**Documentation of the South Carolina Learning Network**

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**Bells Elementary School’s Journey of Change:**

**A Beacon of Light on the I-95**

July 10, 2020

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**Table of Contents**

Foreword 3

Summary 4

Introduction 6

 Snapshot of a Bells Classroom 6

New Tech Network Context 12

NTN Principles and Components 12

Project-Based Learning 14

NTN Approach to School Change 15

Bells Elementary School Context 16

Bells’ Introduction to NTN: In the Beginning 17

Organizational and Professional Development for Transformation 22

The NTN-Bells Professional Learning System 23

Site-Based Coaching 26

Shifting School Culture 32

Learning the NTN Way 33

The Foundation of Trusting Relationships for a Culture that Empowers 37

Persisting through the Challenges of Change 41

Conclusion and Lessons Learned 45

References 50

Appendix 51

**Foreword**

The Bells Elementary School case study entailed a close investigation of the school and the New Tech Network (NTN) school reform model in action. At least once each year over the three years of the documentation project, we spent up to a week at the school observing classrooms and professional development events, interviewing focus groups of teachers, school staff, and students, and *hanging out* in order to understand the nature and impact of NTN’s partnership with Bells. We also spent considerable time interviewing NTN staff and students and attending NTN professional development events to ensure our understanding of the initiative and NTN’s work at Bells.

We wanted to identify NTN participating staff and Bells’ individual teachers and school leaders in our report. We know that teachers and school leaders do not receive sufficient recognition for the challenging work of supporting the daily learning of children who come to school with diverse needs. But not all teachers whose work we observed could be included in the case. Similarly with NTN staff, not all NTN staff contributions were visible to us. Therefore, in the end, we accepted Bells’ decision and New Tech Network’s policy to not use names.

Members of the Bells community who gave generously to us of their time and attention and allowed us into their worlds included the following current and former staff members: principals, Amy Liebenrood and Lauren Behie; school-based coaches Janet Rizer, Mary Kay Bailey, Angela Baker, and Florrie Edwards; and teachers Deidre Bamberg, Lisa Bielefeld, Jodi Brown, Katherine Bunton, Amy Cook, Kawaii Elliott, Bertha Felder, Dee Dee Hartzog, Melissa Hinton, Kendall Hogan, Jamie Kinard, Phyllis Murdaugh, Sarah Pye, Laura Reasonove, Jessica Reid, Allison Standiford, Barbara Washington, and Summer White.

**Summary**

This case study presents the three-year journey of Bells Elementary School, a low-income, racially diverse, under-performing school in rural, Colleton County, South Carolina to adopt the New Tech Network (NTN) school reform model. NTN’s goal is to address the opportunity gap between students from underserved communities and those from more affluent locales so that all students in its partner schools graduate prepared to pursue postsecondary education or careers. To achieve these goals, the NTN model helps schools focus on a set of student outcomes that include: agency, collaboration, written communication, oral communication, and knowledge and thinking. These outcomes are embedded in four structures, which NTN considers “pillars” of their model and upon which teaching and learning are organized. The pillars are “culture that empowers, teaching that engages, outcomes that matter, and technology that enables.” Students engage in Project-Base and Problem-Based learning aided by innovative technology in order to address authentic problems in their schools and communities while simultaneously preparing for post-secondary education and careers.

Beginning with a vivid snapshot of a Bells third grade classroom as a microcosm of the New Tech Network’s school reform model in action, this case examines the struggles, challenges, and successes Bells encountered in the course of its transformation. Those struggles and challenges included: changes in leadership and staff; teachers’ beliefs and conceptual constructs with regard to teaching and learning along with gaps in pedagogical knowledge and skill; alignment of district policies and NTN organizational, curricular, pedagogical, and cultural practice; finding the right pace for change; and teacher worries about their accountability, including meeting district benchmarks and state standards. The case describes how the NTN professional learning system, using formal and informal, routine and customized professional development and relationships, engages with the school and staff so that they persist through these struggles and challenges. All the while, NTN helps the school to strengthen itself as a community and support its change in culture. Throughout, readers will hear the voices of students and faculty in response to the changes in teaching and learning the NTN way as well as in themselves, recounting issues of trust and relationships to build a practice of teaching in the ways their students learn best.

The case concludes with lessons learned that have applicability to the broader field of school transformation. Those lessons include: strong, committed, advocacy school leadership; staff buy-in; principal autonomy; just-in-time responsiveness to reform implementation challenges; change filtered through an integrated professional learning system; and district level “policy-by-exception.”

**Introduction**

Snap Shot of a Bells Classroom

Clustered in small groups around several trapezoidal tables, Ms. W’s twenty-five third grade students are buzzing away when she calls them to come to the rug at the front of the room, just below the smart board. They are a diverse group—white, Black, Latinx, and Asian. They sit cross-legged, or slouched, or leaning back as she tells them how “impressed” she is with their just-completed work on their second project. They will now embark on a third project, which will focus on social studies: “We will start with a driving question, like the fourth grade did so that we have a problem statement. Our exact project is not decided yet. We will figure that out together. Think,” she directs them, “while I read the driving question. We will respond with what we know and need to know.” Then she states the driving question: “How did the Native Americans influence our lives today?” “Think about it for 30 seconds,” she reminds them. Students are very quiet.

Ms. W writes two columns on the smart board: *What do we know? What do we need to know?* As students brainstorm, shouting out their responses in no particular order, Ms. W records them under the appropriate column:

|  |  |
| --- | --- |
| WHAT DO WE KNOW? | WHAT DO WE NEED TO KNOW? |
| * Native Americans helped us grow crops
* Native Americans helped the Pilgrims get ready for Thanksgiving and grow crops
* Get food
* Hunting
* Fishing
* Harvesting
* Things Native Americans did were passed down through generations
* Native Americans helped make a tradition of Thanksgiving
* They made weapons to kill food
* Deer, fish and other things
* Weapons were made of wood, stone, things that could be sharpened
* Used horses to travel
* Without Native Americans we might not be here
 | * What does influence mean?
* Did Native Americans help Pilgrims to heat up meat?
* Cook?
* Did Native Americans help Pilgrims build homes?
* Did NAs help Pilgrims survive?
* Did it cost money to make the first Thanksgiving
* Did they [Pilgrims and Native Americans] use money?
* Did they have money?
* Did they [Pilgrims] bring money [from England] to try to use?
* How did they make the weapons?
 |

Ms. W takes time to interject with clarifying questions in order to delve deeper—she is listening to the students in order to accurately understand the meaning they are making, their thinking, what they think they know and what they think they need to know, which will inform her planning of the project and their course of study. She records exactly what they say, in their words, not her version or a corrected version.

To the student who asked about weapons, Ms. W asks a clarifying question, “You are talking about the process of making weapons?” He nods his head yes. She follows up with another student, “Did you say, ‘Things Native Americans did were passed down through generations’? I want to make sure I am writing down what you said.” The student confirms that this is his statement. “If I am hearing you right, what Native Americans did is pass down traditions from generation to generation. Is that right?” Student agrees. “What do we mean by ‘generation’?” Ms. W asks. Students struggle to define generation: “Birthday.” “Life time.” “From when you live until you die.” “Tradition.” “Generation is not same as tradition.” “Tradition is what you would do every year.” Ms. W interjects: “We kind of know but we are not certain. I will put that on the Need to Know list. You have an idea but are not sure how to express it. We need to know more about this.” She adds the question about what generation means to the Need to Know list. She explains, “If we are doubting ourselves it means we need to discuss—we can always move from one column to another [meaning know and need-to-know columns].” Instead of correcting students or searching for the right answer, Ms. W legitimizes this moment of ambiguity, validates the role of uncertainty in the search for knowledge, and implicitly underscores the value of precision.

A couple of students raise questions about money. One asks, “Was money even created then?” Another student responds: “Sure it was.” Ms. W interjects, “You and L say they [the Native Americans and early European settlers] did have money.” One of the student’s calls out: “When the Pilgrims left England, the king had all that money.” Ms. W asks, “Then what is our ‘need to know’?” The students chime: “Did they have money?” “Did they use money?” She records their responses on the chart. She then takes them back to the driving question and reviews what they have identified as what they know and need to know. “You really thought deeply about this. This is the best Know and Need to Know we have done,” she tells them.

As Ms. W moves her students along the inquiry journey of knowledge-building, from needing to know to knowing, she directs them to the next activity. Students will assemble in their project groups and move through activities in seven centers, or “sensory chat rooms,” that she has created. The activities are designed to engage them in different open-ended experiences in which they will chat with each other, using evidence to draw conclusions. “You will have two minutes per ‘chat room station,’” she tells them. “You’re smart enough to do this—you have done it before.”

One chat room contains a map based on their first project, which examined how South Carolina Native Americans were influenced by their environment. Following that is a “See, think, wonder” chat room with an image for students to see, think, and wonder about. “Just chatting—no writing,” she says to one student who asks if they are to write. In the next chat room, students must look at photos on a handout and discuss which one doesn’t belong. Another chat room has some cookies. Students may eat only one cookie and are required to identify the special ingredient in the cookie. As students settle in their starting chat room, Ms. W plays Native American music.

At the chat room where students must discuss which item doesn’t belong, one group of students discusses reasons for their choices: “All are food, except for rocks - or are they clams [actually they are oysters],” offers one student. Another says, “That fish [in a photo] doesn’t belong. It is the only one that’s dying.” Another selects the oysters thinking they are rocks: “all others are animals. Rocks don’t belong because they are not a mammal.” A student in one group suggests that a fish doesn’t belong because others are on land.” A fellow group member agrees about the fish but provides a different reason, “The fish is being held [in someone’s hand in the photo],” he points out. They remind each other not to worry about right or wrong answers because “these are opinions and the teacher said we can all be right.”

In the next group that comes to the “which one doesn’t belong” table, students focus on the background in the photos and conclude that “the deer doesn’t belong because it has a brown background [and the other photos do not].” One student claims that the photo of oysters doesn’t belong “because water is in the background.” Once their attention turns to the oysters they talk about what they, themselves, have eaten. A few in another group assert that the photo of the “clams [they are oysters] doesn’t belong because the others are of animals.” Yet others in the group argue that “Clams are an animal.” Others note that “three of the [creatures] walk on 4 feet, but not the fish.” In each group, students remind each other that there are no wrong answers because they are expressing opinions.

