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IT ALL BEGINS WITH KNOWLEDGE

Initiating public school transformation to STEM education begins with identifying the fundamental issues that exist within a school. Engaging the community-at-large in this assessment assures that different priorities, values and perspectives are taken into account when decisions are reached about the best path forward.

Understanding the way in which people can work together to identify common goals is an important part of seeing how effective solutions to problems in public education can be created through collaboration. Gathering knowledge gained from the experience and involvement with community action to improve the quality of K-12 education is where Knowledge Capture offers a perspective on the possibilities for generating a community engagement process to support the shift to STEM education.

HOW WE CAPTURE KNOWLEDGE

Headed by anthropologists, the Knowledge Capture Program at The PAST Foundation uses multiple ethnographic methods such as structured observations, interviews, focus groups, and online surveys. These research methods provide quantitative reporting of measurable qualitative data. The team produces a robust, case-study-style analysis to help guide real-time course correction to achieve critical outcomes.

Through our work with a range of clients—from small community organizations to statewide initiatives—we've learned there are as many approaches to success as there are stakeholders. Successful transformation of a shared endeavor is fundamentally dependent on the *commitment of key participants* from each stakeholder group. Knowledge Capture recognizes the importance of *understanding* those key stakeholders, recording their myriad perspectives, definitions of success, and perceived challenges. This understanding helps open the transformation process to engagement--and commitment--from all key participants.

HOW WE APPLY NEW KNOWLEDGE

Knowledge Capture is beneficial at all stages of transformation. Before transformation begins, the program provides access to valuable information from other communities. As strategies are deliberated, ethnography identifies commonalities and differences across groups, helping define the unique context of a particular effort, as well as the essential qualities for successful implementation. After implementation begins, the process identifies valid benchmarks and milestones that demonstrate elements of change.

Along the way, Knowldege Capture provides a roadmap to help transforming communities develop collaborative approaches that maximize the strengths of each stakeholder, on the road to challenging but rewarding outcomes.



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knowledge capture program

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A ROADMAP TO COMMUNITY ENGAGEMENT

In education today, there are few undertakings as complex as transforming a persistently failing school. As technical assistance providers, we have been confronted time and again by commonly held perceptions about why "nothing works." Educators and administrators express a very real sense of frustration with turning a failing school, often claiming, "we've tried everything already." When pressed to explain why schools are failing in the first place, common statements include "we are underfunded," "we lack technology," "we have no control or influence over the environment and community in which the failing school lives,"—and the list goes on. The problems and constraints low-achieving schools face are often similar, regardless of whether the school is urban or rural—as is the desperation surrounding how best to make transformation happen. These issues range from concerns about shifting demographics and the local economy to neighborhood safety and preserving community values and priorities, and more.

At The PAST Foundation, we have more than a decade of experience working directly with schools and communities in transition, and have identified key benchmarks essential to successful school transformation. PAST offers a team of experts, including anthropologists and educators, working collaboratively toward understanding the critical needs of educational systems in transition. Using an anthropological framework, we offer powerful analytical tools to understand both the visible diversity of communities associated with a particular educational system, as well as the hidden commonalties they all possess. Large or small, urban or rural, from whole districts to the one-room schoolhouse—the PAST Foundation has effectively partnered on all levels to outline consistent benchmarks that serve as critical levers in shaping successful school transformational outcomes.

The *Roadmap* series is an opportunity for you to benefit from what we have observed and learned through these partnerships with a diverse set of communities in multiple states across the country. Each of the *Roadmap* publications will highlight effective processes associated with key transformational implementation strategies essential to achieving the necessary culture shift, embedding and sustaining the success of the transformation.

Each *Roadmap* is presented as a case study, providing a context in which to understand real issues and challenges, as well as the opportunity to witness key steps associated with the work of implementing school transformation. We feel strongly that this series must start by detailing commonly shared aspects of communities-in-crisis, defined by grassroots level of community conversation and engagement. In our experience, gaining broad-based commitment from local stakeholders is an essential step leading to the cultural shift required to achieve successful school and community transformation. We begin our *Roadmap* series with *The Roadmap* to *Community Engagement for STEM Education*, a case study of community involvement in transforming a failing pre-K through 12 school feeder system in Columbus, Ohio.

The Linden McKinley STEM Academy (LMSA), launched in fall 2009 by Columbus City Schools, became the first of the district's public schools to transition to a program integrating science, technology, engineering and math (STEM) with "transdisciplinary problem-based learning" (T-PBL). LMSA, a combined middle and high school (grades 7 through 12), as well as four Linden elementary feeder schools (pre-K through 6), are now on a path to completing the transition to STEM and T-PBL for all public school students within the Linden community.

As the first school feeder system in the district to transition to STEM, there is value in looking at the stakeholder process conducted jointly by the community with the school district to evaluate how to best meet the educational needs of Linden's youth. The Linden community process offers a national "roadmap" for urban communities where public education is ripe for revitalization in ways that must also address multiple, related issues that extend to the social and cultural aspects of a community. In this context, strategies to improve pre-K through 12 public education must take into account a broad set of interconnected, relevant, and complex needs of families that seek to attain a quality education for their children. Challenged with rising

levels of poverty, shifting demographics, urgent concerns for neighborhood safety, and a climate of general economic decline, urban communities like Linden are increasingly hindered by constraints of limited budgets and institutional capacity to change the course of their educational future.

