

Mutual Adaptation in Action: The case of IB scaling up in Title I schools

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The National Center on Scaling Up Effective Schools (NCSU) is a national research and development center that focuses on identifying the combination of essential components and the programs, practices, processes and policies that make some high schools in large urban districts particularly effective with low income students, minority students, and English language learners. The Center's goal is to develop, implement, and test new processes that other districts will be able to use to scale up effective practices within the context of their own goals and unique circumstances. Led by Vanderbilt University's Peabody College, our partners include The University of North Carolina at Chapel Hill, Florida State University, the University of Wisconsin-Madison, Georgia State University, and the Education Development Center.

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How do we explain success in efforts to scale up high school reform? Can we build explanations that not only inform, but improve the odds of achieving successful, sustainable, and scalable reform? This paper first looks at two common approaches to analyzing school reform efforts, and the paradoxes they present. It then suggests a third option—the possibility of what we call mutual adaptation in action—and uses the case of IB's scaling up efforts in Title I schools to explore that potential.

After decades of documenting what Sarason (1990) termed the "predictable failure of educational reform," after decades of high school reform efforts that have been widely attempted, highly visible, and largely disappointing, educational researchers are well versed in explaining failures. Since A Nation at Risk declared a "rising tide of mediocrity" (or worse) in American high schools, reform effort after reform effort attempted to change the tide. New designs for Comprehensive School Reform were produced, new waves and models of small schools arose, new techniques for professional learning communities proliferated, and new types of schools, in the form of charters, emerged. Yet the results, as Sarason suggested, were all too often all too predictable.

As the pressure to raise standards, to reduce dropout rates, and to ready students for college continues to rise, it becomes all the more important to identify—and to explain-- examples of successful, sustainable, and scalable reform in high schools. One approach has been to search for determinants--the predictable characteristics and conditions that enable success in reform and improvement efforts, the factors present in sites that beat the odds. So, for example, strong leadership support and widespread teacher buy-in are often seen as enabling conditions for successful implementation and scaling of externally designed reforms (Bodily, 1998; Datnow et al., 2002; Desimone, 2000; Muncey & McQuillan, 1996; Fullan, 1991). After studying school improvement patterns in Chicago, a team at the Consortium concluded that the five "essential pillars" include strong and stable leadership, professional capacity, a student-centered learning climate, coherent instructional guidance, and strong parent-community ties (Bryk et al., 2010, p. 25). Identifying such factors allows reformers aiming to scale up to devise systematic indices of "readiness," to arrive at potential adoption sites with instruments to assess a school's will, and capacity, to put the design in place. While the specifics of readiness indicators vary across providers, there is broad understanding that the odds of scaling up are increased to the degree that those pillars are in place, and sites have a solid foundation on which to build. The paradox here is that so many of the schools most in need of successful reform are least likely to have them.

Another approach focuses attention on the *dynamics* of implementation, on the processes of what happens as schools try to realize a design. As report after report since the path-breaking Rand Change Agent study confirms, ambitious plans and elegant designs for change all too often founder in implementation (Berman & McLaughlin, 1975). Some attempts are fundamentally ignored; others are fatally distorted by the very conditions reformers aimed to change. Still others, eagerly adopted in initial phases, seem to fade as quickly as the infusions of funding that made them so appealing. Those that do gain traction, to be implemented at scale and over time are often characterized by "mutual adaptation," the process where local adopters do change their own practices, but at the same time make modifications in the design to suit their particular context (McLaughlin, 1976; Bodilly, 1998; Coburn, 2003; Datnow, Hubbard, &



