

***Beyond School Reform: Improving the Educational Outcomes
of Low-Income Children***

Report to the Spencer Foundation from the Project Team Consisting of Larry
Aber, Kenneth Burnley, David K. Cohen, David L. Featherman, Deborah
Phillips, Stephen Raudenbush, and Brian Rowan (Team Leader)

August 15, 2006

Project based at the Center for Advancing Research and Solutions for
Society (CARSS) of the University of Michigan (www.isr.umich.edu/carss)

Executive Summary

By the high school years, American adolescents fail to achieve the proficiency levels of their international counterparts in mathematics literacy and problem solving that are the building blocks for success in a knowledge-based global economy. Students of low income, of poverty, of color and of recent immigration perform below others in their cohort. Those disparities in educational outcomes begin much earlier than in adolescence. Their roots extend into the developmental histories of children and their families within the preschool years. Current efforts to address and overcome disparities in academic readiness for children of color and of lower income during the transition into school and the early school years through curricular and instructional reform have been partially successful but difficult to sustain; they thus fail to prevent cumulative disadvantages in successive educational transitions.

These challenges prompted a planning team of academics and educational practitioners, convened by the Center for Advancing Research and Solutions for Society (CARSS) at the University of Michigan, to embark on a one-year discovery process. With an officer's grant from the Spencer Foundation, the team convened 41 researchers, policy analysts, and practitioners in three panels to identify the determinants of poor educational outcomes, the reasons for only partial success of current reforms, and the best prospects for more powerful and sustainable interventions. Panelists provided briefing papers reviewing research evidence and evaluating best practices addressing early and continuing educational disparities. Our stocktaking was augmented by interviews with scholars and school officials engaged in reform efforts, all with expertise on specific issues or intervention approaches not fully addressed by the panels. We also engaged a set of organizations representing school officials, mayors and governors in dialogue about the evolving goals of our project and sought their input to our questions and to our search for new intervention approaches that could be tested on the ground and then taken to scale, replicated, and sustained.

Collectively, these discussions elicited considerable enthusiasm and encouragement not only among scholars but especially among practitioners and leaders of stake holding organizations seeking more effective ways to leverage school reform. Key points of consensus, if not unanimity, emerged from our consultation during the discovery process:

- Focus on meeting proficiency goals, not on the “achievement gap.” Our judgment is to focus primarily upon raising the trajectory of proficiency of the least advantaged children by creating powerful, effective means for all children to meet or surpass proficiency targets in each educational transition.
- Focus on low-income families, diversified by bi-lingualism and color. The burdens upon proficiency differ in profile for each racial, ethnic and income grouping. We heard wide-spread conviction that “non-school” or “non-instructional” factors—like poverty and parental involvement—were powerful, often predetermining influences shaping the readiness to learn and mediating even the most effective school-based instructional regimen on an ongoing basis. This led to a subsequent point about leveraging the best of school reform with

- interventions addressing causal and mediating factors (behind lesser academic readiness) arising outside the classroom and differing among children based on heritage, language, color and income.
- Focus on the transition into school, building on earlier and anticipating later educational transitions. While educational achievement is a series of equally important sequential challenges, we were encouraged to focus extensively and primarily upon the transition from pre-K through Grades 3 or 4. One reason for this conclusion is that instructional and curricular reforms in this transition are better understood and have a more substantial evidential basis. Under a life course perspective, however, we shall build upon the earlier transition from infancy to pre-K and anticipate the next transition from elementary into middle school.
 - Build intervention upon best model of curriculum and instruction and sustain it. The centerpiece of our evolving strategy of intervention will be instructional and curriculum reform. We were encouraged, however, to seek additional non-instructional, non-school interventions to leverage best school reforms on a scalable, sustainable basis (see below). And to find such approaches, we shall use a “best practice” regimen of school-based instructional and curricular reform as a baseline of comparison, the “counterfactual” if you will.
 - Combine instructional reform with synergistic non-instructional interventions. We were led to seek strategically chosen, potentially interactive (non-additive) combination of best school reform with non-instructional, non-school interventions, based on research evidence and practical experience. Future empirical work undertaken by our team and associates, and visits to ongoing reform/interventions sites, will seek this efficient strategy. Several candidate approaches are coming to light. Some may involve addressing health and mental health issues, together with capacities for behavioral regulation (micro-level approaches). Others point toward integrating social services and their delivery at school sites (meso-level approaches). Still others might experiment with policy interventions (macro-level approaches), modified from models of conditional cash grants to low income parents in developing countries to incentivize parental behavioral investments in their children as better academically prepared students. These various approaches need to be compared in appropriately designed pilot experiments.
 - Gain sustaining support of powerful local stakeholders. As we go forward to refine a synergistic intervention strategy, we have been advised to rapidly identify school districts which may become not only willing but abiding partners in the next R&D phase and then in the full scale implementation and evaluation phases over the coming decade. In addition, our advisors suggest assembling a coalition of stakeholders, importantly among them heads of industries and corporations, for whom making the schools work on behalf of the national economy is a top priority; using their stake holding to make it difficult for elected officials to ignore what the projects seeks to accomplish.

Our report on our stock-taking “discovery” phase ends with a synoptic summary of next steps, in an R&D phase. They lead, insofar as possible, to position the project for full implementation as a national demonstration project in 2009-10.

Introduction

By the high school years, American adolescents fail to achieve the proficiency levels of their international counterparts in mathematics literacy and problem solving that are the building blocks for success in a knowledge-based global economy. That alone is a worrisome challenge for American business competitiveness over the next quarter century. But an additional challenge lies within metropolitan neighborhoods of this nation. Namely, students of low income, of poverty, of color and of recent immigration—a growing segment of all American children, and importantly, of future American workers—perform below others in their cohort. That disparity in educational outcomes begins much earlier than in adolescence.

For example, young children just entering school from the lowest quintile of family income score at about the 30th percentile of their cohort's academic achievement; while those from the top quintile of income enter school scoring at about the 70th percentile. Disadvantages arise early in life, and poorer children do not arrive at the school door as prepared for academic learning. Because of the cumulative nature of education, however, children in or near poverty levels almost never catch up to the educational proficiency of their wealthier counterparts and often drop out as early as 9th grade. That fact runs to the foundations of socioeconomic inequality in America and of disparities in later life chances—for healthy living, for living wages, for secure jobs in the growing edges of the economy, and for productive citizenship. That fact about disparity, inequality that may undermine the engine of social mobility across generations, also potentially threatens a pillar of our nation's democracy.

Thus, the stakes are high for failing to improve the educational outcomes of all children, but especially of children initially disadvantaged by low income, poverty, skin color, and recent immigration. Recognizing what is at stake, the Bush Administration proclaimed that “no child (will be) left behind,” and imposed mandates on states and in turn local schools to raise the tested proficiency levels of reading and math and set sanctions for failing to do so. Progress toward achieving the mandated performance levels, however, is slow, localized, and difficult to sustain on a wide-spread scale.

For example, best efforts to develop and implement a rigorous curriculum and instructional regimen in the early grades produce important gains but small sustainable effects on the least proficient students. Reading scores among those least school-ready may improve one-third of a year per year, but the initial disparities between the least and the most prepared are about three years by grade 2. Deficiencies for students in poverty, of color, and with English as a second language are largest. However, a strong, research-based curriculum in the hands of highly skilled teachers and in a school setting with coordinated administrative accountability can and does make a difference. But the trajectory of growth in reading among the initially most prepared for academic learning—disproportionately from white and higher income families—exceeds the pace of catch-up among those least prepared, even with strong instructional interventions. And even then, these interventions are highly difficult to sustain, given the high rates of student migration from school to school and of teacher turnover from year to year.

