High School Transformation A NASHVILLE STORY



More than 100 Academy partners have signed on to work with the academies.













HIGH SCHOOL TRANSFORMATION A NASHVILLE STORY

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THE ACADEMIES OF NASHVILLE - 2010

Metro Nashville Public Schools (MNPS) system serves almost 78,000 students, and includes all of Davidson County, an area of approximately 525 square miles. MNPS is among the 50 largest school districts in the nation with 140 schools, including 72 elementary schools, 34 middle schools, 21 high schools, three alternative learning centers, four special education schools and six charter schools. The district serves a diverse population of students, with 66% minority students, 13% English Language Learners and 12% students with special needs. More than 79% of all MNPS students are economically disadvantaged, a rate that has increased from 64.2% in 2004.

Graduation Rate:

2006=68.8 % 2007=70 % 2008=72.6 %

2009=73.1%

2010=82.9%

The Academies of Nashville are underway, establishing their unique "brand" in all of Nashville's comprehensive high schools. More than 100 Academy partners have now signed on to work with the academies, after a citywide kickoff in June 2010 that included more than 300 business partners, teachers, administrators, and community partners who celebrated the new Academies name and brand.

Extensive development over the past four years, made possible through a Smaller Learning Communities grant from the U.S. Department of Education, has positioned Nashville's high schools for success. A new, experienced school district leader has brought in a dynamic and professional staff. The new high school associate superintendent, a national expert in career academies, has taken charge and is shaping Nashville's high schools into the high schools of the future. As of fall 2010, there are 46 academies in 12 high schools.

Although much remains to be accomplished, all the leaders in Naville are on the same page and the bar for success has been set.

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PREFACE

There are two stories to tell about high school transformation in Nashville. One is the story of how the transformation developed over time, and the other is the story of how the reform is currently implemented. This story has been written to document how the transformation developed over time, including the preparation and events that led to the transformation of high schools in Nashville during a turbulent time in public education. It is important to understand the investments that were made in the city, and although it is difficult to point to any single effort or group of efforts as a cause for success, the picture taken as a whole may be useful for reflection in Nashville in the future and for others who may find similar circumstances in their community.

Names of key contributors are included in this story; however, many other people and organizations contributed along the way and they are too numerous to name.

The story is chronological to the extent that is possible. Many developments occurred in parallel until the time when they all came together to the same goal; as a result, the chapters in this case study overlap in chronology at times.

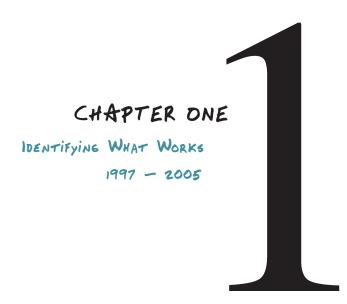
This story occurred during a time when many of the ideas that were being explored were new, and the strategies and tactics that are now proven and refined were uncharted. At this writing in 2010, many of the ideas have become more mainstream and therefore, the same or similar strategies and tactics can likely be implemented in a much shorter time frame today.

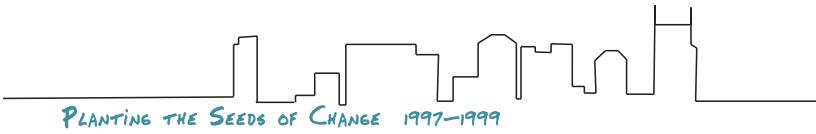
As a Leadership Level Ford Next Generation Learning Community designated by the Ford Motor Company Fund, we frame our work within the three strands identified by Ford: Transforming Teaching and Learning, Redesigning High Schools, and Sustaining Change through Business and Civic Leadership. Although the three strands were not yet identified when much of what is described in this document occurred, it is helpful to know how each of the strands evolved in Nashville and that they occurred synergistically – not in silos. Therefore, in this document the following symbols in the margin identify the strand or strands associated with the focus of the narrative: Transforming Teaching and Learning (TTL); Redesigning High Schools (RHS); Sustaining Civic and Business Leadership (CBL).

Ford Fund's Leadership Level designation is awarded to communities that master a set of essential practices in all three of the strands mentioned above, including: the creation of a five- year master plan around all three strands; formation of a senior business board (like CEO Champions); and establishing a set of industry councils (like partnership councils) to cultivate and support academies in each prioritized pathway.

Finally, throughout the document, organizations that invested in Nashville, both public and private, are noted at steps along the way.

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Ford Academy of Manufacturing Science (FAMS). At Nashville's Glencliff High School in the mid-1990s, students were getting a different kind of curriculum. A curriculum called FAMS (Ford Academy of Manufacturing Science) was offering the students a glimpse of what life was like in the real-world. To make the experience especially real, students spent time in manufacturing companies as interns. Staff at Glencliff reached out to the business community and began the process of collaboration. From this experience, they learned valuable lessons about engaging businesses in the learning experience of students. A federal program, Tech Prep, offered the Glencliff staff the opportunity to develop pathways from the Ford FAMS programs in the high school to comparable programs at the community college – and collaboration began. The experience of the FAMS Academy at Glencliff was valuable in building a more comprehensive Business Academy at the school, which became Nashville's first real high school academy. Teachers and staff at Glencliff began to develop an understanding of the power of academies. Community college teachers and administrators were introduced to the academy concept as they worked with Glencliff to develop pathways to community college programs.

Who did it: Starr Herrman, Donna Gilley, Kelly Henderson, Alison McArthur, Carrie Thornthwaite, Jeff Hudgins, and Mary Lamoreux at Glencliff High School

A National Science Foundation Advanced Technological Education (NSF/ATE) grant at the community college. At Nashville State Community College in the mid-1990s, a \$500,000 NSF grant had just been awarded to create and develop interdisciplinary teams of teachers who would participate in teacher externships in business and industry. Motivation for seeking this grant arose from a growing national concern that our teachers were becoming more and more disconnected from the changing world of work, and that this reality was having a significant negative effect on educational outcomes. Teacher teams from Nashville, Knoxville, Chattanooga, Jackson, and Memphis participated in two years of intensive professional development simulating the work place and learning how to work in teams, create integrated curriculum, use methods for teaching critical thinking, and especially to engage business and industry as partners. This project was called TEFATE for Tennessee Exemplary Faculty for Advanced Technological Education. Upon returning from their externship experience, the teams created "case studies" of the real-world experiences to be used in classrooms. Because the community college teachers had been working with the career academies, Hillwood High School and Glencliff High School were part of the Nashville team. The principal of Hillwood High School traveled to Washington to lobby for the funding, and as

Who did it: Sydney Rogers, Principal Investigator at Nashville State Community College; Clay Myers, Principal of Hillwood High School; Jim Barrott of Chattanooga State Community College

(TTL) (CBL)

he participated in the planning of professional development, he saw the value of exposing the teachers to the real-world. He would later (before his retirement) become one of the eight founding principals of wall-to-wall academies in Nashville.