The class reconvenes on the rug at the front of room beneath the smart board, which Ms. W refers to as the “exploratory chat board.” On it is the driving question, “How did Native American’s influence us”? “Let’s review what we have learned from our chat rooms,” Ms. W says, starting with the cookie, which most excited the students. “What was in the cookie?” (Every one has eaten a cookie in the cookie chat room.) Students call out: “Salt!” “Sugar!” “Some type of crop.” “Cornmeal.” “The Cherokee grew corn.” “Most Native Americans in our area grew corn.” There is a lot of interest in what Native Americans ate. Ms. W comments, “Based on station 4, what I am hearing is we are not sure what they ate. Let’s just ask, ‘What did they eat?’” At this point students refer to information they had learned in a previous unit about the geographic distribution of Native American peoples. Ms. W records what students say they know and what they say they need to know:

|  |  |
| --- | --- |
| WHAT DO WE KNOW? | WHAT DO WE NEED TO KNOW? |
| Native Americans grew corn. Cherokee lived in the Blue Ridge. Catawba lived in Piedmont. Yemassee lived in coastal zone. | Did Yemassee eat clams?Did tribes fight?Did Yemassee create seafood?What did Cherokee eat? |

Students review the experiences in all of the chat rooms and identify what they think they know and what they think they need to know. While students’ comments emphasize what interested them most, their second round on this topic is more knowledge-informed than their first brainstorm.

“Go to your agenda,” Ms. W directs them. Their agenda is the lesson for the day, which is on the New Tech online platform the school uses, called Echo. Every student has a computer with the platform. “Go to the reflection questions on your agenda in Echo,” she continues. “Tell me, what did you learn about the Native Americans in South Carolina? What questions might you still have now? In order to respond, you need to think about something you need to ask me. What do you think would be a good final project to reflect our knowledge about Native Americans? A final project could be diorama, play, etc. Who would be a good audience to present our project to? This reflection is between you and me.’” She tells the students that Echo will not let them submit their responses unless they answer required questions: “It is requiring you dig a little deeper than what you already know.”

This snapshot of Ms. W’s pedagogy, as well as the respectful and trusting teacher-student and peer relationships, illustrate the New Tech Network (NTN) school reform model in action. NTN, a national, non-profit, school reform organization, has as its goal narrowing the opportunity gap between students from underserved communities and those from more affluent locales and for every student in its partner schools to graduate “aware, eligible and prepared to pursue postsecondary education or training” (<https://newtechnetwork.org/>). In order to achieve this goal, NTN guides its partner schools to adopt a project-based learning (PBL) approach to instruction that incorporates state content standards and maps onto a set of student outcomes that are aligned with the principles of deeper learning[[1]](#footnote-1) and critical thinking, collaboration, and technology. Those student outcomes include agency, collaboration, written communication, oral communication, and knowledge and thinking and are embedded in four structures which NTN considers “pillars” of the model, upon which teaching and learning are organized. The pillars are “culture that empowers, teaching that engages, outcomes that matter, and technology that enables.” Students engaged in PBL address authentic problems in their schools and communities while simultaneously preparing for post-secondary education and careers.

Some of these pillars and outcomes are visible in Mrs. W’s class. The inquiry in which students are engaged includes the generation of questions by students, which informs questions the teacher asks to deepen their thinking and, as she mentions, will contribute to the creation of their project investigations. This inquiry, in which students’ voices matter, contributes to a “culture that empowers.” Ms. W’s pedagogy also demonstrates “teaching that engages,” and in particular, it demonstrates the kind of teaching practice required to make inquiry-based learning work. As the founder of the non-profit Inquiry Schools put it, “Teachers have to … become experts at listening to how a student is thinking and then ask [the] questions that will ‘un-stick’ the students’ thinking and set them off and running again.”[[2]](#footnote-2)

In addition to the inquiry teaching and learning, Ms. W’s class also illustrates the seamless integration of NTN learning outcomes of agency, collaboration, oral communication, written communication, and knowledge and thinking (outcomes that matter to the achievement of the goals). The chat room experiences engage students in oral communication, collaboration, thinking, and knowledge building among the students. The questioning and construction of what students determine they know and need to know generate agency, as does the experiential nature of the chat rooms, where, free from right and wrong answer constraints, students are liberated to conjecture and take responsibility for their responses by articulating the logic (accurate or faulty) undergirding their conjectures, all as part of the process of knowledge building. These activities and the values of inquiry that tolerate ambiguity, errors, and speculation in pursuit of knowledge build a collaborative classroom culture that respects intellectual diversity. Tasks that require students to use Echo, NTN’s electronic platform, engage students in using technology as a tool for communication with their teacher and in thinking more deeply.

This case study on Bells Elementary School in Colleton County, South Carolina is one product from a research initiative to document NTN’s four-year South Carolina Learning Network initiative (SCLN). Funded by the ECMC Foundation, SCLN engaged a cohort of diverse school and district personnel from three South Carolina school districts in multi-level, cross-district peer learning and development and sharing of solutions to common concerns: histories of underachievement, racial tension, and issues arising from poverty. The grant funded one year of project planning followed by three-years of project implementation. Colleton County was one of the three districts to join this project.

New Tech Network Context

The New Tech Network (NTN) was developed by a group of Napa California entrepreneurs in the mid-1990s who observed that high school graduates from the Silicon Valley were unprepared for the contemporary workforce. In response to, and with support from, the Bill and Melinda Gates Foundation, they opened New Technology High School in the Napa Valley Unified School District in 1996 to address those concerns. The New Tech Network has expanded from that founding school and currently operates in 28 states with over 72,000 teachers. Two thirds of the schools are in low-income communities. NTN provides support to train teachers and school leaders in immersing students in project-based learning, an approach which fosters collaboration, critical thinking, communication, and other skills considered key to success in today’s workforce.

South Carolina’s involvement with NTN began when former two-term South Carolina governor Richard Riley, then U.S. Secretary of Education for President Bill Clinton, visited Napa’s new high school during its first year in operation. Riley was impressed by the school’s focus on job skills, such as collaboration and agency and the practices of project-based learning that were relevant to students’ lives. When the foundation, KnowledgeWorks, of which Riley was a board member, partnered with the Riley Institute – named after the former governor – at Furman University in Greenville, South Carolina in 2011, they secured a $2.9 million federal Investment in Innovation Grant (i3) to bring New Tech to the state. The goal was to develop New Tech schools in “two of the nation’s most economically and under-resourced rural communities,” according to the Riley institute.

NTN Principles and Components

As mentioned earlier, the core goal of the NTN model in South Carolina is to narrow the opportunity gap between students in majority white affluent regions and those in underserved communities, which mostly comprise students from minority groups and students in poverty. The model is based on four design pillars, which also frame the structure for school and professional development; they are: 1) Outcomes that Matter; 2) Teaching that Engages; 3) Culture that Empowers; and 4) Technology that Enables. Guided by this framework, NTN targets the opportunity gaps that exist at the levels of school and classroom practice, including school culture, access to high leverage instruction, and resources.

The first pillar, *Outcomes that Matter*, refers to the five NTN learning outcomes that student engagement in project-based learning (PBL) is expected to elicit: a) Collaboration; b) Agency; c) Knowledge and Thinking; d) Written Communication; and e) Oral Communication.

These outcomes align with the principles of deeper learning, defined as high-level learning experiences that entail critical thinking, creativity, problem solving, and collaboration. Schools assess students’ demonstration of these outcomes as they engage in problem- and project-based learning, assigning weight to each outcome based on the individual project nature and varying by classroom, school, and grade-level. This enables teachers to accommodate unique project features in their assessments.

*Teaching that Engages*, the second pillar, is operationalized through PBL, the heart of NTN’s instructional strategy, in which students work together on authentic projects. Each project is launched with a carefully crafted entry experience, designed to engage student interest, such as the sensory chat rooms in Ms. W’s class. Projects are driven by guiding questions, such as “Should Humans Colonize Mars?” which fuel students’ need to know information and build knowledge such as “What do humans need to survive on Mars?” or “How is Mars different from Earth?” The third pillar, *Culture that Empowers*, is enacted in the deliberate steps schools take to foster trust, respect, and responsibility such that those elements permeate the school culture and underpin relationships between and among adults and students.

*Technology that Enables*, the fourth pillar of the model, is realized in Echo, NTN’s proprietary technology learning management system. Bells’ adoption of Echo means that every classroom is provided with a smart board and every student with a Chromebook computer, which features Echo. The Echo platform provides students with high levels of access to technology and prompts them to learn to problem-solve and assume agency, or responsibility, for their own learning. Students have internet access to learning programs such as Imagine Learning, Prodigy, Epic Books, Class Dojo, and others that enable them to take tests and read books online as well as individually and collaboratively engage in research. They can even accrue reward points for working hard, demonstrating kindness, or making a smooth transition from one activity to another. Echo is used to structure the daily learning routine. First thing every morning, each Bells’ student opens his or her Chromebook to access the daily agenda and complete “Do Nows,” the first task of the day. Absent students can log onto Echo from home to find missing assignments. Teacher feedback for student work is recorded in Echo and accessible to parents.

The Echo platform features a gradebook aligned with the NTN learning outcomes and allows teachers to communicate with the school’s students and parents about students’ progress. Many interviewed Bells students remarked that they appreciated that their access to Echo lets them know on a daily basis how they are doing in their class and what they can do to improve. The platform also functions as a repository for the toolkits, protocols, and rubrics that support the design and assessment of projects as well as a library of projects, designed by colleagues, which teachers can adapt for individual settings and students. Teachers also use Mastery Connect, which keeps them apprised about the content standards that students have mastered. Furthermore, teachers can connect with the larger community of NTN teachers across the country about deeper and more personalized learning for their students as well as access self-paced tools for professional development.

Project-Based Learning

Project-based and problem-based learning (PBL and PrBL) are at the heart of the NTN approach to instruction. The primary instructional goal of NTN is to create “deeper learning” classrooms where students master core academic content, exhibit critical thinking and problem-solving, collaborate, communicate, manage their own learning, and develop an academic mindset.[[3]](#footnote-3) NTN sees PBL as the means to that end. The change involved in the shift to pedagogy that centers on PBL is complex. It entails shifts in classroom management and structure, an inquiry and student-centered approach to instruction, close teacher-student and student-peer relationships, teacher planning and scheduling that considers differentiation for the ranges of student needs, and new norms that may not align with existing school and district ways of doing business. Even when a teacher is fully committed to the *idea* of PBL, the learning curve to implement the changes required can be steep, according to several Bells teachers. Our site observations and interviews as well as teacher survey data confirm that as *individual teachers* gained experience in implementing PBL and their capacity to implement and manage PBL increased, their commitment to the approach also grew.