Faced with these tough realities, and the mandates and sanctions of No Child Left Behind, school administrators and teachers earnestly seek new approaches to reaching required proficiency levels not only in reading but in mathematics by 2014. School reform, in the form of better curriculum, better teachers, and better teacher supervision and evaluation, while effective, are insufficiently powerful means to the end of raising the least academically prepared to required levels of proficiency. Commentators and analysts like Jonathon Kozol and Richard Rothstein question whether we as a nation are spending too little or, ironically, too much on school reform. Others, such as James Heckman, argue that the earliest postnatal years, together with addressing the hard realities of unequal life chances among children before rather than after they enter school, are a more effective and cost-efficient target for gaining greater socioeconomic opportunity throughout the life course. In effect, the question being raised is whether we are mistaken to expect the schools and school reform alone to overcome foundational sources of unequal school readiness and of early manifestations of failures in academic learning. Those foundations could be closely tied to America's large and in recent decades growing inequality in income and even more, to a polarization of poverty and wealth. Those foundations extend to health and nutritional disparities across economic strata and racial groups, showing large manifestations in maternal health and related infant comorbidity and mortality. They could be tied to historic and intransigent racial residential segregation and newer patterns of economic segregation. In short, are the shortcomings of school reform an epiphenomenon of expecting the schools and school reform to accomplish too much? Should the focus and resources for achieving greater educational outcomes be directed elsewhere?

These are provocative and seemingly fair questions, given the very modest history of sustainable school reforms which boost the educational outcomes and later life achievements of those learning with least proficiency. They seem fair for a nation whose overall performance against student proficiencies abroad sometimes finds us wanting. And they are the questions that led us to seek an officer's grant from the Spencer Foundation to rethink and reassess this challenge. With the reauthorization of No Child Left Behind as a federal policy remedy on the horizon (2007-8), and hearing a growing skepticism among teachers and school administrators that this approach, when taken by itself, is a rather blunt policy instrument, we took the position that the time was critical to think outside existing national policy approaches and beyond piece-meal, idiosyncratic remedies that were being implemented on highly localized bases. We also wanted to take stock of what we as scholars and practitioners thought we knew about the roots of this educational challenge and its likely remedy: Have we asked the right questions and tested the most powerful strategies of intervention into root causes? Do we need to think outside our own intellectual boxes? Can we think beyond school reform, without abandoning hope for leveraging its impact? That is, can we identify strategically-chosen non-school interventions that not only augment evidence-based, successful school reform but that combine synergistically to multiply its effectiveness?

Early Working Assumptions about the Challenge of Raising Educational Outcomes of Low-Income Children

We began our exploration with two valuable assets. The first was an outgrowth of a long-term collaboration between Brian Rowan, David K. Cohen, and Stephen Raudenbush at the University of Michigan. They had just completed a large-scale assessment of instructional reform in U.S. elementary schools and its impacts on differential outcomes of students by race and economic background. Recognizing both the real but limited gains from instructional and curricular reform per se, they drafted a conceptual prospectus (**See Appendix A**) for a broader approach to boosting educational outcomes for disadvantaged students. That prospectus was circulated among a small set of colleagues, coordinated by the University of Michigan's Center for Advancing Research and Solutions for Society (CARSS). And with the assistance of CARSS, a core leadership team adopted the prospectus as a starting point for in-depth "discovery" or stock-taking period. The core team included, in addition to Rowan, Cohen and Raudenbush, Larry Aber (NYU), Deborah Phillips (Georgetown), and David Featherman (Michigan). Rowan has served as the team's principal leader. (**See Appendix B for biographies of the core team.**) Thus, the first asset was a set of committed colleagues who were willing to dedicate time to probing what we know, gaps in knowledge, interventions that have been attempted, and novel approaches that might yield more than additive improvements in educational outcomes for the least prepared at school entry.

A second asset was the prospectus prepared by Rowan et al. and its subsequent modification arising from early discussions among the core leadership team. That prospectus was the basis of the approach to the Spencer Foundation for an officer's grant to undertake an initial stock taking.

The ultimate goal envisioned by that prospectus was a national demonstration project the overall objective of which was a powerful, replicable (across many school districts) and sustainable approach to raising the educational outcomes of low-income children above proficiency levels while not impeding the educational trajectories of others: success for all American children.

Working Assumptions. We cite several working assumptions implicit in the prospectus that were starting points for the initial inquiry:

- *Sequential Transitions and Tasks Assumptions.* Long-term educational achievement reflects mastery of sequential life course transitions and of sequential educational tasks or competencies. The transition into school, the pre-K to Grade 3 or 4 period, is a transition that is not only about mastery of vocabulary, syntax and reading but also about acquiring self (behavioral) regulation, attentional focus, and social competence; it also involves parental and care provider adjustments to new roles and responsibilities vis-à-vis the child and the school.

School transitions and life course transitions are intertwined, even in the years prior to pre-K that anticipate the transition into school.

- *Unequal Life Chances and Early Biocultural Resources Assumptions.* Unequal life chances—including economic but also health and mental health factors—social contexts like family and community life, and lived daily experiences such as safety or violence interact powerfully with biocultural differences to shape individual and group trajectories of mastery of educational tasks; this interaction begins at birth and runs throughout life, but it may be most intensely critical in the years prior to school entry, for long-term educational outcomes.
- *Reading to Learn Assumption.* Learning to read and then reading to learn comprise the pivotal transition for mastering later educational tasks. If the transition into school is one of the first critical life course transitions, reading to learn is among the most foundational intellectual competencies upon which teachers and proficient students cumulate effective teaching and learning after Grade 3 or 4.
- *Early Intervention Assumption.* Early intervention, perhaps earlier than age 3 but most likely beginning at age 3 may be very efficient and effective for long-term, cumulative educational outcomes. However, each life course educational transition—into school, into middle school, into high school, and into postsecondary education—possesses unique challenges. No single investment in a single early life period is likely to inoculate a child for success across all these transitions, or for that matter, for later transitions into responsible adulthood and citizenship. Subsequent or later interventions, crafted around the task and contextual requirements and the requisite competencies of successive transitions, can succeed if prepared and anticipated by effective earlier interventions.
- *Holistic, Contextual Intervention Assumption.* Interventions to continuously improve educational proficiency should be contextual, holistic, and combine both in- and outside-of-school components chosen strategically to leverage school reform. If curricular and instructional reforms by themselves are fundamentally necessary but insufficiently effective interventions over time, then perhaps the causal factors underlying ongoing low proficiency, especially among low-income and minority children, may also lie in other domains, may arise before school entry, and reflect factors outside the school walls. The strategy of choosing the most effective combination of interventions also is likely to reflect differences across the various life course and educational transitions and differ among the groups (economic, ethnic, gender) at greatest risk.

Ultimate Objectives. The initial stock-taking period sought to lay the groundwork for several ultimate objectives, tied to the initial working assumptions, and arising from activities described later in this report:

- *Interactive Intervention Objective.* Identify the combinations of both in- and outside-of-school interventions that interact synergistically (rather than additively and therefore less effectively) to boost the educational achievements of low-income children and those from families of color and of recent immigration.

