REVIEW OF *FOSTERING INNOVATION AND EXCELLENCE*

Reviewed By

Clive Belfield
Queens College, City University of New York
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Summary of Review

The report "Fostering Innovation and Excellence" presents research evidence concerning reforms that the Obama administration has embraced as part of the re-authorization of the Elementary and Secondary Education Act. These reforms include: funds for innovation and for scaling up proven interventions, charter schools, school choice, and online learning. However, the report does not make a strong evidentiary case for any of these reforms. It does not provide a systematic review of the evidence, and it uses an unclear, *ad hoc* method for appraising the evidence. In particular, the report simply asserts that innovation is important, it over-simplifies the literature on charter-school and school-choice reforms, and it exaggerates the research on the benefits of online learning for schools.

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Clive Belfield, Queens College, City University of New York

I. Introduction

In March 2010, the Obama administration released a *Blueprint* outlining its proposals for reauthorizing the Elementary and Secondary Education Act (ESEA).[1] In May 2010 the U.S. Department of Education (USDOE) followed with a set of six documents offered as a summary of the relevant research supporting the administration's plans.[2]

The sixth of these six reports, titled *Fostering Innovation and Excellence*,[3] is intended to provide a research-based justification for the administration's approach regarding three goals: (a) create incentives for ambitious, comprehensive reforms, (b) scale up proven educational strategies, and (c) expand public school choice.

II. Findings and Conclusions of the Report

The report makes a series of claims to justify its overarching policy approaches and reforms. Its stated goal is promoting innovation and excellence in the education system. It is within this new policy context that the administration proposes that states and districts will receive future *Race to the Top* federal funding and enhanced USDOE support.

First, the report emphasizes the USDOE's belief that innovation is essential to raise academic achievement and attainment. Because the education system has struggled to develop and scale up potential innovations, a direct "Investing in Innovation" fund is, according to the report, needed to ensure a "culture of continuous innovation" (p. 5).

Second, the report states that low-income and minority students attend schools with low achievement and graduation rates. Improving school quality for these students necessitates, according to the report, an expansion of charter schools. Because the quality of charter schools is mixed, however, the report argues that charter school authorizers must be more rigorous and that states must loosen or lift their caps on the number of charter schools. Also, parents must be given more information about opportunities for their children to attend a charter school.

Finally, the report contends that school choice programs within and between districts can improve academic outcomes, and that educational options should be expanded to include online courses, again with informational supports for families to learn more about their options.

III. The Report's Rationale for its Findings and Conclusions

The report's goal is to inform discussions of ESEA, the reauthorization of which will direct the focus of policy and the allocations of funding in upcoming years. The report and the overarching *Blueprint* fail to present a conclusive argument in favor of a particular intervention. Indeed, no research foundation is explicitly provided for the *Race to the Top* program, which is extolled on the third page of the report. Instead, the goal is to encourage systemic reforms but with a flexible approach and with a focus on results.

Importantly, the report recognizes that such reforms are unlikely to develop without incentives. For some reforms, states and districts would have to substantially change their practices. The

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incentive is in the form of additional grant awards to states and local districts that take the USDOE-recommended steps to reform their education systems.

Some of the reports' discussion points are reasonable, with sound supporting evidence included in the report. But other points are debatable, with a contrary or alternative argument being equally plausible based on the research. While the USDOE report is not presented as being either conclusive or definitive, a more balanced description, presentation, and interpretation of the evidence would have helped to clarify the key issues and assist readers in understanding the trade-offs in achieving policy objectives.

IV. The Report's Use of Research Literature

The report's claims are based on a wide range of source materials, including academic research evidence, USDOE data and reports, non-peer-reviewed think tank documents, testimony from private agencies, case studies, and documentation from advocacy agencies. For any given claim, a different mix of sources is offered for support.