In the case of Linden, local leaders sought to galvanize the community around a single question—how to rescue its public schools—as a critical component of revitalizing the

community as a whole. Community members acting together as a catalyst for action joined with the school district to raise awareness and inspire community leaders to new levels of advocacy on behalf of the children of Linden. In this consensus-based process, the list of goals identified by the community revolved around three urgent issues: 1) increasing the high school graduation rate; 2) improving student performance in order to better prepare them for adult life by providing them with 21st century STEM career skills; and, 3) assuring "college readiness" to pursue higher education.

In the Linden community, the choice for STEM education evolved to consensus through a series of community meetings that were held over a period of 18 months. Initially, meetings were conducted and led by the school district. In time, community meetings were organized and conducted by neighborhood organizations in response to issues of concern identified by local leaders. The community's specific set of issues shaped a collaborative process, drawing on the resources of the community to devise and implement short-term strategies guided by long-term goals. This case study, chronicling the Linden community experience, identifies critical components of the process that launched the partnership of agencies, organizations, and individuals who joined in an effort to identify STEM education as a viable solution for Linden's community schools and its students.

In the case of Linden, local leaders sought to galvanize the community around a single question ... how to revitalize the community as a whole.

PARTNERS OF THE LINDEN COMMUNITY TRANSFORMATION PROCESS

Alpha Minority Engineering Lecture Series AmeriCorps **Apex Builders** Association of Community Engineers [ACE] **Battelle Memorial Institute** Bethel African Methodist Episcopal [AME] Church Budget Rent-A-Car **Building Trades Institute** Center of Science and Industry [COSI] Church Leaders Group Clarence Lumpkin Construction Training and Jobs Committee **Cleveland Avenue License Agency Columbus Board of Education Columbus City Council** Columbus City Schools [CCS] Columbus College of Art and Design Columbus Education Association [CEA] **Columbus Metropolitan Housing Authority** Columbus Metropolitan Library (Linden Branch) Crane Plastics Corp. Facilities Master Plan Revision Committee Franklin County Department of Job & Family Services Franklin County Education Council Greater Linden Development Corporation [GLDC] Heritage Apartments Heritage Christian Church **Higher Peaks Child Care** Honda of America I Know I Can Project Increase Community Development Corporation KidsOhio Linden Area Education Task Force

Linden community residents Linden public school alumni [Association] Linden public school parents Linden public school teachers & administrators Linden-McKinley High School teachers & administrators Linden-McKinley STEM School Design Team Malcolm Pirnie Engineering Consultancy Metro Early College High School Advisory Group Metro School staff & school administrators Moody-Nolan Inc. National Education Association [NEA] National Service Learning Corporation National Society for Black Engineers [NSBE] Northgate staff Ohio Dominican University Ohio Education Association [OEA] Ohio State University [OSU] Minority Engineering Ohio STEM Learning Network [OSLN] **OSU** Aspire **OSU Provost Office** Otterbein College Partnership for Continued Learning **PAST** Foundation Peggy's Monogramming Project Grad SAVESNet South Linden Area Commission St. Stephen's Community House **STEM Columbus** Tray Lee Bible School United Way of Central Ohio Young Women's Christian Association [YWCA]

HELPFUL INFO

Ethnographic protocols require anonymity of case study participants. Therefore, each individual interviewed for the Linden study was assigned a code number identity. For this case study, individual code numbers range from 501-509. Code numbers are given within report citations to reference specific participant views. The second number in the citation represents a particular response within an interview transcript (e.g., 501-25). Case study citations provide the reader with an "insider" perspective of the situation as well as the essential actions and components that form an action "model" for school transformation. Insight into the experience of one community can inform other communities about expectations and potential strategies as a roadmap for initiating school transformation planning and implementation processes.

INTRODUCTION

THE OUTCOMES OF THE LINDEN COMMUNITY DIALOGUES AND FORMAL PLANNING PROCESS

offer insights into grassroots actions that initially sprang up through community response

to neighborhood public school closures (Bush 2006c, The Columbus Dispatch 2006a). Community members note that closure of several Linden area schools including Gladstone Elementary, followed by closure of Linmoor Middle School (501-48), created a sense of urgency about the possibility of closure of Linden-McKinley High School (Bush 2007c, 2007e). When the school district reached out to community residents to discuss issues surrounding the future of the high school, the overwhelming message to the district was a strong and positive assertion that the high school should not be closed (505-14b). The range of reasons voiced by community members in those early school district meetings pointed to a set of related issues that were both immediate and long-term in considering the well being of the community and potential

"...we're moving to that age where a high school diploma will no longer get you where you think you want to go...and [we understand] that college isn't for everybody...what kind of focus do you have? And so that's where the college and career readiness really came in."

QUOTE [508-109]

impacts of closing the high school. As word of the discussion on school closure circulated in Linden, leaders from different segments of the community engaged in new partnerships to organize and act. As one high school alumnus stated, we wanted to "restore the roar" and build upon the long standing "panther pride" associated with Linden-McKinley High School (505-32).

Five distinct components of the Linden community process resulted in pivotal actions that sustained community commitment to school improvement. These five components of community action are presented in the graphic on the next page. The following narrative presents an exploration of the specific issues and strategies the Linden community pursued to attain common goals, design a strategy for collaborative community involvement, and reach consensus on a school improvement plan. The five points of community engagement provide an understanding of the fundamental steps essential to turning the tide to achieve school transformation for Linden public neighborhood schools.