Mehan, 2002; McDonald, Klein & Riordan, 2009; Reiser, Spillane, Steinmuller, Sorsa, Carney & Kyza, 2000; Stringfield & Datnow, 1998). Like custom tailoring to improve the fit, these adaptations accommodate local features and conditions, while maintaining the fundamental lines of the design. Researchers using this approach have broadened and deepened our understanding of mutual adaptation, and of the scaling process. They point to potential of "scaling down" and going deep to move from adopting programs to changing teaching practice (Coburn, 2003; McDonald, Buchanan & Sterling, 2004; Stringfield & Datnow, 1998), and of shifting ownership from designers to schools (Coburn, 2003; Datnow & Castellano, 2000). Indeed, some have gone so far as to claim that "local implementation of reform *necessarily* involves adaptation rather than 'pure' fidelity" (Reiser et al. 2000, p. 342, emphasis added; see also Stringfield & Datnow, 1998; Fullan, 2000). Even Success for All, a program noted more for prescriptiveness than adaptability, is described by Bob Slavin (1996) as "always adapted to the needs and resources of each school using it" (p. 3). As McDonald et al. suggest, this custom tailoring may be necessary, but it is not easy: "Ignore fidelity and what will you take to scale? Ignore adaptation and your design will crack. This is more than a challenge. It is a dilemma. It can only be managed, never resolved" (p. 19).

But this approach has its own paradoxes. Like for determinants approach, it rests on an assumption that scaling succeeds where schools have the capacity to make the needed adaptations—which not all schools have. Moreover, it cautions that not all adaptations are necessarily positive: "there is no guarantee that the knowledge generated at local sites is correct or even useful" (Hiebert, 2002). Reform designers therefore have to be alert to the adaptations, to "balance fidelity and adaptation" (McDonald, Klein & Riordan, 2009 p. 19), and to guard against "deleterious adaptations" or even "lethal mutations" (Reiser et al. 2000; McLaughlin & Mitra, 2001). Finally, while adaptations may be necessary to scaling up a design, they are not themselves seen as scalable. The design itself is changed—but only in the local site, or 'in situ'. Adaptations are taken as unique and idiosyncratic, inherently local and context-specific. That means that, as Fullan (2001) argues, "twenty-five percent of the solution is having good directional ideas; seventy-five percent is figuring out how to get there in one local context after another" (p. 268).

Emerging out of these studies, however, is another possibility: mutual adaptation not only *in situ*, but *in action*. While more likely to be mentioned in passing than focused on in empirical or theoretical terms, there are examples of reformers monitoring not just to guard against lethal mutations but to learn from implementation efforts, and take local adaptations to scale as they incorporate them into the design itself. They take up what McDonald, Klein & Riordan call the "feedback challenge"—"using experience in new settings to improve the design" (2009, p. 39). In describing the National Writing Project's scaling up effort, Coburn and Stein offer the example of a local adaptation, a rubric for assessing student writing, that "flowed up to the national office" and was incorporated into later efforts, through a feedback pathway used to "feed the design" (2010, p. 283). Datnow, Hubbard & Mehan (2002), in their study of extending educational reform also offer examples of how designers actively adapt to the needs of, or learn from the efforts, of local sites in instances such as Success for All's development of ESL reading materials initiated in one site—but then developed and made available at scale.

Building on that theoretical approach, this paper explores the case of International Baccalaureate's effort to scale up, as they moved to expand their programs and support services in Title I schools. In this case, we saw not only the local adaptations that schools made as they adopted and implemented IB, but also the second level of adaptation—what we call 'mutual adaptation in action'—as organizational learning took



place on both sides, and the designers themselves incorporated what they learned from local adaptations into the next iteration of their design, potentially strengthening not only the design, but also their capacity to go to scale.

The IB

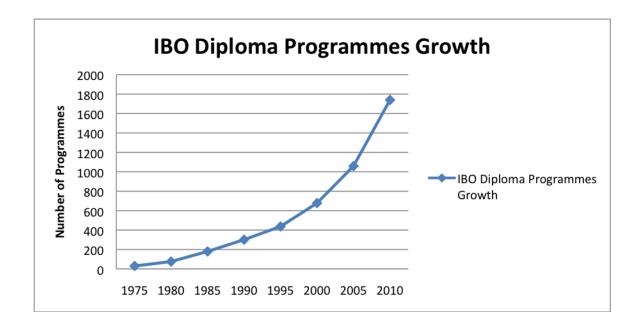
The International Baccalaureate (IB) has a long record and a strong reputation for rich curriculum, rigorous assessment, and college readiness, culminating in an IB Diploma recognized around the world as a "gold standard' in college admissions. In many ways, the growth of IB Diploma Programmes, in the U.S. and around the world, provides a highly successful example of scaling up.

