

Getting from Here to There: When Practitioners Use Research to Stimulate School & District Change

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Introduction

The news is discouraging. Harvard economist Ron Ferguson reports that after years of decline, the racial achievement gap is once again on the rise (seminar at Teachers College, Columbia University, 1/22/03). In a recent study, the Harvard Civil Rights Project reveals the increasing resegregation of American schools. The desegregation of black students, asserts the report, “has now receded to levels not seen in three decades” (Frankenberg, Lee, & Orfield, 2003; <http://www.civilrightsproject.harvard.edu/research/reseg03/resegregation03.php>; p.1). President Bush voices his opposition to race conscious university admissions policies, as the nation awaits a Supreme Court decision that will determine the fate of affirmative action. Can there be any doubt that race and race in education continues to be a stain on the soul of our nation?

On this bleak landscape, however, the superintendents of 10 affluent, high performing New York and New Jersey suburban school districts offer a ray of hope. A few years ago as their historically homogeneous, middle-class districts had begun to grow socio-economically, racially, ethnically, and linguistically diverse, they formed a consortium with the twin goals to promote integration and remedy a minority student achievement gap. Taking up alone the politically volatile challenge of racial equity and privilege could be daunting for the districts. However, as members of a group that offered both a safe space in which to discuss the tensions and dilemmas

attending the issue along with opportunities for mutual sharing, learning, and encouragement, the districts could pursue possibilities for ambitious change. To achieve its goals, the Consortium has adopted a five year knowledge-building-capacity-building change strategy that uses multiple forms of research as one of its primary tools. In this paper, we report on the major learnings of this strategy during its first year and a half. In particular, we explore the question, can school and district practitioners effectively use research to stimulate school and district change? We examine the impact of two strands of the Consortium's research initiatives, 1) statistical, survey, and case study research conducted by three university partners and 2) district-based action research. We examine the nature of this research, how, after one year, it is being used in service of the Consortium goals to promote integration and remedy the achievement gap, and its effects on district and school policy and practice and cross district relationships.

We have organized this paper into six sections: 1) introduction, 2) methodology, 3) context of the Consortium and the work, 4) local action research, 5) university partners' research, 6) discussion, and 6) conclusion and implications.

Methodology

This study uses a qualitative approach in the form of nested case studies that includes a descriptive study of the Consortium's work and an overview of the work of all ten member districts, an in depth examination of four districts, and an analysis of the use of research after one year, to leverage school and district change with regard to the goals of integration, increasing the achievement of all students, and remedying the minority student achievement gap. The in-depth sample of four districts was selected for geographic representation, demographic diversity, and project focused on academics. Of the four focus districts, two are located in different areas of New York and two in different areas of New Jersey. One New York district is largely middle

class minority and the other is predominantly affluent and white. Of the New Jersey districts, one is predominantly affluent and white, while the other is predominantly middle class-affluent, ethnically and racially diverse with a substantial white population. All four participated voluntarily as focus districts. Three of the districts focused their action research on teaching, learning, and achievement in mathematics and one focused its action research on an existing intervention designed to increase student enrollment and success in the district's most academically challenging courses. Figures 1 and 2 provide more details on Consortium members' research projects.

Our study focuses on the district teams' efforts during the first year and a half to build local knowledge and capacity along with the corresponding classroom, school, and district initiatives and changes that are directed at remedying the minority achievement gap. We triangulated multiple sources of data and multiple methods of inquiry to confirm our findings (Merriam, 1988). The multiple methods and sources of data include: 1) fifty-four semi-structured interviews with a cross-section of district personnel (ranging from superintendents to classroom teachers); 2) observations of Consortium meetings, formal and informal district-wide meetings, meetings between districts and the project consultant-facilitator, meetings between critical friends partners, planning meetings among superintendents and the consultant-facilitator, and formal and informal visits to schools; 3) a review of school, district, and Consortium project-related documents and artifacts; and 4) an analysis of intra-district and Consortium-district electronic correspondence. This paper looks closely at the work of three of the four focus districts.

Context of the Consortium and the Work

Founded in 1998 by superintendents with a track record of longevity in leadership, the

Regional Minority Consortium consists of ten historically middle-class and affluent, suburban New Jersey and New York school districts that have become increasingly socio-economically, racially, ethnically, and linguistically diverse. A subset of seven of these districts has worked together for a decade to improve assessment practices and develop a shared framework for continuous improvement. Additionally, a few of the districts are also members of a national network committed to remedying the minority student achievement gap. Although the Consortium behaves as a collaborative, one of the superintendents functions as its coordinator. She convenes meetings and is the liaison with the consultant-facilitator, university researchers, and funders.

The Consortium districts represent a student population base of over 65,000, including 26,784 African American and Hispanic students, who reflect a wide range of socio-economic diversity. The districts also have varying percentages of students for whom English is a second language. Growth in the population of diverse minorities in Consortium districts reflects a national trend, where the United States' minority population is increasingly residing, not in cities, but in suburbs, including historically white suburban communities and it produces racial, socio-economic, and language minority diversity in schools. According to the 2000 Census data, 33 percent African-American children and 45 percent Hispanic children now reside in suburban communities (Ferguson, 2002). This shift confronts historically, white suburban communities that surround the major cities with the challenges of integration, as our nation recedes from a 50-year history of racial and language minority school desegregation initiatives (Orfield, 1996).

Although nationally recognized for their high levels of student performance, Consortium districts, nonetheless, share significant achievement gaps between Latino, African American, Asian and Caucasian students as indicated by the district's informal analyses of anecdotal,

standardized test score, and Advanced Placement course student enrollment data. For example, student enrollment in Advanced Placement American History and Advanced Placement Physics in four of the participating districts revealed serious under-representation of African American and Hispanic students:

Table 1: Four Districts' Student Distribution by Race in Two AP Courses

	Total # of Students	White	African Amer.	Hispanic	*other
AP American History	420	343	38	13	26
Physics B AP	126	110	7	2	7

Consortium districts are not alone in this challenge. Although research consistently demonstrates that between 1970 and 1988, the achievement gap between white and African American and Hispanic students decreased, that progress ended in 1988 and the gap has since widened (Haycock, 2001) and a growing body of literature documents a gap in achievement in historically high-achieving suburban districts (D'Amico 2001; Ferguson, 2002; 2001; Gordon, 2000; Viadero, 2002). As in urban communities, there is now in suburban communities an unacceptable divide in achievement for students of color and language diversity. Furthermore, this gap exists not only for the poor but for middle class minority students. Edmond Gordon for example, writes, "African-American, Hispanic, and Native American students at each social class level tend to do less well than their European-American and Asian-American counterparts" (Gordon, 2000, p. 2). Complicating the challenge is societal ambivalence about integration, merit, affirmative action, and the educational and social benefits of diversity, competing community values of equality and elitism, traditions of exclusion and the privilege structure, and

barometric sensitivity to changes in the privilege structure (Loury, 2003; Forest, 2003; Rothman, 2003; Staples, 2003; Summers & Tribe, 2003)