The report makes claims about the importance of innovation without citing research. Instead, it relies on a simple economic assertion that innovation is the "fundamental source of a nation's growth and productivity" (p. 3). Strictly speaking, however, the fundamental source of growth is productivity—allocating resources in the most efficient way to generate outputs. This is not the same as continuously changing how resources are created or allocated. Innovation refers to new inputs, new technologies, and new outputs. Productivity refers to more efficient inputs, better technologies, and better outputs. For education, it may be preferable to "do what we are doing now, only better" than to "introduce a new way of doing it." The former is often preferred

because change introduces uncertainty and sometimes confusion, and runs the risk of being worse than the initial practice.

Regarding the barriers to developing and scaling up innovative solutions, the report again fails to cite research. It relies instead on reporting the experiences of a single, private company that provides assessment and educational management services.[4] The main barrier is asserted to be a "poorly-functioning educational market that limits funding to develop and scale promising innovations" (p. 3). The report does not discuss other potential organizational obstacles, such as the difficulty in finding skilled personnel or in replicating highly personalized teacher-pupil relationships. It also downplays the well-documented importance of context, such that an innovation that is successful in one context may not be easily implemented in another.[5]

The report's evidence base about the third goal—expanding public school choice—is significantly larger than for innovation and scaling-up. To justify its focus on charter schools, the report relies

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on a mix of academic evidence, testimony from private agencies, and case studies. The report's claim that charter schools help high-poverty and high-minority districts is based on brief profiles of, and testimony from, private companies in four cities: Uncommon Schools, primarily in New York City; Green Dot, in Los Angeles; Mastery Charter Schools, in Philadelphia; and KIPP in Lynn, Massachusetts. The report then acknowledges—based on a well-regarded scholarly review across 16 states by researchers at Stanford University's Center for Research on Education Outcomes (CREDO) —that charter schools do not, on average, out-perform comparable public schools.[6]

Indeed, the Stanford CREDO study is the best single source of information on charter school performance nationwide, and it is consistent with the overall research base—which shows some successes and some failures, with the failures possibly outweighing the successes.[7] This body of research raises obvious questions about why expanded numbers of charter schools would help high-poverty and high-minority districts. As a partial answer, and to buttress support for charter school reforms, the report proposes a twofold solution for improving charter school performance. First, the process through which charter schools are authorized should be improved. Second, states should lift their caps on charter schools and formalize the approval process. The support by the State University of New York offered for the first part of this "solution" is a case study of the authorization of charter schools. For the second part, the report points readers to a survey by a policy agency that advocates for charter schools. This sort of evidence does help to frame a conversation, but it falls far short of the research base one would expect, given that these are major policy initiatives.

Similarly, public school choice options are justified using both academic research literature and a case study of the New Haven Public School Choice project. For online learning—regarded as a

way to open up options for all children—the argument is based mainly on a systematic meta-analysis and review for the U.S. Department of Education, with additional evidence from a case study of an Algebra I course at a virtual school in Louisiana.[8]

V. Review of the Report's Methods

The report's methods are unclear in several key respects. This lack of clarity undermines the report's usefulness in facilitating informed discussions of the USDOE *Blueprint*. In addition, the report's confusing presentation seems likely to lead readers to draw conclusions about the research support for administration proposals that are stronger than a judicious reading of the evidence would suggest.

Incomplete Information on Case Studies

The report includes several instances of what can be called "case studies" —evidence that a particular program seems to be effective in a particular place. But for these case studies to be useful, enough information needs to be included so that readers can understand the nature of the program and its context. What was done? Who were the students? What were the successful elements? Would those elements be likely to work in a different place? What are the research findings from this anecdote?

