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NEPC Review: Giving Students the Chaff: How to Find and Keep the Teachers We Need

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DOCUMENT REVIEWED:	"**Giving Students the Chaff: How to Find and Keep the Teachers We Need**"
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Summary of Review

Marie Gryphon's policy analysis for the CATO Institute, *Giving Kids the Chaff: How to Find and Keep the Teachers We Need*,[1] concludes that teachers matter and that recruiting, retaining and rewarding high-quality teachers can improve educational outcomes for all students. The author further asserts that the current educational system is a major barrier to attracting high-quality teachers because of compressed pay scales that overcompensate experienced teachers and push out talented individuals -- and because public school administrators consistently fail to hire and support the best applicants. The author concludes that a system of school choice and charters will increase competition for quality teachers and that, by opening up the marketplace, quality teachers will be attracted to the profession, good schools will be rewarded and student achievement will significantly increase. The report has some major flaws that undermine many of its central claims, however. The research showing that teachers matter is indisputable, but the monograph selectively cites a few studies suggesting that the best predictor of teacher quality is measured by standardized test scores of prospective teachers -- a finding that is contested in the literature and ignores a wealth of studies that identify other critical variables, such as credential-

ing, as strong predictors of teacher quality. In addition, the author extrapolates (or takes a leap of faith) that choice and vouchers offer the best strategy for recruiting and retaining high-quality teachers, without considering limitations and alternative explanations of the empirical research. More importantly, the author does not mention research on charter and private schools that challenges the report's assumptions and conclusions.

Review

I. INTRODUCTION

In the disputatious area of teacher quality research, establishing common ground between scholarship from the left and right could potentially loosen policy logjams and allow federal, state, and local educators and policymakers to support a unified educational agenda that strengthens teaching and improves student learning. Unfortunately, common ground is hard to find. The CATO Institute report, *Giving Kids the Chaff: How to Find and Keep the Teachers We Need*, falls short.

That report begins on solid ground, noting that teachers affect student achievement and that teacher quality is an important factor in improving educational outcomes, especially among poor children. Other findings are that school choice and compensation are levers to improve teacher quality and improve student achievement. The author then argues that competition and choice induce improved hiring practices and more flexible compensation policies, which in turn attract and retain high-quality teachers.

To reach this conclusion, the report cites only a narrow band of research literature. In the end, the report's failure to consider alternative interpretations of empirical research on hiring and compensation undermines the validity of the findings and conclusions, as does the failure to identify research that does not corroborate an "achievement effect" for charter and private schools. The report's conclusions are accordingly of mixed usefulness in guiding policy.

The conclusion about the importance of teachers and teacher quality reflects a consensus view of the field and is well grounded in the research literature. The report's corollary conclusion on the role of competition in teacher hiring and compensation, however, is poorly linked to any supporting evidence base, disregards alternative explanations for the evidence cited, and fails to identify and address contradictory or confounding evidence. As a result, this part of the report has limited usefulness in guiding policy decisions related to improving teacher quality.

II. FINDINGS AND CONCLUSIONS

The article presents the following conclusions concerning the value and means of attracting and retaining high-quality teachers:

- The best predictor of student success is the quality of the teacher (i.e., teachers matter);
- Higher quality teachers appear to leave the profession at a greater rate than lesser quality teachers;
- The problem with attracting high-quality teachers is greatly exacerbated by bureaucratic and restrictive public school systems that distort

and subvert the hiring practices of school administrators;

- Salary compression and the lack of flexibility to differentiate pay dissuade the best teachers from entering the profession;
- Merit pay systems cannot change teaching the way they are currently structured because they don't target or reward the best teachers;
- Increased competition will improve teacher quality;
- Private and charter schools are much more successful at attracting and hiring high-quality teachers; and
- Under a system of school choice, teacher quality will be greatly improved -- and through marketplace competition, school administrators will have an incentive to hire the best teachers.