Confronted by an informal knowledge base of inequities and inequalities and anticipating their state's publication of test scores disaggregated by racial subgroups, the Consortium sought a strategy that would both promote integration and increase the achievement of all students in the districts as well as embed remedies to the minority achievement gap, create public spaces in which communities could safely confront their inequities, and build public will to openly support equality and quality achievement for all. They sought a strategy for deeply rooted, enduring change that would not make quality and equality dependent upon external funding or imported, canned programs which could disappear through changing administrations.

Believing that a multi-pronged, multi-voice knowledge-building strategy would produce multiple forms of data that could be used to build local capacity for enduring change from the classroom level to the district to the state policy level, the Consortium settled on its knowledge- and capacity-building research initiative. The knowledge- and capacity-building strategy they designed offered support from a professional education consultant-facilitator, who had a long standing and trusted relationship with several of the Consortium districts, and included partnerships with three university research organizations.

The knowledge-building component has three components: 1) district-based action research to closely examine local manifestations of the achievement gap, to more deeply and systematically understand its sources, and to assess the effectiveness of site-developed initiatives designed to eliminate the minority achievement gap, 2) Consortium support through meetings and critical friends activities, and 3) collaboration with three university research organizations whose role is to provide external and multiple perspectives on the minority achievement gap and

district efforts to address it.

Building Knowledge through District Action Research

The Consortium's reform strategy linking local knowledge-building to the development of local capacity for educational change and reform finds strong support in the literature (Cochran-Smith and Lytle, 1990; Senge 1990; McLaughlin, 1990; Fullan, 1993, 1999; Noguera, 2001). As Ferguson points out, there is good reason to respect the uniqueness of each locality and the wisdom of locally crafted solutions built on local knowledge, "Every school district is unique, with special advantages and challenges. Even if we assume that all are pursuing the same ideals, there is no reason to believe that all can or should pursue them with precisely the same formula" (2001, p. 34).

Action research in particular enables districts to build a local knowledge base (Cochran-Smith and Lytle, 1993) and, as Noguera points out, for locals to own the findings: "Action research data provides a way for people to engage in a conversation about complicated, controversial issues without getting defensive and personalizing blame" (Noguera, 2001, p.6). In different studies, Winter (2003), Rothman (2001) and Sadowski (2001) each report on varying degrees of change in practice in response to findings from teacher action research at schools involved the Minority Student Achievement Network (a national organization devoted to remedying the achievement gap).

The action research initiative agreed upon by the Consortium's superintendents sought to produce knowledge that would be the basis for generalizable, systemic change that would be disseminated systematically across the district and be accessible to all students. Therefore, each district (except one) formed a district action research team whose members included district and school administrators, counselors, and teachers. Each superintendent appointed a project

coordinator who convened the team and served as liaison with the Consortium. Because the Consortium's goal was the improvement of student achievement, the Consortium coordinator and the consultant-facilitator encouraged the teams to focus their action research on instruction (which all but one did).

Throughout the first year, the district action research teams met at Consortium meetings, where guided by the consultant-facilitator and supported by the university researchers, they worked collaboratively to frame action research questions and plan their research methodology. They shared their progress, frustrations, and findings with a mutually selected partner district that functioned as a critical friend providing feedback and guarding against insularity. They gave one another the courage to conduct this work and provided a safe space in which to have honest conversations about race, ethnicity, and achievement—to hear, as one superintendent said, “that other school districts are also willing to address this issue openly.”

Another superintendent remarked, “This project has given us focus and an opportunity to share our problems and get advice and suggestions from others.”

A district administrator said, “[Consortium membership] gives you impetus to do something. It moves the agenda.”

Consortium meetings were also a forum in which the university research partners participated, coaching the teams in their research designs, offering informal feedback and presenting formal reports on the findings of their own research as well discussing the findings, implications, and how to disseminate them.

More intensive work on the action research projects continued back in the districts, facilitated by the coordinator or a superintendent-appointed administrator, and in some cases with support from the consultant-facilitator. Teams collaboratively identified their sample,

developed data collection instruments such as surveys and interview protocols, and engaged in data collection and data analysis. This collaborative process facilitated the creation of a shared vision for and belief and ownership in the action research projects. Discussing the process for selecting their research topic, a guidance counselor, stated:

[The project] grew from all of us talking at a conference—administration, guidance, math teachers, and superintendent. We all had different perspectives and we were trying to come up with a path. There were lots of people with different perspectives. The project just grew out of these conversations. We all had equal input.

As Figures 1 and 2 illustrate, the research projects across the focus and non-focus districts demonstrated both similarities and variation in research focus and methodology. Some district teams examined school-level phenomena, while others looked at phenomena across their entire district. Some looked at their district's existing programs to remedy the achievement gap; others examined conditions that support learning opportunities and teaching strategies that produced strong achievement from minority students in their schools; yet others studied content areas, particularly student performance in mathematics which district educators as well as prominent scholars (Singham, 2003; Schoenfeld, 2002; Adelman, 1999) view as the most powerful gatekeeper; and still others looked at issues of access to knowledge and information across education stakeholder groups. The action research samples included students from diverse racial, ethnic, and academic performance groups and sometimes parents as well as district practitioners. The methods for data collection used by the teams included interviews, observations, statistical analyses, surveys, focus groups, and document reviews. However, only a few districts used more than one method for collecting data. Nonetheless, projects demonstrate the use of multiple data sources including parents, students, teachers, administrators, and artifacts that also reflected the voices of diverse constituencies.