- *Efficient and Sustainable System Intervention Strategy.* Select the strategic combination of such interventions that are the most cost-efficient, implementable, politically feasible, and sustainable at scales of whole school districts, shaped as necessary to local conditions in different geographic regions and reflecting local partnerships' (e.g. health and welfare agencies; mayor's and chief superintendent's offices) needs and capacities.
- *Stakeholder Community Objective.* Create durable coalitions of academic researchers, school administrators, community and business leaders, public officials, and other stakeholders in the outcomes of this project that will enable and sustain but also survive it as a learning and action community addressing evidence-based educational reform, going forward.
- *Evidence-based Practitioner Objective.* Contribute a more systematic evidence-based approach to educational reform, throughout the project's course, by addressing and disseminating greater skills among practitioners in accessing, evaluating, and using research evidence about "best practices."

Taking Stock and Seeking Critical Advice from Scholars and Practitioners

With support from the Spencer Foundation and seed monies from CARSS, we used several approaches to examine and critique the validity of our initial working assumptions and the soundness of the preliminary versions of our ultimate objectives (both listed above). We also sought evidence of additional partners willing to join our small leadership team, either as members of the core committed to achieving its goals or as active advisors to it. Finally, we wished to assess the feasibility of developing a set of institutional stakeholders and partners who would be drawn to the project's vision, assumptions and goals and would assist its realization because of a valuable stake in its ultimate success.

First, the leadership team convened *three stock-taking meetings* consisting of both academics and educational practitioners. We pooled our collective knowledge of leading scholars across a broad range of disciplines and research communities (e.g. pediatrics, educational researchers, sociologists, developmental researchers, educational policy analysts, economists, psychiatrists) who have focused either on young children, upon young students, or topics (e.g. poverty, delinquency) we wished to associate with educational outcomes. We also sought nominations from several foundation heads who have funded research on school reform and on welfare reform; we sought nominations of key practitioners (e.g. school administrators from around the nation) who either were engaged in noteworthy reform efforts (especially regarding the transition into school and focused on the early school years) or seemed eager and ready to do so. (Lists of participants, from an original list of about 80 invitees to one of these three stock-taking meetings, appear in **Appendix C**, and the letter of invitation and charge to attendees is in **Appendix D**.) In selecting attendees, we did not limit our choices only to those doing research on educational achievement or whose research or practical expertise was about the transition into school and the early school years. We wished to put the question of our priority given to the transition into school on the table for critical debate.

We distributed our preliminary project prospectus and several background publications (e.g. Richard Rothstein’s essay for the 30th Anniversary of the Spencer Foundation) as starting points for discussion. We asked invitees to come prepared to critique the prospectus’ working assumptions and objectives. To prepare that critique, we asked each to write a short commentary for distribution to all prior to the meeting. Each commentary was organized around three questions to be answered with reference not only to the author’s own research or practical experience but also to empirical and wider evidence generated from within the author’s practice field or discipline: (1) What are the key factors—whether arising from within the school or outside it, whether occurring during key transition points or prior to school entry—that most powerfully impact educational proficiency and especially failures to reach proficiency? (2) What gaps in knowledge limit our ability to more fully understanding failures to reach and sustain proficiency or to construct effective interventions toward that goal? (3) What are “best case” examples of more effective, sustainable interventions and what makes them “best?” (**Appendix E** is the collection of submitted commentaries, not all of which followed our charge or addressed our questions as we had hoped; still all were very valuable to the ensuing discussions at the meetings and to the leadership team’s subsequent deliberations.)

Our second and third stock-taking approaches emerged from a realization that our first set of three meetings was not providing as full a critical discussion or pooling of perspectives as we had hoped. On the one hand, our reconnaissance of research and critical perspectives revealed that we had not fully captured the complexities and nuances associated in differentiating between the *challenges to school readiness and subsequent proficiency arising from poverty and low income as contrasted with those associated with “minority” status—such as race, ethnicity, and bilingual learners*—so often a correlate of low income but with distinctive issues. Thus sets of two or three of our leadership team each conducted a series of *telephone interviews* sought from over two dozen leading scholars *addressing aspects of race, ethnicity and bilingualism*, many of whom themselves were scholars of color. The questions to these advisors were those three we put to participants in our face-to-face discussions but with special reference to students of color and from families of recent immigration.

Our third approach was to add Dr. Kenneth Burnley, former chief superintendent of the Detroit School System, as a member of our project leadership team. Dr. Burnley currently is a senior fellow at the University of Michigan’s School of Education. Burnley quickly addressed a deficiency in our reconnaissance: We were able to bring only two very busy school administrators to at least one of our prior meetings, despite verbal commitments to attend. Burnley devised a two-phase strategy for opening an active dialogue about partnership with practitioners and with professional and governmental associations. The first phase, which is ongoing but nearly completed as of this report, entails a series of *meetings in the headquarters of chief executives and deputies of organizations representing school administrators, large school systems, teachers, mayors or governors*. (See **Appendix F** for a list of organizations and other scholars consulted.) Burnley’s stellar reputation and his willingness to make initial contacts readily got us the interviews we sought. He joined our team in all the interviews. Before each, we distributed a synopsis of our project prospectus and its working assumptions and

objectives. We identified several questions we hoped to pursue: (1) Given the objectives of your organization, does this project, specifically its focus and goals, align with the needs and priorities of your constituency; what would make the alignment closer? (2) What current activities and projects of your organization might dovetail with and help influence the ongoing development of our project and its ultimate objectives? (3) Under what conditions now and into the future might it become possible for your organization, the auspice of your office, to help us develop trusted partnerships with local school districts and officials (which ones and where?) as we continue to fine-tune the objectives, design and the strategies of implementation and maintenance of this project? (4) How might we begin building a partnership with your organization, what might we offer your constituency going forward, such that you become an active stakeholder in the project's evolution, funding, and (one hopes) ultimate success? The second phase of Burnley's suggested strategy will be pursued over the following year and involve a series of site visits to cities and districts, with the assistance and support of the CEOs and organizations we are nurturing as stakeholders, to assess which sites (e.g. school districts; cities; states) may become partners in the empirical stage of our project.

Our fourth approach turned attention toward potential sources of funding of large-scale experiments or other strategies of implementing and assessing educational reforms. The advice we sought was more about strategies of *building a funding coalition* of both public (e.g. federal agencies) and private (e.g. foundations; corporations) donor/stakeholders. So far, this process has used our project prospectus to elicit reactions from agency and foundation heads to its working assumptions and ultimate goals. One important pair of questions in these discussions: Given that many innovative "experiments" with interventions are underway and competing for funding, are our emphasis on the transition into school, our focus on intervening to achieving proficiency for low-income children, and our goal of finding a synergistic intervention addressing curriculum and instruction *and* other outside-of-school factors likely to be useful and compelling to scholars, practitioners, and policy makers? What would make it more so?

What We Are Learning, Gaps in Knowledge and Key Preliminary Conclusions

Our learning and deliberations are ongoing, and the final section of this report outlines the directions we shall pursue to fill gaps in knowledge and to reach final closure to the project's ultimate objective. Having said that, the four approaches to stock taking yielded valuable insights, suggestions, and enthusiastic yet constructively critical and cautionary advice. While we did invite and did receive differences of opinion about a few of our working assumptions and ultimate objectives, on balance we heard more support and encouragement to continue their refinement than strong advice to choose an alternative target of intervention (e.g. transitions into middle or high schools; close the "achievement gap" rather than focus on meeting proficiency goals). *Scholar colleagues engaged us in a healthy debate over the state of evidence-based conclusions that support our assumptions, and one consequence is an ongoing set of secondary analyses we are carrying out (and others we plan to commission). Many, however, indicated an eager interest in playing some future role in nurturing the project to realization.* One challenge

we face, as a consequence of a myriad of well argued “key” factors affecting proficiency and failure to reach and sustain it, is how to sort what is more “key” from among the rest. We comment on this challenge in the final, next steps section.