"We need to do problem based learning when we do these things in communities. And say, here is the issue, how do we solve this issue? And how do we know that we've done a good job? Isn't that what you're teaching [the] kids? And you have rubrics and problems, and here is the process, and how do we solve it, and how well did we do it? So, use your own, I mean - have a process that includes stakeholders at the onset, instead of waiting for people to say, 'well I wasn't involved I didn't know anything about it. I'm not sending my kid here. I'm afraid, or I don't know, I'm anxious'."

QUOTE [509-98]



Define the academic goals

Stakeholder Goals



Identify stakeholders' priorities

Five points essential to community engagement in school transformation

3 Collaborative Partnerships

Build partnerships and broad-based commitment for a collaborative community planning process



5

Stakeholder Action

Facilitate stakeholder action for school and community revitalization

Stakeholder Consensus

Implement a consensus-based process to evaluate school transformation to STEM education



EXIT 🕹 ONLY



DEFINE ACADEMIC GOALS

THE FIRST STEPS TAKEN JOINTLY BY THE SCHOOL DISTRICT AND THE COMMUNITY were aimed at understanding academic goals critical to school improvement. Four main areas of improvement were identified:

- Identify and implement 21st century curriculum and instruction
- Improve high school graduation rates
- Build program resources that assure career and college readiness
- Identify funding support for higher education for Linden high school graduates

Early in the exchange between the school district and the community, a number of problems were cited by the school district as grounds for considering closure of the high school (Greater Linden News 2007c, 2007d, 2005). High on the list was declining enrollment in the pre-K through 12 schools (The Columbus Dispatch 2007, 2006a, 2006b). Contributing to the Linden situation was an overall decline in Linden's population from 40.9k to 34.8k in the decade between 1990-2000, resulting in 12% fewer school-age children residing in the community (Community Research Partners 2007). Associated with low enrollment in Linden area schools was a district-wide problem in 2008 of high school graduation rates of just under 74% (Columbus Board of Education 2010). With funding support from the district, the Community Research Partners (CRP) conducted a study to gather fundamental information defining academic concerns and other factors affecting Linden public schools to better understand the nature of the problems for Linden parents and their children. The study provided the opportunity to further define broad-scale community issues including related census and other socioeconomic trends.

Utilizing focus group data, the study also honed in on a range of stakeholder perspectives including those of parents, students and members of the religious community, as well as local business leaders. Study findings identified a series of factors associated with the decline in public school enrollment. However, a single stark fact emerged that pointed to the bottom

line consideration for the school district: only 37% of Linden children were enrolled in Linden area public schools at the time of the study. This information underscored the unavoidable hard economic and financial considerations faced by the district to maintain local public school operations (Bush 2007d, The Columbus Dispatch 2006a). Getting to the bottom line for the school district also offered the opportunity to better understand why parents were choosing to enroll their children in schools outside the district, including the option

"The community has got to pass the levy. We've got to support the levy. Because we're not going to have a school. The numbers made sense to me. You had twenty percent or better decline in enrollment... It was an economic decision."

QUOTE [501-62A]



Photo courtesy of The PAST Foundation

In 2008 and 2009, over 100 Linden students attended the "Summer Engineering Experience for Kids"—a program of the National Society of Black Engineers (NSBE)—where middle-school students learned basic engineering skills to create hands-on projects. The 3-week camp was designed to help prepare Linden students for STEM education and careers. The project was sponsored by partner organizations of the Linden Area Education Task Force, the Battelle Memorial Institute, and NSBE, and was held at the St. Stephen's Community House in Linden.

to enroll students in charter schools (505-48; 509-16; Greater Linden News 2007c; Bush 2006a, 2006b; The Columbus Dispatch 2006a).

Key findings of the CRP 2007 study found that parents electing to send their children outside the district stated they were seeking a school environment for their child where students could: 1) experience higher "academic rigor" and "expectations"; 2) receive quality instruction in a "best practices" learning environment; and, 3) experience "hands-on learning in ways that apply to daily life." Additionally, parents identified the need to increase community involvement in efforts to improve the school environment, including opportunities to bolster the reputation of Linden public schools and advance school safety measures. College preparedness and providing access to scholarships and other financial assistance were also cited as critical to opening up opportunities for higher education to Linden public school graduates. With clearly defined community goals identified in the CRP study, together the district and local stakeholders moved forward armed with important understanding about commonly held goals and values, as well as greater awareness of the problems and challenges for improving public education in Linden. Initial efforts organized by the school district provided for a series of information-sharing meetings held in different neighborhoods to convey news on proposed school closures (505-14a). However, the information sharing quickly galvanized community response, with local leaders stepping in to organize a series of ongoing meetings, including workshops and community dialogues to further define academic goals and develop a strategy for school transformation (504-22a; 505-12a; The Greater Linden News 2009i, 2009k, 2008b). These early actions were embraced by the community, and signaled a deeply held determination to foster an inclusive local process, lay the foundation for grassroots action among those who shared a common goal for school transformation, and build on a willingness to work to make it happen (501-8; 505-2; 506-136; 507-59a; 509-84).

"[Parents] equated STEM with the idea that STEM would give more opportunities to their kids, and that STEM was an advanced thing that should be brought into their community and so it was good for them. And so they did community meetings about it, they did surveys about it, they've got graphs and charts and newsletters about STEM showing up in their community, they even had the radio stations talking about STEM and so on."