Beginning in Geneva in the 1960s, IB took on two design challenges: philosophically, they aimed to create a program that would "create a better and more peaceful world through intercultural understanding and respect;" practically, they aimed to construct an academically rigorous program that would accredit "internationally mobile" students for entry into highly selective universities "back home" (http://www.ibo.org/history/). To earn an IB Diploma, students take courses and pass externally assessed exams in 6 subjects, including the Theory of Knowledge. They conduct independent research projects and compose a 4,000 word extended essay, while undertaking—and documenting-- 150 hours in Creativity, Action, and Service.

Their Diploma Programme has been widely accepted, as what an Education Week article called "the 'Cadillac' of college-prep programs (Gehring, 2001). It has also been widely adopted. From a small number of private international schools, the Diploma Programme has grown steadily, reaching into public schools, and spreading across countries and continents "like wildfire" (O'Harrow, 1993). As of spring 2012, according to the IB website, there were 2349 schools offering the Diploma Programme in 141 different countries; 775 in the U.S. alone (http://www.ibo.org/ May 15, 2012).

Graph 1





Like a Cadillac, to be "IB" has become a mark of distinction—but it has also been a marker associated with elite students and schools, in academic as well as economic terms. In 2004, the IB organization formally shifted their scaling up strategy: to "broaden access purposefully where we can have the most impact, particularly with disadvantaged students." As Jeffrey Beard, who became the Director General in 2006 stated: "Every child around the world should have the opportunity to have a high quality global education." IB began working to 'scale up' in two new and distinctive ways: to scale out-- expanding access to more traditionally underserved schools and students, and to scale down--extending their offerings through a new "continuum," including Middle and Primary Years Programs which are aimed school-wide (Unlike Diploma Programmes which are often implemented as selective programs within a school).

Through this new access strategy, they aimed to provide increasing opportunities for traditionally underserved students and schools to "be IB" (Siskin, Weinstein, & Sperling, 2010). More than 1000 U.S. schools now offer IB programs: more than 90% are public schools, and increasing numbers of those schools are Title I eligible. These shifts in policy and population raised important questions not only about what it takes for Title I schools to be IB, but also about whether and how IB itself can adapt to serve these schools and students.

In September 2006, IB North America (now called IBA¹) was awarded a federal Advanced Placement Incentive grant, to develop, pilot, and refine new models for structures and support services to build the pipeline that would connect programs and prepare students from the Middle Years through the Diploma, to expand participation across schools, staff, and students—and ultimately to improve performance in academic achievement and college access.

In April 2007 the International Baccalaureate Organization changed its name from IBO to IB, and IB North America became IB Americas, or IBA. We use the new name, IBA to refer to the organization and to its regional headquarters in New York.



This was an ambitious scaling up effort, involving not only program implementation, but the complexities of comprehensive school reform, and even of connecting across middle and high schools. While the primary goals of the project were to design and deliver new supports for Title I schools, this was also in many ways an R & D effort, an opportunity for organizational learning on both sides as Title I schools were learning to be IB, while at the same time IBA was learning what it takes to be IB—or to support IB-in Title I contexts. Over the three years of the grant, they devised, revised, and improvised new components, adapting to what they were learning in the field. What this paper focuses on is that effort as a case of what we term mutual adaptation in action.

The Pilot Sites

Seven schools agreed to participate as pilots for the federal IB project, in four different districts and regions--sites that we have given the pseudonyms of Eos, Aquilon, Hesper, and Austrin. All had been through the initial 'consideration' phase, where schools determine the fit of the program to their needs, and IB assesses their readiness; all were expected to go through two years of 'candidate status' going through trainings, and implementing IB in a critical mass of classrooms before documenting progress and hosting visiting teams for full 'authorization' in year 3.