Perhaps the most enthusiastic response emerged from the practitioner community representatives. Uniformly we heard that teachers, principals and superintendents are seeking more effective ways to leverage school reform. They seek curricular and instructional tools, based on research evidence that would lead to both greater proficiency gains and to sustainable, cumulative learning across grade levels. But in addition, we heard that practitioners were experiencing frustration with an apparent “glass ceiling” (a phrase used by one consultant) to these delimited school-based reforms. They applauded our search for impediments to achievement that arise both outside of school as well as inside the walls. They stated a willingness to help find and implement a strategy of intervention that coupled strong reforms in teaching and learning with novel approaches, whether introduced inside the school, in families or the surrounding community, or in broader social policies, that addressed the readiness to learn. They pledged to help us find willing partners (school systems and superintendents; cities and mayors) and identified follow-up staff to their initiatives that might start building collaborative ties. Frankly, we were elated with this early receptivity.

What we conclude from these animated and productive discussions with practitioners and scholars is that our project has the potential to make a unique intellectual contribution and one that could be received with considerable enthusiasm where it might count most—within the learning communities of schools.

This section, therefore, highlights a few key points of consensus, if not unanimity, that emerged in our stock taking to date. It also highlights a few of the less well conceptualized and less well researched issues—gaps in knowledge that came to light. And it provides an updated synopsis of our working assumptions and premises, conditional upon next steps to close key gaps in knowledge. Finally, it shall underline those opportunities for the project to make unique and valuable contributions to both theory and practical outcomes.

Focus on Meeting Proficiency Goals, Not on the “Achievement Gap.” Much of the research literature and of the rhetoric surrounding the schools’ accountability under No Child Left Behind is focused on closing “the achievement gap,” mainly between lower-income students and schools and their higher-income counterparts and among students by racial and ethnic ancestry. In our consultative meetings some urged us to focus on factors limiting greater success in closing the achievement gap. Others argued that doing so would render our ultimate project less likely to make a credible claim of success and thus to join a long line of expensive “failures” that have doomed wide-spread support for systemic school reform. Our judgment is to focus primarily upon raising the trajectory of proficiency of the least advantaged children by creating powerful, effective means for all children to meet or surpass proficiency targets in each educational transition. That goal may also reduce mean differences among groups of students, but

the criterion for a successful intervention, in our project, will not be linked to such gaps per se.

In sum, we suggest that the “problem” to be solved in realizing better educational outcomes for our nation is to find efficient ways to raise proficiency levels, the growth trajectory of proficiency across successive educational transitions, of those least prepared for academic achievement, without sacrificing the opportunities for others to grow as well. A goal of raising the performance of all to above grade proficiency levels, while not handicapping others in that grade, is still daunting. Defining proficiency standards is not straightforward, and it should be as much research-based as determined by administrative or political fiat. But proficiency is more attainable than attempting to close the gap. A program that aims to raise proficiency levels to grade standards, and succeeds at large scale, is likely to gather more sustaining political and economic support than a program that sets out to close the gap and appears to fail except in very idiosyncratic, localized contexts.

Focus on Low-Income Families, Diversified by Bi-Lingualism and Color.

By and large, children of poverty, African American and Latino ancestry, and from families of recent immigration arrive at school with the least academic readiness. The burdens upon their school readiness, both academically and behaviorally, and to subsequent trajectories toward higher levels of graded proficiency, are many. *These burdens to academic achievement differ in profile for each racial, ethnic, and income grouping.* That these burdens are diverse suggests that the schools, themselves, may not be solely responsible for failures to reach proficiency levels concurrently with more advantaged students. In fact, this same point is made by practitioners and scholars alike, and not as defensive rhetoric to avoid taking responsibility to create within schools rigorous, effective, and sustainable learning environments for the least well-prepared children. Instead, in our discussions *we heard wide-spread conviction that “non-school” factors were powerful, often predetermining influences shaping the readiness to learn and mediating even the most effective school-based instructional regimen on an ongoing basis* (the strongest, vehement but also evidentiary case for this point of view is made by Heckman). So if the schools are failing the nation and leaving many of its children behind, the schools are only partly to blame (again, Rothstein’s commentary makes this point elegantly). And if that is true, then *school reform by itself is not likely to achieve as much as some combination of the best of reform together with interventions to address causal and mediating factors that arise outside the classroom or beyond the provenance of school officials.*

Calling attention to the “non-school” factors that affect learning, especially the predetermining impacts of early life handicaps, including poverty, and the importance of working not only with children but also with their care providers, is not new. Decades ago this emphasis formed the basis of Head Start and similar efforts to address the family and community-based challenges facing especially black children of poverty, such as James Comer’s Social Development Program. What could be new, and what was urged for our consideration, is an evidence-based strategy of mixing interventions that rest solidly upon instructional reform but that also simultaneously and synchronously address

sources of instructional and learning handicaps arising outside the school. *Mostly from the scholarly community, but also from practitioners (who felt that non-school factors were neglected and ignored in the era of NCLB), we heard a confidence that the research basis for integrating a regimen of reform that combined attention to both in-school and outside-of-school factors was far stronger now than ever before.*

Poverty and Unstable, Low Income. Having asserted that optimism, we also heard a long list of non-school factors likely burdening the least proficient and the least ready to learn. *Poverty itself is more than low and unreliable income.* It brings hunger, malnutrition, uncorrected visual and auditory impairments and painful oral disease; increased likelihood of undiagnosed and untreated mental conditions, unrelieved stress and associated behavioral dispositions arising from disadvantaged living conditions; and the daily risks to life itself from living in violence-prone neighborhoods. A child of poverty often lives with a single (female) parent or grandparent and may move from home to home, even to foster care settings with such frequency that sustain school attendance becomes impossible. Love notwithstanding, *parenting skills and the abilities of poverty-prone parents to prepare their children for school—even to offer them the vocabulary and the conversational skills necessary for kindergarten—are infrequent and underdeveloped.* Under post-1996 federal and state welfare eligibility requirements (subsequent to the Personal Responsibility and Work Opportunity Reconciliation Act), *low-income parents must work, and absent provisions for child care,* the burdens placed upon children's home circumstances may only become greater challenges for preparing for school and learning once there (e.g. a reliable caretaker monitoring that home work is getting done; bed times are met; breakfast is served).

Under these many burdensome circumstances, it is small wonder that efforts to address academic readiness and gains in proficiency with direct payments to parents (unconditional income supplements) have small albeit important (in the scheme of other single-factor interventions) impacts on outcomes like gains in children's IQ scores. But repeatedly we were admonished, as much by scholars studying poor and minority communities as by practitioners teaching in these settings, that *any effort at in-school reform had to recognize the sheer weight of poverty and the concentrated, multi-dimensional handicaps to learning borne by low-income children and their care providers.* In the section on next steps, we offer some preliminary thoughts on how we shall explore doing so.

We noted some important gaps in knowledge, however, despite a long and deep literature about poverty. *One less developed arena is health and mental health and the co-morbidity risks among poor children that impact educational outcomes.* Recent research in epidemiology reveals that the same disparities in health and mental health found among adults are present in children, with about 20% of children (more in areas of concentrated poverty) having diagnosable mental problems. Health status is poor among the poor, even in childhood. Consequently, there is growing interest in using schools and school systems as points of diagnosis and intervention for health and mental health. Yet at present, *there are only a handful of well-developed, school-based intervention programs designed explicitly to improve young children's health and mental health.*

Further, the synergy between intervention programs in these domains and the improvement of students' academic learning has yet to be investigated systematically. This is unfortunate, however, since preliminary evidence shows that early health and mental health status have significant effects on young children's academic growth, special education, and/or remedial placement, as well as general adjustment to school. We shall address this gap in knowledge during the next stage of our work.