Who did it: Sarah (Thompson) Knestrick at the Nashville Area Chamber of Commerce

(CBL)

Who did it: Starr Herrman at Glencliff High School

(HSR)

Who did it: John Bransford, Susan Williams, and Kay Burgess at Peabody College of Vanderbilt

(TTL)

Business Partners start to connect at the Nashville Area Chamber of Commerce. As interest in exposing both students and teachers to realworld experiences grew, the Nashville Area Chamber of Commerce assigned a

full-time position to help coordinate workplace learning experiences with staff and students at Glencliff High School. Workforce development staff members at the Chamber were beginning to look for ways in which they could help produce better outcomes for students.

State Department of Education takes notice. The State Department of Education engaged innovators at Glencliff to develop a replication process for developing career academies statewide, including the development of a career academy manual. A short time later, Glencliff received a grant from the state to develop an Academy of Business.

How People Learn researchers from Vanderbilt partner with other

efforts. At Vanderbilt University, world-renowned experts in learning and authors of The National Research Council's How People Learn, were discovering more about crafting learning for the best result. This team of researchers began to meet with the interdisciplinary teams formed at Nashville State Community College and the high schools. The collaboration resulted in relationships that would be critical for future planning and development as the teacher teams began to understand specific ways in which they could improve the learning outcomes for students. A key learning for the interdisciplinary teacher teams that would shape future successful practices was that learning that is contextualized will produce deeper understanding of academic content.

Lessons Learned:

• Teachers who participated did not understand real-world work issues and importantly they wanted and needed opportunities to learn and evolve as teachers.

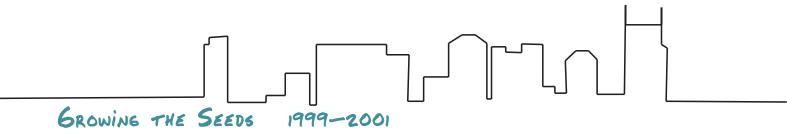
- Modeling real-world experience gained via the externships in the traditional classroom would be challenging to accomplish.
- Business partners could play a key role in providing context for learning.
- Engaging businesses in classroom experiences could produce big benefits for academic outcomes but accomplishing this even on a small scale required a large amount of professional development.
- Designing the work based on research in learning science could add much value to the work.
- Sustainable and effective career academies included changes in structure, transformation in teaching and learning, and engagement from businesses and the community.

Struggles:

- Time for the teachers to learn and plan.
- Money to fund externship opportunities and professional development.
- Changing the traditional school culture.

Results:

- A single highly successful academy at Glencliff High School.
- A career academy manual to guide successful implementation of other career academies.
- People at the grassroots level were starting to understand the growing problem in education and were beginning to explore possible solutions.
- Twenty two rudimentary case studies based on actual workplace experiences were developed with the help of business partners.
- Important connections among learning scientists, public school educators, and community college faculty were developed.



Who did it: Sydney Rogers at Nashville State Community College and Jim Barrott at Chattanooga State Community College, Principal Investigators; John Bransford, Susan Williams, Kay Burgess from Vanderbilt; Clay Myers from Hillwood High School

(TTL)

(CBL)

(TTL)

Setting up models for change. As the funded teacher externship program came to a close, a \$1.6 million grant was awarded by NSF/ATE to go deeper with the work. This grant provided money, time, and expertise to turn the rudimentary case studies developed from the teacher externships into useable multi-media classroom materials. The leaders wanted to develop classroom materials that could be widely distributed and adopted. The statewide collaboration of community colleges, high schools, universities and business partners was called Southeast Advanced Technological Education Consortium (SEATEC). Knowledge and experience gained from this work formed much of the basis for the next phase, which established model career academies.

Business partners were recruited to help provide externships and real-world problems for students: Nortel Telecommunications in Nashville, MCI in Memphis, Brock Candy in Chattanooga, a civil engineering company in Knoxville, and an IT company in Jackson.

Vanderbilt Learning Technology Center is influential. Interdisciplinary teacher development teams were joined by researchers at Vanderbilt as the Learning Center at Vanderbilt became a key partner with the NSF grant at Nashville State. A series of "co-development" professional development workshops were held and five multi-media case studies were developed.

Award-winning work. The SEATEC effort was one of the first to receive the Tennessee Board of Regents statewide "Academic Excellence" Awards.

Lessons Learned:

- Moving effective research-based practices to public school and community college classrooms would be hard to do, and difficult to scale and sustain. Researchers expect controlled and perfect implementation and teachers did not want to be told how to run their classrooms.
- The real need was to change the way teaching and learning was practiced rather than requiring a new curriculum and materials.
- To be really effective learning should be in context.

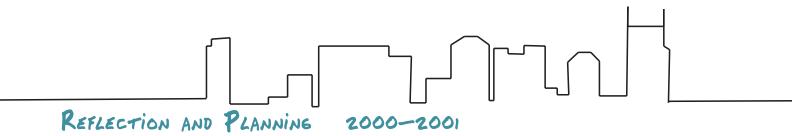
- Development of classroom materials that teachers would actually use well was harder than was anticipated because teaching and learning would need major structural reform lectures should be minimized, inquiry-based student-centered approaches should be maximized.
- The traditional high school structure presents many challenges for teachers who want to work collaboratively with partners and with each other.
- Using the problem based case learning approach helped students learn to think critically and solve problems.
- Traditional assessments need to change to a more performance based assessment.

Struggles:

- Managing the extensive tension and conflict between the researchers and the classroom teachers.
- Fitting the new models into the existing structures and assessments of traditional education.

Result:

- Isolated well-developed models of what is now termed "Problem Based Case Learning"
- A small set of teachers developed expertise and experience in what transformed teaching and learning should look like.
- Very little change occurred beyond the models scattered across the city.
- Research from the project suggested that students who were taught using the model cases and learner centered teaching strategies transferred the academic knowledge better to other content areas than those who had been taught in traditional classrooms.
- The following multi-media case studies w ere developed:
 - The Case of the Gummi Bears: Candy manufacturing in Chattanooga
 - I want my Pizza Hot: A study of how to retain heat during pizza delivery
 - Bridge Collapse on Route 88: An engineering disaster story
 - Help! TheBlue Screen of Death: A case study of telecommunications
 - A tour of MCI Memphis: Future workforce needs
- The case studies were used only in isolated classrooms and not as a part of the regular curriculum.



Who did it: Liz Allen Fey of Management Solutions Group; Sydney Rogers at Nashville State Community College; Nancy Eisenbrandt at the Nashville Area Chamber of Commerce; Christine Bradley, Executive Director of the Nashville Career Advancement Center; Chris Beck with EDS at the General Motors Saturn plant in Spring Hill; Jeanette Armstrong, the Director of Career and Technical Education at Metro Nashville Public Schools; and Nancy Dill, Principal of Stratford High School

(CBL)

A time for reflection. With many lessons learned, models in hand, and struggles identified, it became clear that high schools would need to be structurally redesigned in order for new teaching and learning methods to work and be sustained. To move to the next phase, it was time to design a plan that would eliminate barriers and allow for deep implementation. A \$75,000 planning grant was awarded to Nashville State Community College by NSF to engage a broader group of business partners in the planning effort and to develop the region's capacity to produce a qualified pipeline of Information Technology (IT) and STEM workers starting from high school and moving them to the community college.