QUOTE [502-26A]



IDENTIFY STAKEHOLDER PRIORITIES

IN ORDER TO MOVE FORWARD WITH A PLAN FOR ACTION, PRELIMINARY discussions were organized between community leaders and the school district to identify key points to assure successful outcomes for a school transformation planning process. Five important preliminary areas were identified as the basis for initiating a community planning process:

- Parents committed to enrolling students in neighborhood public schools
- The community as a whole would pledge to build support for school levies to assure funding for local public school renovation
- The district committed to a community planning process to attain academic goals
- The district and community joined in actions to improve school safety and security
- The district and the community together formed the Linden Area Education Task Force to take on a joint process to design a school transformation plan, and identify locally supported actions including ways to avoid future school closures

Closing Linmoor Middle School prompted a strong response from the community, opening up a series of early exchanges that ultimately led to building a more robust relationship between the school district and the community. On the part of the community as a whole, early discussions revealed there was little awareness among community advocates of the serious problems confronting the school district and parents of Linden students (503-12a) despite

efforts to inform the community (The Greater Linden News 2007a, 2007b). On the district's part, faced with financial considerations, school closure policy was being conducted through normal decision-making channels involving review and comment by the Columbus City Schools citizen's task force, whose members included residents from the Greater Columbus area (Bush 2007a, 2006b; CEA 2007a). With little awareness of district processes and options to provide feedback, Linden residents felt they had been left out of the loop on decisions to close Linden schools (501-68b; 503-12b; 509-8a).

"The school belongs to the community...There is a trust relationship—the district representation needs to trust that the community knows what they want for their children, and the community needs to trust that the district representation has the capacity to implement that."

QUOTE [504-22]

Following a resounding plea by local leaders to support community involvement in creating a school transformation plan (Bush 2007b), the district continued to hold meetings in order to engage stakeholders in a meaningful process for Linden. Many stakeholders took the opportunity to help in the community's effort to further define issues of concern, voicing their views directly to the Board of Education. The issues raised included frustration over the quality of education in Linden, as well as deeply held fears about impacts to the vitality of the community associated with closing Linden public schools (505-12b; Bush 2007c; Greater Linden News 2007a, 2007c). In this effort, Linden area stakeholders convinced the district of their

"The fact that things for young people to do were no longer there–like, we used to have the teen center, right on Cleveland Avenue, and the teen center had closed and so there were more concerns about–there's nothing for our young people to do outside of school. So, there were sort of a lot of different things that were going on that made me more interested in what was happening with our schools and teens."

QUOTE [503-14C]

commitment to work collaboratively to find solutions to the problems facing their neighborhood public schools, and in so doing helped set the stage for a communitybased, problem solving process (509-84; Greater Linden News 2009k).

Early in the exchange of ideas between the community and the district, leadership from both stepped forward with propositions responding to fundamental discussion points essential to initiating a joint planning process (501-20). With awareness that the school district alone could not address the broad range of issues raised by the community, initial stakeholder interests focused on organizing participation of local leaders and parents to work with the district, assuring local priorities and traditional values would remain integral to a plan for Linden schools (501-20; 502-76; 504-22a).

Among the options proposed to the community by the district was the idea of combining the high school and middle school (grades 7-12) as a way to build sufficient enrollment in a single facility, improve operating cost efficiencies, and avoid closing the high school (CEA 2008, 2007b; Bush 2007b). Although this option would also address the problem of bussing Linden area middle school students to schools outside of Linden (508-97), many in the community were initially against the idea of a combined middle school and high school, and expressed their reservations and need to explore the issues more fully (505-12a; 508-31; 509-8; Sebastian 2007). In time, parents did resolve these concerns, allowing the district to gain broad support for a combined middle school program (508-101).

Enrollment challenges across Linden area pre-K to 12 schools were also an issue of concern for the district. Gaining commitment from Linden area parents to enroll students in their neighborhood schools was predicated on the district's assurance that a school transformation plan would be implemented (501-62b). From the community's perspective, the district's willingness to assure a plan for Linden schools was an important component of reestablishing trust in the district's "capacity" to meet the needs of the community (504-22). This included identifying additional funding for the district to ensure support of academic goals, incorporating provisions for improved curriculum and instruction (502-18,26; The Columbus Dispatch 2008; Richards 2008; Sebastian 2008).



Photo courtesy of The PAST Foundation

Demonstration of student learning is visible in all K-12 Linden STEM feeder schools, where projects line the school hallways giving students a sense of pride and accomplishment in their work. Student projects involve research and exploration of solutions to real-world 21st century challenges experienced in today's neighborhoods and communities.

The district also needed assurance from parents and residents to help support passage of the school levy in order to secure funding necessary for renovation of the high school building and other operational costs in the public school pre-K to 12 school feeder system (501-62a). Additionally, the community voiced its concerns for reestablishing a safe and secure learning environment in all Linden schools. Community advocates on this specific issue stepped forward to join with the school improvement effort, building on existing work already underway in partnership with local law enforcement in Linden (507-54).

With the formation of the Linden Area Education Task Force, the district formalized its commitment to the community to engage in an open, broad-scale, consensus-based process to develop a school transformation plan for Linden (Bush 2007c). The Education Task Force was jointly led by two co-directors, one representing the district and the other representing the community (501-18; 502-62a). The structure of the Education Task Force included creating committees to address specific elements of the school transformation plan. The committees were organized to include a combination of district staff and community members working side-by-side (506-28a). The process also extended the opportunity for the public to participate, involving Columbus area partners to join in the process, bringing with them a range of educational resources and expertise on education reform to advocate for school improvement and the work of the Linden Area Education Task Force (502-36b,62b; Greater Linden News 2009c).