African American Ancestry. African American children are not all poor or low income. *Race in America, when coupled with low income, however, means that poor black children face additional burdens that poor white children do not.* Residential segregation of African American children, except for those with middle class or wealthier parents, places them *in poorly financed inner-city school systems with high teacher inexperience and turnover.* The students themselves move from homes to foster care to and from relatives, adding to the instability and lack of sustained learning opportunities. Despite those facts, *we heard of several heroic success stories about teachers and schools that have prevailed in urban, African American communities, as have their students...for a while.* Some of these success stories are about charter schools (e.g. the KIPP schools); a few are conventional public schools. Such examples belie the conclusion that urban schools are doomed to failure. They negate the simple equation between spending per pupil or class size per se and achievement, but such factors do still matter (i.e., the KIPP schools are not inexpensive to operate and experience high rates of teacher burn out).

But black children, especially by adolescence, have been exposed to several “non-school” factors that loom large in their social and personal, mental lives. *One is the large fraction of black boys and girls who have encountered the juvenile justice system themselves or have siblings or cousins who have been “in the system.” Like foster care, this simple fact disrupts school attendance and creates a climate of self- and group identity that sets up a disconnect between lived experience and the normal expectations and requirements for learning and matriculation.* Add to that the very high fraction of African American men, and increasingly women, in the criminal justice system. Role models on the street, absent fathers and uncles in jails, add to a mental disconnect from the conventional school system, its tacit values, and the life prospects it seeks to hold out to those who succeed in it. That is, given the economic realities of adulthood (e.g. unemployment and/or crime) and the street-life alternatives (economic and social) of the neighborhood, the conventional school house may not be automatically attractive or even necessary. (We were especially grateful to Michael Wald for bringing this “special population” of “sometimes” students to our attention.)

Orlando Patterson argues (as do others, some from a political rather than research-based orientation) that this is rationalization; look at the evidence of many black kids succeeding, he says. Black males and African American families—and children—need to succeed and can in the world as it is; they can assume a place of leadership in a diverse world economy. *Personal responsibility (from parents and older youth), with a little help from those ready to offer it within these communities, goes a long way; but the pathway is tough (as noted by James Comer, among others).* Yet even among those on that pathway,

the psychological challenges and other burdens of being black—in a world where the history of African American success, through education, in the leading edges of the economy is only 30 to 40 years old—are large. For instance, Claude Steele and colleagues (Aronson) describe some *psychological challenges as the threat or risk of a negative or inappropriate stereotype*: My group is not good at school, so if I encounter difficulties or begin to fail in school, I am not at fault; why try harder? (By contrast, Asia-American students tend to see their peers as successful in school and interpret failure as episodic, a bad day, and due to external reasons, a bad test; next time, I'll do better by preparing better.) Such group-based self attributions of responsibility can be and often are shared by peer groups and by teachers as well, converting such stereotypes into externally reinforced *self-fulfilling prophecies*. Ironically, such reinforced self-fulfilling prophecies—among socially powerful peer groups on the street and in the school and by teachers in the school—tie the street and school together in a perverse way. It impairs achievement, depending on what the prophecies foretell and *whether such “possible selves” can be altered in the minds of students, peers and teachers.*

We encountered several important streams of research and intervention research (i.e., Dweck, Markus, Oyserman) into this dilemma. Most addressed the social and psychological burdens among African American students, especially among adolescent males, that impair school achievement. This line of work seems especially promising for future development within our project, as will be noted below.

Suffice to say that more basic research of this genre would be required. Most of what exists was developed among youth and adolescents and for educational transitions in middle school and beyond, including college. How such cognitive and emotional models, linked to self- and group attributions, play out developmentally in young children, perhaps even in the pre-K years, is an open and uncharted arena. Outcomes like perceived competence, self-expectations, and vulnerability to failure, as well as group-based identities and attributions, are some areas needing deeper developmental knowledge. How one would intervene in such processes, of course, depends upon such basic research, especially among ethnically and racially diverse children, as a foundation.

Hispanic Ancestry. Latino Americans come from highly diverse regions, including the Caribbean and South and Central America. We concentrated our focus mostly on Hispanic Americans, mostly from Mexico. Hispanic students often live among low-income African American neighbors, especially in the Eastern states or in urban ethnic enclaves of the West. Their school settings are very similar to those of comparable black children. Many come from low-income families, and many of these are either legal or illegal immigrants. Children of the second generation, holding constant income, appear to do as well in school, if not better, than their white or Anglo counterparts. But the complexities and dynamics of immigration, not to mention fluidity of immigration policies on the horizon, could alter patterns that have appeared in the research literature.

Given the high fertility among especially Hispanic immigrants and the contemporary fact that population growth in America (including school-aged populations) arises mostly from immigration and its progeny, any project addressing the future of American education must confront the special challenges faced by children of immigration.

Two prime factors affecting immigrant children are bi-lingualism and bi-culturalism, and these are likely to be unavoidable factors for our project to address. They also are complexities about which more foundational research seems necessary before devising ways to address these challenges. Interestingly, bi-lingualism and bi-culturalism are both “in-school” (instructional) and “outside-of-school” factors that affect proficiency and its growth. They also must be factors coming to play in designing and implementing interventions into the schools and within the communities, tailoring approaches according to cultural and linguistic conventions and nuance.

As an “in-school” factor, *bi-lingual instruction remains controversial for its effectiveness as a tool. Part of the controversy is that the curricular content of this instruction is insufficiently challenging and not on a par with its English language counterpart.* More research was recommended by our consultants into what constitutes a rich verbal environment for children learning in two languages, how complexity and fluency of BOTH languages can be maintained, and how to raise the quality and complexity of curricular options (including teacher competency) for non-English instruction. *More research is needed into the ways that shifting between two languages may either facilitate or impair instruction in either, given comparable content.* A different “in-school” issue is how ethnic and linguistic diversity is used to reinforce the pride and dignity of different cultural heritages, so that all students and especially those of “minority” status, view learning in different languages as both natural (not a handicap or stigma to be overcome) and (perhaps) even desirable.

Outside the school, parents without fluency in English are unable to provide reinforcement to the bi-lingual learning of their children (although in some cases, such older children are in an elevated position within the household as translators and inter-cultural mediators). [There are some apparent parallels between such families and, say, African-American families in which non-standard English and functional illiteracy abound. But sorting out similarities from differences is important.] *Bi-lingualism, and bi-lingual instruction, can be construed as a challenge to the preservation of cultural and linguistic heritage and an ethnic enclave; it can be resisted within the home and community.* In such instances, the bi-lingual child poses a mixed blessing and may encounter ambivalence or the lack of full support from the wider community.

These factors impacting the schooling of immigration’s children are likely to vary from community to community. *Asian-American, Mexican-American, and Arab-American communities, for example, are likely to view bi-lingual education and bi-culturalism through different lenses of cultural experience and of various commitments to full*

assimilation. Given the importance and volume of such children in tomorrow's schools, we cannot avoid these issues. And to prepare our way, our consultants urged us to gather deeper knowledge and undertake, or commission, more foundational research.

Focus on the Transition into School, Building on Earlier and Anticipating Later Transitions. Our prospectus and working assumptions framed the educational process as a series of life course transitions and sequential educational tasks. That view was reinforced in our consultative conversations with scholars and practitioners. In addressing the challenges faced by low-income students, for example, some stressed the challenges of the high schools and the transition into post-secondary education or employment-seeking. Others, the transition into middle school. The types of educational and broader developmental tasks associated with these transitions differ from each other. For example, in the middle-school transition, mastery of algebra is prerequisite to higher educational outcomes; it also is a time when key peer affiliations crystallize and these and other reference groups anchor the group identities and self-attributions that interact with the motivational and cognitive processes underlying educational outcomes. It is a pivotal point when many of the least prepared for more rigorous academic work can and do drop out.