Figure 1: Regional Minority Consortium: NCREST Focus Districts' Action Research¹

School District	Level	Action Research Objective	Sample	Method of Data Collection & Data Sources	Findings from Focus Districts' Action Research
North Harbor School District ----- North Harbor High School	9-12	To increase African American and Latino students' math achievement To learn the factors that influence seniors' decision to take math courses beyond requirements	Random sample of African American and Latino seniors enrolled in math course and not enrolled in math course	Student Interviews	❑ Students' self-perceived ability in math is not correlated to their level of math class; students in high-level math classes do not consider themselves "especially strong in math." ❑ Students' sense of social belonging is related to their achievement level in math ❑ Students feel that individual teachers make a huge difference in their math achievement (for example, students who continued with math feel "inspired" by teachers while some of the students who did not continue taking math felt "disrespected" by their teachers) ❑ Students who do not pursue higher level math classes are "unsure" about their choices and power within the school structure ❑ Minority students feel that they are not always encouraged to excel and take honors classes
North Harbor Middle School	6-8	❑ To learn the factors which contribute to the success of African American and Latino students	Academically successful African American and Latino students identified by:	Interviews with teacher selected "successful" African American	Students report that they learn best when: ❑ The teacher is enthusiastic ❑ The teacher is "creative" ❑ Work is done in a groups with other

¹ Districts are identified with pseudonyms.

School District	Level	Action Research Objective	Sample	Method of Data Collection & Data Sources	Findings from Focus Districts' Action Research
		❑ To ascertain if there are “enabling factors” that African American and Latino students who have demonstrated academic success have in common	❑ Level of math course ❑ First quarter grades in English and math ❑ Scores on the fourth grade math and English standardized tests	and Latino students	students ❑ The teacher explains clearly ❑ The teacher uses examples ❑ Students get support at home for doing their assignments
Orchard Grove Public Schools	9-12	❑ To learn the factors that contribute to students' underachievement in math ❑ To learn about the relationship between students' ambition to succeed academically and their actual academic achievement (measured by math ability) ❑ To learn what factors contribute to students with low ambition demonstrating high math achievement ❑ To learn if there is a relationship between students' self-concept and their level of ambition (regarding academic success) ❑ To learn if there is a relationship between a	African American and Latino students in regular and low level math classes identified	❑ Student surveys ❑ Student journals ❑ Teacher journals ❑ Student interviews	From the student surveys: ❑ Factors that contribute to students success in school are: ○ Teacher's instructional effectiveness ○ Support mechanisms in and out of school ○ Teacher attitude ○ Degree of teacher inspiration ❑ Outside of school, the factors that influence students' success in math are: ○ Help at home ○ Money ○ Real life importance of math

School District	Level	Action Research Objective	Sample	Method of Data Collection & Data Sources	Findings from Focus Districts' Action Research
		students' self-concept and their actual level of achievement in mathematics ❑ To learn if there is a relationship between racial identity and math achievement			
South Hills Schools	K-12	❑ To learn if there is a difference in the materials and pedagogy between South Hills and schools that demonstrate high levels of math achievement (courses offered and scores on standardized tests) and have large populations of Latino and African American ❑ To garner information about the school district's culture ❑ To learn what support there is for students in math classes and in the school itself ❑ To learn what "follow-up" there is for students, if it is adequate and how students and families use it	For student interviews: ❑ Middle school and high school students were interviewed ❑ Teacher recommendation was the basis for participation ❑ From each grade, two African American, Latino, white, and Asian American students were interviewed ❑ Each pair consisted of a student who was "good" in math	❑ Observations at "high achieving urban schools" ❑ Student interviews ❑ Standardized test scores ❑ District student assessment data ❑ Analysis of classroom demographics across schools and subjects	From the student interviews: ❑ Teachers did not identify any Asian American students as "having trouble in math" ❑ Asian American students see themselves as "excellent" math students and attribute their success in math to their parents/family members. ❑ Students having difficulty in math "tell stories" of teachers who told them in their early grades, that they were inadequate in math From analysis of grouping demographics: ❑ African American and Latino students are less frequently selected for accelerated math classes in elementary, middle, and high school ❑ The district's criteria for student placement in accelerated classes is inconsistent.

School District	Level	Action Research Objective	Sample	Method of Data Collection & Data Sources	Findings from Focus Districts' Action Research
		To learn what the role of families and home traditions are on students' achievement	and one who was having "trouble" in math		
Focus Rolling Brook Public Schools	9-12	- To learn how successful the Advanced Placement Academy is in meeting its goals ("to enhance abilities, promote self-esteem, and develop academic skills needed to achieve success in Honors and Advanced Placement courses") - To learn what the staff, students and parents know and understand about the mission of the AP Academy - To learn what factors of the AP Academy have influenced students' success in higher-level courses - To learn what AP Academy practices might be disseminated throughout the district.	- Random sample of H.S. students - High School faculty - AP Academy teachers - Students who completed the AP Academy	- Student data: Final grades and test results - Surveys of teachers and students on their knowledge of the AP Academy: - AP Academy Student survey - Review of student work	- From teacher and student surveys: scant knowledge and confusion about the AP Academy - Preliminary analysis of the data shows: - Increasing numbers of minority students are enrolling in and completing honors and AP classes - Increasing numbers of minority students are passing AP exams

Figure 2: Regional Minority Consortium: Non-Focus Districts' Action Research Projects²

School District	Level of Project	Action Research Objectives	Sample	Method of Data Collection & Data Sources	Findings and Effects from Action Research at the Conclusion of the Pilot Year
Sun City School District	K-12	To create a district-wide data base: ❑ To learn if levels of student achievement are constant from grade three through grade nine ❑ To learn if there are trends or patterns in student achievement data ❑ To learn if there are any students or groups of students that have lower levels of academic achievement ❑ To learn what the “critical indicators” are for predicting student achievement ❑ To learn if there are critical points in time when the achievement gap begins to manifest	Ninth and Tenth grade students who have been in the Sun City School District since the second grade	Analysis of student records for : ❑ Standardized test scores ❑ Elementary school attendance ❑ Race/ethnicity ❑ Socio-economic status ❑ Gender ❑ Sixth grade math placement ❑ Free and reduced lunch status ❑ Ninth grade GPA	❑ The creation of a database that tracks students' performance from second grade through high school is beyond the district's current technological capabilities.
Clearview City School District	Kindergarten	❑ To develop a knowledge base about gaps in reading	Two groups Kindergarten students: One group qualifies for Title I funds and the other does not	❑ Analysis of student outcomes on word recognition activities	❑ Students in the Title I group did not perform as well as students in the other group.

² Districts are identified by pseudonym.