NTN Approach to School Change

NTN uses a whole school approach to change, integrating the multiple components of the model at the same time rather than implementing them piecemeal over time. NTN’s professional development has specific role-aligned mechanisms to introduce stakeholders to the model as well as ongoing strategies that build the staff’s capacity to support schools’ ongoing implementation of NTN design pillars and culture and achieve its outcomes. Components of NTN’s professional development process as carried out in the South Carolina Learning Network (SCLN) include:

* New Tech Annual Conference (NTAC)
* Leadership Summit
* Convenings
* Leadership residencies
* Teacher residencies
* District level coaching and,
* School level coaching, involving leaders, teachers, and site-based coaches

The New Tech Annual Conference (NTAC) features professional development experiences for school leaders and teachers, differentiated according to length of time implementing PBL and role in the school. Using protocols, NTN coaches guide participants from NTN schools across the country through a series of learning experiences. Convenings are in-person events that focus on an in-depth examination of NTN principles and practices[[4]](#footnote-4). The SCLN Convenings were designed to foster inter-district cooperation between the three districts participating in the SCLN. NTN’s goal is that participants leave the convening energized, returning to their offices and schools with new tools designed to contribute to the transformation of their institutions. Leadership summits bring together school and district leadership teams with thought partners to develop the capacity to lead and implement their school’s transformation[[5]](#footnote-5). Leadership and teacher residencies provide new implementers with opportunities to observe first hand more experienced districts and schools implementing the NTN model.

NTN Coaching is multi-faceted. An NTN district coach is assigned to each participating district and differentiates his or her work to meet the needs of each district in how best to support implementation in that district’s participating schools. The goal is to help district leaders recognize what constitutes effective school practice and to help them develop the policies, practices, conditions, and structures that enable that. NTN recognizes that buy-in from district leaders is essential to the success of the implementation at the school level. Other services are district customized for each unique situation.

NTN School Coaches work with school leaders to develop a customized school implementation plan, using a set of analysis and decision-making processes. NTN School Coaches also work with the school leadership and site-based instructional coaches to advance and deepen their knowledge of NTN’s instructional approach, problem- and project-based learning; they help plan site-based professional development for teachers, and guide teachers through the intricacies of the Echo platform and its use. NTN coaches remain in close contact with school leaders, provide feedback on the implementation and its challenges as they surface, and help teachers design high quality effective projects. They visit the schools from 6-8 times each year and maintain regular contact via video-conference, email, and phone.

Bells Elementary School Context

Bells Elementary School is located in Colleton County South Carolina near the small town of Walterboro (pop. 6,000) not far from the Edisto River, across the street from a Dollar Store. The town refers to itself as the “front porch to the Low Country.” Travelers who want to stop in Walterboro can access the town via two exits along the I-95, which slices from south to north through eastern South Carolina from Hardee to Dillon. A 2005 documentary labeled that section of the I-95 the “corridor of shame,” referring to its grim educational landscape. Poverty in this rural area crisscrossed by winding country roads is evident in dilapidated trailers, small houses commonly in disrepair, and limited dining and retail options. Counties in the I-95 corridor have some of the state’s highest unemployment rates and residents struggle with high rates of obesity and other health issues. Fast food predominates, although antique stores and a few nicer restaurants dot Walterboro’s quaint downtown.

Bells is one of five elementary schools in Colleton County. It enrolls 350 students from grades Pre-K to 5 and employs 22 fulltime teachers, one principal, one guidance counselor, and two site-based instructional coaches. Forty-two percent of the students are Black, 38 percent are white, and 17 percent Latinx. Asian students comprise a small portion of the enrollment. One hundred percent of the students at Bells qualify for the National School Lunch Program, a federally-assisted meal program operating in public and nonprofit private schools for low-income households.

Although recently improving, Bells’ academic achievement on standardized assessments has been among the lowest in both the district and state. In 2019, Bells placed in the bottom 8 percent of elementary schools in South Carolina and ranked fourth out of the five elementary schools in the Colleton district. Although Bells’ staff acknowledge the need for improvement in standardized test scores, their assessments using performance standards measures, such as NTN rubrics, and teacher and student surveys indicate that the standardized test scores do not capture the improvement and achievement in both school culture and learning and the widespread enthusiasm for the changes made since Bells began implementing the NTN model in 2017.

**Bells’ Introduction to NTN: In the Beginning**

Bells’ former principal and her leadership team had begun exploring diverse strategies to better meet Bells’ students’ needs at the same time the district superintendent was guiding the district’s elementary schools to each identify a particular pedagogical direction. Simultaneously, Colleton County School District joined the South Carolina Learning Network (SCLN), described earlier. After attending a New Tech Network Convening in Orlando Florida in 2016, to which her superintendent had invited her, she decided New Tech was the right approach for Bells. She had been working with staff on the student-centered workshop instructional model and felt that NTN could promote those advances, make “learning relevant to our children [and] expose them to a myriad of things, different things they could do [so] they could create their own pathway [and] not be stuck in the past, repeating their parents’ lives,” which, she continued, was the current pattern. She saw NTN’s learning outcomes as “life skills . . . educating the whole child, beyond academics,” and “deeper learning with agency and collaboration and student learning outcomes as the heart of NTN.” “Education is the one thing we can give them,” she concluded, because it could break the cycle of generational poverty.

As the NTN-Bells partnership was beginning, Colleton County was just completing a new 45,000 square foot facility for the school. The project had been in the works since 2014, when voters passed a bond issue approving its construction. A local news outlet had referred to the old building as “a modern school stuck in a 60-year-old facility.”[[6]](#footnote-6) Bells originally opened its doors in 1954 as a high school, and little about the physical plant of the school had changed since then. The principal had the opportunity to influence the design to support student-centered learning, including a library-media center and the selection of classroom furniture that could be responsive to PBL and student collaboration as well as individual work.

The new facility was designed with two wings with seven classrooms each, a computer lab, and a media center that includes a library filled with hundreds of books and lined with cozy reading spaces and furniture. Heavy rains in the summer of 2016 delayed completion of the new cafeteria and multi-purpose rooms. But teachers were able to design their classrooms with flexible student work spaces and seating to accommodate the small group work and collaboration that typifies project-based learning. Students were excited about their new playground, which over time was filled with new playground equipment financed by staff and community fundraisers, including raffles, bake sales, and cook-outs, along with contributions of the Parent-Teacher Association and school district. Parents appreciated the clearly marked, safe, new drive-up student drop-off area in front of the main entrance.

At the fall 2017 NTN Leadership Summit, the principal developed knowledge and skills to support the NTN transformation. She learned to use NTN protocols to lead meetings, customize feedback to staff, and structure time and resources to further the learning of the Bells’ leadership team, which at the time was comprised of the instructional facilitator, reading and math coaches, a school counselor, and a district leader. The principal and the leadership team met regularly—face -to-face and online—with their NTN assigned coach, whose accessibility and responsiveness built trust in NTN and its model, all of which facilitated implementation. The school leadership team also met regularly with NTN’s leader of the Coach Development Community (CDC) and NTN’s Project Lead. The CDC leader led school-based coach webinars, virtual PLCs, site visits, and convenings for district coaches at which he modeled NTN strategies for interacting with and guiding teachers in NTN strategies such as project-based learning (PBL). The Project Lead’s work was primarily with the district leadership team. She also met with school leaders & coaches at district and project meetings.

The principal wanted “everyone to feel they [could] be part of this.” But,” she commented, “I cannot force anyone to do this.” Some teachers were getting it. Others had “[the] will but not skill. And other teachers,” she recognized, “were not comfortable with the shift from traditional teaching to project-based learning.” She decided “to help those who don’t fit with this to get a job elsewhere” and supported teachers who chose to move to other schools in the district.

“Previously, when Bells had used the mandated direct instruction model,” where the desired teacher response was compliance, teachers would say, “tell me what you want me to do and I will do it,” explained the principal. When the school shifted to NTN, she began telling the teachers that “they had to figure that out. It [has been] a struggle for them to make their own decisions.” She noted their lack of agency and reflected, “This may be the first time they see the why and relevance behind what they are doing [and this] has bolstered some of my teachers to move forward.”

The principal found that in adopting NTN, she, herself, needed to change her expectations and her role. At the beginning she noted that she “was too fixated on what teachers were learning and doing,” and didn’t think about what she was supposed to be doing. NTN’s Leadership Summit allowed her to focus on her learning. She read lots of articles, discussed deeper learning, engaged in PBL from a student perspective, and took a lot of time for reflection. This helped her understand why she was using the protocols and other tools and how to use them purposefully. As she explained, she learned that she:

Needed to give teachers customized feedback; [to] know how to say the hard thing and get feedback. Also, as teachers were learning what is PBL; [that] they needed a new class structure, etc., and I needed to ask myself about PBL, she wondered, ‘How can I help to move the work forward?’ I thought about every meeting where protocols were or were not used. What is the point of meeting if I can put it in an email? If I want to grow our teachers, how can I structure our materials and resources for all of our continuous learning? Are we doing a good job at collaboration?”

All of these questions she asked herself.

Her approach changed. Because she wanted everyone to have a voice at meetings, she “went through protocols to find the right one to achieve that outcome.” Using this outcomes-driven approach for a faculty meeting on collaboration, the principal selected an article for everyone to read and discuss, with a successful result. “Everyone walked away with information on the importance of collaboration and able to see it through different perspectives based on the article,” she reported. “If we want children to be agents of their own learning, then our teachers have to be as well,” she said. Teachers could move from a compliance stance to an inquiry stance in which individuals could see that there could be multiple pathways to reach the outcomes they had set for students.

Together, the Bells staff promoted their NTN launch prior to school beginning, which excited many parents about their children’s “back to school.” Parents and stakeholders participated in Bells’ Meet the Teacher Night, and students were excited to see new furniture and hear about projects and technology. The principal commented, “We spent a full day before school thinking about how to create courses in Echo and to house our projects.”

Enacting NTN at Bells also required the district to behave in a different way. NTN brought together Bells faculty and Colleton County district leaders to begin to deepen their understanding of the values, assumptions, attitudes, dispositions and practices that undergird the NTN goals and model and the implications for practice. The principal explained: “We needed the district to understand what we were doing so that they could understand how to support us.” While she was learning NTN, district officials were learning it too. The superintendent, and deputy visited NTN partner schools in Indiana and the supervisor for elementary schools went on other visits along with other district staff. They saw schools that were not micromanaged by their districts and where principals had autonomy. They and other district staff attended SCLN Convenings led by NTN Project Lead and other NTN staff and learned that NTN schools could request and be granted relief from district-sponsored professional development that was not relevant to what they were doing. Similar to Bells staff’s initial response, not all district staff were on the same page, nor was NTN everyone’s priority. The principal felt that the SCLN Convenings helped everyone to see that the district culture needed changing to support adoption of NTN. “The question was,” she said, “Where are we going as a district? We talked that we needed time for our teachers to transition and implement NTN—deeper learning and PBL—with fidelity.”