Recognizing that educational achievement is a series of sequential challenges, each important and compelling in its own way, we conclude from our consultative process that our ongoing preparations will focus primarily and extensively upon the transition into school, that is, from pre-K through Grades 3 or 4. In doing so, however, we also shall use our life course perspective to look both backward and forward. That is, we shall build upon the earlier transition from infancy to pre-K. And, we shall anticipate the next transition from elementary into middle school. We believe this approach, especially as we design and implement the ultimate interventions, will make the results of this project more productive and beneficial.

The rationale for this decision has a broad base. *First, our inspiration to form the core leadership team drew upon our research expertise and several interests in the conjunction of low-income families and economic inequality, child and family welfare policy, instructional and school reform during the early years, and early child development.* To put it bluntly, we were predisposed to tackle a difficult challenge from our pooled collective strengths. Second, the depth and sophistication of the cumulative research literatures, from many disciplines, on which we must draw in linking non-school factors together with school-based reforms, are much greater and have a longer associated empirical corpus for secondary analysis. Importantly, that research corpus and capacity for secondary analysis are yielding *a rich vein of knowledge about school reform and how to optimize its successful impact on achievement during the early school years.* While the examples are numerous (e.g. the National Reading panel; RAND panels about K-2 reading programs), the Study of Instructional Improvement conducted by Rowan,

Cohen and Raudenbush provides both practical and scholarly guidance about instructional reform upon which this sequel project will build.

Third, and related to the former, *the lineage of intervention and demonstration projects focused on pre-school and early educational transitions (e.g. Head Start, Early Start, Follow Through), and on early child developmental issues, generate well documented cases of successes and failures from which to learn, or, in the instances of those still ongoing, upon which to build.* Notable among the latter longitudinal assessments of early intervention are the High/Scope Perry Preschool Project, the Carolina Abecedarian Project, and the Chicago Parent-Child Centers. Fourth, *growing empirical evidence suggests that the roots of readiness to learn lie in the early years of life and at least by age three begin to manifest outcomes that can be carefully measured and (with optimism borne of newer research) modified.* The abilities and skills acquired in the pre-K period and extending into the early grades (e.g., learning to read; reading to learn; self-regulation and self-motivated learning) lay the necessary foundations for later learning, transitions, and educational tasks. Failures to acquire a solid foundation become ever more costly for the child, the family, and the school to overcome. Aware of new evidence and new capacity, many of the practitioner associations we visited were primed to work more creatively than in the past to prepare children for the school, to prepare the school for a new demography of challenged students, and to search in partnership for a new vision and plan to do so.

A fifth reason lies in a novel objective of our project. *Our goal is to implement a sustainable regimen of intervention that combines strategically chosen factors of instructional and other school-related reforms with factors arising largely outside of the school (some perhaps potent prior to school entry). And we seek to take the most powerful, synergistic regimen to a multi-district, multi-regional scale.* We aim for unique, nonlinear impact, and when successful, this approach, during this early foundational period, should have greater than previous impacts on raising the floor of proficiency, if not fully closing gaps in proficiency.

A sixth reason also adds to the novelty of this project, in our view, and that is *our use of a life-course approach in designing the focus and objectives of the intervention.* While the specific details and choices remain in flux pending more preparatory research, we shall build both upon the infancy to pre-school transition and anticipate the middle-school transition, all the while focusing intensively on the transition into school. For example, with respect to instructional and curricular reforms during the early grades and perhaps even in the pre-K period, we may use mathematical instruction as part of an integrated approach to more effective reading instruction (e.g. as per the approaches of Frye and of Ginsberg). The mathematics curriculum also lays the foundations for the middle-school transition, if properly sequenced. Likewise, the powerful intervention approach of Oyserman during the middle school years, aiming to counter more limited “possible selves” among low-income African American teenagers, may be modifiable and used within the feasible developmental ranges of younger children. This latter possibility opens new basic research questions and illustrates how our problem-driven, solution-seeking project must also break new scientific ground if it is to succeed.

Finally, and on a somewhat philosophical ground, *the transition into school is a pivotal first encounter between the child, his or her family, and the state.* The encounter is mandated by the state; families must submit their children to schooling, usually public schooling (except in those still rare instances of home schooling, or, to private albeit still mandatory educational institutions). The outcome of that encounter, for the child and family, sets in motion early experiences of success and failure in public settings, emotionally-laden labels of being a “good” or “bad” student, and comparatively derived self-attributions that begin to shape life goals, hopes, or their dispiriting vague absence. For the state, the first encounter is an initial testing ground of the community’s commitment to the goals of creating competent, committed citizens and a diverse future work force capable of leading the global economy. While the latter responsibility of public education extends into the post-secondary years, any failure to recognize where such responsibility begins is very difficult to overcome later in the educational process.

Build Intervention Upon Best Model of Curriculum and Instruction and Sustain It. The most likely centerpiece of our strategy of intervention will be instructional and curriculum reform. In fact, part of our rationale for choosing the pre-K to Grade 3 or 4 transition is that the research and interventions associated with instructional and curricular reform for this period are more sophisticated and bench-tested than for later educational periods.

Our general goal—as of this writing—is to use, for baseline comparison (or if you will, the counterfactual), a “best practice” regimen of school-based instructional and curricular reform. Current best instructional reform would be compared to more complicated interventions, noted in their highly schematic and preliminary form in the following section.

Our preliminary thinking follows from the expertise within our leadership team, from the advice of individuals we consulted, and from our own reading of the research and practices literatures. We see as the core of our intervention a highly effective and proven early literacy intervention, to be coupled with both effective and well-coordinated after-school programs and summer school opportunities. Our own reading of the research literature suggests that this basic “school reform” approach can boost the academic achievement of target students. But our hypothesis is that instructional interventions will be even more effective if students come to school more frequently, in better physical and mental health, and with the kinds of social, behavioral, and emotional dispositions shown by prior research to be “academic enablers.” And this leads directly to our next point.

Combine Instructional Reform with Synergistic Non-Instructional Interventions. We have stated earlier an aim of finding and then implementing at large scale a set of interventions that focus on pre-K through Grades 3 or 4 but that also build upon and anticipate some aspects of earlier and later transitions. The centerpiece will be the developmental and educational tasks for competence and proficiency of this educational period, and the core of that will be curricular and instructional reforms that

are systemic and sustained. But while the school and instructional reform may be at the center of this intervention strategy, our stock-taking consultation strongly reinforced our premise that we must combine powerful instructional reform with attention to non-school-based precursors and concurrent factors that either enhance or impede educational progress, and do so synergistically.

The early candidates for our consideration are many, and our work ahead involves strategic, evidence-based choices. *Among strong “non-instructional” candidates are the early (preschool, infancy) development antecedents of behavioral regulation—aspects of social and emotional development and of attentional regulation—that enable the child, upon school entry, to become “teachable,” to be non-disruptive and focused, to engage in non-aggressive social play and helping behavior, for example.* Boys seem less developmentally predisposed than girls to some of these outcomes and indeed, more research is warranted into neurological and gender-based aspects of the behavioral side (as well as the cognitive) of learning. Our consultants made the case that for many low-income students and others least ready to learn, the acquisition of “proper” behavioral regulation was at least as important, perhaps even more so in some cases (e.g. boys), than the more strictly cognitive antecedents (e.g. vocabulary).