Involving all stakeholders in the planning. A series of facilitated planning meetings was conducted over the course of the next twelve months. More than 80 people representing dozens of businesses and educational organizations participated.

The plan that resulted included steps to:

- Develop a model for a new high school structure that would allow for full implementation of contextualized learning. That structure would be in the form of a career academy.
- Prepare students to enter the comparable program at the community college.
- Engage business partners with the career academies by helping interdisciplinary teams of teachers develop contextualized programs.
- Provide industry certifications in IT for students graduating from the high school academies.
- Develop an urban career academy model in Nashville at Stratford High School, a rural model in Spring Hill in conjunction with EDS and the Saturn Plant, and a suburban model in Oak Ridge in East Tennessee.
- Create a new curriculum model called Corporate Scholar Solutions (later called the "first generation problem based case learning" by Gerhard Salinger of NSF) to provide actual business problems for students in "real time".
- Accomplish all of this via an NSF funded regional center for Advanced Technological Education. The center's focus would be on transforming teaching and learning and creating a pathway for students from high school career academies to the community college.
- Implement a companion initiative called "The Case Files" to focus on creating

sophisticated tools for development of interdisciplinary teams for creating model problem-based case learning and engage a professional learning community of high school and community college teachers around the country.

It was becoming increasingly clear that characteristics of the academy structure would support all important elements of 21st century learning, rigorous academics, career preparation, and college-ready.

These plans formed the basis for subsequent proposals to the National Science Foundation to fund a Regional NSF Center and The Case Files and ultimately the findings and plans created a solid basis for the U.S. Department of Education Smaller Learning Communities grant proposal that resulted in the current wall-to-wall implementation across the district.



Who did it: David McNeel, Director of the regional NSF center; Jim Johnson, Dean for Technologies at Nashville State: Ruth Loring, a learning scientist from Dallas; Nancy Dill, Principal of Stratford High School; Jeanette Armstrong, Career and Technical Education Director at Metro Schools; Starr Herrman, Glencliff High

2001-2005:

(CBL) (TTL) (HSR)

School

Who did it: Nicholas Holland, President of Centresource: Janet Wallace and Newt Rowland, Stratford High School; Chris Beck with EDS and Mark Johnson at the Saturn Plant in Spring Hill; Howard Gentry, Vice-Mayor

(CBL)

Who did it: Brenda Elliott, Principal at Stratford High School

(HSR)

Who did it: Melissa Jaggers at Nashville State Community College; Harold Ford, Principal of Williamson County Middle College High School

(CBL) (HSR)

Development of model academies funded in Nashville. Plans for the Regional NSF Center and for The Case Files developed through the planning grant were both funded by NSF for a total of approximately \$3 million. Work focused on designing effective professional development for teachers that would help them model learner-centered teaching and learning, creating tools for helping teachers author problem-based case learning modules, experimenting with students' experience with real-time industry-based problems (Corporate Scholar Solutions), and development of the structure for the model academies.

Businesses take a deeper stake in the work. Business partners were recruited to support the academies at Stratford, Spring Hill, and Oak Ridge. In Nashville, a business advisory committee was established for the Stratford IT Academy (SITA). Parent information nights were held. Incredibly, students from across Nashville began to request to transfer into Stratford to attend the IT academy. The vice mayor remarked that this was unheard of because Stratford was an urban school that most parents wanted their children to exit. Electronic Data Systems (EDS) established a scholarship fund for students who graduated from the IT academy at Stratford to attend the community college.

Principals gain experience. A new principal was placed at Stratford High School. She supported the IT academy within the limitations placed on the school by the new administration at the district office. She later became one of the eight principals who sought widespread reform and wall-to-wall academies. She was a key influence on other principals.

A fourth model academy was established. A \$600,000 grant from the U.S. Department of Education to establish a fourth IT Academy at the Williamson County Middle College High School (MCHS) at Nashville State Community College was awarded. This implementation provided an opportunity to learn about the impact of career academies on at-risk students from an entirely different demographic. Modeling the use of Problem-based Case Learning at MCHS further demonstrated the value of the methods.

Teacher professional development was key. A series of professional development sessions for more than 100 high school teachers involved highly structured visits in the form of roundtables with industry. Teachers from Maplewood, Hillwood, and Stratford spent two days at Dell, HCA, Nashville Electric Service (NES), and WebMD learning the ins and outs of the business world. Business partners were major contributors to the planning and the resulting development workshops. Results were remarkable. Comments from both teachers and industry included statements like:

> "Now I understand why we need to completely re-structure education" and "It is time for our schools to come into the 21st century." Business participants made comments like, "I have a much better understanding of the challenges our schools are facing and now better understand how to help them overcome them."

Representatives of the Ford Motor Company Fund attended some of these sessions and observations led to collaboration with the regional NSF center to modify the Ford PAS training to include an increased emphasis on engaging business.

Putting it all together. Those involved in all the previous efforts began to understand that curriculum reform, the reform of the teaching and learning process, and effectively engaging the community could not be addressed in isolation - reformers needed to consider all aspects of reform simultaneously or "synergistically." From this, they created a national convening in 2004 for community colleges and high schools. This convening for education reformers, called "Synergy," was funded by the National Science Foundation and more than 20 communities representing 15 states attended. Subsequently, Synergies have been held on a bi-annual basis in Boston, Phoenix, and San Francisco.

Results at Stratford. The Academy at Stratford did enjoy some success despite greatly reduced support from the central office during this time. Indeed, to see some of the amazing stories of SITA (Stratford Information Technology Academy) and the outcomes, follow this link: http://www.cite-tn.org/ITAcademies/

Results of other models. The model academies in Spring Hill and Oak

Who did it: David McNeel of Nashville State Community College; Starr Herrman of MNPS; John Bransford of Vanderbilt: Jackie Grav of Georgia Tech; Eddie Andrews of Nashville Electric Service; Cheryl Carrier of Ford Motor Company Fund

(TTL)

Who did it: Sydney Rogers and David McNeel, developers of "Synergy;" Aimee Wyatt and Clay Myers, MNPS Principals

(CBL) (HSR)

Who did it: Newt Rowland and Janet Wallace at Stratford High School; Starr Herrman as a consultant to CITE; Nicholas Holland of Centresource; Melissa Jaggers with Nashville State Community College

(HSR)

Ridge and Williamson County's Middle College High School flourished. Corporate Scholar Solutions (real-time problems in business and industry) were implemented at the community college with great success. To see evidence of the success of this initiative, please see report on CSS at the CITE website as noted above.

Who did it: Chris Beck of EDS at Saturn; Sydney Rogers of Nashville State Community College

(CBL)

Nashville is noticed as gaining knowledge in business engagement with academies. Dan Hull, the founder of Tech Prep, invited Nashville participants to deliver a keynote luncheon address to more than 400 high school teachers and administrators at the annual National Tech Prep Conference. The title of the talk was "Effectively Engaging Businesses in Career Academies." At the time, presentations to educators made by business partners were an uncommon occurrence.