III. THE REPORT'S RATIONALES FOR ITS FINDINGS AND CONCLUSIONS

The report's rationale for connecting competition and choice to teacher quality is based on a review of empirical studies on school and district policies and practices in traditional public schools, public charter schools, and private schools. The report first identifies research linking teacher quality to student performance. Next, literature is identified suggesting that traditional hiring and compensation systems offer few incentives to attract and retain high-quality teachers. Finally, research on two areas -- (1) districts with high levels of competition, and (2) charter and private schools -- is used to suggest that when faced with competitive pressure, administrators (or other hiring managers) select higher quality teachers and use differentiated (rather than lock-step) compensation systems to promote retention.

IV. REVIEW OF THE REPORT'S USE OF RESEARCH LITERATURE

Cato's report is undermined by its narrow use of the research literature. Even on the central (and widely accepted premise) of CATO's policy analysis – that teachers matter and thus teacher quality matters for improving student achievement – the report references just a narrow band of research (primarily the work of the Rivkin group[2]) and excludes the larger evidence base. The excluded evidence base suggests that teacher effectiveness matters *and* that proxy measures for quality extend far beyond the prospective teachers' standardized test scores discussed in CATO's analysis.[3] . A brief review of this literature suggests that CATO's claims about teacher hiring overstate the importance of standardized test scores as a proxy measure for teacher quality and understates the importance of other measures such as teacher preparation, certification, professional development and mentoring as proximal causes.

Numerous studies conducted at the individual classroom, school, district, and state levels have found that students' achievement is significantly related to whether their teachers are fully prepared or certified in the field they teach, after controlling for other teacher and student characteristics.[4]

In addition to certification, teacher variables that have been found to have an impact on student achievement include: professional development[5]; graduation from a high-quality university[6] ; and quality of the teacher preparation program, quality of mentoring of beginning teachers, and the teacher's knowledge of teaching and learning.[7]

The following subset of variables has been found to influence student achievement in some studies, but not in others: (a) lower

class sizes[8]; (b) route to credential and type of teacher preparation[9]; (c) teachers' verbal ability[10] ; (d) whether the teacher's race is the same as student's race[11]; (e) the extent to which classroom practice provides instruction aligned to the test[12] (also referred to as, 'topic by cognitive demand'); and (f) general measures of ability or academic talent, such as an ACT, SAT or exam scores on the Texas licensing test of basic skills, the Texas Examination of Current Administrators and Teachers (TECAT). [13]

Given the large number of methodologically diverse studies that collectively support CATO's thesis that "higher quality teachers can significantly improve educational outcomes, especially among poor students" (p.1), it seems neither fair nor balanced to exclude studies suggesting a range of possible indicators of teacher quality beyond standardized test scores. The report also neglects to mention other direct assessments of teaching, beyond test scores, that are arguably more authentic indicators of teacher quality. For example, an assessment developed by the National Board for Professional Teaching Standards (NBPTS) directly measures both content and pedagogy using a methodology that documents a teacher's actual practice (planning, teaching, and assessment) and objectively tests the teacher's content/pedagogical knowledge in the teacher's content area. Several studies have found that the NBPTS assessments predict teacher effectiveness as evaluated by their students' learning gains.[14] These studies add to the rich diversity of research that suggests multiple factors that affect and demonstrate teacher quality. By giving short shrift to studies linked to such variables as teacher preparation, licensure, and professional development, CATO's analysis appears to be highly selective and limited to specific references that lend support to CATO's teacher quality argument.

V. REVIEW OF THE REPORT'S METHODOLOGY

This report reviews existing research and does not present any new empirical evidence in support of its claims. Thus strengths and limitations of the report's use of literature are noted in part IV without a separate discussion of methodology.