Previously we discussed the potential synergy of combining health and mental health issues into an intervention strategy. The premise is that in doing so, together with school reform, the boost in educational outcomes will be far greater than with school reform alone, and, that the net school reform effect itself will be greater than in the baseline comparison, with instructional reform alone. The same logic would apply to interventions that address behavioral regulation beginning in early childhood, in combination with school-based instructional reform. *Indeed, some combination of mental health issues and with issues associated with behavioral regulation appear, at least for now, as highly promising and related “non-school” factors to incorporate into our intervention package. But as previously noted, the early childhood mental health arena is one warranting more foundational research.*

Both examples, from a longer list, illustrate what we might term “**micro-level**” factors, in both cases, non-school micro-level factors (e.g. individual differences in behavioral regulation). But our search for optimal synergy with instructional reform must be broader, including possible “**meso-level**” factors. These would include, for example, *the integration of social services and their delivery at school sites; home visits by teachers or nurses that address issues of parenting and health; school-based health and mental health centers; a variety of coordinated interagency strategies for tracking and delivering services to clients, perhaps in concert with the school, that compensate for community-level handicaps, like the absence of safe streets or shortfalls in access to health- and mental health care in poor neighborhoods.*

By the same logic of building upon a foundation of systemic school reform, we also shall compare a third tiered-intervention approach: namely, a combination of school-based interventions (beyond the baseline of instructional reform) with child and family welfare or other policy changes impacting educational outcomes. These policies represent yet

another level of factors shaping educational outcomes: broad “**macro-level**” factors that condition and influence the educational process at the institutional and individual levels. When commentators like Rothstein ask if incremental monies for urban school systems would be spent more effectively on public health or on income subsidies for universal day care, he addresses policy options impacting educational outcomes for low-income children. He also bluntly calls the question of the most cost-effective pathway toward raising proficiency levels; school reform is one pathway, policy reform directed to key handicapping factors is another. We take Rothstein’s point and suggest that our project should contrast the baseline of “best practice” school reform with a combination of it with a few strategically-selected policy interventions.

As with other arenas of our stock taking process, candidates for policy intervention were numerous. Some pointed to the inefficiency introduced into efforts to coordinate instructional and curricular reforms across grades by both the migration of low-income students from school to school (because of instabilities in their living arrangements) and the turnover of teachers. One suggestion was to devise an incentive program for teachers, perhaps in the form of a housing allowance made conditional on duration of employment and meritorious performance.

One especially intriguing policy intervention might be modified from models of conditional cash grants to low-income parents in developing countries. Whereas most welfare policies in America use incentives and disincentives to affect labor force behavior (e.g. earned income tax credits for the working poor) and therefore income, new approaches abroad are tying incentives to parenting behaviors that directly affect investments in their children’s human capital, especially the educations of their children. In several Latin American countries, for example, parents receive grants that not only replace the income of a child sent to work rather than to school but that also are made only if parents perform certain tasks: e.g., regular well-baby health care visits; regular school attendance. *What is especially intriguing about this kind of policy is that it both addresses aspects of poverty (providing more income within the household) and also positively reinforces better parenting skills that tie more directly to advancing preparations of the child to show up for school ready to learn.* It potentially makes the parent into a more engaged partner in the educational performance of the child, demonstrating to the child at least the appearance if not the reality of importance the parent attaches to schooling. While not wishing to push the hypothetical too far, we also can imagine ways of structuring the incentives and conditional parental behaviors—perhaps even additional monetary incentives to children for gains in proficiency—so that both parents and children begin to see concrete, tangible connections between going to school, improving proficiency, and useful, monetary outcomes. That association may be taken for granted outside of low-income communities; it may need to be built into the cognitive and motivational systems within the minds and heavily burdened lives of poor parents and their children.

Whether such unconventional (for this nation) policy intervention is politically feasible and practically possible is uncertain, but we are encouraged to think boldly about reforms, outside the school itself, that could be powerful adjuncts to instructional and

related school reforms. Those that engage parents and families together with the schools, those that may have multiplier effects (making parents better parents but also more literate, numerate, punctual, and employable as well) are especially intriguing.

Gain the Sustaining Support of Powerful Local Stakeholders. Our practitioner advisors and policy analyst consultants have reminded us that school reform at any level—local, state, national—is contested terrain. In the present climate of reform, dominated by No Child Left Behind as national policy, efforts to take a broader and more tailored, localized approach, while probably welcomed in principle by parents and teachers, will find resistance. Some will come from under-resourced and struggling school officials who are trying to close achievement gaps, repair crumbling infrastructure, and get rid of poor teachers while retaining their stars.

As we go forward to further refine our intervention strategy, we have been advised to rapidly identify school districts around the nation who may become not only willing but abiding partners over the years necessary to finalize the design and fund the project but also to sustain it through its trial period and evaluation. This entire process, from start to finish, will take up to a decade.

The Washington-based heads of school administrator and urban leadership associations, along with senior leaders of education-focused foundations, have been especially helpful in identifying potential cities, school districts, and mayors and chief superintendents as candidates for exploratory conversations. At the same time, they warn us about the turnover we can expect within any local consortium of leadership we might assemble for each site in our multi-site, district-level design that we foresee. It will be important, we have been advised, to attempt to assemble local stakeholders that include not only parents, teachers, and superintendents but also chief superintendents and mayors or deputy mayors. These coalitions themselves are not easily assembled, owing to turf issues and political rivalries, but if we wish to coordinate school reform at the district level, if we wish to integrate service agencies (e.g. in physical and mental health care with social welfare) under city-wide jurisdiction, if we wish to use state-level policy instruments as part of our intervention, we must have not only the buy-in but the sustained support and enforcement of key leaders and key offices.

Political lethargy, resistance to interagency cooperation, rivalries over jurisdiction will be encountered and they are the enemy of sustainability as initially willing partnerships and effective coalitions suffer turnover of the champions. This is a huge strategic issue, the solution for which is not easily foreseen.

One chief executive of a practitioner association, speculating about this dilemma, could only advise a general course of action: *Assemble a coalition of stakeholders, importantly among them heads of industries and corporations for whom making the schools work on behalf of the national economy is a top priority, who will*

make it impossible for elected officials to ignore what you are trying to accomplish. Make them part of your team effort quickly.

Turning to funding, our early reconnaissance suggests that we need both modest short-term funding to complete next preparatory steps (see next section) but then very large-scale funding for pilot trials and then full-scale implementation and evaluation over a decade. Some combination of foundation monies and smaller grant funding should help us through the remaining preparatory period. However, we must begin now to assemble elements of a funding coalition from both public and private sources. Large-scale public monies, from federal sources, currently are tied to congressional mandates and intended to produce results in a very few years, not in a decade's time. One suggestion is to attempt to work the Hill with an eye toward gaining a place for this project in a future appropriation—in other words, an ear mark. (Under devolution, states have had authority to redirect some of their health, social service, and welfare dollars in new and creative ways; we hope to tap into that flexibility and authority for some of the anticipated interventions and policy realignments we are considering.) Another difficulty with securing federal monies is that interagency cooperation, over recent decades, has a poor track record. Some very few well endowed private foundations do care about educational reform. Perhaps some leadership from those foundations might galvanize a broader coalition based on private and public support. But the funding challenge is not for the faint of heart.

V. More Preparations Lie Ahead and Next Steps

In many respects our initial stock taking has refined and sharpened many of the working assumptions and ultimate goals with which we began in our project's prospectus.