While the district has gone through a series of changes (recently the superintendent who brought in NTN resigned), it has supported Bells’ NTN transformation. While Bells is accountable to the same set of standards as other, non-NTN district elementary schools and administers the same state exams, the school has been released from the district’s pacing schedule so that Bells teachers can teach the standards at the time of the year when they determine student readiness, and they are not micromanaged about increasing test-scores. They are able to develop their own curriculum. The principal had the confidence of the district.

In Bells’s second year of partnership with NTN, the district transferred the principal to lead a Colleton middle school transition to the NTN model. She was succeeded by the current principal, who continued to secure the district’s responsiveness to Bells’ NTN implementation needs. At first she was skeptical: “It was a new organization and new system” and she had to “get used to a different way of thinking and a different set of values.” She became a strong advocate for Bells’ NTN approach because she witnessed first hand that “this new way connected to the outcomes I wanted to see.” She also appreciated the relationship among teachers: she “loved that they were talking to each other.”

**Organizational and Professional Development for Transformation**

NTN’s professional development process, including NTAC, Leadership Summit, Convenings, and especially coaching has guided and continues to guide Bells in developing its capacity to implement, adapt, sustain, and own the NTN instructional model and a culture based on the values and goals of their NTN partnership. However, the NTN professional development system did not supplant Bells’ already existing structures for PD. Rather, the NTN’s system for PD and Bells’ already existing structures for PD interacted in a dynamic way, propelled by the felt needs of the school community to develop and implement the instructional practices, school culture, and goals and outcomes Bells and the NTN want to achieve. What emerged was an integrated system for professional learning through which the school transformation occurred.

Bells’ integrated many of NTN’s professional development experiences into its existing professional development structures, which included grade level meetings on Mondays, vertical groups of teachers on Wednesdays, and twice monthly whole-staff district-mandated PD on Tuesdays. On Mondays, the site-based coaches and the principal join grade level team meetings which focus on student data, analysis of common assessments, and students’ performance on particular skills such as phonics. Weekly Workshop Wednesdays, are organized into two vertical groups of teachers from different grade levels that have common science standards. Since second and fourth grades share weather standards, for example, those grade levels meet in a vertical group in order to co-design projects, share resources and engage outside experts, etc. Typically, Workshop Wednesdays are also used for NTN-facilitated professional development and feedback from NTN coaches as well as Bells’ own site-based coaches and principal.

At professional development sessions, teachers learn though a modeling and practice approach so that they can apply what they have experienced during these sessions to their classrooms. Family Time activities, the ritual that begins each Workshop Wednesday is a good example. A teacher facilitates an activity designed to build personalization and closer staff relationships; participating teachers then adapt the activity to use during the Family Time segment in their classrooms for the same purposes. Workshop Wednesdays also build professional collegiality where teachers support one another in problem-solving their challenges. The twice a month, hour long, after-school district mandated Tuesday meetings are used for what Bells calls “extended learning,” which is guided by teachers. During these sessions, teachers have led workshops for their colleagues on strategies that are useful at all grade levels, such as how to use Google docs, and how to conduct reading conferences with students; this time has also been used for presentations by the school psychologist.

The NTN-Bells Professional Learning System:

At an NTN Convening in fall 2017, NTN Director of School Development led Colleton participants through activities designed to engage them in examining the concept and practice of collaboration. His goal was to enable the adults to fully appreciate what it feels like to students collaborating on a project with others whom they may not know well. He pointed out the consistency in how collaboration is experienced across grades, “A collaboration rubric for 2nd graders doesn’t look different from a collaboration rubric for high school seniors and adults.” Bells participants at the SCLN Convenings returned to their school with new tools, including protocols, discussion prompts, and ways of facilitating meetings to strengthen school-based professional development. NTN staff also presented ideas for building relationships between schools and local communities in order to engage community businesses and organizations in the development of projects that addressed authentic community issues. This remains a challenge at Bells; many parents commute long distances each day to work and unemployment is not uncommon.

In February 2017 a NTN-assigned school coach began working with Bells staff on the NTN acculturation process, so that they learned together not only the cultural and instructional shifts that are necessary for successful implementation of the model and to achieve the goal of deeper learning, but the roots and rationale for the changes ahead. This was framed by the design pillars, described earlier. She modeled the interactions that promote student learning in the classroom. She initiated the staff into the NTN protocols, such as Knows and Needs-to-Knows (K/NTK), that guide classroom inquiry and she helped them integrate the five learning outcomes into the process of project implementation: Knowledge and Thinking, Agency, Collaboration, and Oral and Written Communication.

She also helped the school use Echo well, working with teachers to set up projects in the platform and supporting them as they individually worked through Echo 101, the self-guided learning program developed by NTN for new platform users. One teacher credited Echo with allowing them to “get out of the way more and let students guide their own learning. Echo allows teachers to give the reins to students. Teachers are still in control but kids think they are,” she explained.

Much of the NTN School Coach’s initial work with staff focused on strategies designed to promote a positive school culture of caring, acceptance, and respect. In some cases, teachers experienced the time spent working on culture as competing with their immediate need to learn explicit strategies for using Echo and mastering the details of project planning and classroom management through what NTN deems the “messy middle” of a classroom project. This sentiment was especially notable in early October at the beginning of the first year of implementation. Teachers shared that they loved that students were excited and taking more responsibility for their learning, but they questioned their own skills and accountability: “Am I doing it the right way?” “With so much emphasis on the final project, I worry about lost content;” “I still have a lot of questions. I’m learning Echo and how to use it efficiently;” “Problem-based learning would be worthwhile if we could figure out how to implement it.”

Yet, the teachers’ confidence grew. Time and again, comments by site-based instructional coaches and the principal emphasized the NTN School Coach’s responsiveness, which was immediate and on target to address the detailed day-to-day issues they were confronting, which helped in their managing them. Although much of her communication was online, she was a constant presence. The faculty could depend on her for quick email responses to their questions, and she provided them with her personal cell phone number in case someone needed immediate assistance. She understood what they needed when they needed it, and provided it, which facilitated their surmounting the small and large hurdles of change. Several credited her guidance and emotional support with the school’s success in implementing the NTN model. One stated,

 We’re in touch with \_\_\_ all the time. We share documents with her through Google drive. When she comes here, she spends considerable time guiding [us] in the right direction. She doesn’t tell us what to do.

Many comments made it clear that the Bells faculty and staff trusted her deeply.

In addition to the NTN School Coach and Project Lead, NTN director of Coach Development Community (CDC), and other NTN staff, provided support throughout the planning year. NTN staff and Bells leadership met regularly about the progress of the school change. NTN’s Director of School Development, who oversees the planning process and is involved in the planning year, explained that typically he devotes a large portion of his job to achieving staff buy-in, convincing school stakeholders that the work it takes to implement the new model is worth the effort. However, he said, Bells staff needed little convincing. They had the will. They were fueled by the principal’s enthusiasm and their own determination, even if they were not exactly sure what they were getting themselves into. What they needed most was support to gain the skill. He introduced the staff to the elements of PBL. He taught them how to develop driving questions and problem statements to frame a project and collaborate to incorporate the state content standards into project plans. A Bells’ long-time instructional coach, chuckled as she recalled, “We practiced a lot even though we had no clue about what we were practicing.”

Unlike many other schools new to NTN attending NTAC (New Tech’s annual conference), the Bells instructional coaches and the teachers prepared in advance for NTAC by bringing with them a curriculum map for a project they had developed collaboratively with NTN’s Director of School Development. The map, while incomplete, provided valuable context for making the conference useful and meaningful, and put them “ahead of the game,” one teacher said, a distinct advantage in an experience that some found “overwhelming.”

All Bells teachers we interviewed expressed the desire to see PBL in operation by participating in teacher residencies that provided opportunities to witness PBL in action at schools with successful PBL implementation. They hoped in this way to observe the nuances of teacher and student behavior in the course of a school day as a project unfolds. Watching real teachers going through the PBL implementation processes with real students exhibiting typical student behaviors would have supported their transition to a new practice, they agreed. Unfortunately, limited resources prevented most Bells teachers from participating in a teacher residency. And those who experienced the teacher residency were disappointed that although they could talk to students and see classrooms, they “were not able to [observe] how [teachers and students] were actually doing [PBL]” said one teacher.

Site-Based Coaching

Another NTN element introduced at Bells during the planning year was the Coach Development Community (CDC). The CDC director, who coached Bells’ site-based coaches and also coordinated with the Bells’ NTN school coach to strategize for her on-site visits. Site-based coaches are employees of the school and district and their role varies according to the school and district. At the onset of the NTN partnership, Bells already had two full time coaches—an instructional coach and a reading interventionist—and a part time math coach. By the third year, the math coaching position was gone and a new reading interventionist was in place. The on-site coaches adapted their roles to support teachers on the planning and implementation of PBL, helping them to incorporate local standards, implement NTN rubrics and assessments of the NTN learning outcomes, customize the NTN project planner (NTN’s planning-backwards project planning tool) to meet their needs, and deepen their understanding of the skills set needed for teaching for deeper learning.

Bells’ site based-coaches participated in monthly mostly virtual meetings with the CDC director, who encouraged them to engage in coaching “experiments” he co-designed with them. A coach would try a new strategy, sometimes video-recording the effort and subsequently reflect on the outcome. The CDC director was a thought partner to explore or refine coaching strategies. He worked with Bells coaches to improve their coaching cycles in which the coaches would work with a teacher to identify and meet a goal. A goal might entail working to increase the depth of learning in social studies or building rigor into project activities. Coaches then reflected with the CDC director on the outcomes and might revise the experiment or design another experiment to further the progress.

The site-based coaches were sensitive to teachers’ responses to the changes they were undergoing. Sometimes teachers’ anxiety about “letting go of control” emerged when they considered allowing student voice and choice into the learning process. That choice might manifest in the details of the contract each group constructed at the outset of a project to govern group members’ participation or even in the end-product chosen by a group to represent their learning. In some cases, teachers struggled to adjust to the noise-level in the classroom when small groups busily engaged in discussion. “We heard repeatedly from some teachers who had been teaching for many years and even those approaching retirement that multiple years of experience made it that much harder to change long-ingrained teaching habits,” said one site-based coach.

A few teachers “had a difficult time finishing a project,” the site-based coaches recalled. Because the “district [had] been very rigid with, ‘you teach this at this time’, the craft of teaching,” they asserted had “been lost overtime.” Those teachers wedded to the district’s pacing schedule had “a hard time accommodating to the change based on the rigidity that they [were] used to.” They struggled with “letting go; of allowing students to be more independent,” said one on-site coach. Teachers struggling to transition from rigidity to flexibility “embraced PBL verbally, attempted to practice the practices, but resorted to instruction taught the previous year.” As the initial principal had noticed, and the coaches also observed, some teachers possessed the will but lacked the skill and agency to transition to that degree of flexibility. Effective implementation of NTN practices relied upon teachers understanding the standards deeply enough to recognize the most propitious and opportune times to introduce the learning associated with those standards. The issue was not only flexibility or the habit of unquestioning compliance, but also teachers developing new habits of autonomy and agency. Furthermore, teachers were uncertain of district approval of such teacher autonomy and judgment, even though both principals had worked with the district to engage its support. These were new assumptions and values at work.