School District	Level of Project	Action Research Objectives	Sample	Method of Data Collection & Data Sources	Findings and Effects from Action Research at the Conclusion of the Pilot Year
New Horizon City School District	Middle School	❑ To learn if peer study groups lead to increased mathematics achievement as measured by standardized test scores and grades ❑ To determine whether academically oriented peer groups will encourage group members to value academic success and achievement ❑ To learn if peer study groups will facilitate students to develop leadership and collaborative skills and teach them to support one another	African American and Latino students who demonstrated a capacity for high achievement in mathematics as measured by standardized test scores and grades	❑ Review of Student Records: quarterly grades and report card comments ❑ Review of program records: Student attendance and participation in study groups ❑ Comparison of students' sixth grade Terra Nova percentiles with their rankings as fifth grade students ❑ Compare students' performance on district-wide sixth grade final exam to performance of previous (current seventh grade) students who scored at the highest level on the fourth grade standardized exam	❑ The program has a high attendance rate ❑ The program has a high retention rate ❑ There is high parental demand for the program ❑ Continuation of the groups

School District	Level of Project	Action Research Objectives	Sample	Method of Data Collection & Data Sources	Findings and Effects from Action Research at the Conclusion of the Pilot Year
West Fern Public Schools	K-12	❑ To learn if the district's character education program has led to changes in students' behavior and attitude ❑ To learn how the district's character education program can be altered to better achieve its goals	All Students	❑ Teacher Surveys ❑ Focus group discussions with "key teachers" ❑ Student attendance data	❑ Small improvement in elementary school attendance ❑ Team better understood the possibilities of action research with regard to their practice ❑ Teachers initiated a new action research project that looks at the effectiveness of a 9th grade cluster organization
Astor Public Schools	K-9	❑ To increase the district's capacity to gather data regarding students' transitions (fifth grade to sixth and eighth grade to ninth) ❑ To learn how to identify the characteristics of school culture that can improve or hinder minority achievement ❑ To learn how to nurture and encourage students to participate in higher-level classes	❑ American and Latino African students were selected based on teacher (5th grade) and guidance counselor (8th grade) recommendation. ❑ Students who demonstrated a capacity for high academic achievement were	❑ Standardized test scores ❑ Grades	❑ Findings forthcoming

School District	Level of Project	Action Research Objectives	Sample	Method of Data Collection & Data Sources	Findings and Effects from Action Research at the Conclusion of the Pilot Year
Lakeland Public Schools	9-12	☐ To learn if the Global Research and Civics and Government Institutes are successful in achieving their goals ☐ To assess the ability of students to achieve the skills and competencies in conducting research over long-term projects	selected Institute students (the student population of the institutes is representative of the entire district's demographics)	☐ Teacher grades ☐ Review of student records for: leadership in conducting and planning school-wide activities; completion of community service hours.	☐ Findings not available

The implementation of the research projects varied across districts. Most district teams got off to a quick start and conducted well organized investigations. A couple, encountering complications with regard to the logistics of their sample and the organization of data collection, took longer to launch their studies. One district encountered political obstacles beyond its control. In a mid-year surprise move, the district's school board voted not to renew the popular superintendent's contract, bringing anger and protest to the district. The political turbulence and uncertainty diminished the breadth and intensity of the initial research design; however the team carried forth to conclusion with a smaller project. One district team launched a project but did not analyze its findings. At the inception of the project, most of the districts had existing initiatives responding to the achievement gap and some used their research to examine aspects of them.

Six of the districts applied their findings to practice and/or policy at the conclusion of the first year. One district team, upon finding that the creation of the database they needed to pursue their research was beyond their current technological capabilities, committed themselves to finding other strategies to pursue their investigation. In another district, where the leaders of the action research team left to take new positions elsewhere at the conclusion of the school year, the research findings have not been applied, although that district continues with existing initiatives to address the minority achievement gap. The district that lost its superintendent has not applied its findings, but its new superintendent has decided to renew the district's membership in the Consortium and become re-engaged in the Consortium's activities. Although the district that did not complete its research obviously could not apply any findings, it has continued its affiliation with the Consortium as well as other activities addressing the achievement gap. The six districts that applied the findings of their action research projects did so immediately, urged on by their

research teams whose members were eager to “do something.” Of the six, three were districts our research focused on and we discuss them here.

North Harbor High School, having learned that its African American and Latino students felt that they were not always encouraged to excel and take honors classes, designed and is implementing a math enrichment program for 10th grade African American and Latino students, based on the work of Uri Treisman. The program’s goal is to increase the enrollment of African-American and Latino students in high-level math classes. The assistant principal leading the school’s action research team explained that the intervention occurs at a decisive point in students’ high school education:

at the point when the students can decide to stay in the higher, more challenging track. Teachers identify minority students who are promising, but who might fall off or give up in math without extra support. We have a very broad definition of *promising*. We want to be inclusive and allow as many kids in as we think will benefit.

The chairman of the math department explained that the program targets students who have the capacity for higher level mathematics but do not pursue it: “We have a group of kids whom I think are capable but do not take higher math classes. This program is aimed at these students. We are not only interested in the ‘top notch’ minority kid.” Teachers can recommend any student whom they believe can benefit from the program. Students participate in a weekly two-hour study group focused on developing problem solving strategies and study skills. A teacher with a reputation for being “strong and respected” was deliberately selected to teach the group in order to emphasize that the program is enrichment and not remediation.

The intervention applies the research findings by creating a mechanism that operationalizes encouragement in the form of a student support group, a high quality teacher, and a curricular intervention (i.e., the enrichment program) that addresses students’ math needs while

being responsive to their perceptions and concern with issues of respect. The student support group provides peer encouragement and a sense of belonging. The assignment of a high quality teacher demonstrates the school's investment in the students which constitutes an indirect but powerful form of encouragement, as it is a statement of the students' value to the school. The content of the enrichment course, designed to prepare students for higher level math courses, is an explicit form of encouragement that expresses the school's expectation that students can learn and achieve at a high level. North Harbor High School team's findings about the significance of encouragement turn out to confirm Ferguson's (2001) and the school applies these findings to its practices. Other action research findings are embedded in these decisions. For example, the enrichment teacher was selected for characteristics the research found to be associated with promoting students' mathematics achievement and course taking.

The North Harbor Middle School implemented a math and reading after-school program for underperforming African American and new immigrant ELL students. The program is based on the research team's findings on the supports successful students reported receiving at home. The research team decided that the school would take on the role of supplying home conditions that advantage students so that they succeed. Contrary to former experiences with after-school programs, the teacher leader of the research team reported that attendance in this case remained constant through cold winter months because, he asserted, the students "understood they needed something and the teachers, themselves, are involved, encouraging the students to come." He explained that the action research affirmed teachers' hypotheses about students' needs and stimulated them to seek a foundation grant to support the program, which the district is also financing: "[The program] came out of the research. We've long known that these kids needed something. The research we did showed it."