Lessons Learned:

- Implementation of an academy (a pocket academy) within a traditional high school that is not wall-to-wall academies is problematic and difficult to sustain.
- Scheduling, teaching loads, and curriculum integration are made exceedingly more difficult if the entire school is not involved.
- Teachers would use problem-based case learning effectively if they had been part of the development and if they understood how teaching and learning had to be different. They are unlikely to use PBCL effectively if they are not part of the development.
- Professional development for teachers that included co-development with business partners could have powerful outcomes.
- Parents can get excited about the academy opportunity for their children and will make extra efforts to send their children where these opportunities exist.

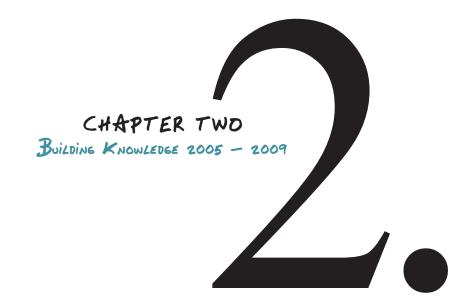
Struggles:

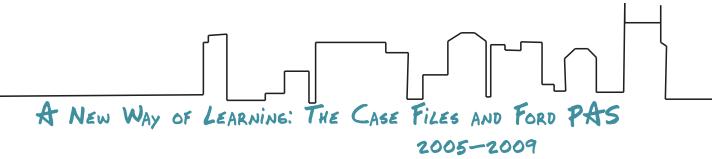
• Changes in administration devastated progress.

- The pervasive misconception that academies are vocational education and have little value in educating for academic subjects would be difficult to overcome.
- •Solutions for implementing the true academy model were elusive in the schoolwithin-a-school scenario.
- The locally developed problem-based case studies were difficult for teachers to use in an environment focused on traditional academics that excluded context.

Result:

- A set of principals and teachers who had experience with career academies and engaging businesses.
- A moderately successful career academy at Stratford High School.
- Academy at Spring Hill demonstrated success that can be achieved when school district administration supports grass roots reform efforts.
- Academies in Spring Hill, Oak Ridge, and the Middle College High School provided insight for teachers and business partners in those communities.
- A scholarship fund, established by EDS provided incentive for students to complete academy work and move to the community college.
- •More than 200 teachers, principals, and business partners developed a greater understanding of the value of engaging business in the educational experience in order to provide context and understanding.





Problem-Based Case Learning (PBCL), engaging business: Although dozens of problem-based case learning lessons that reflected the workplace experience of teachers were made available through the various grants, success in incorporating these case-learning experiences into the academies was never effectively accomplished in the high schools. Traditional high school structures and culture presented barriers too great to overcome without structural reform and a clear mandate for change from the Director of Schools.

Who did it: Jim Johnson and Sydney Rogers at Nashville State Community College; Ruth Loring, a learning scientist from Dallas

(TTL)

(TTL)

Ford Partnership for Advanced Studies (PAS), a foundation for the

academies: A new curriculum was unveiled by the Ford Motor Company Fund to replace the Ford FAMS curriculum that had formed the basis for the first business academy at Glencliff High School. All of the people involved in developing PBCL, high school academies, and Corporate Scholar Solutions concluded that this new Ford PAS curriculum, developed by the Educational Development Center (EDC) could become a foundation for broadly changing the way teaching and learning takes place. It was believed that locally developed PBCL and Corporate Scholar Solutions could complement and enhance FORD PAS and this model could be applied in many curriculum pathways.

A barrier exists: The school district's chief instructional officer would not allow the Ford curriculum to be used in the high schools because the focus of the new administration was singularly on academics. As a result, to fulfill a growing need for a better prepared workforce, the Nashville Career Advancement Center (NCAC), the local Workforce Investment Board office, organized a full-day strategic planning meeting to find a way to bring the curriculum to high school students and to prepare them for future workforce needs. The resulting plan was to craft an afterschool program called "21st Century Tech Skills" and raise money to pay teachers stipends to lead the program and to attend the Ford PAS professional development.

Who did it: Christine Bradley of NCA; Nancy Eisenbrandt of the Nashville Area Chamber of Commerce; David McNeel and Sydney Rogers of Nashville State Community College

(CBL)

Professional development for high school teachers. An MNPS teacher who was a Ford PAS certified trainer was available to help train teachers outside the school day. Participating high schools included Glencliff, McGavock, Overton, Maplewood, Whites Creek, and Stratford. Teachers at these schools were

Who did it: Donna Gilley of Glencliff High School, Lance Lott of the MNPS central office, David Mc-Neel of the regional NSF center at Nashville State, many local businesses and funders.

(CBL) (TTL)

paid stipends to attend the Ford PAS professional development sessions and conduct student-centered, after-school activities with high school students. Business partners included HCA, Emdeon, Duthie and Associates, and others. Students were introduced to the Ford PAS material and also to workplace practices and culture. This program succeeded in informing principals and teachers alike about the value of engaging businesses and focusing on workplace skills.

After the first two years of the 21st Century Tech program, the Smaller Learning Communities grant from the U.S. DOE was awarded to Metro Nashville Schools (see pages 19-20 for more information about this grant). Nashville Career Advancement Center, Nashville State Community College, and Metro Nashville Public Schools partnered to deliver the program and together, they raised additional funds to keep the after-school program in place to serve as a bridge to the career academies during a transition year. The funded SLC grant laid out plans to incorporate all the components of the program, so they believed keeping it alive would help real progress occur faster once the grant was implemented. After two years, there were excellent results (final reports including data are available under "resources" at the link below). Ford Motor Company Fund provided a grant to help with the cost of the professional development. Most importantly, it was the beginning of the development of MNPS teachers in how to teach with inquiry-based problem-based learning and how to most effectively engage business and industry.

To see more details of this program, follow this link: http://www.cite-tn.org/21tech.htm

Lessons Learned:

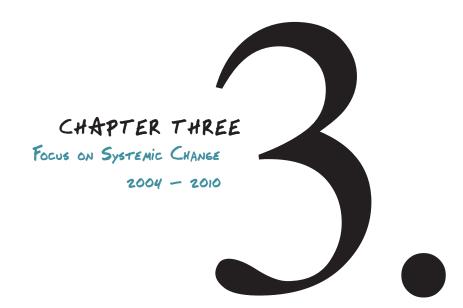
- Many teachers are anxious for opportunities to learn new methods and they become energized when provided good development opportunities.
- Student responses were more positive than had been anticipated.
- Local businesses could play substantial stakeholder roles and stay engaged beyond the traditional benefactor level of engagement.
- Incorporating inter-disciplinary problem-based instruction within traditional structures and cultures was extremely difficult.
- Consistent and stable high level administrative support is required for this reform to be successful and sustained.