The Project Lead found the Bells’ site-based coaches “incredibly thoughtful and intentional.” Bells’ NTN school coach remarked that they “were not squeamish about trying new things,” and as a result “were leaps and bounds ahead of schools that had been in the network for three years.” She further reflected that Bells’ site-based coaches’ easy accessibility and their office’s open door contributed to teachers’ seeing them as a ready resource for their questions and concerns. “Teachers know where to go for answers,” she remarked. This accessibility was aided by the low teacher-coach ratio.

The site-based coaches “did coaching based on the need of the teacher at the time,” said one. They went into the classroom and taught students themselves, modeling for the teachers. They observed and followed up with discussions with teachers. They used Bells’ existing professional development structures of Monday grade level meetings and Workshop Wednesdays to work with teachers. They reviewed student data and assessments with teachers and provided input into teacher planning. They had discussions to increase teachers’ awareness of misalignments that can occur:

Writing a rubric is hard. We had the teachers respond to one of their written performance assessments and look at the rubric they’d written, and some realized that what they’d asked the children to do and the rubric didn’t go together!

The principal confirmed that writing rubrics remained an ongoing challenge, even in year three:

 So they’re using rubrics and they’re having to learn to write rubrics that actually match what you’re asking the children to do. That is an area we’ve still got to work on. That’s a tough one because we’re used to multiple-choice and fill in the blank.

Site-based coaches helped teachers understand that they could meet state mandates on math and science by integrating them into their projects instead of teaching them separately; that in some cases what was required was “not new, but a refinement of what they were doing,” said one coach. The reading interventionist helped teachers integrate reading and writing into the projects and the math coach did the same with math. One site-based coach (the literacy interventionist) commented that sometimes she needed to help teachers “realize how literacy helps with the project and that they could use customary texts in a new way.”

When Bells embarked on a school-wide effort to examine the level of the questions when addressing students, coaches visited classrooms to categorize questions according to Webb’s hierarchy of Depth of Knowledge. Were teachers posing “questions that asked students to recall information or questions designed to foster critical thinking?” Teachers engaged in peer observation to assess the number of questions asked and their levels during lessons. The coaches then facilitated faculty discussions about the issue. A couple of teachers asked the coaches to observe in their classrooms and offer suggestions to raise their question levels.

As the implementation progressed in year three, the on-site coaching focused more intensively on improving the integration of reading and literacy in project design. The teachers and coaches determined that vocabulary was best taught by integrating vocabulary into discussions about the project rather than as a distinct subject. Reading instruction could occur organically as students engaged in research related to their projects. For example, when the question of the meaning of the word “generation” arose in a discussion concerning the class project (referenced in the opening snapshot), and the teacher determined that the students were uncertain about the word’s meaning, she placed the word in the “Needs to Know” column of the project protocol. She would address the word’s meaning again later in the project after the word appeared in the course of the project work. Teachers newer to Bells told us that the coaches provided extra hands if needed to facilitate small group reading instruction. The teachers credited one coach with her willingness to locate books or novels pertaining to in-progress projects for instructional reading groups.

When Bells began to work with district-mandated phonics materials in response to data showing students’ deficits in phonics, the site-based coaches discussed with the new NTN school coach, why they should use it and how it would affect the reading and writing instruction in the lower grades. the NTN school coach helped them “chunk how we would roll it out.” One coach explained:

The phonics kit we use has no real assessment piece; so we talked through how to create our own. They [NTN coaches] talk us through problems and they take very specific notes on our conversations that we can access if we need to be reminded of what we’ve talked about – like a running record of our conversations.

(A running record is a precise graphic representation of a student’s oral reading behaviors.)

When the coaches noted the need for phonics support in the upper grades, the NTN school coach helped them work that out, too. As a result, all grades are now working on words at various levels with carefully selected materials, which ties into the literacy lesson plan they developed the year before. NTN reviewed the literacy plans the coaches developed, provided feedback, and various members of NTN staff all contributed to coaching the coaches to support the improved literacy plan that is now in place for every classroom.

When Bells students scored lower than hoped for on the STAR Reading Test, a midyear assessment that serves as a benchmark for spring South Carolina Ready testing, the site-based coaches launched a faculty-wide effort across grade levels to analyze the results, identify the precise reading standards that needed attention, and determine what instructional strategies might most effectively scaffold student instruction. The Bells reading interventionist asked the teachers to analyze the value of the reading materials the school had recently purchased to address the issues raised by the data they had received. “Is there something else we need to add? What other conversations can we have about this data?” she asked. She conceded that the standardized tests presented students with unfamiliar text and without the background knowledge they possess when they engage in project-related research and reading activities.

The work NTN coaches have done with Bells’ site-based coaches and staff has generated an important cultural shift in the nature of Bells’ professional development. One site-based coach explained that in general, teacher professional development prior to the NTN partnership was more prescriptive rather than responsive to teacher needs, as it is currently: “We didn’t have a structure for analyzing the needs of the teachers in relation to the students, so I think the protocols and flexibility that have been taught to us and used with us as adults have kept us focused.” The principal affirmed the ethos of personal responsiveness at the core of Bells’ professional development values: “We work really hard with our professional development to make sure it will be beneficial to the teachers and is something they really need for their project.” Such responsiveness models the behavior teachers are expected to demonstrate in their classrooms with their students and is consistent with NTN’s design pillar, “culture that empowers,” which embodies trust, respect, and responsibility.

One coach noted that Bells’ own professional development has taken on the characteristics of NTN’s approach to PD and teacher learning by using the conceptual framework underpinning NTN’s project planner, which begins with the end in mind, then creates a learning path that includes individual scaffolds and benchmarks, and concludes with feedback. The value and process of starting with the end in mind and continuously reflecting on the movement forward toward that end is also evident in the annual goals teachers set for themselves. Bells teachers meet with their site-based coaches to review their yearly goals along with their documentation of the progress they have made toward meeting those goals. Together they review the outcomes. When teachers worry about the district pacing mandates or grading policies that conflict with the timing of assessments at Bells, the coaches assure the teachers, “You do what you need to do,” one teacher explained. “The school coaches have our back one hundred percent.”

Teachers have applied NTN’s value for teacher ownership of their practice to their students’ learning, as one teacher explained:

As far as learning and PD provided by NTN coaches, it was very deep in terms of learning targets/outcomes and rubrics, but they left us ample room to make it our own, so there was no thumbs down, you have to do it this way, but a lot of reflecting and the confidence that they would be there if we needed them. I think that was important.

And that’s pretty much how our projects run in the classroom; leaves a lot of room to make it your own, but then as a teacher, we’re still there when they need us – that’s how they do us and that’s how we do our students.

This strong sense of teacher ownership and autonomy, which allows and encourages teachers to make instructional decisions based on how their students learn best, and where professional judgment is trusted by the administration and permitted by the district has produced deep professionalism and a culture of formal and informal continuous professional learning that teachers take very seriously. They are continuously checking with each other formally and informally on how well they are doing or not doing. When things are not working, they immediately check with a colleague or their site-based coach. There is no shame or fear.

**Shifting School Culture**

Although there was staff consensus that Bells had a “good culture” before its partnership with NTN, interviews with students and teachers indicate changes in culture over the three-year period of the documentation. As mentioned earlier, NTN views culture as an “empowering” force in a school, one that “fosters trust, respect, and responsibility in such ways that those elements permeate the school culture and underpin relationships between adults and students and adults with each other.” NTN’s perspective on the critical role of relationships and a positive climate in successful learning is confirmed by recent neuroscience research and studies on the science of learning (e.g., Cantor et al, 2018; Darling-Hammond & Cook-Harvey, 2018).[[7]](#footnote-7)

* The culture cultivated at Bells is immediately apparent upon entering the school, as one encounters light-filled hallways illuminating artifacts of student work and posters explicating the values the school wants to nurture. Against a red backdrop on one wall, small posters announce the projects on which each grade-level is currently working, while other walls proudly display student artifacts from those projects. The project titles convey their authenticity (i.e., real world rather than abstract): “Who are community helpers?” Weather and Me;” ‘Water: The Good, the Bad, and the Ugly;” “How Does Geography Influence the Development of Our Community?” “Rock and Roll: What would be the best design solution for the standing water in our playground?” “Why Should Humans Colonize Other Planets,” and “What Motivates People to Take a Risk?” There is a bulletin board spelling out the word, KIND, inviting students to “Be the *I* in Kind.” Several posters remind students about PAWS, the acronym for the school’s matrix of expectations: “positive attitude,” “act responsibly,” “work as a team,” and “show respect.” A chart on RESPECT identifies the values embedded in the school’s idea of respect: recognizing diversity, earning trust through individual action, self-monitoring, personal space, empathy though listening and connecting, supporting others to succeed, and treating everyone equally. Other signs encourage students to be and express who they are, i.e., be themselves.
* The walls of the professional development room which houses the site-based coaches’ office display the school’s instructional values and priorities, aligned with the NTN model, along with working documents referencing current professional development work. There are professional norms, guidelines for debriefing learning walks, evidence of PBL in action, and instructional structures such as academic vocabulary, questioning and scaffolding for depth of knowledge, and use of learning outcomes. There are “Essential Questions for PLC,” which ask teachers to reflect on what they expect students to learn, how they will know students are learning, and how they will respond if students aren’t learning or already know what teachers are teaching. Another poster lists the multiple tools for the Instructional Tool Kit. One wall displays a matrix of small posters defining the terms integral to NTN instructional practice: “agency,” “driving question,” “need-to-knows,” “entry event,” “rubrics,” “opportunity gaps,” “authentic,” and more. There are several posters on phonics, which is a current focus of professional development, determined by the staff’s analysis of students’ reading issues. From these artifacts, one can see the NTN four pillars in operation: outcomes that matter in the projects students are working on; teaching that engages with practices from the Instructional Tool Kit; culture that empowers in multiple posters exhorting students to be themselves; and technology that enables embedded in the project designs.

Learning the NTN Way

From the onset of the SCLN, students’ responses to projects, technology, collaboration, and the variety of learner-centered strategies for enacting NTN pillars, were very positive. Collaborating with other students in groups was often described as “fun.” Collaboration enabled students to “talk about things first and then write;” “find out answers;” “figure out mistakes;” “get better at certain things;” “get more [work] accomplished.” Students were enthusiastic to “go on the computer”; “go on different math programs;” “go to a website called Prodigy;” “compete in challenges;” and “get to explore different worlds” while other students went “to the teacher table.” They engaged in research: “learned to look up things.”