The USDOE report is not clear about how some of the cited evidence or case studies should be interpreted. For example, the report describes the introduction of Empowerment Schools in the Clark County (Las Vegas, Nevada) School District. These "charter-like" schools, which receive supplemental funding, have several novel features. Yet, the report does not explain which specific features or resources of the Empowerment Schools are desirable or effective. The reader is not given the foundational information to allow him or her to determine what lessons to take from the Clark County experience. Also, while the report cites evidence of the Empowerment Schools' success (increased proficiency levels, test scores, and parental satisfaction), the report does not establish whether the Empowerment Schools serve high-poverty and high-minority children—the expressed reason for the *Blueprint* policy of expanding charter schools. Most importantly, the report does not help readers understand how the case studies should be generalized. Will the Empowerment Schools model work in a rural district, for example? How will it perform if the principal is inexperienced or if additional funding is less than $50,000? Readers are not given any guidance on the external validity of this particular model (leaving aside the quality of evidence used to support the claims of success).

Highlighting Success, Poorly Defined

The report focuses on successes—not failures or typical cases—and it does so without considering the full implications. Consequently, readers do not get a full picture of a specific reform. For example, as noted above, the report cites several successful education management organizations (EMOs). It does not give an overview of the EMO sector, which has grown only

modestly since the early 2000s and which is increasingly dominated by non-profit corporations.[9] It also omits key research.[10] One of the organizations—KIPP—is included because of the existence of a high-quality study of one KIPP school in Lynn, Massachusetts. Certainly, this KIPP school's achievement gains are notable and have been evaluated using a rigorous research method, but the degree to which this KIPP school—the only one in Massachusetts and one that is in high demand—is representative of the KIPP model is unexplored. A more useful guide for policy would be to report on the typical EMO (or the "average" KIPP school).

Even more important is the narrow focus on test-score achievement, particular with respect to charter-school and school-choice reform. An extensive research literature has developed comprehensively evaluating both reforms, looking not just at academic achievement, but also drawing attention to the implications of these reforms for equity and efficiency.[11] This extensive body of knowledge is not reflected in the research summary. The report does note that charter schools may help to reduce inequities by providing better-quality education to minority students, but an equally plausible scenario, not mentioned by the report though often found in the research literature, is that school-choice policies can decrease equity if they increase segregation (either by race or by ability) and stratification due to parental efficacy.[12]

On the issue of efficiency, the report is mostly silent. Yet consideration of resource use is obviously important in evaluating whether achievement gains are worthwhile as compared to other policy options. For example, the KIPP model requires a long school day and year, with teachers who are expected to work much longer hours and are typically much younger.[13] Policymakers could legitimately ask whether such a model is scalable, and at what cost. Effective online learning typically requires extra resources on top of the costs of regular instruction; there is no strong evidence that effective online learning costs less. The resource implications of these reforms are not considered by the report. Policymakers might ask whether a major expansion of online learning is too risky, without a systematic investigation into how much it would cost.

Questionable Sources

In its use of source materials, the report does not weight the evidence in any clear manner, such as by methods, quality of data, or rigor of execution. Implicitly, this treats each piece of evidence as equivalent in value, putting an anecdote on a par with a longitudinal quasi-experiment or a rich, in-depth case study.

The report does not distinguish between published research and research that is not peer-reviewed but simply posted on a think tank's website. Typically, the former has been through an independent peer-review process and is therefore regarded more highly. In a related problem, the report does not consider any source-related bias. For example, the report takes at face value the academic performances reported by three private-school companies (Uncommon Schools, Mastery Learning, and Green Dot). Such internal studies are generally considered less reliable than external evaluations. It also uncritically accepts the claims of the National Alliance for Public Charter Schools that there is significant pent-up demand for charter-school slots, as well as the position of the Center for Education Reform on the revocation of charter licenses. Both of

these agencies are strong advocates for expansion of the charter school movement. Of course, all of these claims may be true, but none are verified with independent evidence.