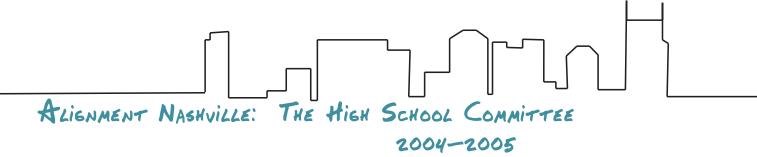
Struggles:

- Funding had to be pieced together to start and maintain the program.
- Developing and using problem based case learning was difficult for teachers who were not typically curriculum developers and for those who were advocates of traditional academic learning.

Result:

- A core group of people within the school district, the community college, and the business community now had valuable experience in synergistic methods of high school reform.
- A core group of teachers in MNPS gained certification in Ford PAS.
- A set of students from urban high schools who participated in the 21st Century Skills after-school program had their eyes opened to new possibilities for their future.
- The school district administrations focus on academics and dislike of any career and technical education activity meant progress within the school day was non-existent.
- A model and method was developed in an out-of-school time setting that impacted students, teachers, and employers and that formed a knowledge base for future high school academy transformation.





Building trust through structured and transparent collaboration.

During this period of time, public schools in Nashville were in near-crisis mode. Achievement and graduation rates had been declining (although graduation rates had shown slight improvement for a year); morale among employees was low; and district leadership was inconsistent.

Equal and trusting work-relationships between community organizations and the school district were primarily limited to single-school relationships, and even that was spotty throughout the district. District leadership – feeling overwhelmed because dozens of different outside organizations were trying to impose their individual, uncoordinated agendas on schools and students – exacerbated the situation by almost completely eliminating access by those organizations.

Staff at the Nashville Area Chamber of Commerce, empowered by volunteer leaders, searched for a way to help turn the situation around. A consultant was hired to produce recommendations for helping improve public schools.

From this effort, Alignment Nashville was established in 2004 by some very forward-thinking businessmen and philanthropists who chaired the Education Committee at the Chamber. The purpose of Alignment Nashville is to strategically coordinate the work of community-based organizations that work with the public schools and to align them toward a single agenda – the agenda of the school district. Structures and processes of Alignment Nashville are based on the premise that to solve a problem, we must first build trust between the community and the school district. Strategic coordination could only be effective if there was a high level of trust between the school district and community organizations. As a result, the processes of Alignment Nashville emphasize trust-building practices. In time, with consistent and focused collaboration, a distinct shift in the way organizations collaborate with the schools has occurred. Within the Alignment structure, committees focus on school population groups, and one of those committees is focused on the high school population. Those who serve on the high school committee have become close and trusted collaborators. (See the Alignment Nashville annual report for a complete committee list.)

Changing the culture. The AN High School committee was chaired by the Metro Schools Executive Director of High Schools. Through his leadership,

Who did it: Orrin Ingram and Tom Cigarran, Nashville business leaders; Nancy Eisenbrandt, Nashville Area Chamber staff; Doug Zimmerman of VisionLink; many other community leaders engaged by the Chamber

(CBL)

Who did it: Jim Overstreet, Jim Briggs, Margaret Bess, and Darwin Mason of Metro Schools

(HSR)

Who did it: Principals Clay Myers, Aimee Wyatt (Assistant Principal with Mike Tribue and later Principal), Lora Hall, Brenda Elliott, Karl Lang, Mike Tribue, Margaret Bess, Alvin Jones, Darwin Mason; Jim Overstreet from MNPS administration; Sydney Rogers with Alignment Nashville

(CBL) (TTL) (HSR)

Who did it: Mayor Bill Purcell's office and Marc Hill; Ellen Zinkeiwicz; The Alignment Nashville High School Committee; Liz Allen Fey from Management Solutions Group; School Board Chair Marsha Warden; Melissa Jaggers with Alignment Nashville

(CBL)

the Developing Community Leaders (DCL) effort began with a goal of having non-traditional student leaders (who had been leading in negative ways) improve the climate of the high schools by becoming change agents, thus setting the stage for reform. At the time, the climate and culture in the high schools was not conducive to learning, and most principals considered this to be a significant barrier to effective learning. As participants on the Alignment Nashville High School committee, several principals planned the DCL program to help improve the climate in the high schools. Soon after the DCL effort was established, the committee was given the opportunity to align businesses, higher education, and non-profits around a high school design called "smaller learning communities."

Principals leading the way. Eight of the twelve comprehensive high school principals, several of whom had participated in earlier pilot academy activities and with the DCL effort as noted, had requested that the district pursue a federal SLC grant through the U.S. Department of Education. Their request was made out of frustration that the district had failed to make AYP and that most of the central office attention was aimed at elementary schools. District administration was deeply divided philosophically about the proposed approach. It was not supported by some at the district office, including the Chief Academic Officer, because they believed the proposed approach represented pure career and technical education instead of the preferred traditional academic approach. However, the Director of Schools was lobbied by principals, Alignment Nashville High School committee members, and Alignment Nashville staff. He slowly warmed to the idea and promised support if the grant were developed and awarded to the district. Several of the principals involved in this effort had been involved in the earlier academy efforts, professional development, and had attended Synergy.

Broad-Based Strategic Planning. The U.S. Conference of Mayors offered an opportunity to apply for a planning grant for high school redesign; Nashville applied and won the grant. With these funds available, along with a green light from the director of schools and several school board members, the AN high school committee engaged a professional strategic planning consultant, Management Solutions Group, and conducted a series of planning meetings involving more than 80 members of the community and school district personnel.

A Five-Year Plan. From this series of meetings, a five-year strategic plan was developed as a roadmap for collaborative redesign of Nashville's high schools. A grant proposal to the U.S. Dept. of Education was developed from the plan, and \$6.65 million was requested to implement the largest smaller learning community redesign in the country. The design of this successful proposal was based on the lessons learned from earlier projects, and one of the major lessons learned was that changing the way teaching and learning occurs would continue to be problematic unless high schools were transformed structurally. Thus, the wall-to-wall academy design was incorporated in the plan. The plan was approved by the Director of Schools pending award of the grant. In the 2006 round of SLC awards, the grant to Nashville was the largest given in that year. Reviewers cited the extensive collaboration and existing knowledge base as reasons for funding the proposal. When the grant was awarded, further conflict arose within the central office; however, the school board also approved the plan and work began in earnest. The Chief Instructional Officer left the school district soon after these events to become the superintendent of another school district.

An SLC project director was appointed. At this stage of the implementation, most central office and school personnel were unfamiliar with the concept of smaller learning communities and as a result, the effort was viewed internally as a passing fad or an add-on to existing reform efforts. This struggle continued until new leadership arrived in 2009.

America's Promise provides support. In 2007, Alignment Nashville partnered with the America's Promise Alliance to host one of the first Drop-Out Summits in the nation. More than 300 leaders and citizens who care about public education attended. Nashville was named as one of America's Promise's "12 featured cities," with activities coordinated by Alignment Nashville. As a result, many connections to national partners have occurred, including State Farm Insurance, AT&T, United Way and others. The first summit, entitled "Operation Graduation and Beyond," is an important milestone in this story because the event focused all stakeholders on high school graduation as a target. Subsequently, resources that have been provided to Nashville by America's Promise have contributed to the development of much of the work aimed at improving the graduation rate.

