*, 58, 55-67.  
  
Lauen, D.L. & Gaddis, S.M. (2016). Accountability pressure, academic standards, and educational triage. *Educational Evaluation and Policy Analysis*, 38(1), 127-147.  
  
Rouse, C.E., Hannaway, J., Goldhaber, D., & Figlio, D. (2013). Feeling the Florida heat? How low-performing schools respond to voucher and accountability pressure. *American Economic Journal: Economic Policy*, 5(2), 251-81.
- 18 Lee, J. & Reeves, T. (2012). Revisiting the impact of NCLB high-stakes school accountability, capacity, and resources: State NAEP 1990–2009 reading and math achievement gaps and trends. *Educational Evaluation and Policy Analysis*, 34(2), 209-231.
- 19 Grodsky, E., Warren, J.R., & Kalogrides, D. (2009). State high school exit examinations and NAEP long-term trends in reading and mathematics, 1971-2004. *Educational Policy*, 23(4), 589-614. Retrieved August 11, 2016.
- 20 Smith, S.S. & Mickelson, R.A. (2000). All that glitters is not gold: School reform in Charlotte-Mecklenburg. *Educational Evaluation and Policy Analysis*, 22(2), 101-127.
- 21 Jennings, J.L., & Lauen, D.L. (2016). Accountability, inequality, and achievement: The effects of the No Child Left Behind act on multiple measures of student learning. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 2(5), 220-241.
- 22 Klein, S.P., Hamilton, L., McCaffrey, D.F., & Stecher, B. (2000). What do test scores in Texas tell us? *Education Policy Analysis Archives*, 8, 49.
- 23 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 24 Figlio, D. & Loeb, S. (2011). School Accountability. In E.A. Hanushek, S. Machin, & L. Woessmann (Eds.), *Handbooks in Economics*, Vol. 3 (pp. 383-421). The Netherlands: North-Holland.
- 25 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *The impact of standards-based accountability*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-Impact\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-Impact_Final.pdf)
- 26 Borman, G.D., & Dowling, N.M. (2008). Teacher attrition and retention: A meta-analytic and narrative review

of the research. *Review of Educational Research*, 78(3), 367-409.

Fuller, E.J. & Pendola, A. (2020). K-12 Teacher Supply, Demand, and Shortages in Pennsylvania. Harrisburg, PA: Center for Rural Pennsylvania. Retrieved August 12, 2020, from <https://www.rural.palegislature.us/documents/reports/PA-Teacher-Supply-Demand-Shortages-Exec-Sum-2020.pdf>

Kraft, M.A., Marinell, W.H., & Shen-Wei Yee, D. (2016). School organizational contexts, teacher turnover, and student achievement: Evidence from panel data. *American Educational Research Journal*, 53(5), 1411-1449.

Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Journal*, 50(1), 4-36.

- 27 Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Journal*, 50(1), 4-36.
- 28 Clotfelter, C.T., Ladd, H.F., Vigdor, J.L., & Diaz, R. A. (2004). Do school accountability systems make it more difficult for low-performing schools to attract and retain high-quality teachers? *Journal of Policy Analysis and Management*, 23(2), 251-271.
- Feng, L., Figlio, D., & Sass, T. (2018). School accountability and teacher mobility. *Journal of Urban Economics*, 103, 1-17.
- Ingersoll, R., Merrill, L., & May, H. (2016). Do accountability policies push teachers out? *Educational Leadership*, 73(8), 44.
- Ryan, S.V., Nathaniel, P., Pendergast, L.L., Saeki, E., Segool, N., & Schwing, S. (2017). Leaving the teaching profession: The role of teacher stress and educational accountability policies on turnover intent. *Teaching and Teacher Education*, 66, 1-11.
- Wronowski, M.L., & Urick, A. (2019). Examining the relationship of teacher perception of accountability and assessment policies on teacher turnover during NCLB. *Education Policy Analysis Archives*, 27, 86.
- 29 Erichsen, K., & Reynolds, J. (2020). Public school accountability, workplace culture, and teacher morale. *Social Science Research*, 85.
- Feng, L., Figlio, D., & Sass, T. (2018). School accountability and teacher mobility. *Journal of Urban Economics*, 103, 1-17.
- Ingersoll, R., Merrill, L., & May, H. (2016). Do accountability policies push teachers out? *Educational Leadership*, 73(8), 44.
- Wronowski, M.L., & Urick, A. (2019). Examining the relationship of teacher perception of accountability and assessment policies on teacher turnover during NCLB. *Education Policy Analysis Archives*, 27, 86.
- 30 Feng, L., Figlio, D., & Sass, T. (2018). School accountability and teacher mobility. *Journal of Urban Economics*, 103, 1-17.
- 31 Kraft, M.A., Marinell, W.H., & Shen-Wei Yee, D. (2016). School organizational contexts, teacher turnover, and student achievement: Evidence from panel data. *American Educational Research Journal*, 53(5), 1411-1449.
- 32 Bartanen, B., Grissom, J.A., & Rogers, L.K. (2019). The impacts of principal turnover. *Educational Evaluation and Policy Analysis*, 41(3), 350-374.
- 33 Li, D. (2015). *School accountability and principal mobility: How No Child Left Behind affects the allocation of school leaders*. Boston, MA: Harvard Business School.
- Mitani, H. (2018). Principals' working conditions, job stress, and turnover behaviors under NCLB accountability pressure. *Educational Administration Quarterly*, 54(5), 822-862.
- 34 Mandel, Z.M. & Fuller, E.J. & (2020, January). *Access to school counselors for Black students in*

Pennsylvania. State College, PA: CEEPA. Retrieved June 1, 2020, from <https://ceepablog.files.wordpress.com/2020/06/black-student-access-to-counselors-in-pennsylvania-1.pdf>

Mulhern, C. (2019). *Beyond teachers: Estimating individual guidance counselors' effects on educational attainment*. Cambridge, MA: Harvard University. Retrieved January 26, 2020, from [https://cepr.harvard.edu/files/cepr/files/counselors\\_mulhern.pdf](https://cepr.harvard.edu/files/cepr/files/counselors_mulhern.pdf)

- 35 Henfield, M.S., Washington, A.R., & Byrd, J.A. (2014). Addressing academic and opportunity gaps impacting gifted black males: Implications for school counselors. *Gifted Child Today*, 37(3), 147-154.