Projects stimulated student engagement to “build our own things—like a car out of parts-connector and rods—and see if it could go far using rubber band energy.” They could test their skills. Through projects students engaged into open-ended inquiries: “how to save water [and] why take risks?” Social studies projects took them into “wars in history.” Students’ comments suggest how projects were engaging and stimulated thinking and focus: “[With projects] it’s easier to learn. You think more; spend a long time on things; learn about that thing, especially in a group.” Another commented that students “pay attention to teachers to answer the questions.” While another said, “[Projects] make the learning more fun; I don’t like to be bored.” Writing gets integrated into projects, as one student explained: “We document what we do.”

Some students interviewed asserted that there was “not much speaking or writing.” Others’ comments indicated how writing supported student agency. Students wrote narratives about

“yourself and your life experiences,” and described the process they used in writing: “You write something and re-read it. You read it and fix mistakes. Then you re-read again to make it make sense. You get somebody else to read it—friends, teachers, partners—find mistakes and fix them. Then publish it. Put it in a box and other people can read them.”

In the second year of the SCLN, students showed continued interest in projects, collaboration, group work, and technology, but a deeper understanding as demonstrated by a more detailed articulation of what they were doing and experiencing. While some students’ projects asked them to consider “if we should colonize Mars,” others were more earthbound, asking them how water can damage their school. The problem-solving water damage project emerged from the Bells’ authentic water drainage problems caused by the rusting of the school facility’s metal gutters and standing water on the playground. In year three, that project morphed into a student-generated plan to pipe standing water to a nearby fire station to aid in fighting fires. Students expanded their use of computer applications for developing and recording their work (e.g., Google docs) and for using multiple formats for presenting their work (e.g., slides). Students explained their regular use of the NTN Echo platform: “We go on everyday to find out what we do every day.” And they continued their excitement about their access to different literacy and math sites where they experience learning as “fun” games: they answer questions and can get points, which they can transfer as donations to charities.

In the third year of the partnership, most students’ discussion of innovative technology noted the more frequent use of computers for research and innovative use of computer programs such as *Renaissance Learning*, *Imagine Learning*, *Imagine Math*, *Math Magic*, *Big Brains*, and *Bee City* (an interactive zoo), and especially learning games. A few said that technology was a “way to learn that they [had] never imagined before.” Some also mentioned the Smartboard, noting how much a teacher could do with it. One student commented, “There are more times you can go on your computer and do research, but it’s not all about the Chromebook. It’s about when Ms. P uses the white board, [and the] many things you can use and teach us on.” Students mentioned the routine and transparency provided by the use of Echo to communicate the lesson for the day: “We have a site called Echo and we have an agenda and every morning we follow it;” “The teacher makes our day into a little agenda;” “Every day we get on there after breakfast and see what we do next. It’s kind of a checklist for the day.” In particular, students noticed the difference between the “bubble tests” they used to take and *Mastery Connect*,”[[8]](#footnote-8) which they use now.

Often, the students mentioned content that engaged them. Over the three years, math was a popular topic of conversation among students, particularly computer math programs and games, which counted as one of their favorite learning experiences. Interviewed students were proud to report their expertise in fractions and the value learning math would have on their dealing with money when they became adults: “Cause you’re always going to need money. Money relates to math cause you have to add it and count.” They were proud of having learned “how to add and subtract” and “the box method for division.” “Simplifying fractions made doing math fun.”

Some projects taught culturally relevant content through authentic activities as well as challenged students to demonstrate their learning using a variety of modalities. One third grader reported, “We were doing Native Americans. We were the Yemassee tribe and we went outside and made their huts and pottery.” Another elaborated, “We made dioramas and we had to go outside and gather resources that they would use.” The Yemassee are of particular relevance because they are a low country South Carolina Native American nation in the area that includes Colleton County. Other projects elicited students’ fascination with acquiring and communicating new information. For a project exploring the question, “Should humans colonize other planets?” one student explained, “We get to learn about the solar system and a new planet called Proximal B.” Another student continued, “We got to look up pictures of Mars.” Another explained, ‘And we’re making posters and telling all kinds of information about planets.” Another remarked, “We’re doing the same project but we’re making an infographic!” One student noted that they could give voice to their ideas in projects: “You get to express what you think.”

Collaboration through group work continued to evolve with students and teachers identifying group work problems and challenges and developing and implementing strategies to address them. In some instances, teachers organized the groups; one student explained: “The teacher picks out groups and she gives out papers and we get certain jobs to do.” In other cases, students have more voice and choice about who is in their group: “Our teacher picks out a few group leaders and then we choose which people we want in our group.” Criteria students consider in selecting group members include personal compatibility and skill set; as one student commented, “their personality” or “maybe they’re good at researching or asking questions and coming back and wording it correctly or something like that.” Group members then determine which person will do what tasks and then they share their findings with each other.

However, the assignment of tasks within a group can generate conflict, students noted, especially if two or more students want the same job. “Sometimes,” a student said, “It starts a big conflict.” “Sometimes,” another student said, “people mess up stuff on purpose.” Teacher intervention may be necessary so that decisions are made in a fair way, explained some students. Students also reported that in a couple of classes, group work has been reduced, especially since they have access to Chromeworks and other online programs, which can provide alternate activities.

Their experiences seem to develop students’ understanding of some of the complexity of group work: one’s analysis of group work noted that, “The main thing is that it’s a struggle.” Yet, another observed that, “We had to work in a team and persevere and collaborate.” Another referenced the reciprocity possible in group-work: “You help them, and they help you.” Several students noted advantages of group work: enjoyment, engagement, efficiency, collegiality, and collaboration in order to build new knowledge and execute original ideas. They “like groups” because “it’s fun;” “you’re not just sitting with a piece of paper. You talk with other kids. Teachers don’t do boring learning;” “You get your work done faster, ‘cause if you’re alone, you have to do all the stuff; but when you’re in a group, you help them out and they help you out.” Another liked “to work together to build and share ideas; and you can create your own design.”

In the group work we observed in classrooms, students helped each other to complete tasks, to understand task demands, and explained or demonstrated to each other content processes necessary for problem solving, i.e., they informally taught each other. The students both reinforced norms set for group work in their class, and they also engaged in off-task personal chit-chat. Teachers served as ambulatory catalysts, interjecting questions to groups to move them along in their learning; answering questions; correcting wrong turns; giving feedback on students’ work ethic; and monitoring on- and off-task behavior. In some cases, teachers taught small groups while students worked on other tasks, sometimes in groups, sometimes in pairs, and sometimes alone, as in a 5th grade class where the teacher rotated groups of students to her table to guide their writing of an essay, while other students worked on a variety of other tasks.

The Foundation of Trusting Relationships for a Culture that Empowers

Interviewed students’ comments and researchers’ observations of classrooms suggest that students experience a sense of empowerment—they feel they have opportunities to express themselves through the tasks they work on and with their peers. Projects are designed to consider what students know, need to know, and are interested in knowing and their comments indicate that their access to technology expands their field for learning and supports their curiosity. Work in groups provides degrees of choice, which consider student voice. These instructional values and choices indicate a respect for and responsiveness to students’ perspectives.

Overwhelmingly, first year interviews with students indicated that they trusted that their teachers cared for them. Further probing revealed that they often meant that they were sure their teachers would protect them from outside intruders and school shooters, a specter that loomed large in interviews with students. Students often described the measures in place that the school and their teachers could take to protect them. “We have doors with codes to get inside the building [that] keep people who want to hurt us from getting in,” a student said. Another added, “They made the windows so when someone shoots at it, the bullets will just stick in there. It’s not bullet proof but the bullet won’t go straight through.” Several students assured us that the teachers protect them: “Teachers monitor us;” “they watch what you’re doing;” they are good at making sure we know all the drills in case something happens;” “they don’t leave the classroom to go to the bathroom without making sure an adult is watching the kids;” they are good at keeping us safe.”

Perspectives on teacher-student relationships were mixed, with student trust and confidence in teachers growing over the course of three years. “Most [teachers] are friendly,” said one student in the first cohort. A few students mentioned that they want teachers to “be nice; not mean;” “make sure every kid is treated the same way.” One noted that, “if the student does something bad, they [teacher and student] don’t get along well. The teacher gets mad at the student.” Another said, “If you have a problem, you go to a teacher. Sometimes they help.” A few students advised that “if you have a problem with school work, go to your mom and dad;” “If the work is too hard, like multiplication in first grade, or you’re not learning, tell your parents that it’s too hard.” However, on challenges with project work, students advised, “ask your teacher.”

The second and third student interview cohorts spoke more about relationships with teachers in the context of their learning. One student explained that there is a lot of talking, that teachers were “very good at talking” as a means of problem-solving. Another elaborated that there is “like a relationship of talking” with her teacher, meaning that there is dialogue. Another student commented, “The teacher tells kids if they have a problem, she will explain things they don't understand.” Another said, “Teachers are nice; they break the lesson down so we can understand it.” Another commented, “Teachers help you out with what you don’t know.” And another said, “Teachers make learning fun so you can enjoy learning.”

However, the affective aspect of teacher-student relationships remained significant. One student noted, “They [teachers] were kind, but now they’re helping people and being nice.” Another offered, “Some are strict but nice at the same time so they can keep their kids in line; but some are soft where they get to know you.” Another commented, “The teachers are very kind and have nice attitudes and there’s never a day when they’re down; they’re very polite and they help you.”

First year interviews suggested that the NTN values of trust and responsibility did not yet extend fully to peer relationships. The students interviewed referred to a bullying problem at the school, despite a school-wide anti-bullying initiative. “Posters are good,” said a student, but some bullies don’t care and do it anyway.” “There aren’t many bullies in the school—only four in our classroom,” said another. “Our class is one big bully,” commented another. “Sometimes [students] say hurtful things,” remarked another. “No. I can’t be myself here,” commented another student. “Can't be my funny self. Some people don’t like me the way I am. Sometimes I have to pretend that I’m different. I don’t want people to think I’m weird.” Yet another student countered with, “You can be yourself.” Teachers can’t always intervene explained one student, because “Some bullies are slick and wait ‘til when the teacher isn’t looking.” Even in schoolwork, other “students aren’t always helpful.” A couple of students felt that it was not the job of their peers to help them feel safe or with schoolwork: “They’re here to learn, too.”