Ford - an important partner. Nashville's partnership with Ford Motor Company Fund dates back to the early 1990s and both Nashville and Ford Motor Company Fund have learned much from each other through the years. However, the Ford Partnership for Advanced Studies-Next Generation Learning (Ford PAS NGL) initiative was the right thing at the right time for Nashville.

Who did it: Melissa Jaggers of Alignment Nashville; Jim Overstreet and Jim Briggs with MNPS; Starr Herrman, MNPS Director of the SLC grant.

(CBL) (HSR)

Who did it: America's Promise Nashville Steering Committee

While Nashville was beginning to coalesce around the career academy model, Ford was working with a handful of communities across the country that were using the Ford PAS NGL Essential Practices to scale and sustain career academy networks. The Essential Practices support the three strands of Ford PAS NGL: 1) Transforming Teaching and Learning; 2) Redesigning High Schools; and 3) Building Sustainability through Business and Civic Leadership. The practices also help communities organize their work and develop a five-year master plan. (Please see www.FordNGLC.org for the Ford PAS NGL framework and Essential Practices.)

Ford provided guidance and support to Nashville on the Ford PAS NGL Essential Practices, which helped guide and organize the development of Nashville's newest five-year master plan. Support included the services of a national coach, site visits, peer-to-peer mentoring, funding for specific work and stakeholder meetings, and even an introduction to the individual who became the new associate superintendent of high schools. This partnership continues to thrive and together, Nashville and Ford are working to develop a replicable model for deepening the integration of academics into the career theme, maximizing common planning time to develop strong professional learning communities, and bringing meaningful business engagement to teachers and students.

Lessons Learned:

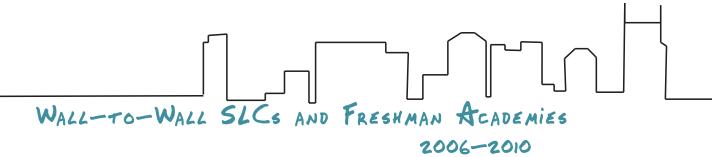
- Internal grass roots leadership can pave the way for reform if supported by the broader community.
- Traditional school culture is difficult to change.
- External partnerships can have a profound impact on a community if they are true partnerships.

Struggles:

• Internal conflict within the schools created political hurdles that had to be overcome.

Result:

• A mechanism for change was in place.



Transforming schools; structure and culture. The SLC plan funded by the grant aimed to convert eight of the comprehensive high schools in Nashville into wall-to-wall academies, meaning the essential structure of the high schools would change and that all students would be enrolled in an academy. This transformation meant that extensive structural and cultural change would need to occur in the high schools. As a result of the DOE SLC grant, school district personnel engaged in extensive planning for structural and cultural change for four years, even while proceeding with the first implementation steps. One important characteristic of the structure was to place a Change Coach in each school. The importance of the very difficult cultural change work cannot be understated. Cultural changes take time and tenacity.

Implementation would come in phases, beginning with freshman academies the first year and adding a grade level at a time in each year. The career/thematic academies would start in Year 3. The first objective was to develop a nurturing and caring environment for ninth-graders because research shows too many ninth-graders never earn enough credits to advance to the next grades, thus beginning an escalating path to dropping out of school. To address this, advisory programs were developed to provide advocacy and support for ninth-graders.

Professional development of a different sort. To be successful, a high priority was placed on the professional development of teachers and staff in the eight high schools. This professional development was tailored to the needs of individual schools and was broad in scope, extending beyond traditional academic development to include a focus on critical thinking, working in teams (highly functioning teams), facilitating collaborative partnerships, formative assessment, teaching on a block schedule, differentiated instruction, and using data to transform teaching.

In May 2008, the district held a Smaller Learning Communities Institute for more than 350 high school teachers for three days. In May 2009, a second two-day SLC Institute was held with more than 600 teachers attending.

Challenges to overcome. Even with support of the administration, many challenges threatened the success of the project. One of the greatest challenges was the idea held by most of the thousands of district teachers and staff that this

Who did it: Starr Herrman of MNPS; Jim Overstreet and Jim Briggs of MNPS; the Alignment Nashville High School Committee; Change-Coaches in each high school

(HSR)

(TTL) (HSR)

(TTL)

grant was temporary and viewed as an "add-on" to any other reform efforts. Fortunately, during the time when district leadership was unstable, Change Coaches in each school (funded by the SLC grant) kept the reform going at the school level.

(CBL)

Another challenge involved communication about the dramatic changes to the community at-large, especially to parents. It was no easy task helping the citizens of Nashville understand that these new high schools were not vocational schools, and instead were rigorous and engaging academies that incorporated learning for the 21st century and that were designed to prepare all students for college and careers. The Alignment Nashville High School committee called upon the Alignment Nashville Parent University committee to orchestrate a neighborhood information campaign using community organizations as trainers to deliver the information developed by the school district to small groups within homes, churches, and community centers.

(CBL)

Community stakeholders build structure. Meanwhile, community partners in the effort were building structures and relationships that would soon bear fruit. The Alignment Nashville high school committee established membership that included principals, business partners, leaders of community organizations and others. The committee followed the Alignment process, which establishes regular meetings and communication among members and follows a system than focuses collaborative work on outcomes, assessments, and strategic work.

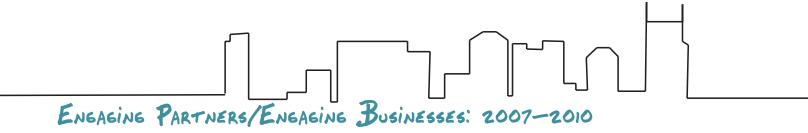
Lessons Learned:

- Changing long-standing practices in teaching and learning among thousands of
- staff, and administrators takes several years and some tenacity.
- Most of the funding should be used for professional development activities.

Struggles:

- The politics of change.
- Lack of strong vision and decision making at the Director of Schools level.

• Strong implementation of stage I – freshman academies and a good outcome for the effort.



The ITP process; establishing partnership councils. The Alignment Nashville high school committee completed tactical planning for community engagement, the first step in the Alignment process, in 2007. Next, an Invitation to Participate (ITP) was issued to identify community organizations that could lead the development of Partnership Councils. Partnership Councils – one for each industry cluster – serve to provide leadership for recruiting and assigning business partners and resources among the different academies.

Importantly, the committee identified and the ITP outlined the various substantive ways in which businesses could engage with the academies. Based on the work of several committee members who had been a part of the early projects that focused on interdisciplinary teams and engaging businesses in the academic program, a set of options for business engagement was developed that, if executed properly, would deliver an excellent academic outcome. The ITP's call to the community included a request for businesses to get involved in the academies by providing speakers, advice, teacher externships, student internships, mentoring, and real-world problems for students to engage.

Establishing partner roles and dividing the work. The Nashville Area Chamber of Commerce and the PENCIL Foundation were selected to lead the planning and development of the Partnership Councils. From this structure, partnership councils developed strategies for engaging businesses within industry clusters and have proven to be important in helping to equitably distribute support for all academies. PENCIL Foundation and the Nashville Area Chamber of Commerce play key roles in the current implementation. The Chamber has raised funds to lead and maintain the operation of the Partnership Councils and the teacher externships, and PENCIL Foundation connects the partners and the individual academies within a school.