More importantly, the report pays no attention to the established hierarchy of research methods. Some methods can make much stronger claims of internal validity than others.[14] Specifically, a well-designed, well-executed, random-assignment study is most likely to measure a causal effect, while simple correlation studies are weak in that regard. In turn, correlation studies are preferred over simple comparisons of means. In fact, comparing raw mean achievement levels (e.g., between charter- and public-school students) is potentially very misleading: one group may be systematically different from the other group. Yet the report cites several documents that give only raw average test scores as justification for claiming the success of the reform.[15] These comparisons are not persuasive evidence that any reform is working and do not satisfy the report's purported approach to funding "proven innovations" (p. 6).

Similar quality issues must be considered when using qualitative research. A carefully designed and executed ethnography or case study will offer useful—often crucial—insights regarding, for instance, the implementation of a reform. An undisciplined collection of anecdotes is much more likely to be misleading and incomplete, and this is especially likely when the source has a vested interest in the reform.

The report also inappropriately juxtaposes two conflicting studies on charter schools (and omits discussion of many other high-quality studies and reviews). One is the above-mentioned CREDO study of 2,430 charter schools in 16 states, which finds that 37% of charter schools

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delivered significantly worse results than local public schools (while 17% of charters performed significantly better). The other is a study of 49 charter schools in New York City that finds that the charter schools outperformed local public schools. It is not appropriate to treat these two separate studies as providing equivalent information: the CREDO study relates to almost 50 times as many schools, operating in markets that represent the national context for reform (rather than one high-density, urban location). The report does not explicitly claim that these studies are equivalent, but it does give them equal attention and fails to help readers understand the strengths and weaknesses of the different approaches. Moreover, its overall summary of the charter school literature claims that "while many charters perform significantly better than state averages, many perform worse" (p. 8). This may be a legitimate conclusion, but it is not a valid inference from just these two studies. Indeed, its legitimacy rests primarily on the variation in the contexts in which charter schools operate and on the variation in methods researchers have used to evaluate them.

Muddled Evidence Supporting Online Learning

The report over-interprets the evidence to support online learning. It notes—but fails to properly distinguish between—the two very different categories of online learning: blended learning and pure online learning. In the latter, the student generally works from home. Blended learning is face-to-face instruction with online resources used as a supplement. This blended approach is not very close to the layperson's understanding of the sort of "online courses" the report highlights.

Looking across all the evidence (as cited in the USDOE systematic review), blended learning outperforms face-to-face instruction in terms of academic achievement. This is perhaps unsurprising, as blended learning augments the regular face-to-face pedagogy with additional resources for online technologies. This augmented approach raises a concern about the cost-effectiveness of online learning, however; i.e., whether the additional spending justifies the achievement gains or whether these gains could be achieved in some other way at lower cost. The report does not consider cost-effectiveness.

Moreover, the data on the benefits of blended learning is far from comprehensive. The report summarizes the evidence as follows:

> A recent synthesis of rigorous research addressing learning outcomes in online courses, mostly at the postsecondary level, generally found that students performed better, on average, in online and blended learning courses than in more traditional face-to-face classes (p. 12).

That synthesis, however, includes only five studies conducted with K-12 learners (all the rest are at the postsecondary level). On average, these studies do show gains in achievement (with one study showing that the face-to-face instruction was actually superior). But all five studies are of blended learning; none are of pure online courses. And one of the studies is from Taiwan, while another is for elementary school special education classes.

Interestingly, one of the five studies is described in full detail in the report (p. 12). It is a blended-learning Algebra I course offered by the Louisiana Virtual School that requires both an in-class teacher and an online teacher. The research evaluation claims to employ a quasi-experimental method, which—if it were true—should ensure strong internal validity.[16] But the study was not in fact quasi-experimental. The comparison schools were selected by the participating districts; they were not chosen using a method that would ensure their equivalence to the online schools in all aspects except for not having an online program.

Finally, the report omits discussion of a well-regarded study from California that found that non-classroom-based charter schools (sometimes called cyber-charters) are performing "poorly" relative to both classroom-based charter schools and local public schools.[17]

Based on this evidence, there is little or no reason to conclude that pure online courses will foster excellence in the K-12 education system. In addition, while some evidence supports the blended online model, the issue of efficiency should be seriously considered before a policy recommendation is made.