By the third year, interviews reflected a dramatic improvement in this area. Students agreed that peer relations now reflected trust, respect, and responsibility—indeed, a sense of caring and community, even though there was “sometimes yelling out loud and fights.” “Being nice” figured prominently in students’ talk and was connected to the social-emotional and academic support of students for peers. The best thing about Bells was that “Everyone is nice and helps you a lot;” “helps you if you are in trouble;” “teachers help you learn;” “if you are down, they will bring you up.” The absence of “meanness” was mentioned several times: “people are kind and not mean;” “All the teachers I’ve had are nice; they’ve never actually been mean to me.” The organization of the students’ learning experience for camaraderie reinforces “niceness” as students can “work with partners and talk and be nice to each other and help.”

Students experienced Bells as welcoming and “a good place to learn.” Welcoming meant that it was easy to make friends and friendships were critical to “feeling connected and happy,” which ranked high in students’ concerns. One student, who had started out at Bells, transferred, and then returned a few years later said that everyone “made me feel that this was my ‘always my school.’” “Kids come up to you immediately to ask to be friends with you.” said one student about her first days at Bells. Another concurred: “The second I got here, kids came up to me and asked me, ‘Do you want to be friends’? I couldn’t turn them down.” “People at Bells welcome you. They make you feel that you belong ‘cause everyone has a nice attitude; no one is disrespectful,” explained a student. Another said, “I was scared, shy, crying when I first got here. It took three days ‘til I realized it was fine. [then] you couldn’t stop me from talking about school.” But, commented one student, “It’s not just about friends. It’s about learning all you need to learn.” Another added, “Once you come in you learn a lot of things here and the teachers help you out with what you don’t know.”

The personalization evident in these student comments reflects the school’s commitment to Family Time, a segment of the morning schedule when teachers facilitate activities that support a growth mindset and students becoming better acquainted with each other. Following a three-day weekend, during morning Family Time in one class, each student relayed to the group a high point and a low point of the preceding weekend.

Family Time, which the initial principal initiated with the NTN school coach’s input and which the current principal continued, is, she claims, the underpinning for a culture rooted in trust that faculty and students feel toward one another and in the school. She explained that her predecessor worked hard to develop the adult culture. She:

and the coaches and staff kept supporting and encouraging each other. They were there for each other. They listened. I try to listen to their needs and concerns and support any way I can –coaches also.

Such listening results in actions that support teachers such as when first grade classes had 30 students each, and the coaches went into the classrooms to work with small groups of students. It is not unusual for a teacher to pop into the coach’s office to ask for “help” and have the coach respond immediately. Bells’ Workshop Wednesdays reinforces this culture of trust with the tradition of starting with a Family Time activity facilitated by a teacher, which colleagues can then adapt for their classes. The underlying design of Family Time generates trust, explained the principal:

If you trust someone and feel good talking with someone and they will listen, then you are more likely to share with them. This is why teachers are able to share the way they do. Also, why students can do what they do, they trust each other. Visitors tell us that they can feel the trust—and welcoming feeling.

Mutual trust among faculty has given teachers the freedom to learn, to struggle with new learning, to “need-to-know,” which is a key NTN pedagogical value and strategy: At the beginning, said one teacher,

I thought it would be something to dive into. But [we’ve] seen the need for baby steps. We still have a lot to learn. We have to ask for help—there are so many questions. They [the staff] all feel comfortable asking for help. It’s not a sign that we can’t do it. Just that we need help. For a while, I was feeling lost. I didn’t have a clue as to what I was doing. Just have to let go some of the worry. I’ve got to try this and see what happens. I feel free to do that in this building.

* Another commented, “This is a learning curve for everyone.”

Persisting through the Challenges of Change

* Mutual trust has generated a sense of collective responsibility and community among the staff. According to one teacher,

New Tech bridged the gap between teachers and administration—we are all on the same side. We are a team. If we have a problem, it is our problem. [Colleagues are] much more approachable and welcoming to whatever your issue might be.

According to Fred Newmann, such collective responsibility builds internal accountability, which reinforces organizational capacity,[[9]](#footnote-9) all of which we see in the continuous improvement behaviors of teachers, especially when they have problems. Commented one teacher, “You are never ashamed to go to [colleagues and coaches] to get help.” Another explained, “You are talking to other teachers about what will make your projects better. Before we didn’t talk so much about content specific stuff. Another concurred: “We reach out now to other grade levels about what works and how to do better work.” “It is ok to fail,” said another. “[You’re] not marked or in trouble if you feel things are not working. ‘[You can] say, this is not working. Please help me.’ Someone here will help you. Your opinions matter.” Another teacher remarked, “We know we have the ability to work on things that are not good. It’s very rigid elsewhere. Expectations at other schools are more for what it looks like on paper than what is going on in the classroom.”

This culture of trust and responsibility allowed teachers to engage more and more deeply in NTN pedagogical practices, expose and express their skepticism and uncertainty, tolerate ambiguity, be overwhelmed, and admit to failures, and also persist. Interpersonal trust developed over time and in concert with their persistence through the crucible of implementing NTN practices and values. From the beginning of the NTN partnership, all teachers interviewed saw value in PBL One said,

[PBL] can create instances for deeper learning of the content. Not just teach and test. If done correctly, it can be beneficial. One big issue with all of this testing is students not retaining information. Deeper learning could help them to retain and transfer learning from here to there.

Another saw the benefits of PBL as “Allowing the students to take control of their learning—not so much direct teaching; posing a question and then finding the answers.” Another noticed “more ownership, more effort. [Students] will do a better job.” Another felt that PBL

will help in the long run [with] people skills; problem-solving; coming up with alternative plans; thinking outside the box; building mutual respect; how do you treat people; when do you agree to disagree; coming to a consensus. Another thought that PBL “will encourage people to take more initiative.”

Nonetheless, teachers found the experience of change daunting: as they saw it, they had to understand new ideas while learning new practices at the same time they were implementing them, managing competing and conflicting district priorities, and also managing their personal reactions. One teacher struggled with the discomfort of not knowing:

[I am] not comfortable with this way of doing things yet. I still have a lot of questions. Every day I am figuring out better ways of using Echo and what the changes might mean for students. Giving students a choice of what they want to work on- either excited about something or want to get it over. Choice and accountability. Family time every day. But I focus more on soft skills- being responsible, having agency, and character traits.”

Another teacher said:

Am I doing it the right way as a teacher? I still have a lot of learning to do. Are my students now getting what they need? Projects are based on South Carolina standards. Our standards include so much. It’s so hard to cover all of them.

Another commented, “Are we going to be able to adequately address all the state standards?” Another worried, “Doing a project does not always fit into a test—not teaching the same thing at same time as the district [pacing schedule]. The district has not changed the system to accommodate trying to do project based learning while trying to still meet the requirements.” Another commented that, “Projects don’t always fit into the grading schemes. Students may not have tests. But [we must] still meet the requirements of the district for assessment—there are the same number of grades required for the same 9 weeks.” The site-based coaches corroborated teacher struggles:

Teachers are asked to create original projects and they struggle to figure out what makes an engaging, authentic project that also meets state standards and fits within the marking period. They’re also struggling with how to incorporate grading opportunities—there are supposed to be multiple grades per marking period—and how to make sure students are prepared for state tests. It seemed like they would benefit from ‘starter kits.’

Management demands were also a concern of some teachers: “PBL requires a mindset not easy to achieve, since it requires keeping track of so many pieces of the puzzle. How do you keep the driving question in mind while allowing for the flexibility it requires to work with diverse learners?” Some mentioned the scaffolding and benchmarking they had to learn. Another mentioned challenges presented by different content areas: “Science content is very hands on—applying the skills and collaboration, etc. ... In social studies, it’s more reading- less interesting for the kids.” Sometimes teachers found that they did not yet have the experience to accurately assess whether they could effectively implement a project: “My first project was a total flop—it was social studies. The big idea sounded good—the price of progress—how slavery influenced decisions. Lots of big ideas. It might have been better for the end of the year.” Another reflected,

I still have a lot of questions—learning something different with Echo and how to use it efficiently. Giving students a choice of what they want to do and what would they like to work on first—possibly because they’re excited about it or like it the least and getting it over with. Giving them choice and accountability.”

Some challenges involved enabling students to understand the demands of a new kind of instruction. As one teacher said, “teaching students what [PBL] looks like and what it means. . . it’s a change in culture.” But the teachers along with the students developed norms for this new kind of instruction. One teacher explained the staff was still trying to integrate the parts into a coherent system:

 “[We’re] trying really hard to use Echo. When students first started using the Echo agenda, we gave them a detailed schedule of what they needed to do and in what order. Now we’ve moved away from that to ‘here’s what you need to do today.’ [Students] do them in whatever order they prefer. [They know that they] have responsibility for [their] learning. We do Family Time every day, no matter what. [We do] project boards, driving questions, knows and need-to-knows. I’m trying to get to the point where everything is integrated based on the project. But we’re still learning. We’re not perfect.

In the third year, teachers who had been at Bells from the beginning of the SCLN recognized the progress they had made in the many facets of instruction: “We use our standards to drive the projects—we incorporate the standards;” “You may have your plan,[but] when kids come up with questions in the Knows and Need-to-Knows, you have to be ok with altering your plan. Sometimes, kids come up with Needs-to-Know that you didn’t know they needed to know.” “It used to be just reading text books. Now you can find fun ways to integrate content into other content and …integrate math and writing and reading into the projects. The more we do integration, the more we learn how to do it.” “It was more of a challenge to find resources at the beginning—resources drive the project—now we know where and how to find them;” “Teacher expectations for student work have become clearer. We’ve been pretty successful on our getting the outcomes we want.” And their expectations for their practice are grounded in the reality “that everything you do is not going to work and that is ok so long as you know to go forward.” Revision is inevitable. “Our team revamped our rubrics so students [could] score themselves so that they know why they did or didn’t get the score they wanted.” “We dialed back some in the number of projects we do;” “We do new projects and also revise projects.”

And the staff is keenly aware of the unresolved conflicting values and practices that they must contend with. Some teachers commented that the absence of state tests in science and social studies gave them more flexibility to focus on developing more interesting projects than in the content areas that are tested. Most staff also concurred that there is a “misalignment” between PBL and the state’s standardized tests, which they believe do not reflect what students know. Yet despite these unresolved and perhaps unresolvable issues, several teachers expressed a sense of excitement for themselves. As one said: “This is a new way of teaching. I feel once I do get it, it will be wonderful. More authentic teaching than I have been doing.” Another commented, “This pushes us, which is what we want.”