In the fall of 2009, the Partnership Councils, collectively and with leadership from the school district and the Chamber, held a district-wide career fair for freshmen at the city's convention arena. More than 3,000 ninth-grade students attended the fair as part of a course they take called Freshman Seminar. More than 200 companies demonstrated and explained the types of careers available in their companies. Because of the huge success of this fair, it will become an annual event for all ninth-graders.

Who did it: Ralph Schulz, Marc Hill and Chelsea Parker with the Nashville Area Chamber of Commerce; Connie Williams with PENCIL Foundation; Starr Hermann with MNPS; the Alignment Nashville High School Committee; more than 300 volunteers from six partnership councils.

(CBL)

(CBL)

(CBL)

CEO Champions. To ensure the reform efforts are visible and supported in the community, the Nashville Area Chamber of Commerce established a group known as the CEO Champions. This group of key city leaders includes the Mayor, the Director of Schools and other business and civic leaders. They advocate for and support the reform at the highest level.

Lessons Learned:

- Many community organizations were anxious to help and needed a strategic direction.
- The Alignment committee process had built a significant bank of trust among the organizations.
- Community resources are much more effective when they are strategically aligned.
- During turbulent times, community leadership and engagement can play a significant role in protecting reform efforts.
- Roles and expectations for partnership council members need to be welldefined.

Struggles:

- Protecting the existing reform efforts.
- Preparing schools to effectively partner with business and community organizations.

Result:

• A structural foundation on which business and community engagement could be built

A LETTER TO THE READER

This case study vividly illustrates the importance of planting seeds for educational transformation deeply within the fabric of a community and its school system. In fact, the seeds of the current Ford Fund initiative, Next Generation Learning (NGL), come from and can be seen in the practices developed in Nashville. The three strands of NGL – transforming teaching and learning, redesigning high schools, and aligning business and civic support – are all on display today in Nashville.

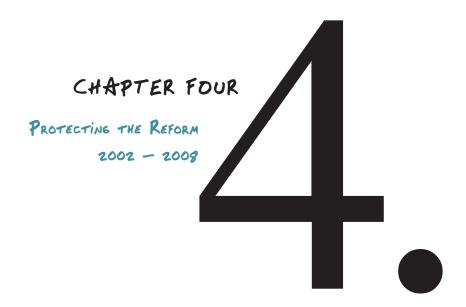
Strand 1 - Nashville Metro Public Schools has trained more teachers in the project and inquiry pedagogy using Ford FAMS and Ford PAS than any other community in the country. Ford PAS is used widely in ninth-grade academies across the district and the district is one of two in the country piloting the first Ford PAS academies.

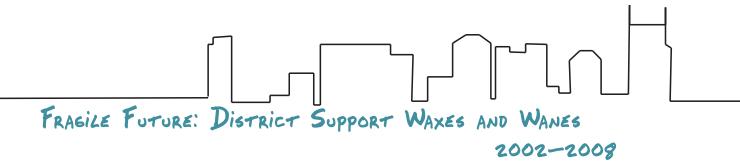
Strand 2 – Through the determination of its business community, its principals and an experienced handful of administrators, plus the timely receipt of a federal Small Learning Community grant, all the pieces came together for developing a career academy system in all zoned high schools. In the last four years, this community team resisted pressure to narrow the scope of its vision on just a few high schools. They stood their ground.

Strand 3 – Nashville's business and civic communities, in firmly embracing the essential practices of Next Generation Learning, are setting the stage for long-term sustainability. They are playing their role in protecting and enhancing the transformation of their high school system. We have watched similar initiatives in other communities, initially as well-grounded, wither without such long-term, well-structured support.

Ford Motor Company Fund is proud of the partnership with Nashville and Metro Nashville Public Schools and their community partners. Let me emphasize the word partnership. The strength of Next Generation Learning resides in the 15 communities that make up the NGL network. Ford Fund's role is to help convene these communities to learn from each other, and continually upgrade our essential practices based on innovations developed in the communities themselves. It is clear from this case study that what we thought was a "recent" innovation in Nashville – career academy educator-teams taking summer externships with sponsoring companies – evolved from seeds planted a decade earlier by Nashville State Community College with funding from the National Science Foundation. We expect much to flow from this partnership in future years.

Cheryl Carrier, Program Director 21st Century Education Initiatives Ford Motor Company Fund





Changing of the guard. Soon after the planning and start-up of the model academies began in 2002, a new school district administration was hired for Nashville public schools. The new administration's view of the career academies was that they were a form of vocational education, and not viable options for teaching academic subjects. Furthermore, the administration eliminated most of the traditional Career and Technical Education courses and support staff.

During this two-year period, the future of career academies in Nashville was considered highly fragile by those who had been a part of the effort to establish them in Nashville. Later, the same administration came under pressure from principals and external partners and agreed to try for the federal SLC grant.

District fails to make AYP. For the 2007-2008 school year, not unexpectedly, the Metro Nashville School district failed to make Adequate Yearly Progress (AYP) under the federal No Child Left Behind legislation. As a result of the test scores released in August 2008, the district was placed under the direction of the State of Tennessee and many of the principals who had just completed training for implementation of smaller learning communities (academies) were removed and others were moved to different positions within the district. In addition, the Director of Schools left the district a few months before these results were released. This fruit-basket turnover impeded the progress of implementation of the academies during a very critical time. However, implementation did continue due to obligations to the federal grant.

As noted, leadership of the district was under state direction during this period, and later under an interim director working at the direction of the state. Because most district personnel still believed that the Smaller Learning Communities grant was a passing fad or an add-on to real reform, those who were implementing it were unsure as to the long-term sustainability of the reform. However, freshman academies were well underway in the eight high schools.

Freshman academies show success. Despite the failure to make AYP, an interesting phenomenon was occurring in the ninth-grade academies. Students were attending school at a significantly better rate than in previous years and in some schools, freshmen were earning promotion to the next grade at a significantly higher rate than in previous years. As the development of these freshmanacademies was the first major strategy in the SLC grant, this data provided

indication that the reform efforts were working.

Who did it: Mayor Karl Dean

(CBL)

Who did it: David Fox, School Board Chair, Jesse Register, Director of Schools

(CBL)

Mayoral support. Nashville is fortunate to have a mayor who has named public education as one of his highest priorities. He has demonstrated this support by ensuring stable funding for the school district while in the midst of a devastating economy and at a cost to other city services. In addition, his office has supported many of the efforts described here. He has raised private dollars to complement public funds and through these efforts he has established several progressive and important initiatives.

Political turmoil. As a result of the state takeover, city leaders were searching for solutions to the seemingly dismal problem with public schools. Options on the table included a mayoral takeover of the elected school board. As could be expected, school board members opposed the option of a takeover and much tension existed among the citizens of Nashville who were involved in improving public schools. A strong school board chairman led the board through a very difficult time in which they identified a new director, who began in January 2009.