The South Hills Schools District action research team also looked at mathematics achievement across racial and ethnic groups. From each middle and high school grade, they interviewed randomly selected, representative pairs of African American, Latino, white, and Asian American students identified by teachers as “good” and “having trouble” in mathematics. However, teachers could identify no Asian students for the “having trouble in mathematics” category. The interviews enabled the team to collect information on the supports for mathematics learning in students’ classes as well as in the entire school, how students and families use those supports, and the role of families and home traditions on students’ mathematics achievement. In order to assess student access to high level mathematics courses, the team analyzed classroom demographics across subjects, standardized test scores, and other assessment data and found that African American and Latino students were less frequently selected for accelerated math classes in elementary, middle, and high school and that the district process for recommending students to such classes was ambiguous, inconsistent, and reliant on teacher judgment without accountability safeguards. Lastly, the team visited schools in other districts with predominantly African American and Latino students whose test scores and mathematics course taking data demonstrated high mathematics achievement in order to observe their pedagogy and examine their instructional materials.

South Hills also acted immediately upon its research findings. When interview findings showed that in the early grades, students learned that they were inadequate in math and subsequently lived out a self-fulfilling prophecy, the district eliminated ability grouping in mathematics and initiated differentiated curriculum and instruction along with corresponding professional development for all elementary school teachers. The deputy superintendent who led the research team said:

Every student [identified as having trouble in math] told a story of a teacher who told them they were not good in math. And ‘It’s true,’ they told us. ‘I’m in a low math class.’ Of all the things we did it was the interview with these kids that led us to this idea that we cannot allow our kids to believe that they’re mathematicians or not when they’re eight . . .

We’ve stopped all grouping in the third grade [which is where ability grouping begins]. We are training every third grade teacher in differentiation to teach all these teachers new strategies for teaching math. This came directly out of the interviews we did and the reasons why kids thought they weren’t good at math.

However, the implementation of these research findings is not without tensions, explained the deputy superintendent:

We’re fighting some very angry parents because we can’t put a ceiling on our kids. And so we have to be very, very careful here not to do anything that would stop kids in the name of doing better for some other kids.

Regarding access to accelerated math courses, South Hills now aggressively recruits marginal students, who previously would have never been considered, for their 6th grade summer acceleration institute.

South Hills has also integrated their findings from their school visits with learnings from research that is not their own. Using the work of Northeast Foundation and Ferguson (2001), South Hills is implementing the Responsive Classroom model to support children’s sense of belonging and opportunities for trusting relationships with teachers. A related intervention, the Freedom School, a middle school program that aims to create a sense of community among its voluntarily enrolled all African American students and staff, responds to the districts’ findings on the feelings of racial isolation among its African American students. “The self concept was not developing as positively in African American kids as in white kids. We’re watching them. We have them marked in our databases. To see what influence we have we try to meet with them during the year,” said the deputy superintendent.

Rolling Brook Public Schools District, which has a predominantly African American population, has been engaged in several efforts to remedy the achievement gap since 1998, when the superintendent and school board established a task force on the achievement gap. In 1999 they initiated an Advance Placement Academy which operates during the summer to prepare students for honors and advanced placement courses. Although initially the district intended the Academy to be exclusively for minority students, the AP Academy students have since expressed their desire for it to be integrated and district has adjusted its recruitment goal to reflect its diversity.

While the Consortium's action research strategy is but one component of the district's broader commitment to educational equity and excellence, the superintendent asserts that "it really has helped us in learning how to look at programs in a critical way, getting others involved—the ones who are responsible for making the programs work—and looking at the data, and then finding ways that programs can improve." Involvement in the Consortium action research initiative enabled Rolling Brook to closely examine the accessibility and effectiveness of the AP Academy and the implications of its practices for the district as a whole.

Eager to obtain information on the accessibility of the AP Academy, the district action research team decided to examine the student recruitment process. The team developed and administered a survey for students and faculty to assess their knowledge and understanding of the AP Academy. As the superintendent revealed, "What we found out initially is that there was a lot of confusion on the part of staff." The analysis of the survey also revealed that students had scant knowledge of the AP Academy. The intervention was nearly invisible. For example, 83% of students were not aware of the AP Academy, 94% did not know anyone who participated in the AP Academy, 73% of teachers did not understand the criteria for selection of students to

participate in the AP Academy, and 73% of teacher had never recommended any student to the AP Academy.

After reviewing the findings, the superintendent concluded that “part of the action research program was how do we better inform people about the purpose and make sure that we get the right youngsters into the program. That involves communication with staff, which has been happening.” Presentations on the AP Academy were made at the high school faculty conferences, where the entire faculties were in attendance.

According to the assistant superintendent, the district wanted the faculty to understand that the AP Academy is:

not a program for a few, and known by a few. We want all teachers in the building to recommend students and for that to happen, they really have to more informed about the profile of the student that we are looking for. That’s what we’re finding the toughest. We also don’t want to turn down somebody who really wants to make that commitment

In order to resolve this admission criteria-open access conundrum, a district committee comprised of two principals from the high schools, the assistant principal in charge of guidance and pupil personnel, a representative of the guidance counselors, the chairs of the high school academic departments, the assistant superintendent, and the superintendent has been debating the AP Academy admissions policy from their diverse perspectives. The assistant superintendent explains, “We have a pretty good cross-section of people who are knowledgeable and have different perspectives and there are differing philosophies.” The questions framing their policy debate are surfacing a range of beliefs and values regarding inclusion, exclusion, ability, achievement, ambition, and equal access to intellectual challenge: “Should we let anybody who’s committed to do a summer program come in? Should we admit students that are carefully

looked at as far as potential, creativity, and task commitment? Should we look at [those characteristics]?”

At the same time the district is formulating an AP Academy admissions policy, it is also assessing the Academy’s curriculum, effective practices, and student outcomes. To find out what practices and curriculum work, the district surveyed students who completed the AP Academy to obtain their feedback about the experience, electronically catalogued their responses, and analyzed them. To find out the effects of the intervention, they analyzed the course history of all AP Academy students, including their program prior to AP Academy enrollment, their subsequent enrollment in honors and AP classes, their scores on AP exams, and the correlation between school performance and SAT scores.

The superintendent said, “There has been a much more in-depth look at the data that we probably wouldn’t have done in such an in-depth way if it weren’t for the action research project that was initiated through the Consortium.”

The assistant superintendent concurred on the value of their research: “You certainly can build a tremendous knowledge base [and] perhaps change the way children manage their work, certainly feel better about themselves.”