"So [the community dialogues] really helped us understand what we needed to do to meet the needs of the community and build a school and a feeder pattern that they wanted to be engaged [with], have their students go to, and be involved with."

QUOTE [506-136]



BUILD PARTNERSHIPS AND BROAD-BASED COMMITMENT TO SUPPORT A COLLABORATIVE COMMUNITY PLANNING PROCESS

A HIGH PRIORITY FOR COMMUNITY LEADERS AND THE DISTRICT WAS TO ENSURE a robust public engagement process, building upon local networks and other important existing community resources for action. Three main avenues for engaging the Linden public were pursued to attain stakeholder buy-in and create opportunities for collaboration across diverse interests:

- Initiate outreach and ongoing communication to grow community engagement and understanding of public school issues and potential actions and outcomes
- Seek partnerships and support among community leaders who could help inform others in the community on progress with the planning process
- Hold community meetings in different neighborhood venues to increase outreach and understanding of diverse stakeholder issues

Among the initial group of Education Task Force members, there was a deeply held understanding that the work of the Education Task Force would be conducted primarily in the community of Linden, holding work sessions in local venues as a measure of ensuring access to the process, and gaining community buy-in (501-28a; 502-36a; 503-52). At the same time, there was an awareness among Education Task Force members that engaging community members, working side-by-side

with district staff, would also lead to mutual ownership of a process shared by all participants (506-22a). Community outreach strategies to initiate community awareness and invite broad-based local participation relied on utilizing existing communication channels among local community organizations including those in the business sector, promoting the process through local newsletters, religious group networks and local media (505-36; Greater Linden News 2009c, 2009d, 2009h, 2009j, 2008a).

On the issue of local buy-in, community leaders felt that inviting participation of diverse local organizations and community members would result in a plan incorporating Linden values and "help to assure the right solutions" would "And so I said let's move forward, let's look at it, what does it do? Let's ask the community. We then did the community conversations, which we knew– we all said that in order to do any of this, it was going to take parents, teachers and everybody."

QUOTE [501-20]

be sought by those who were most familiar with the needs of Linden families (501-28b; 503-38; 504-22a; 506-22b; 509-84). Taking on a leading role, St. Stephen's Community House, providing



Photo courtesy of The PAST Foundation

In 2008 and 2009, Linden area high school students participated in "STEM in the Linden Area" (STEM LA), organized by the Greater Linden Development Corporation. STEM LA offered students paid summer internships to work at local businesses. The project was sponsored by partner organizations of the Linden Area Education Task Force.

services to Linden area families since 1965 (St. Stephen's Community House 2013), helped convey an intent to conduct a process that would remain local, and directly involve participation of community leaders in reaching decisions on formal education policy for Linden. As co-director of the Education Task Force, the community had confidence that St. Stephen's would help focus on priority issues faced by the community, while at the same time transforming frustration and high emotions held by the community through engaging in a proactive strategy for improving the quality of education for students in Linden (501-28b; Greater Linden News 2009i).

Local leaders also recognized the importance of participation by educators and others interested in STEM education from the greater Columbus area who also stepped forward to partner in the effort. However, there were initial concerns as to their role, as community members voiced their views that leadership of the process had to be taken up by Linden organizations, not by groups from outside the community (502-36b). As understanding grew among Education Task Force members of a deep sense of community pride (502-76), and of the community view that revitalizing the schools was a path to revitalizing the community as a whole (502-28b), the process shifted to a true "reciprocal partnership" in which "the community felt they had a genuine say" (508-63,79).

"It's been an ongoing community process, that the ownership of it has continued to be the community. That when things were difficult, and there's been rough, rough edges with it, that the community didn't abandon the project and the district didn't abandon the project. And, that says a lot for both. I mean, you know it's-they stuck with it, and continued to stick with it."

QUOTE [504-148]

FACILITATE STAKEHOLDER ACTION FOR SCHOOL AND COMMUNITY REVITALIZATION

COMMUNITY SENTIMENT REGARDING A PLAN FOR TRANSFORMING THE PUBLIC schools involved the idea that school transformation was integral to an overall long-term plan for revitalizing the community as a whole. Their views expressed a set of four important aspects of school transformation and broadly held community values and goals:

7 School improvement is transformative for the community as a whole

Retaining community identity thru revitalizing the



Recognition of the fundamental connections between improving the quality of education and community viability allowed for the process to unfold with understanding and respect from all participants. This led to designing a strategy addressing interrelated issues of vital importance to the community. Inherent to the community's goals for school improvement was a sense of restoring a pride of community, and of building a new vision for Linden in which students could identify with a long tradition of past academic success experienced by community members,

many of whom are alumni of Linden-McKinley High School (502-28b; 505-34; 506-28b; Greater Linden News 1999a, 1999b, 1999c). Additionally, there was growing sentiment expressed in the community that schools should be reestablished as the "center of the community" (504-30). As these issues became more clearly defined, Education Task Force members attempted to creatively align these broad goals for community revitalization with the community's focus on improving opportunities for students, while also conducting the central task of producing a rigorous evaluation of the academic options for school transformation for Linden (502-26; 506-22b).

"The 'Engagement Committee' [of the Linden Area Education Task Force] was a combination, again, of district personnel and community folks. The focus was on re-establishing the school as the center of the community, and re-establishing the pride that was in Linden-McKinley [high school]."

QUOTE [501-20]

"I think the biggest outcome of this whole thing, that I have seen, is it has opened the door between school and community in a way that it had not before. And again, I think that's been a change on both sides, not just one side."