VI. REVIEW OF THE VALIDITY OF THE FINDINGS AND CONCLUSIONS

CATO's report accurately captures two fundamental challenges facing K-12 education -- "identifying the highest quality teaching applicants and finding policies that will keep them in the classroom" (p.2) -- but offers little compelling evidence for how competition and choice would improve either one. Specifically, the report does not consider alternative interpretations of the underlying empirical evidence on hiring and compensation. Further, it understates the importance of working conditions and fails to acknowledge existing monetary and non-monetary incentives to retain high-quality teachers. Finally, it ignores data suggesting that educational sectors with presumed advantages in both hiring and compensation policies -- charter and private schools -- do not demonstrate clear and consistent academic advantages over public schools. In particular, the absence of a strong empirical advantage for either charter schools or private schools over the non-charter public sector suggests that CATO's claims about the link between teacher quality, choice, and competition are guided by ideological presumption rather than empirical reality. Each of these issues is discussed below.

Hiring policies and working conditions

The teacher-effects literature emphasizes the importance of recruiting, supporting, retaining and motivating talented teachers. Many

of CATO's claims about the problems afflicting teacher hiring policies and practices find support in that literature. Public school systems can be bureaucratic and rigid and sometimes provide few or no incentives to attract and support quality teachers.[15] Similarly, compensation systems governed by seniority rules and lock-step salary increments often fail to reward the most committed and effective teachers.[16] Therefore, few would dispute that bureaucratic structures can prevent school districts from attracting and hiring high-quality teachers and that "teacher quality can be improved dramatically when administrators understand the attributes that make for good teachers and are given the right incentives to make good hiring decisions."[17]

Less transparent and more contentious are CATO's claims about the predictive value of teaching applicants' standardized test scores as a proxy measure for teacher quality. CATO's treatment of test scores as a predictor of teacher success is internally inconsistent and overly narrow. On one hand, CATO's report acknowledges that the attributes of good teachers are neither readily apparent nor quantifiable, that "teachers' scores can explain only a portion of the large difference in achievement [attributed] to teacher quality," (p.4), and that "most of the teacher effect remains a mystery" (p.4). On the other hand, the report criticizes the hiring practices of principals and school district administrators by stating, "Those gatekeepers systematically fail to hire the most capable candidates" (p.5). Hiring the most capable candidates should include far more than standardized test score data. Other important factors that could (and should) have an impact on hiring decisions, but go unmentioned in the article, include certification, quality of teacher education program, professional development, and measures of teacher's knowledge of content and pedagogy, such as NBPTS assessments.

In addition to overstating the importance of standardized test scores in hiring decisions, the CATO report suggests that performance-based pay coupled with unrestricted hiring practices and compensation systems would reduce bureaucratic rigidity and help attract and retain high-quality teachers. Empirical evidence casts doubt on these assumptions. For example, in recent years several states have experimented with and have put in place accountability systems that provide for bonuses or salary increases that are directly tied to student test scores. The early research on these systems are not encouraging; they do show an overall test scores increase on the given state's standardized test used for accountability, but these gains do not carry over to other tests that measure the same content.[18] This disconnect should be understood in light of evidence that tests used for accountability can be -- and are -- gamed.[19] Neal observed that to establish a fair and equitable test-based performance system would incur considerable test costs and engage students in significantly more testing, taking away time that might be better used for instruction.[20]

The report's assumption that schools competing for talented teachers demonstrate improved hiring practices has another problem. It potentially conflates teachers' individual employment decisions with hiring managers' practices and policies. Although the report cites research suggesting "administrators in competitive districts gave quality higher priority in the hiring and retention process" (p. 10), there is no mention of a simple and arguably more compelling explanation to any variation in teacher quality in these districts: teachers' self-selection into schools with better working conditions.

The implications of this different interpretation for the report's conclusions are subtle but significant. If teacher self-selection into schools (rather than managerial hiring policies and practices) is chiefly responsible for placement, then improving school working conditions should be the priority. While it may be argued that schools competing for talented teachers will improve working conditions to attract them, this argument ignores resource disparities between and across schools and districts as well as the communities in which they are located. An arguably more efficient policy mechanism to attract talented teachers to high-needs schools may be targeted assistance for facilities development, program enhancement, and teacher incentives.