The findings from the district’s own research have spurred changes in the curriculum and intention of the AP Academy. Instead of teaching all students only the same skills, they will differentiate the curriculum in order to prepare students for the actual courses that they are going to take, such as AP biology. Mechanisms will be created to keep AP Academy students connected during the school year so that they become a support group and encouragement for one another. A guidance component will be added to the program. To regularize and expand the benefits of the intervention, the district is now thinking about disseminating practices that have

made the AP Academy successful. The assistant superintendent explained: “We need to look at [using] some of those [AP Academy] practices during the whole school year even with students who don’t fit the profile –so we can instill in them a desire to achieve and to do better and to stick with it.” Lastly, they have created a data analyst position to help principals, teachers, and central office administrators examine the effectiveness of their programs for various types of students.

“We will continue looking at the data and using the methodology we learned through the action research,” said the Superintendent.

University Partners’ Research

The Consortium’s knowledge-building strategy also included research by three university partners: The Institute for Education and Social Policy (IESP) at NYU, Distinguished Professor of Social Psychology, Michelle Fine at the Graduate Center of the City University of New York (CUNY), and the National Center for Restructuring Education, Schools, & Teaching (NCREST) at Teachers College, Columbia University. The university research agenda was determined in collaboration with the Consortium superintendents and the consultant-facilitator and is based on what the districts want to know in relation to their efforts to remedy their achievement gap. IESP research aimed to inform the Consortium on its statistical data-generating capacity. CUNY research aims to provide high school students’ perspectives on the achievement gap and their school experiences. NCREST’s research aims to capture both broad and in depth perspectives on the Consortium’s knowledge- and capacity-building strategy, documenting and analyzing the nature and uses of the developing knowledge base to build capacity, implement pedagogical initiatives, apply resources, develop public engagement strategies, and inform local and state policy to support achievement gap remedies.

New York University

Districts collaborated with the Institute for Education and Social Policy and faculty from the Wagner School of Economics at NYU to build an information system that provided the potential to examine trends that may offer insights into how to support greater achievement among minority students. This work enabled Consortium members to establish a database and determine which data will be useful to track student achievement over time. Planning the database was an important step in building a knowledge base and developing districts' capacity to make change. To ascertain each district's initial data capabilities, the institute surveyed all superintendents of the districts participating in the Consortium. Following the collection of district survey data, the IESP staff met six times with each district in order to build a Consortium-wide database.

After the initial planning phase, the research plan called for the creation, maintenance, and study of a regional database that would inform and be informed by the qualitative component of each district's work: school-based research that links promising practices to student achievement data. Ways to organize, analyze, and visualize the data from a variety of assessment sources were to be developed. This would have allowed for records to be organized according to defined indicators in order to help districts to look for patterns and trends over many years. However, the reality of data differences and data management limitations in the Consortium districts made the development of an integrated regional database difficult to achieve (Weinstein and Fruchter, 2002) and precluded the implementation of the regional database.

The Graduate Center of the City University of New York

At the core of the project is a concern for achievement and effective integration of students. Specifically, each district seeks to understand how youth across race, ethnic and class lines view their educational experiences, opportunities, outcomes and changes underway to remedy the achievement gap. Since research points to the significance of student voice in fostering change at the local level (Wasley, Hampel, and Clark, 1997), the Consortium knowledge building strategy included a crucial and often neglected aspect of school change research: the voices of students. Michelle Fine and a research team from CUNY Graduate Center worked with 50 students from the Consortium and New York City high schools.

The research teams collaborated in schools, in two “research camps,” and at the CUNY Graduate Center. At the first camp, the students participated in “methods training,” learning procedures of interviewing, focus groups, and survey design. The entire research team collaboratively designed a survey of questions (Torre and Fine, in press). The team distributed the survey to ninth and twelfth grade students in all of the Consortium schools and a sample of New York City public schools and received 3799 completed surveys “brimming with rich qualitative and quantitative data that could be disaggregated by race, ethnicity, gender, and “track”” (Torre and Fine, in press).

At the second camp, a three-day workshop, the team analyzed qualitative responses from the survey, focus group transcripts conducted in four districts, and observations and interviews from cross-visitations. From the examination of the interviews and observations, the team developed an interview schedule that they will use with a sample of recent graduates from four districts.

With the survey data, the team first analyzed the “achievement gap” from its “dominant paradigmatic form” – using race and ethnicity as a predictor of academic engagement,

motivation, connection to school, and preparedness for college (Fine and Torre, in press). The team found that race, class, and ethnicity are, indeed, strong predictors of all variables. Fine and her colleagues report, for example, that white and Asian students are “far more likely” to describe teacher comments that are both positive and validates their ability and motivation as students (Fine and Torre, in press). Next, the team examined academic “track.” This investigation revealed that “track” was a stronger predictor of academic engagement, motivation, desire for college, and sense of personal efficacy than race, class, or ethnicity (Fine and Torre, in press). An additional analysis of school size found that school size is a “strong” predictor of academic engagement, with students in small high schools reporting higher levels of engagement than their big high school counterparts (Fine and Torre, in press).

Currently the CUNY team is working with the youth researchers to “speak back” to their schools. Some students have shared and others are planning (with their school administrators and the CUNY team) to share ***their*** findings in a variety of ways, including presentations to groups of teachers, student clubs, or at community meetings. One school has constructed a “word museum” to publicly display students’ responses from the open-ended survey questions. Planning sessions consider what formats will enable diverse audiences to hear the message. The CUNY team, the Consortium, and student researchers are also developing formats for presenting their work nationally.

Teachers College, Columbia University

NCREST documented the nature and uses of the Consortium’s developing knowledge base by investigating Consortium educators’ base line theories, assumptions, and understandings about the achievement gap, their methods of knowledge development, what knowledge they developed, and their early application of their new knowledge to remedy the achievement gap.

NCREST provided feedback on the perspectives of educators involved in the Consortium's initiative.

Interviews of the district educators involved in the Consortium's initiative found that the gap in achievement in Consortium districts is accompanied by other gaps, as students are under-represented and under-participate in the life of the school community. Conversation on the gap was dominated by an overwhelmingly deficit perspective on African American and Latino students and their families while at the same time accompanied by a deep desire for integration and equity. Interview data invariably portrayed minority students and their families as inadequate, unable to measure up to an unspoken and ubiquitous standard of behavior attributed to affluent whites. Minority families and children were described as *less*: less frequently intact, less capable of advocating for their children, giving less support for high achievement or intellectual development. Students were described as having less ability, motivation, determination, and fewer goals to succeed. They demonstrated less effort and class participation, low expectations for themselves and trust of teachers and their school. On occasions where interview respondents discussed the school's contribution to the gap, they described them as less responsive to students and families of color, providing fewer resources, and exerting less effort on their behalf.