Mandel, Z.M. & Fuller, E.J. & (2020, January). *Access to school counselors for Black students in Pennsylvania*. State College, PA: CEEPA. Retrieved June 1, 2020, from <https://ceepablog.files.wordpress.com/2020/06/black-student-access-to-counselors-in-pennsylvania-1.pdf>

- 36 Mulhern, C. (2019). *Beyond teachers: Estimating individual guidance counselors' effects on educational attainment*. Cambridge, MA: Harvard University. Retrieved January 26, 2020, from [https://cepr.harvard.edu/files/cepr/files/counselors\\_mulhern.pdf](https://cepr.harvard.edu/files/cepr/files/counselors_mulhern.pdf)

- 37 Fuller, E.J. (March, 2017). *Access to school librarians, nurses, and counselors in the Commonwealth of Pennsylvania*. State College, PA: CEEPA. Retrieved April 1, 2017, from <https://ceepablog.wordpress.com/2017/03/10/access-to-school-librarians-nurses-and-counselors-in-the-commonwealth-of-pennsylvania/>

- 38 Jackson, C.K. (2020). Does school spending matter? The new literature on an old question. In L. Tach, R. Dunifon, & D.L. Miller (Eds.), *APA Bronfenbrenner series on the ecology of human development. Confronting inequality: How policies and practices shape children's opportunities* (pp. 165-186). American Psychological Association. Retrieved August 25, 2020, from <https://doi.org/10.1037/0000187-008>

- 39 Jackson, C.K. (2020). Does school spending matter? The new literature on an old question. In L. Tach, R. Dunifon, & D.L. Miller (Eds.), *APA Bronfenbrenner series on the ecology of human development. Confronting inequality: How policies and practices shape children's opportunities* (pp. 165-186). American Psychological Association. Retrieved August 25, 2020, from <https://doi.org/10.1037/0000187-008>

- 40 Baker, B.D. (2018). *Educational inequality and school finance: Why money matters for America's students*. Cambridge, MA: Harvard Education Press.

- 41 Baker, B.D. (2018). *Educational inequality and school finance: Why money matters for America's students*. Cambridge, MA: Harvard Education Press.

- 42 Rothstein, R., Jacobsen, R., & Wilder, T. (2008). *Grading education: Getting accountability right*. Washington, DC and New York: Economic Policy Institute and Teachers College Press.

- 43 Polikoff, M.S., McEachin, A.J., Wrabel, S.L., & Duque, M. (2014). The waive of the future? School accountability in the waiver era. *Educational Researcher*, 43(1), 45-54.

- 44 Polikoff, M.S., McEachin, A.J., Wrabel, S.L., & Duque, M. (2014). The waive of the future? School accountability in the waiver era. *Educational Researcher*, 43(1), 45-54.

- 45 Chiang, H., Lipscomb, S., & Gill, B. (2016). Is school value added indicative of principal quality? *Education Finance and Policy*, 11(3), 283-309.

Ehlert, M., Koedel, C., Parsons, E., & Podgursky, M.J. (2014). The sensitivity of value-added estimates to specification adjustments: Evidence from school-and teacher-level models in Missouri. *Statistics and Public Policy*, 1(1), 19-27.

- 46 Polikoff, M.S., McEachin, A.J., Wrabel, S.L., & Duque, M. (2014). The waive of the future? School accountability in the waiver era. *Educational Researcher*, 43(1), 45-54.

- 47 Spurrier, A., Alderman, C., O'Neal Schiess, J., & Rotherham, A.J. (2020). *Assessment and accountability in*

*the wake of COVID-19*. Washington, DC: Bellwether Education Partners. Retrieved August 24, 2020, from [https://bellwethereducation.org/sites/default/files/Bellwether\\_Accountability-COVID19\\_Final.pdf](https://bellwethereducation.org/sites/default/files/Bellwether_Accountability-COVID19_Final.pdf)

- 48 Hampton, K., Fernandez, L., Robertson, C., & Bauer, J.M. (2020). *Broadband and student performance gaps*. Retrieved August 24, 2020, from <https://ssrn.com/abstract=3614074>
  - 49 Polikoff, M.S., McEachin, A.J., Wrabel, S.L., & Duque, M. (2014). The waive of the future? School accountability in the waiver era. *Educational Researcher*, 43(1), 45-54.
  - 50 Polikoff, M.S., McEachin, A.J., Wrabel, S.L., & Duque, M. (2014). The waive of the future? School accountability in the waiver era. *Educational Researcher*, 43(1), 45-54.
- Rothstein, R., Jacobsen, R., & Wilder, T. (2008). *Grading education: Getting accountability right*. Washington, DC and New York: Economic Policy Institute and Teachers College Press.
- 51 Tyler, J.H. (2013). If you build it will they come? Teachers' online use of student performance data. *Education Finance and Policy* 8(2),168-207.
  - 52 Hasan, S. & Kumar, A. (2019, July). *Digitization and divergence: Online school ratings and segregation in America*. Retrieved September 3, 2020, from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3265316](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3265316)