While small in number, the pilot schools represented considerable variation, and collectively reflect a broad range of conditions, characteristics, and capacities that IBA is likely to encounter in Title I schools. All were in urban areas, with low wealth and high concerns about test scores and graduation rates, but district size ranged from small (2,000 students and only one high school) to very large (hundreds of high schools). One school was small, with approximately 400 students, while two were large comprehensive high schools—with 1600 and 1800 students. Two high schools were growing, and adding new staff; two were struggling with declining enrollment. One housed 7th to 12th grades in a single building; three sites partnered middle and high schools to build pipelines that would have to connect not only programs but also quite separate campuses and staff. One was a new school, where IB was built into the design from the very beginning; three sites were working to introduce new IB programs into much older and well-established patterns and practices.

The pilot schools did have at least three things in common. First, they were all working actively to build IB programs and better prepare more students for Diplomas and for college—while at the same time struggling with district and state accountability systems not aligned with IB. Second, they all generously agreed to pilot the new support structures and strategies developed by IBA though the API grant. Third, they all most graciously allowed researchers considerable access to their own work.

The Study

Over the three years of the grant period (January 2007 to January 2010) a team of researchers at the Institute for Education and Social Policy (IESP), located at NYU examined IBA's design and delivery of new supports, and their implementation and impact in the pilot schools. Researchers conducted two visits each year to each site, including: (1) interviews with IB coordinators, school and district administrators, teachers and guidance counselors; (2) observations of staff meetings and professional development



activities; (3) interviews and observations with IB staff and coaching consultants. We also gathered relevant quantitative data in each site, such as student demographic data and enrollment patterns, state and IB exam scores and credit accumulation. Two additional components of the study took initial questions and findings to larger scale: a case study of one district implementing IB as a strategic reform effort, and a survey of all Title I high schools offering IB programs across the U.S. (Siskin, Weinstein & Sperling, 2009).

Because both researchers and participants had framed this in part as an R & D effort, we presented ongoing feedback to the schools and to IB through informal briefings and annual reports. This was not framed as a "developmental evaluation," but frequent and formative feedback was intended to allow for alterations and adaptations in the implementation plan and in the supports IB was developing for Title I schools, as discussed below (Patton, 2006). But we also found compelling signals of success, and of progress toward scaling up.

For example:

- Test scores, where the district was using IB in its most challenging sites, were rising more quickly and more steeply in IB schools;
- One school, after a rocky first year, implemented IB school wide, reorganized professional development around it, and moved off the state's warning list;
- Teachers who attended IB's own professional development gave glowingly positive reports, reorganized classrooms in observably different ways, and saw marked changes in student attendance and engagement;
- One district, after seeing the effects of IB in its high school and one middle school, adopted IB programs district-wide.

To explain those successes, the following examples suggest the progress of IBA's efforts, and provide illustrations of mutual adaptation in action as IBA took—and used-- feedback from the context, the coaches, and the researchers. In the examples below, they used that feedback to adapt: 1) adjusting to the kinds of contextual features that so often lead to predictable failure to alter timelines or to drop components, 2) accommodating weak or unstable 'pillars' to change procedures; and 3) identifying local adaptations with promise and taking them to scale.

Adjusting to Context and Conditions

Contexts matter, and for decades of educational reform efforts researchers have documented the ways in which specific local context features tend to compound challenges, and to confound even strong designs (Sarason, 1990). These were certainly the conditions we found in most of our IB pilot schools. What is striking, then, is that they led to not only local adaptations, but also to adaptations in design,