As discussed in the following section of this review, the "ideological filter" that privileges choice and competition over other factors influencing teacher quality such as certification and working conditions is also evident in the report's analysis of compensation policies designed to retain high-quality teachers.

Compensation policies and private/charter school comparisons

The CATO report also flags problems in the area of teacher compensation policies and practices, and this contention does have empirical support. For example, public school compensation policies often do underpay many of the most promising potential teachers, and there are indeed limitations to the effectiveness of across-the-board salary increases or merit pay systems in retaining high-quality teachers.

CATO's assertions about the relationship between competition and compensation policies, however, understate the importance of working conditions, fail to acknowledge existing monetary and non-monetary incentives to retain high-quality teachers. They also ignore recent scholarly comparisons between private and public school performance that undermine the argument that superior hiring and compensation policies in private (and charter) schools improve teacher quality and student outcomes.

CATO's report suggests that pay compression (via salary schedules that link pay to such factors as years of experience and education/professional development) drives higher-quality teachers out of the profession and retains mediocre teachers. These analyses seem to exclude the role of non-monetary incentives in retaining high-quality teachers. For example, there is no discussion of how high-quality teachers may be rewarded through choice of teaching assignments, additional support for professional learning activities, and classroom or other building-level preferences. Arguably the most important non-monetary incentive influencing teachers – working conditions – is relegated to the notes, which state that "Some other interesting research suggests that teachers tend to prioritize good working conditions far more highly than salary" (p. 13). Again, a clear weakness of the report is that it does not identify and discuss strategies to directly improve working conditions -- beyond choice and competition -- as potential strategies for recruiting and retaining high-quality teachers.

Throughout the report, private and charter schools are praised for having superior hiring and compensation policies. Consider, for example, the following assertions: "private and charter schools have very different hiring practices than do traditional public schools" (p. 9); "A seemingly mystical property of private and charter schools is their ability to simultaneously keep teaching quality high and student/teacher ratios low,

all while spending less on salaries per teacher than the public system" (p. 10); and "[private and charter schools] have more resources available to reward high-performing teachers" (p.10). These claims are only supported only by a few citations to a narrow slice of empirical research.

While hiring and compensation policies and other "mystical" properties may be different in charter and private schools than public schools, these policies and properties do not necessarily conjure concomitant improvements in student achievement. In fact, three recent analyses of National Assessment of Educational Progress (NAEP) data collected by the National Center for Educational Statistics (NCES) suggest no "achievement effect" of private and charter schools relative to public schools.[21] Applying hierarchical linear modeling (HLM) to NAEP data in mathematics and reading, researchers at the Educational Testing Service and at the University of Illinois each independently found minimal achievement differences across sectors. Where statistically significant differences did exist (in 4th grade mathematics and 8th grade reading) they did not consistently favor one sector over the other. In fact, the analyses of math scores by Lubienski and Lubienski showed public schools doing better than charter schools, while both of these did better than private schools.[22] Given that private and charter schools play a central role in linking competition and choice to teacher quality and ultimately student performance, CATO's policy analysis should at minimum address studies that suggest more tenuous linkages between these variables.

VII. THE REPORT'S USEFULNESS FOR GUIDANCE OF POLICY AND PRACTICE

While one key element of CATO's policy analysis – the growing acceptance by researchers across that policy spectrum that teachers and teacher quality matters – provides important guidance for policy and practice, other elements are undermined by a propensity to filter the evidence base in favor of a particular point of view. Specifically, the report's conclusion on the role of competition in teacher hiring and compensation is poorly linked to any supporting evidence base, disregards alternative explanations for the evidence cited, and fails to identify and address contradictory or confounding evidence. Although competition and choice are essential elements of a robust educational system, CATO's analyses fall short of establishing a strong connection to teacher quality via hiring and compensation systems.

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