QUOTE [503-46A]

A strategy to grow more broad-based interest in the school transformation effort was directed toward a diverse set of Linden stakeholders. A primary target of this effort was intended to build awareness of the potential for improving the economic viability of Linden (501-40). Launching a campaign called "Learning in Linden," a two-fold proposition was put into action: first to convey information about the school transformation plan and gain support from parents to enroll their children in Linden schools. Linked to that was a secondary goal to promote the idea of the potential benefits for the business community. The latter message concerned

the importance of a strong educational program that would attract families to Linden, allaying lingering fears that school closures and/or low performing schools would lead to fewer families moving to Linden, and fewer families to buy goods and services from local Linden businesses (501-92; Greater Linden News 2009c, 2009d, 2007a, 2007d).

A related aspect of raising community awareness was tackled by the Greater Linden Development Corporation (GLDC) in recognizing the potential impacts of low-performing schools for future growth and development in Linden (503-16). Opening up their community newsletter to exploring issues of school improvement, the GLDC newsletter, "The Greater Linden News," provided a continuous stream of information as the plan progressed toward consensus (Greater Linden News 2009g, 2009h, 2008a). The GLDC also worked in partnership with the Education Task Force to inform the community about the potential for transforming Linden schools to a 21st century learning environment through an integrated program of science, technology, engineering and math (STEM) and transdisciplinary problem-based learned (T-PBL). Once people understood STEM, acceptance began to take hold, and "it was like a ground swell," and people felt convinced they wanted STEM education for their students as a primary direction to preparing them for the jobs of the future (502-26b; 503-26; Greater Linden News 2009d).

Essential to this effort was the process of conveying to parents and residents what STEM offers and why it was the right decision for Linden (503-22; 505-87; 509-106). Additionally, parents wanted assurance from the district that as the first school feeder system to transition to STEM education, the process would be fully supported through the transformation to successful outcomes (505-56; 508-51). One community member commented that the first time they had encountered the term "STEM" and learned that Linden was being considered for STEM education, was through the GLDC newsletter distributed to every household in Linden (505-50).

Gaining community support for the levy to fund school renovation also opened up a significant set of related issues voiced by the community involving the prospect of construction contracts and assurances that consideration would be given to hiring local businesses and workers (501-76). Bringing local construction companies to the table and reaching out to local unions led to a series of important outcomes, including jointly sponsored local job fairs offering job training and formalizing contractor bidding opportunities (Greater Linden News 2009b). For Linden,



Photos courtesy of Greater Linden Development Corp

(*left*) Community members with diverse interests and concerns joined together in a process to identify collaborative actions to support Linden community revitalization strategies. Their vision for Linden was integral to the plan for assuring that the quality of education in the public schools would benefit the community as a whole.

(*right*) Dialogues were held in Linden to give parents, students and other stakeholders the opportunity to consider the potential benefits of STEM education for the K-12 Linden schools. The community gatherings were essential to gaining input from the community and build support for the decision to transition to STEM education as the best path forward for Linden students.

this was as important for gaining community buy-in as the effort for "selecting the new school curriculum" (501-78a).

At each step of the process, community leaders reached out to diverse stakeholders not traditionally involved in education advocacy. In this strategy, the Education Task Force was able to build on local knowledge and experience, as well as bring local resources to the table to create a community-based plan for action. The result was a community engagement process that resonated deeply in the Linden community, creating broadly shared expectations for the future of the education system and success of Linden's youth (Greater Linden News 2010a, 2009a, 2009d, 2009h).

"From the very first I was intrigued–I mean, I thought 'this sounds great, it sounds like it could really help our community, you know, could help move our young people into the jobs of the future.' Everything they presented sounded–to use old-fashioned words– 'neat' or 'cool'. You know, I was excited about it."

QUOTE [503-26]



IMPLEMENT A CONSENSUS-BASED PROCESS TO EVALUATE SCHOOL TRANSFORMATION TO STEM EDUCATION

IDENTIFYING STEM EDUCATION AS THE BEST PLAN FOR LINDEN REQUIRED

laying the groundwork toward understanding the benefits of STEM education for students, and building confidence in the district's ability to implement STEM across all grade levels in the pre-K to 12 school feeder system. In reaching consensus for STEM education, the Linden experience suggests a series of essential steps for successful implementation of school transformation:

- Engage community leaders early in the process, providing mechanisms to acquire information and begin an exchange of ideas between the district and the community to define issues of concern to stakeholders
- Conduct a robust process for identifying academic goals and commonly held propositions for initiating school improvement
- Provide a clear and consistent message about STEM education for the community, communicating information in different venues involving local level school administrators and educators, including classroom teachers, who will conduct implementation of STEM education
- Work with local leaders to develop short-term strategies to expand opportunities to educate parents, students, and others in the community about STEM education and strategic connections to locally relevant academic goals for a 21st century education
- Establish the connection between STEM education and STEM careers for students and their parents, as well as others in the community including local business leaders

Laying the groundwork to reach consensus for school transformation of Linden area schools was initiated in January 2007 and reached conclusion by January of 2009 with approval by the Board of Education for implementing STEM education. In the following timeline (pg. 26), it is notable that the community response to the January 2007 district meeting led to an immediate plan for a stakeholder process embodied in a Task Force structure joining education leaders with Linden stakeholders. Within a few weeks of the school district's first community meeting in 2007, the district joined with St. Stephen's Community House and committed to organizing a Task Force stakeholder process open to the public. The Education Task Force proceeded to assemble the group of partners including Linden organizations and community advocates to hold its first

"So I would have to say the [school] board was supportive of the process. And supportive of the STEM program being in the Linden community. They were supportive of the decisions the community made and the superintendent's recommendations."