Unpredictable problems are a predictable pattern. Over the three years of the grant we witnessed ample evidence of the kinds of unpredictable, yet regular, incidents that disrupt and interrupt implementation efforts—particularly in high needs schools. Student fights required administrative and police intervention; snowstorms closed schools; a server breakdown cut off internet access for two weeks; a break-in led to fears of missing student work and records that would put IB credit in jeopardy. Budget crises, particularly in year 3, brought cuts, more cuts, and chronic uncertainty as more cuts were constantly anticipated—as an administrator succinctly put it, "it's grim." Teachers talked of "trying to stay above water" or of the "thousand things that happened to me during my planning period that prevent me from doing planning." In such turbulent contexts, a coordinator observed, implementing IB is like "waiting for Godot": "every step forward there's another reason to pause. And wait some more." While IBA could, and did, make small but consequential accommodations to deadlines and schedules, the most significant adaptation was to the authorization process itself: the highly formalized process by which schools apply to be IB, and work through monitored steps to move from 'candidacy' to 'authorization' was 'postponed' in several sites—giving strong signals of just what work still needed to be done. They sent the signal to staff who had been working hard on this effort that they were not waiting for nothing, and in one district set off "red flags" to the central office that more support was needed. IBA did not change the criteria, but they did change the schedule, recognizing that some sites might need more time to reach the same standard. Which they did.

High-needs schools tend not to be high users of IB's online curriculum. One of the original components IBA had proposed was Seminars in Science, an online professional development course. In the first year, however, two fundamental problems arose. First, several sites had difficulty providing the hardware and bandwidth that would be required. One teacher, for example, spoke of her computer as a "doorstop"—the box was there, but the lack of speed, and the absence of sound, made it impossible to use for the required tasks. At another school, where computers—with sound—were available, the server went down and access was not restored for two weeks. Others struggled with physical access—computers were in the building but off in a lab, or virtual access—district blocks prevented them from accessing off site sites. Even when the equipment was readily available (or when they worked from home), teachers found IB's site less than user-friendly, and their materials difficult to find. They did not have the necessary capacity to implement the curriculum, not did they have the capacity to make local adaptations—other than making excuses for not making the change. Given the low levels of capacity, and the lack of interest in the IB materials that were available at that time, IBA decided to drop that component of the access work from the grant priorities (although the project continued as a part of IBA's larger efforts).

Reinforcing Pillars and Redesigning Procedures

Strong and stable leadership may be "essential" for school improvement —but it is too rare to be relied on. Leadership has been found repeatedly to be an "essential pillar" for school reform (Bryk et al, 2009; Carnoy et al., 2003), but strong and stable leadership is a scarce resource, particularly in high schools and in low wealth settings. In the pilot sites, while district leadership support may have been weak, school-level leadership has been repeatedly weakened by principal turnover. Each of the seven schools undertook the project with a principal who had committed to the design; that was, and is, one of the criteria IB uses in its readiness assessment. By year 3, only one of those principals was still in place. The



principal's door may always be open—but "it's a revolving door." Aquilon, for example, had a new acting principal in fall 2007, as well as a new assistant principal. Austrin had a new principal from outside, as well as a new superintendent—both of whom were new not only to the school and the district but to the idea of IB. Eos went through four principals in the three years of the grant, including a retirement, an acting principal who was not retained, and another who was "relieved of duties" after questions arose about graduation credit improprieties leaving teachers to explain that they had a new principal in the spring, and then a "new, new principal" in the summer—someone who came in from outside, and was unfamiliar with the school, the staff, and IB. Said one teacher, "there's a high turn-over rate of principals in this school as far as I know. I mean, even the last two years we've had two, three, four principals move in and out. That has a big effect on the atmosphere of the school and the climate of the school." Eos provided the most dramatic examples of how disruptive turnover can be, but while their case may be unusual in intensity, it is consistent with patterns among high school principals, particularly in urban schools. The repeated negotiations of developing a relationship with a series of new principals took a toll on teachers, and affected IB implementation efforts. The "pillar" is too shaky to build reform efforts on; the capacity for a school to develop adequate adaptations on its own is highly unlikely. Yet for IB to move into Title I schools, where leadership turnover is a chronic condition, brings the challenge not only of finding strong leaders initially, but also of finding, and fostering, leadership strength repeatedly. IBA adapted to this challenge by reconfiguring their timeline—to repeat what they had planned as first year supports to principals in each principal's first year, to strengthen the coaching support, to network principals so they could better share experience. When some, like Austrin's coordinator, worried that "It's a question of support, because if we're going to do this, it can't just be me," IBA worked to adapt their implementation structures to emphasize distributed leadership teams of teachers.