VI. Review of the Validity of the Findings and Conclusions

As stated at the outset of this review, the USDOE report does not intend to offer definitive conclusions; its goal should be understood as more provocative, to raise issues and set out approaches to educational reform (even as it occasionally claims to provide an evidence base). That noted, it is unclear why the administration would choose not to present a truly comprehensive and rigorous empirical defense of its *Blueprint* priorities.

One result of this failure is the imbalance between the cited evidence and the goals (p. 1). Two of the goals are innovation and scaling-up, which are associated with the $650 million "Investing in Innovation" fund authorized by the Recovery Act. Yet the research support for these two goals is covered in a single page and nine citations. The other goal encompasses charter schools, public school choice, and online learning. The report devotes six pages and 42 citations to it. This imbalance may reflect the preponderance of available evidence. At the end of the day, the report's presentation suggests either that evidence is largely non-existent (regarding innovation and scaling up) or mixed (regarding charters, choice and online).

Overall, the report's claims would be more compelling if they were based on a systematic review of the evidence in all areas. The claims would also be more persuasive if they addressed some of the possible barriers to implementing these reforms. As it is, the report is too simplistic. Its evidence base is too narrow and appears haphazardly chosen, and the claims it derives from that research are over-confident.

VII. Usefulness of the Report for Guidance of Policy and Practice

The report's policy recommendations, as described above, seem disconnected from the research offered to support them. In addition to the above examples, readers should note that the report does not fully explore the consequences of its two interlocking charter school recommendations. In advocating for the expansion of high-quality charter schools, the report contends that some authorizers apply insufficiently rigorous renewal and revocation processes, allowing poor charter schools to remain in operation. Thus, it is claimed, the authorizers themselves should be monitored more closely, with periodic reviews. The report, however, also contends that the use of charter schools cannot expand in part because of state caps on their numbers and enrollment growth. But the first reform is likely to offset the goal of the second, and vice versa. And increased growth itself may harm existing charters, if they over-expand beyond their capacity. Moreover, the report argues for giving more autonomy to all local public schools, and this too might reduce the enrollment numbers for charter schools by diminishing their advantage in flexibility. If all these recommended reforms were implemented, it is unclear how many charter

schools would actually be created (or indeed whether it might not be better to have fewer charter schools but all of them of high quality). These tensions and issues are not explored in the report, thus limiting its usefulness for guiding policy.

This report, read alongside the *Blueprint*, should be part of the policy debate on the reauthorization of the Elementary and Secondary Education Act. It will focus discussion on

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some key reform issues: the need for innovation, the expansion of charter schools, the growth in public school choice, online learning, and the provision of information for families. If the ESEA is reauthorized, the report and *Blueprint* will become directly relevant. Given that federal funding will be directed to states, districts, and schools that implement such reforms, these documents highlight some of the approved approaches.

Viewed as part of the Obama administration's funding, fiscal, and budgetary priorities for education, the report contains a strong implicit assumption that is very salient: that the education system needs resources and that policymakers will respond to resource-linked incentives. In other words, that if the availability of funding is contingent on enacting reforms, then such reforms will likely happen. Although this is perhaps not a revolutionary argument, it may prove to be more effective in leveraging change than prior approaches.

But, given this potential impact and since significant resources may be committed, it is essential that the report should try to establish, using rigorous evidence, a clear understanding of the merits of these reforms. It does not do this. Its coverage of innovation and scaling-up is too brief. The report's use of case study material is incomplete and it relies too heavily on "success stories" and evidence from sources with vested interests. Finally, the report over-interprets the research support for charter schools and online learning. It is possible that all of the reforms promoted in the report and *Blueprint* could promote innovation and excellence. Yet, to ensure that this possibility is maximized, it is necessary to offer a critical and sober reading of the evidence.

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