QUOTE [509-36]

meeting within just a few short months, in spring 2007. Once launched, the Education Task Force was able to complete its mission over an 18-month period, and by January 2009 proposed recommended actions to the Columbus City Schools Board of Education (501-24). Working through issue-driven committees that included curriculum and instruction, school safety, and school renovation design, the Board expressed confidence in the community process in approving the plan for school transformation presented by the Education Task Force (509-36).

Engaging the community in a highly structured and robust, but 'user friendly' process, the district was able to overcome initial fears about unavoidable proposed changes, and rebuild trust with parents and community leaders. Additionally, and most important to the community, the outcomes envisioned involved developing a meaningful plan for action also contributing to a broader set of goals relevant to the community as a whole, gaining broad stakeholder endorsement of the plan. The role of local leaders to nurture a partnering strategy and process that opened the door to exploring diverse issues that emerged as different voices and issues were identified, lead to forging new understanding and alliances across community organizations and associations.

The necessary time to identify local partners, resources and secure funds to support a rigorous Education Task Force effort was conducted on a parallel track with efforts to gain funding for new curriculum and instructional training costs (Ohio STEM Learning Network 2008, Greater

Linden News 2008c), including opportunities to apply for STEM education funding from the state of Ohio. On that front, the district undertook action to seek education funds, and with passage of House Bill 119 by the Ohio legislature (Dayton Area Chamber of Commerce 2009), began grant proposal development to compete for state STEM funds for Linden (The Columbus Dispatch 2008). These efforts continue as the district moves forward with school transformation in Linden as well as in two other urban, pre-K to 12 school feeder systems within the Columbus City Schools.

Among Linden leaders, gaining support for a successful school levy to fund the renovations of the Linden-McKinley High School building were also essential to meeting goals for design of the combined middle "I was always struck with how interested and excited people were to do things, so I never got the sense that this was something that [the community] didn't want to do. ... You know, I got this sense that it was sort of a Linden pride kind of thing they were going to do, in a uniquely Linden style, with Linden people."

QUOTE [502-38]

school/high school (The Columbus Dispatch 2009; Greater Linden News 2009d, 2009f). The resources supporting these actions also extended beyond local entities as the planning process gained ground. With funding provided by the National Education Association (NEA), the community received major assistance through a grant from NEA's "Closing the Achievement Gap" Program. With NEA funding, St. Stephen's and the Columbus Education



Photos courtesy of The PAST Foundation

(*left*) The Girls Empowerment Mural (GEM) project, supported by The Women's Fund of Central Ohio, provided important opportunities for students to demonstrate critical thinking as well as skills and talents gained through education as they consider STEM solutions to community issues.

(*right*) GEM takes the power of murals out into the elementary schools, as part of a process of revitalizing the community as a whole, restoring the pride of community, and a spirit of working together.

Association (CEA) jointly held a series of substantive, ongoing "community dialogues," providing a forum to garner important insights on community needs linking school transformation with social, cultural and economic issues fundamental to the well-being of the community as a whole. The Linden community dialogue design has been recognized by the NEA as a successful model for community action offering a unique view of the importance of community engagement for implementing STEM education on a national scale (501-24; 509-102).

> "The design process was really a combination of community folks working alongside district staff, and really putting the ownership of this process in everyone's hands."

> > QUOTE [506-22A]

"At the end of the day we got the committees together and came back with a recommendation, presented it to the board, the school board. The community conversations, I think, were phenomenal."

QUOTE [501-24]

TIMELINE TO COMMUNITY ENGAGEMENT



JANUARY 2007–AUGUST 2009



District funds stakeholder focus groups to identify issues of concern Linden Area Education Task Force begins meeting School district and Greater Columbus education partners -Battelle, Ohio State University, and Center of Science & Industry (COSI) - begin search to fund math and science school

Ohio state legislature approves HB 119 to fund STEM education statewide



RECOMPENDED ACTONS

CONTINUING THE REVITALIZATION PROCESS THROUGH STEM EDUCATION

BUILDING ON THE MOMENTUM OF IMPLEMENTING STEM EDUCATION, THE community continues to express support for the ongoing school transformation to STEM education. In fall 2012, the Linden-McKinley STEM Academy held the official rededication ceremony, inviting the community to join with students, faculty and administrators in celebrating the completion of the renovation of the new middle school/high school facility (Columbus City Schools 2012). One Education Task Force participant observed that, "STEM (education) has opened doors in the community that would not have been opened otherwise" (503-62a; Greater Linden News 2011, 2010b, 2010c, 2010d, 2010e, 2009b, 2009e, 2009k).

The interest in STEM education as a shift toward preparing students for 21st century jobs and careers remains high, and community leaders express a need to continue to share the success of the transformation with the community more broadly. The following observations and suggestions reflect ideas in response to the question about the "legacy" of the STEM school transformation process for the Linden community. The following comments provide the benefit of seeing the range of positive changes that are part of the Linden experience including the potential for continuing community commitment to the success of Linden schools.