Professional capacity is compromised by teacher turnover. In considering the fit between IB and the sites, teacher commitment and capacity was another key factor—as it is in many externally designed reform efforts (Coburn, 2003; Datnow, Hubbard & Mehan, 2002). But teacher turnover was high across several sites, "huge" in some, and for Title I schools "I mean, that's normal," as one of our pilot administrators reported. Eos experienced three years of contract problems, frozen salaries, and a reported "exodus" of teachers. There was concern about high teacher turnover in general, but particular concern in certain subjects (like science). A teacher talked of how "turnover is huge. I think just last year more than half of the department left . . . I was considered a veteran with my four years of teaching." The level of turnover that makes fourth year teachers the veterans is a challenge for any school, but particularly for a school trying to implement a program like IB. In another example of the irony of success, the administrators at Austrin talked of their considerable investment in IB trainings for teachers—which then made those teachers more attractive candidates for positions in a nearby, and more affluent district. Over several years of participating in IB, they have trained—and paid to train—65 teachers, but 27 of them have since left the district. IBA staff revised and improvised in the mechanisms to provide access to trainings. First, they worked with sites to work around obstacles in the process—like having to have the funding upfront, or having to sign up for a training with an individual teacher's name—something that seemed impossible where turnover made it unlikely that schools would know in the spring who would be teaching what in the fall. Second, as it became apparent that access and travel costs presented a serious obstacle, IBA created an alternative structure: if the sites couldn't get enough people to the trainings, IBA would bring a training to them. At both Hesper and Eos, where large school size, limited budgets, and turnover issues made the problem particularly pressing, on-site professional development sessions on MYP were made available to all, or most, staff. This opened up the trainings to people whose attendance



at off-site sessions would have been an unlikely priority give the difficulties and the travel costs: counselors, teachers across a range of subjects, administrators—and even an occasional district administrator-- had the chance to participate in the training, and to participate together. That experience, as a principal described it, was "very powerful" in creating a sense of collective enterprise, and in signaling both district and school commitment to IB. For IBA, although their professional development has been consistently praised as invaluable in improving teaching practice, building a critical mass of trained teachers is a consistent challenge when turnover is a consistent pattern.

Taking Local Adaptations to Scale

Policy pressures create competing demands. Education reform remains high on the policy agenda, and the pressure to raise test scores and reduce dropout rates, is rising considerably. The pilot schools, like so many Title I schools, were struggling to make 'AYP' (Adequate Yearly Progress), and that urgency can easily overwhelm the needs of IB. At one school, they told us, "teachers are saying they do MYP in March, after the [state] test." At another, the saying has become almost a slogan: "we can't do MYP until we make AYP." A principal warned a faculty meeting "if we don't get those test scores, we won't survive as a school." With survival at stake, the priorities were clear. Where IB was seen as competing with, rather than complementing the drive to survive these demands, it was difficult for staff to justify investing—and sustaining—the time, attention, and resources that IB requires. At one meeting, staff talked of the "urgency" of NCLB responses, the "imperative" of state and district pressures, and how their work all "needs to be contiguous with our discussions" about those imperatives. One idea that emerged as important came when an IB coach improvised a local adaptation—and offered a "reframing" to resistant staff. He suggested that they see IB not as a goal in and of itself, but as a means to an end, as a way to move toward the ultimate –and urgent--goal of improving student achievement (and scores). Over the course of the grant, that reframing became more common across schools as coaches adapted their vocabulary in the next iterations of the coaching model—and IBA scaled up the adaptation further by developing frameworks to demonstrate alignment between IB practices and specific state standards. Presumably that adaptation will adapt again, as the Common Core brings standards to a new level of scale.