**Conclusion and Lessons Learned**

Although Bell’s implementation of NTN is still a work in progress—the community involvement component of projects is still developing[[10]](#footnote-10)—the partnership has yielded important, and perhaps unexpected, effects on the school culture, teachers’ sense of themselves as teachers, and some insights into what factors contribute to successful school reform. At Bells, NTN’s goal of creating a culture that empowers, meaning that relationships are based on trust, respect, and responsibility, has come to mean a school that sees itself as a family, where there is closeness and connection. One of the teachers commented and her colleagues nodded in agreement that the school:

Feels like a family atmosphere. Kids feel like they can pop into [the instructional coach’s] room and ask for help. People can pop into each other’s rooms and ask for help or offer help. Kids talk about a lot of different stuff during Family Time. Kids talk about highs and lows in Family Time. They solve problems during Family Time. We try to build on the family feel.

The pedagogy of Project Based Learning with its integrated practices and values of collaboration, agency, authenticity, knowledge building, inquiry, and communication has affected the school community not only professionally but personally. “Teaching is more meaningful to me because it is more meaningful to the kids. I am focusing on students being life learners—not just memorizing for a test.” The ways in which they practice have moved them from teaching the standards to “teaching the whole child,” said one teacher. This change has affected how they see themselves, their teaching role, and the satisfaction teaching brings them. “I think of myself more as a facilitator. You let the children guide you in what they need to know, which makes it more enjoyable to teach,” explained a couple of teachers.

Teachers increasingly see the relationship between discipline and “teaching that engages.” “Behavior is more controlled because [the students] are more involved. Especially when they collaborate, they hold each other accountable,” commented one teacher. “Kids monitor each other to complete tasks for the group. This affects discipline. Once you figure the flow there aren’t really behavior problems.”

While Bells had the organizational features that research associates with successful change efforts, including strong, committed school leadership and staff buy-in, five other features of the change effort stand out: advocacy school leadership, principal autonomy, just-in-time responsiveness to reform implementation challenges, change filtered through an integrated professional learning system, and “policy-by-exception.”

Advocacy school leadership occurs when school leaders assert agency to advance beneficial policies and practices and protect their schools from competing district policies and practices. Both Bells principals demonstrated advocacy leadership. The initial principal identified teachers who would be unable to support the reform and helped them find teaching positions at other schools; she contributed ideas to the design of the new Bells building ensuring that the building would contain features that would support the kinds of learning the reform was promoting (e.g., furniture that would accommodate collaboration); she demonstrated commitment to the NTN professional development by participating in all NTN professional development events with district leaders as well as the staff in her school; she was active in school-level professional development; she changed her role and learned new leadership strategies to effectively support the change; she secured the parent community’s confidence in the reform; and she advocated for exceptions to particular district policies so that teachers were free to effectively enact the reform. When the current principal succeeded her, she, too, committed to learning the reform and participating in NTN professional development, engaged with students to strengthen Family Time, supported teachers during Bells professional development, and continued to advocate for exceptions to district policy necessary for effective implementation of the reform.

Principal autonomy was another contributing factor to the success of NTN at Bells. The initial principal had the autonomy to choose NTN as a reform that matched her goals, select teachers who would be able to implement the reform, and adjust site-based coaching roles to include support for NTN. In hiring new teachers, the current principal has the autonomy to select those who support the NTN model, and she can organize professional development to support NTN implementation.

Just-in-time responsiveness to reform implementation challenges. Repeatedly, the Bells staff commented on the crucial role played by the NTN school coach even though her “presence” was largely virtual. When they had questions or problems, they could count on her in-the-moment responses with solutions that were “just-in-time” to answer questions or address problems. NTN staff’s responsiveness sufficiently diminished implementation obstacles and allayed anxiety, which enabled site-based coaches and teachers to persist and deepen their practice.

Change filtered through an integrated professional learning system. Bells’ existing professional development system became the primary pathway for the staff’s professional learning for implementing the NTN model, values, and practices. This existing system for continuous staff learning was facilitated by organizational structures including weekly common meeting time for grade level teams and vertical teams. Two full time and one part-time on-site coaches were already in place, one with strong expertise and deep roots in the school and in the district, one a literacy interventionist, and the third, a math specialist. NTN staff used these existing structures to enact their work with the Bells staff. The existing coaches adjusted their roles to become NTN site-based coaches. No new system or structures had to be created; teacher expectations for ongoing professional development remained unchanged. The Bells system welcomed the changes in professional learning, which staff reported became more customized and responsive to teachers’ needs than it had been previously.

*Policy-by-Exception,* a change strategy identified by Darling-Hammond, Ancess, and Ort-Wichterle (2002)*[[11]](#footnote-11)*, in their study of a New York City high school transformation, meant that the Colleton County School District exempted Bells from several policies that could have prevented the effective implementation of NTN practices. Bells was exempted from the district’s curriculum pacing policy, its mandated curriculum, and standardized test scores were not used to evaluate the school. *Policy by exception* facilitates individual school change without requiring the district to change policies that it may determine are required and beneficial for other schools.

Although the positive school culture that existed prior to Bells partnership with NTN likely contributed to the school’s capacity to implement the model, that culture alone cannot account for the degree of commitment demonstrated by the school’s leadership team and faculty to examine – and question - long held beliefs about students, learning, and teaching. Changes in beliefs and teaching practices are complex, especially when they take place concurrently. Together, the tight collaboration between NTN and Bells staff, their mutual commitment, and the district’s willingness to support the changes all contributed to the results. making Bells a beacon of light on the I-95 corridor.

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**Appendix**

**Methodology**

This case study on Bells Elementary School in Colleton County, South Carolina is one product from a research initiative conducted by the National Center for Restructuring Schools, Education, and Teaching (NCREST) at Teachers College, Columbia University to document the New Tech Network’s four-year South Carolina Learning Network initiative (SCLN). Funded by the ECMC Foundation, SCLN engaged a cohort of diverse school and district personnel from three South Carolina school districts in multi-level, cross-district peer learning and development and sharing of solutions to common concerns: histories of underachievement, racial tension, and issues arising from poverty. The ECMC grant funded one year of SCLN project planning followed by three-years of project implementation. Colleton County was one of the three districts to join this project. The NCREST research was sub-contracted by NTN. Four NCREST researchers were involved in data collection: Jacqueline Ancess, Elisabeth Barnett, Debbie Igunbor, and Tina Kafka.

The Bells Elementary School case study aims to provide an in-depth examination and rich images of what the NTN model looks like in operation in a high implementation school and an analytic narrative of how the change occurred, identifying critical factors and turning points and the professional learning system that facilitated that change. Researchers used a mixed methods approach. Data collection occurred from 2017 through 2020 and included three multiple-day site visits to the school in 2017, 2018, and 2019. We conducted multiple, full period observations of first grade through fifth grade classrooms, professional development sessions, semi-structured interviews with Bells’ two principals and four site-based coaches as well as eight semi-structured focus groups with teachers from all grades and six semi-structured student focus groups, each with a representative sampling of students from across the school’s grades. Focus group students were selected to include race, age and academic ability diversity; and in the last year of documentation, only students who had been at Bells since the onset of NTN were selected to participate. For the 2019 school visit, three teacher focus groups involved teachers who had been at the school since the NTN initiative began and one group of teachers who began at Bells after the NTN initiative was in operation. Written consent was obtained from all individuals participating in interviews and focus groups. Only students whose parents provided written permission participated in focus groups and those students also signed their own participation consent forms.

We reviewed school artifacts including standardized test score reports, organization charts, schedules, student work, and documents communicating school goals, values, and practices. In addition we interviewed NTN personnel including those who facilitated professional development sessions and worked on-site or virtually with school leaders, teachers, and site-based coaches. We reviewed NTN documents including NTN school coach reports on Bells’ implementation progress, and rubrics on school implementation of the NTN model components. Data sources also included interviews with district leaders and student and educator survey results from all SCLN schools. We then analyzed the data and triangulated findings to produce a narrative report. The final draft was submitted to the Bells principal and instructional coach to verify accuracy and provide general feedback. Changes were made in response to their comments. The final draft was also reviewed by NCREST’s associate director, and changes were made in response to her comments.

**Research Questions:**

1. What does the NTN model look like in operation at Bells: organization, instruction, professional learning system, roles and responsibilities, relationships, culture, technology?
2. What was the impact of the school’s partnership with NTN on: instruction (teaching, learning, curriculum, assessment, and technology), school organization, school culture, teacher beliefs, the professional learning system, and student-teacher and student-student relationships?
3. What was the change trajectory?
4. What major challenges and obstacles did the schools and NTN encounter in the change process?
1. See Mehta, J., & Fine, S. (2014). The elusive quest for deeper learning. *Harvard Education Letter*, Volume 30, Number 4, July/August 2014 [↑](#footnote-ref-1)
2. https://www.kqed.org/mindshift/42092/10-tips-for-launching-an-inquiry-based-classroom. [↑](#footnote-ref-2)
3. Hewlett Foundation. n.d. “What is deeper learning?” Available at http://www.hewlett.org/programs/education/ deeper-learning/what-deeper-learning  [↑](#footnote-ref-3)
4. <https://32dkl02ezpk0qcqvqmlx19lk-wpengine.netdna-ssl.com/wp-content/uploads/2017/07/NTN_BROCHURE_V4_print.pdf> [↑](#footnote-ref-4)
5. <https://newtechnetwork.org/resources/virtual-leadership-summit-fall-2020/> [↑](#footnote-ref-5)
6. Wilhiteawilhite, A. (2014). Bells Elementary at the heart of $10 million bond issue in Colleton County. <https://abcnews4.com/archive/bells-elementary-at-the-heart-of-10-million-bond-issue-in-colleton-county> [↑](#footnote-ref-6)
7. Cantor, P., Osher, D., Berg, J., Lily, Rose, S&T. (2018): Malleability, plasticity, and individuality: How children learn and develop in context. *Applied Developmental Science*, DOI: 10.1080/10888691.2017.1398649.

Darling-Hammond, L. & Cook-Harvey, C. (9/2018). Educating the whole child: Improving school climate to support student success. <https://learningpolicyinstitute.org/sites/default/files/product-files/Educating_Whole_Child_REPORT.pdf>

, [↑](#footnote-ref-7)
8. An “assessment and curriculum platform designed to show student learning in an intuitive, visual way, so educators can focus on . . . improving student outcomes,” <https://www.masteryconnect.com/> [↑](#footnote-ref-8)
9. <https://www.hepg.org/her-home/issues/harvard-educational-review-volume-67-issue-1/herarticle/implications-from-restructuring-schools_233>. [↑](#footnote-ref-9)
10. Logistical issues make it complex to engage community members in projects; many parents drive long distances to work each day. Unemployment is not uncommon. [↑](#footnote-ref-10)
11. #####  *Reinventing high school: An Analysis of the Coalition Campus Schools Project. (Fall, 2002).* AERJ*, 39, 3, 639-673.*

 [↑](#footnote-ref-11)