- Continue to hold community meetings to report on progress; schedule regular, well-advertised meetings that people can plan to attend with advance notice (503-66).
- Find ways to continue to convey what STEM education is by taking STEM out of the school and demonstrating it in the community (503-54).
- Create a model for other Columbus communities, building upon lessons learned to benefit the district and neighborhoods in ways that will establish better relations between communities and their public school system (503-46a; 504-148; 506-38; 509-110).
- This case study has relevance for transforming existing pre-K to 12 school feeder systems in the future, which involves different types of challenges than creating a new "start-up" STEM school (506-98).
- The community has seen new investment in the community as a result of the redesigned school and the transformation to STEM education – people think it has worked out for the greater benefit of the community and in building a sense of pride in Linden students (503-50; 506-79).

- The process shows the community has faith in its youth – this is an important message to convey to Linden youth and will also be true of other communities making the transformation to STEM education (504-152).
- Use the "Design Cycle" to support problem-solving generally in the community, to follow the process of defining the problem to identifying viable solutions that the community can endorse and that assures good outcomes – without this process there is "fear and mistrust" when people do not have a good understanding of what is changing and why it is changing (509-98).
- **7** Engage teachers and students early in the process (509-130).
- Create a system-wide method for community partners to engage with STEM schools, including maintaining a "coordinator" position to facilitate community involvement (503-48b).
- Teacher training needs to include orientation to the community, to gain familiarity with local partners and resources that can connect students and the school with their community to support STEM education and problem-based learning (e.g. asset mapping); teachers who are not from the community often are uninformed about the local community and potential ways to build local partnerships (503-50a).

CONCLUSIONS

In considering the essential steps that were put into motion, it is apparent that there were a series of successful collaborative actions implemented and supported by diverse partnerships to reach consensus for STEM education. Building stakeholder "buy-in" to a plan for action involved an ongoing series of discussions that both identified problems and sought out solutions for the unique challenges identified through a community planning process.

Reflecting on the Linden experience, there is value in considering the potential for using the consensus framework as a "roadmap" for collaborative action for school transformation. In considering the basic components of stakeholder engagement, the viability of the model to support a community process conducted in a shorter timeframe offers a path for other communities an effective strategy for implementing a 21st century approach to education.

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APPENDICES

HOW THIS REPORT WAS CREATED

The PAST Foundation *Knowledge Capture Program* (KC) produced the Linden case study of school transformation. The KC research team relies on ethnographic methods to conduct field research, working collaboratively and directly with school faculty, program partners, as well as community members involved with education reform. This ethnographic study focuses on the analysis of a 2-year period, 2007 through 2009, when the Linden community embarked on school transformation of their neighborhood pre-K to 12 public school system.

The Knowledge Capture approach to learning about school transformation builds upon the grassroots actions and particular experiences of stakeholders engaged in community planning for school transformation. In this view, we gain insights into "lessons learned" and define critical components of school transformation integral to effective outcomes. These insights are especially important for STEM education where community-wide engagement and collaborative partnerships form essential elements of successful school transformation.

The KC team interviewed nine individuals who shared their observations on the work of the *Linden Area Education Task Force*. These individuals responded to a set of open-ended questions designed to explore the community process from different perspectives (next page). The nine interviews were audio recorded and transcribed. Additionally, the KC team analyzed contemporary published information from the study time period drawing from local news sources reporting on community issues and events associated with the Linden STEM education planning process.

Ethnographic protocols require anonymity of case study participants. Therefore, each individual interviewed for the Linden study was assigned a code number identity. For this case study, individual code numbers range from 501-509. Code numbers are given within report citations to reference specific participant views. The second number in the citation represents a particular response within an interview transcript (e.g., 501-25). Case study citations provide the reader with an "insider" perspective of the situation as well as the essential actions and components that form an action "model" for school transformation. Insight into the experience of one community can inform other communities about expectations and potential strategies as a roadmap for initiating school transformation planning and implementation processes.



The Knowledge Capture Team at The PAST Foundation

- Monica S. Hunter, Ph.D. (right)
- Maria Green Cohen (middle)
- Meghen Matta (left)

Linden STEM Education Project Key Informant Interview August 2012

- 1. When did you become involved in the community planning process to consider the public education issues including the closure of Linmoor Elementary?
- 2. What were the main issues that you felt needed to be addressed by the public school system?
- 3. What did you think of the idea of developing community input to the public school district in considering changes to be made in the school system? Were there short-term decisions regarding neighborhood schools that the community members identified? Were there long-term issues that the community identified for the public school system?
 - a. If you know, how did the idea of STEM education develop as an option for the Linden school system?
 - b. What do you think were the benefits of selecting STEM education as an important change for the Linden schools?
- 4. What do you think were the disadvantages of selecting STEM education for the Linden schools?
- 5. What role did you play in the community process conducted by the school district?
 - a. Were you part of a specific committee, or did you play a role in the broad process that included designing and supporting committee actions overall?
- 6. Who were the primary leaders in determining the actions that followed from the community process?
- 7. In your view, what were the key outcomes of the process overall?
- 8. In your view, were there issues concerning the Linden education system that were not addressed thru the process?
 - a. If so, what has happened in regard to those issues?
- 9. Is there a legacy to the process in terms of ongoing community engagement with Linden schools that resulted from the community planning process?
 - a. Are there other aspects that developed through the community planning process that continue to benefit the community?
- 10. Can you suggest others who should be included in this series of interviews to capture the diverse range of perspectives on goals and objectives that were identified during the community planning process?
- 11. Was there anything we didn't discuss that you think important to understand about the Linden community and the public school process for implementing STEM education in the K-12 system?