Districts are large, complex, and often disconnected. Across districts, particularly large districts, people at all levels of the system make decisions, adopt new programs, institute new policies, or alter budgets, often in ways that affect, or undermine, the implementation of school reforms, including IB. Eos's district, in the face of AYP fears, introduced a new curricular approach, and mandated new reading program; Aquilon's district introduced three new accountability instruments. None of these were designed with IB in mind, and none aligned well with IB design. "School districts matter" to the potential for school reform (Spillane, 1996; Slavin & Madden, 1996), but several pilot sites expressed considerable concern that IB didn't matter enough to their districts. They spoke of district leaders who "sign off" on the IB application, but "don't sign up" to help make it happen, and don't have enough information about or training in IB to even know how to help. As a Hesper teacher explained, "the building can't do more than the district allows them to." While district leaders were often invited to IBA conferences, or to the in-service sessions for this grant, few district administrators could make time, or would make IB a high enough priority, to attend. Yet in those sites that were able to involve district leadership, competing



demands were reduced, supports were strengthened, and central office commitment encouraged school leaders—both teachers and administrators—to "keep up the hard work." IBA staff made some effort at direct interventions to reach out to district leaders, but more importantly, they moved several of the professional development opportunities to the sites—and administrators were more likely to attend, and to be aware of, onsite events. For Title I schools, especially in larger districts, implementation of IB requires systemic reform, or at least systemic accommodation (Smith & O'Day, 1991). Without more clear information about IB and its implications for *district* decisions and appropriate provisions, school efforts are seriously constrained—and working more directly with districts is becoming an increasingly prominent part of IB's current scaling up efforts.

Conclusion--Mutual adaptation in action: learning and altering in the design

Over the three years of this grant, both IBA and the pilot sites had, as one person so succinctly put it, "been working on this really, really hard, but it's difficult." This was an ambitious and complex reform effort that required considerable hard work, and that phrase turned up repeatedly in interviews. Students talked of their own hard work: the personal project "was a lot of work. But it showed I could do it" or the "extended essay . . . it was a lot of work" or just "IB is a lot of work." Teachers spoke of the years of hard work to really learn to teach IB, or to convince colleagues that this program could work in their school or for their students. Principals talked of the major mental shift, and the difficulty of reconfiguring professional routines and cultures. Coordinators talked of the multiplicity of demands that managing IB asked of them—often without the release time to let them work as hard as they wanted. Sometimes, it felt like "too much to ask right now" or "too much work," but in fact, teachers and students, coordinators and principals, also spoke of just how worthwhile this work was. They continued to work at it—even under difficult circumstances, even through new superintendents and new or "new, new principals," and even when the budget cuts and financial uncertainty turned the setting from challenging to "grim."

In the course of that hard work, they confronted the challenging and changing contexts that so often characterize disadvantaged schools, and all to often lead to the "predictable failure of school reform (Sarason, 1993). They –and IBA-- encountered, and adapted to, 'pillars' that were too weak or too unstable to support the reform effort sufficiently. They coped with policy pressures to raise standards and adopt new interventions that often were not aligned with IB. They survived leadership turnover, in some schools with stunning regularity. They struggled with teacher turnover that can make training a critical mass of teachers seem an impossible task. Perhaps most challenging, they took on the task of changing beliefs and expectations, to convince—and to demonstrate—that disadvantaged students in disadvantaged schools can succeed in being IB, and that IBA could learn from these sites how to support them in that work.

Through that work, the design itself shifted, as timelines compromised, procedures were altered, and support personnel and materials were refined—based on experience and evidence as the design 'scaled out' to new kinds of sites. We might think of this, as Datnow suggests, as a process of "co-collaboration." That way of thinking—shared with school staffs—has its own benefits in increasing ownership and increasing commitment: "a powerful experience" explained one teacher, that encourages her to "dive deeply into the process of school reform with schools because it's nice feeling that you are in partnership as opposed to things that come at you from on high. I feel more strongly connected to IBA



and the people and the process because of the grant and the structures that were put in place than I ever have been in six years." Or we might think of this, in the terms Google has made popular, of scaling up as an effort of 'perpetual beta testing" where drawing board designs are strengthened by the designers' willingness to try, test, and adapt based on the experiences of real users. But the possibilities for its adding to our understanding of the scaling up process, and the potential for its contributing to designers' efforts to achieve successful, sustainable, and scalable reform in high schools suggests that we should think more about it.



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