We still aim for a national demonstration project, based in several school districts across strategically chosen regions and cities. We seek a powerful synergy of interventions, based upon rigorous instructional reform across schools in a district but conjoined with equally rigorous efforts to significantly boost the educational proficiency of students by addressing key non-instructional and non-school factors that impede a student's ability to meet proficiency standards. Our criteria for success are to achieve levels of proficiency and to accelerate the pace of reaching proficiency among those initially least prepared for academic achievement, typically poor and minority students, some recently immigrated to America. Moreover, we also aim to achieve more powerful, synergistic impacts of school-based reform by combining them with interventions outside the school, including within public policy arenas. Our main educational target is the transition into school, mainly the educational tasks and life course transitions between pre-K and Grades 3 or 4. But from a life course perspective, we also shall be attentive to predisposing challenges within infancy and anticipate the transition into middle school.

Our reconnaissance has refined the details and the rationale for this prospective project. But it also has revealed gaps in knowledge that must be filled, presented substantive choices we need to make in designing an efficient intervention approach, indicated strategic preparations to which we must now turn, and underscored the importance of a deliberate but quick pace of finding strategic partners for our empirical work and of building coalitions of stakeholders and supporters.

What are some next steps? And what is our timeline of preparation? While a full specification of tasks and timetable will be laid out in subsequent documents and funding proposals, we offer some synoptic and still evolving plans to evoke the comments and guidance of colleagues and other advisors to our project.

First, the two overarching goals of the next steps are (1) designing a scientifically-sound intervention strategy, pre-tested for feasibility at large, multi-site scale, prepared for full implementation, and accompanied by plans for its sustainability and adaptability over as much as a decade; and (2) setting a flexible and scientifically-responsible timetable for achieving the foregoing that, insofar as possible, positions the project for full implementation as a national demonstration project in 2009-10. In identifying this target date for full implementation, we anticipate a policy “window” during the reauthorization process for No Child Left Behind, probably during 2008-9. Our aspiration is to be sufficiently prepared, with sound evidence of effectiveness behind us, to advance our design and approach in that “window” as the most compelling option for leveraging school reform and for accelerating proficiency gains going forward. Full implementation would require very substantial funding and a very solid foundation of evidence suggesting efficacy at large scale.

Second, our overarching strategy for arriving at a final intervention design and sustainable implementation will draw upon two parallel preparatory, R&D thrusts. Both thrusts reflect substantive, conceptual and process conclusions we reached as a consequence of our stock-taking period; both seek to address gaps in knowledge and of capacity to implement powerful, synergistic interventions; both experiment with informed ways to leverage instructional and curricular reform by intervening outside of school reform as understood conventionally. *One strategic thrust reflects our life course approach to intervention. Specifically, it integrates the holistic, child-centered perspective of early childhood development and education prior to kindergarten with the more segmented skill and task perspective of the child as student-learner during the kindergarten through grade 3 period. The aim is to make the transitions into pre-K and during pre-K through grade 3 as seamless and coordinated as possible and to build the foundation for the next transition.* Brought to this task will be the best capacity of the field of early childhood development to integrate academic learning and preparation for learning during the child’s first years within the major developmental agenda of that period, namely, socially-situated and socially-appropriate emotional and cognitive development. This perspective explicitly acknowledges that the instructional goals of early education will be most effectively met when closely coupled with strategies to foster each child’s self-confidence and skills as a co-learner within a community of peers

and adults. Commensurately, brought to this task will be the best capacity of the field of school reform—of best instructional and curricular practices—that boost and accelerate literacy (and math) proficiency. But in so doing, the aim is to create new insights and intervention capacities. For example, how can best practices of learning and instruction of the K-3 period be refitted and adapted to make current approaches to academic learning prior to kindergarten under the “whole child” perspective more powerful, effective, and potentiating for greater readiness to learn during K-3? Similarly, how can the holistic, whole-child perspective of early childhood infuse a greater capacity, during K-3, to integrate and adjust academic learning with child-centered trajectories of emotional and cognitive development to the benefit of both educational outcomes and social and emotional development?

The second strategy thrust of R&D emphasizes the parent-child relationship as well as the linkage of early childhood to success in school after entering kindergarten. Specifically, it draws upon capacities to address and improve the health and psychological well-being of children from birth into pre-K settings so that these health-related burdens to development and learning are mitigated if not fully removed. It also seeks to enlist and motivate low-income families to better prepare children for academic learning at higher levels of proficiency and at accelerating pace, beginning prior to kindergarten and extending through grade 3 or 4. Brought to this task will be incentive-based strategies, e.g. conditional cash grants to parents and perhaps to children themselves. The R&D task is to render these incentive-based strategies ever more effective and sustainable as tools in raising (early) linguistic competence (in parents as well as children) and in building and maintaining habits of better parenting, of pride in doing so effectively, and of preparing to and wanting to learn. Brought to this task also will be efforts to address better diagnostic and delivery systems addressing some of the more egregious health and mental health (as well as the behavioral regulatory) deficiencies impacting low-income children.

While separating these two R&D thrusts as a division of labor, we view them as necessarily interrelated and cross-fertilizing. During the next phase of preparation, these parallel endeavors must learn from each other, and the organization of both as R&D processes must and will take that goal into account. *What drives this integration and cross-fertilization is the premise—to be tested during the pre-implementation, feasibility period of preparation—that when taken together these two lines of work will yield a synergistic combination of school-reform and non-curricular interventions that will “blow through the glass ceiling” of current best practices of addressing low levels and the slow gains of academic proficiency.*

Within this overarching R&D strategy, we envision creating several more focused efforts to close gaps in knowledge and to pre-test the efficacy of evidence-based interventions. While separated out as a division of labor, these efforts, too, must and shall be coordinated to engender cross-fertilization. At this writing, we have identified five preliminary foci, which we identify for illustration without detailed commentary: (1) reading interventions, including English as a second language curricula, and mathematics as a learning tool as well as a competency; (2) non-instructional interventions that

address young children’s emerging self-perceptions as capable students and their regulatory capacities supporting engaged and socially-constructive learning; (3) health and mental health interventions that address diagnosable and treatable barriers to learning; (4) exploration of the educational impacts of selected non-educational policy and practice interventions, such as (cash) incentive-based interventions; and (5) early childhood (from birth to school entry) as an initial “pre-school” academic as well as developmental transition with major social and emotional goals.

This R&D process will commission rapid turn-around concept and review papers, conduct secondary analyses, create short-termed and focused task forces, and hold topical workshops and consensus conferences as needed. We also envision making selected visits to schools or districts—nominated by researchers, foundation sponsors, and other stakeholders—in which best practices or model programs of instructional and non-instructional interventions can be evaluated on the ground.

An additional component of the R&D process that cross-cuts all aspects of our preparation is the building of effective non-academic partnerships in the design, testing, and ultimately the implementation and use of our work. Among the most important of these partners are a series of school districts and community and school leaders from these sites. Beginning immediately, we are using various informational sources to identify potential partners and sites who either have ongoing and apparently effective reforms or who by various criteria seem poised to undertake them. We wish to engage these sites in a conversation about partnership, about ways our project may offer them something of value even in the short run, and conditions under which they may invite us to conduct our planned R&D work over the next 3 to 4 years in a collaborative, reciprocally-beneficial manner. With this aspiration in mind, some of these partners would become performance sites for feasibility testing.

Finally, we shall devise a strategy of forming a funding coalition from public and private sources and of assembling a coalition of community-based and national stakeholders in the outcomes of our project who may become outspoken advocates for it. The latter goal implies an active advisory role for these stakeholders in the next R&D phase of our work and beyond.