Lessons Learned:

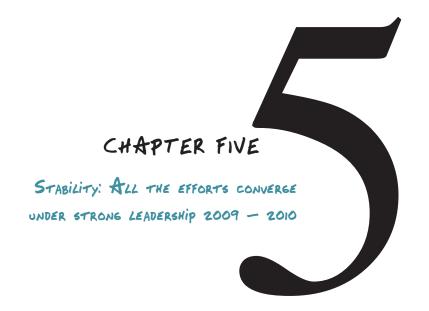
- Strong community leadership can sustain reform through times of transition
- Early results from phase I implementation (freshman academies) indicated a positive impact in improved promotion and attendance rates.
- Lack of district leadership at the highest level impedes progress.
- School district administration has the authority and responsibility to lead in the direction they choose.

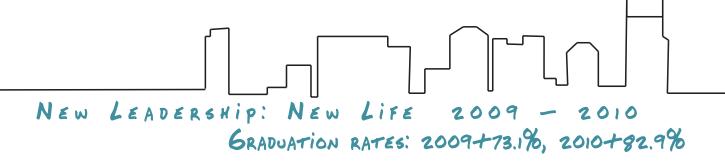
Struggles:

- Lack of leadership at the highest level
- School district personnel who believed in the work that had been developing were unable to effect long-term change in the district without high level consistent leadership.

Result:

• A foundational good result with freshman academies was enough to keep momentum going for some time, even without strong leadership





A strong vision and mandate. Soon after his arrival, it was clear that the new Director of Schools was a seasoned superintendent with extensive experience in leading change. Right away, he began making changes and decisions. The new director established his "Transformational Leadership Groups," or "TLG's," that would plan reform aimed at different populations of students and administrative segments of the district. The high school TLG incorporated a new strategic planning effort led by the Chamber that ultimately produced a second five-year master plan that was approved in September 2010. The Ford Motor Company Fund provided extensive support in the development of the master plan. In 2010, the Alignment Nashville high school committee combined with the district's high school TLG to form the High School TLG/Alignment commit-

After assessing the value of the high school reform that had already taken place, the new director recruited a new Associate Superintendent of High Schools with a national reputation for successfully establishing high school academies. Together, they established the district-wide mission and vision for wall-to-wall academies that had been elusive and fragile for several years. Through strong and decisive leadership at the highest level, they ensured that all 12 zoned high schools would participate in this new redesign and as a result, the plans were no longer considered a passing fad or an add-on project.

In fact, redesign of high schools into the academy structure was now a fullblown, district-wide transformational strategy for high schools. The strategy now enjoyed strong district leadership, a stronger and still developing internal grass-roots support and understanding, and strong and strategic support and participation from the community-at-large.

Developing the brand. With assistance a variety of partners, the school district engaged a marketing and branding firm to execute a process that resulted in the "Academies of Nashville" brand, complete with logos for every school and every academy.

Stop to celebrate and move to the next level. To celebrate the success to date and to reveal the new logo and brand, the Alignment Nashville High School committee organized a community-convening event of more than 300 school

Who did it: Jesse Register, Director of Schools; Jay Steele, Associate Superintendent of Schools; Pam Daley with DK Brand Strategies; Starr Herrman, SLC Director; Sydney Rogers and Melissa Jaggers with Alignment Nashville; Marc Hill and Chelsea Parker with the Chamber of Commerce; Connie Williams with PENCIL Foundation: Principals. Change Coaches, teachers, students, and partners, all now on the same page. A special acknowledgement is also made here to all the people who served on all of the Alignment Nashville committees.

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district and business partners on the 20th floor of the new Pinnacle Bank office building in downtown Nashville. The event was sponsored through a competitive grant awarded to the Alignment Nashville high school committee by the America's Promise Alliance. At the event, Ford Motor Company Fund presented Nashville with the Leadership Level designation of a Next Generation Learning Community. The new academy logos and brand were revealed with great ceremony. More than 90 business partners took part in a signing event to demonstrate their partnership with particular academies in the high schools.

Lessons Learned:

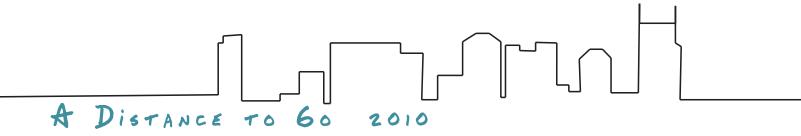
- When grassroots change is met with strong administrative support and strong decision making the likelihood of success improves dramatically.
- Substantive and strategic engagement of the community should not be undervalued.

Struggles:

- Finishing the job
- Funding

Result:

• Community and schools working in a common strategic direction.



The Academies of Nashville are now getting a high level of visibility in the Nashville community. Much of the conversation is now very positive, a refreshing shift from the skepticism that was rampant when the effort began. However, many challenges are yet to be met before we can claim real success.

For example, the State of Tennessee has adopted new academic standards for all grades. The "Tennessee Diploma Project" included a new and tougher standardized assessment in 2010, and the scores of these tests are expected to be much lower as a result.

Middle school students need to be engaged and prepared for academies. In fact, the district's Middle School TLG is working on its own reform plans to transform middle schools and prepare those students for the new high school structure.

There is a renewed emphasis on science, technology, engineering and mathematics (STEM), especially because STEM-related concepts were a significant portion of Tennessee's successful proposal for federal Race to the Top funds. Efforts to interest students in STEM and STEM-related high school academies are a significant focus of attention for administrators at both the middle and high school levels. In addition, the Alignment Nashville Middle School committee is engaging community organizations to help middle school girls discover the opportunities of STEM careers via their creative interests in an effort called Art2STEM funded by the National Science Foundation.

CONCLUSION

- In spite of the struggles due to inconsistent leadership and vision for high school reform, moderate progress was made through the years. When strong district leadership put forth a vision that incorporated all of the investment made by federal agencies and private philanthropists, planning, development, and structure solid traction became evident.
- Reform efforts would not have survived without the strength of the community partnerships.
- Building community trust is a key factor.
- Professional development for educators, business partners, and community members is a must.
- An infrastructure that drives an ongoing sustained collaborative process is needed.



Thank you to the following people who reviewed this document for accuracy and advice:

David McNeel, Starr Herrman, Nancy Eisenbrandt, Christine Bradley, Cheryl Carrier, Rick Delano, Liz Allen Fey, Melissa Jaggers, Kelly Noser, and a special thank you to Diane Long for her expert writing and editing assistance.

References and attachments:

- * Link to Metro Nashville Public School website http://www.mnps.org/Page68146.aspx
 - * Link to Alignment Nashville website http://www.alignmentnashville.org
- *Brochure from the business engagement conveining http://www.alignmentnashville.org/resources
- * Link to the Stratford IT Academy website (SITA) http://www.cite-tn.org/ITAcademies

* Link to CITE http://www.cite-tn.org

* Link to Making Learning Real http://makinglearningreal.org/index.html

* Link to the American Youth Policy Forum Article http://www.aypf.org/fourmbriefs/2008/fb112108.htm