The interviews also revealed that district leaders and educators involved in the Consortium initiative are ambitious for a remedy more powerful than a statistical narrowing or equalization of standardized test scores or course enrollment figures. Remedying the achievement gap is but one factor on a broader landscape of hopes for the full integration and enfranchisement of students of color in the life of the school community, where they feel full entitlement as evidenced by their robust participation in the many educational opportunities their

school communities provide. Anything less mirrors the marginalization of people of color in the larger society and prepares students for it. Consortium members were eager for a cultural change evidenced by changes in teachers' beliefs in the capacity of African American and Latino students to succeed at high levels, academic and social integration, a system caring adults who advocate for students, a system of early interventions, and push for students to go beyond their current levels of achievement and ambitions. The desire for integration is captured in the comment of one administrator who hopes to "no longer be able to tell the level of a class by the color of the students."

NCREST's reports to the Consortium noted the apparently incongruous coupling of a deficit perspective and ambitious goals of academic quality for all and integration, which turns out more accurately to be a statement of the journey districts need to take from where they are to where they want to go—from a deficit mind set to a state of integration. The NCREST reports urged the districts to examine their ethos of teaching and the role and responsibilities of teachers with regard to student engagement and achievement as well as their norms of academic engagement in classrooms. Conversations raised questions for the districts to consider. Do the formal and informal limits that teachers place on their role and responsibilities and that districts also formally and informally sanction create pedagogical norms and conditions that constrain the development and implementation of strategies that would increase the levels of achievement of minority students? For example, when children aren't learning, do teachers believe (and does their district agree) that it is their job to find the ways to get students to learn and not stop until they do? Must districts adopt policies that expand their concept of the job of teaching to include practice such as teacher outreach to marginalized students? Do they have to demand such behaviors of all teachers as they demand that first grade teachers teach reading? If relationships

make a difference in achievement, do districts have to demand relationship building as a component of teachers' practice? NCREST's findings also indicated that that districts examine the norms for student engagement in classrooms to learn what elicits and inhibits students' sense of entitlement to and participation in the academic culture; and that they look at gap as another of several instructional problems that demand changes in practice. Exploring these issues might advance the districts' journeys from here to there.

Discussion

The response to the question we proposed in this paper is a qualified yes: school and district practitioners can effectively use research to stimulate school and district change. We qualify our yes because our research is restricted to the first year and a half of a five year initiative and student academic outcome data, which the project aims to change, are not yet available. However, within the time frame of this study, the districts discussed in this paper used action research to make changes in classroom instructional practice, curriculum, criteria for teacher assignments, criteria for student course placement, accountability practices, student support practices and mechanisms, professional culture, and district policies. And the districts, action research teams responded with a sense of urgency to their research findings. Their research created a felt need for immediate action.

North Hills High School's remedy is intentionally designed to be sensitive to students' feedback in an almost literally way: it incorporates symbols of enrichment (e.g., curriculum choices) so that students are assured that these classes are not remedial. The selection of a teacher for the characteristics most likely to encourage students to enroll in higher level math course takes seriously students' feelings of exclusion. In order to ensure the broadest possible access and inclusiveness, the admissions process for the enrichment program relies on individual

teachers' judgments, rather than test scores or grades (in light of the South Hills findings of bias in teacher recommendations for accelerated courses, an interesting area for further research). The middle school intervention assesses its responsiveness to students by comparing their attendance and to the attendance of other interventions.

North Harbor's remedies in response to their research findings have made small but significant shifts in the school culture. They have expanded the boundaries of the schools' responsibility for student achievement by taking an intentionally pro-active stance with reticent students, by providing academic supports not supplied by students' families, and by using student feedback to drive staffing and curriculum decisions. Their remedies also reveal the limitations of their change. There are no formal mechanisms for students' self-nomination or parent nomination for the high school enrichment intervention. There are no plans by the middle school team to apply its findings on teaching practices identified by students as promoting learning.

South Hills findings that none of the Asian American students in their sample attributed their achievement in mathematics to any action on the part of their school experience, that students classified as "having trouble in math" could track their poor achievement back to an undermining and humiliating experience in an early grade in elementary school, that African American students suffered a sense of racial isolation and inadequate self-concept, and that their process of teacher recommendations for student acceleration showed bias against African American and Latino students all shocked their moral sensibilities and provoked dramatic, politically risky and potentially controversial organizational, instructional, curricular, and student support interventions and systemic remedies. The district mandated detracking, differentiated curriculum and instruction, the Responsive Classroom, and the race-based Freedom School—all

of which they decided were necessary to pursue equity and equal access to knowledge and opportunities to learn.

In Rolling Brook the action research initiative has penetrated the professional culture engendering habits of critical reflection. They have used the action research for program accountability purposes. They examined the diverse factors regarding students' access to the AP Academy and assessed the nature and quality of students' experiences in it. They are tracking its effects on student course taking to determine if the AP Academy is achieving its purposes. They are using their findings from these inquiries to make curricular, student support, and organizational changes designed to strengthen the effectiveness of the AP Academy and make it more responsive to students as well as to disseminate the new knowledge of effective practice across the district so that a broader constituency of students can benefit from it.

Although the research and the findings in the three districts have similar themes—the denial of access of African American and Latino students to higher level academic classes/ courses and inadequate teacher encouragement for academic ambition—the districts' remedies as well as the genesis of the remedies and the process for their implementation are different—idiosyncratic—because they are context and culture specific and draw on local practitioners' tacit knowledge of their context and culture. North Harbor's remedies emerged from school-based action research teams comprised of teachers and administrators. They are small and locally controlled. North Harbor's central office, although very committed to and knowledgeable about the initiative, supports from the background primarily with resources guidance from the superintendent and a public engagement initiative led by the superintendent. Site-based teachers and administrators enact the remedies.

South Hills' remedies emerged from the central office as a systemic district mandate with the district primarily responsible for their implementation. In Rolling Brook a district level team comprised of a cross section of site-based and central office practitioners of diverse perspectives generated a course of action for district programs and the role of schools as they affect them. Implementation oversight occurs at the central office.

Despite these differences, we found in each district a connection among research, agency, and accountability. Action research produced local knowledge which created a felt need to do something—to act to correct a harmful situation. Thus, feedback from their own inquiry led teachers and districts to take corrective action, which in turn is changing the landscape of students' learning, achievement, and enfranchisement opportunities. Local engagement in knowledge building has stirred within local practitioners deeper understandings and a felt need to enact educational access and equity where it has been lacking. Local knowledge building has generated a sense of agency: the behavior of the teams and districts—and its immediacy—demonstrates the resolve and capacity to own and take responsibility for their problems as evidenced by the remedies they have designed and are implementing. By owning and taking responsibility for eliminating harmful practices and replacing them with practices designed specifically to support increased achievement and equity, these teams and districts are demonstrating responsiveness and responsibility to learners, which, Darling-Hammond and Snyder (1992) identify as learner-entered accountability.

Particular conditions are emerging as helpful to the kind of local knowledge building characterized in this initiative, including: leadership, commitment, and involvement of the superintendent, unambiguous district support in the form of leadership and resources, time and resources for team meetings, research activities, and the implementation of remedies, technical

support for designing action research studies, political stability, and continuity in the site-based and district administration of the action research.

The effects of the research initiative on cross district relationships has been most noticeable among the superintendents whose bonds, trust and will to take on the cause of equity and excellence has been strengthened.

The districts response to the university research stands in contrast to the action research. University researchers' reports were eagerly awaited and well received. NCREST's analysis of the district's action research projects evoked requests for more knowledge and technical assistance on future action research designs. CUNY student research was enormously popular and generated great excitement among Consortium team members. Teams perused the student survey findings from their own district and looked forward to planning the presentation of the data to their school communities. Superintendents expressed interest in the contrast between the deficit perspective universally used to describe the achievement gap and the visions for equity ambitious change. Conversations began on the relationship between the constraints of teachers' roles and responsibilities and remedies to increase the engagement of marginalized students as well as on the role classroom norms of engagement might play in student engagement. Superintendents mentioned the influence of the research on their thinking. One explained that he was now considering working backwards from the district's vision of change to developing strategies to get there.

While the districts acted with speed to use their own research findings, their use of the university research—even when it has confirmed their findings—is taking longer. We have recently begun to investigate this research-practice gap and are considering a few hypotheses which draw on Robinson's work on the mismatch between educational research methodologies

and educational practice (1998). The districts' application of their own research findings seems integral to their inquiry and to their educational, historical and political contexts and sensitive to their constraints. Each teams' implicit synthesis of this complex knowledge base and their research findings seems to facilitate actionable remedies that have a good likelihood of compatibility with their district landscape, even—or especially—when the remedy generates some dissonance, as in South Hills. It seems that actionable remedies—the selected solutions—evolved during the inquiry process and made themselves apparent rather than were generated in a linear trajectory. Just such an organic process is how Brown & Eisenhardt (1998) describe effective complex change. The districts were behaving like learning organizations, “continuously acquiring and using new and better knowledge,” generating, learning, and incorporating new ideas, creating and disseminating knowledge (Fullan, 1999, p. 15).

In contrast, using the external university research to stimulate change presents a significant challenge for practice because the application of the findings is not embedded in the inquiry and it is not linked to local practitioners' ways of knowing and their tacit knowledge in particular practitioner communities. The university based or external research is what Nonaka and Takeuchi (1995) describe as explicit knowledge: “knowledge expressed in words and numbers” (p.8.). Explicit knowledge, according to Nonaka and Takeuchi is “only the tip of the iceberg” (1995, p. 8). As a result the university or external research is less accessible than the action research and the district teams are left to figure out what the external research findings mean beyond what they say, how they make sense in their particular context given their particular set of constraints, and how to effectively operationalize them. As one teacher commented, a particular strand of externally conducted research “wasn't given to us in a way that's going to help us . . . use this information in our community. Unless you really know where

it came from, and how to use it, and what's what, it's not helpful. We're just coming at it from two different points.” This comment implies that particular conditions need to be met for externally conducted research to be usable to practitioners. It needs to embody practitioners' ways of knowing and practitioners' ways of using knowledge. It needs to link to particular, local tacit knowledge—the intuition, experiences, values, culture, and constraints of the districts; it needs to embed the unique complexities of each district's context.

Conclusion and Implications

This study presents some of the promise and pitfalls of a knowledge building strategy that uses multiple forms of research to stimulate change. Although the study is limited by the short time of its duration, it offers some important insights on the possibilities of school district action research as a strategy to change educational practice and policy. The closeness of school and district practitioners to the research can create a felt need to act on the findings, particularly to change harmful practices. The holistic approach that integrates the research process, tacit knowledge, and the application of findings seems to embed the unique constellation of complexities of the district culture, particularly the local constraints that could be obstacles to change, thereby increasing the likelihood that some policies and practices can be changed swiftly. The initiation of district action research by the practitioners who will have the responsibility of carrying out the change generates a strong sense of ownership in and responsibility for making change. Yet the circumstances under which districts and schools confront local constraints (e.g., South Hills) or side-step them (e.g., North Harbor's middle school) need more investigation. Political stability, consistent staffing and oversight, time and resources, opportunities for practitioner collaboration, technical assistance in research design,

strong superintendent involvement and unequivocally supportive district leadership seem to be conditions that enable districts to engage in effective action research.

We hypothesize that when externally conducted research does not consider the particular unique entanglements of local contexts and does not make links to local tacit knowledge it is difficult for practitioners to make sense of and use research, even when they are motivated and when they are interested in the findings. The connections need to be made between the research findings and particular context-sensitive applications and they need to be explicitly apparent in ways that make sense to practitioners. Drawing on Robinson's assertion (1998) that a misalignment of researchers and practitioners' theories produces a research-practice gap, we also suggest that a research-practice gap can occur when researchers and practitioners' conceptual constructs, their ways of knowing and their ways of understanding the connections between research and practice are not aligned. Further empirical inquiry needs to examine the use of multiple forms of research to stimulate changes in school and district practice and policy.

This study also raises questions about the "minority student achievement gap" that cannot be ignored and are not within the purview of this paper to treat with the depth and rigor they deserve, but which are too important for us not to ask. In the current education system which is based on rationing high stakes curriculum and ranking students for access to the kind of education that brings society's rewards of economic and social mobility—where there must always be winners and losers—we wonder whether the conceptual construct of a "gap" and the efforts to narrow, close, or eliminate it are likely to produce equity and excellence in education? Or will we have a more racially and ethnically proportional system of educational access and rewards in which others are marginalized in new ways?

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