

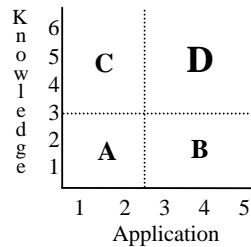


New Technology High School
 Napa, California

Prepared by International Center for Leadership in Education

- A Model of**
 Small Learning Communities
 Rigor and Relevance
 12th Grade Initiative
 Personalized Environment
 Technology Integration
 Authentic Learning
 Leadership Empowerment

Rigor/Relevance Framework



- By the Numbers**
 300 students
 95% to postsecondary
 37% minority students
 2% free/reduced price lunch
 3% students with disabilities

Executive Summary

New Technology High School is a model of a highly personalized small learning community, created through a vision of community business partners and other stakeholders who challenged the district to create an alternative high school that will prepare students for the workplace of the 21st Century. Based on the condition that the school *not* be a career academy singularly-focused on technology and the stipulation that it serve students who have not been actively engaged by learning in the past, the school exemplifies an integrated vision of successful best practices. Located in Napa, California, it has extensive integration of technology, project-based learning; effective alternative assessments; individualized learning; and distributed leadership with a shared and unwavering dedication to mission.

Because it is a school of choice that recruits new students, it understands the dual demands placed upon it for both proven rigorous and relevant performance and customer satisfaction in a highly independent and student-focused learning mode. The school combines a solid college-prep curriculum with a learning program that equips students with a set of career, life-skill, and lifelong learning competencies. About 95% of graduates continue their education after high school. It also makes its students feel respected, responsible, cared about, and fortunate to be part of a dynamic learning environment.

1. Demographics and Overview

New Technology High School (New Tech) is located at the southern end of the Napa Valley wine region northeast of San Francisco. The area's population is employed in blue collar agricultural and service occupations and is growing. New Tech is a non-charter, but alternative, public high school. The school opened in 1996, after planning initiated in 1992 by the Napa Valley Unified School District in response to the local business community's expressed need for a different "vintage" of homegrown graduates. The business community was seeking graduates who would be adept at technology skills, 21st Century work styles, and applied competencies. Local businesses, community mentors, the Gates Foundation, nearby postsecondary institutions, parents, and its own New Technology Foundation with its dedicated replication network continue to support and work closely with the school to continue that vision.

New Tech is designed to serve students who have struggled with average or below academic achievement and engagement in the past, yet have high potential and positive attitudes. Most students who come to the school are technology-adept and real-world focused, but the most common attribute is what Principal Mark Morrison calls "passion." All students appear to savor the alternative approach to high school instruction and learning. No honors or remedial classes are offered, although an innovative physics is available in combination with Algebra 2. The school aims to prepare its students for careers in technical and other professions in which knowledge and skills are applied. The school's mission is to empower students to excel in an information-based, technologically advanced workplace and society.

The New Tech leadership believes that optimal school improvement cannot be done piecemeal. As a result, the reform effort was comprehensive and deliberate, with the full vision in mind.

When New Tech opened, it served 113 students, all juniors, who were recruited from the district's two other feeder high schools and from surrounding districts. By 2004-05, enrollment had grown to 300 students with a freshman class just added. As of the fall of 2005, a grade ten program will be added to accommodate current freshmen, which will increase school enrollment by approximately 100 students. This year's freshmen will become the first, four-year model cohort for the program.

The 2004-05-student population has a ratio of approximately three males for every two females, close to its target of 50%. About 63% of the students are white with a mix of 11% Hispanic, 8% Asian, 2% Native American, and 15% other minority populations. Three percent of students are classified as students with disabilities, and 2% are eligible for free/reduced price lunch. There are very few English-language learners (ELL), migrant, or African American students. Over 95% of the graduates have continued their education beyond high school with over 25% eligible to attend a four-year college.

With over 23,000 square feet of open architecture featuring windowed inner walls, the school provides approximately 42 to 47 square feet of classroom space per student. Technology is integrated throughout the school. There is a higher than one-to-one ratio of networked computers to students. The school resembles a workplace more than it does a traditional high school. The principal describes it as a "high-tech, high-touch learning environment." Technology is viewed as a tool, not a focus, and the school seeks to be more than a computer and technology skills academy.

Like its architectural design, New Tech's student protocols are "open." There are no bells, no hall passes, and no lockers. Trust and responsibility provide the basis for most of the rules and structure needed. The suspension rate is almost nonexistent. Students are expected to monitor their own conduct and behavior, because they have chosen to attend the school, recognize its advantages, and want to help preserve its relationship-based, intimate culture.

Students apply for admission and are interviewed with their parents before they can be considered for admission. To date, the only academic entrance requirements have been a 2.0 GPA and completion of lower-grade coursework. Qualified applicants are then selected by lottery. The school aims to maintain its small enrollment because the school and foundation have a strong belief that anonymity leads to poor behavior and smallness is a prerequisite to learning. There is a waiting list to enter grade nine next fall.

School staff consists of Principal/Director Mark Morrison, six support staff including one counselor, an internship coordinator, and 14 teachers. The principal and school enjoy a fair degree of autonomy within the district, a necessary condition of the alternative school's mission and purpose. Due to the relatively small number of teachers, there is no formal department structure and there are no department chairs. The teachers also tend to be specialists in multiple subjects, such as art and drama or scientific studies and math. Instructors from nearby Napa Community College also teach college-credit courses on and off-campus. New Tech is one of 11 schools supported by the New Technology Foundation, a not-for-profit agency started in 1999 to promote the innovative New Tech vision and mission to new districts and locales, to raise funds, and to provide consultative instructional and curricular resources to the member schools and teachers in its network.

2. Achievement Data

California's high-stakes state assessment required for high school graduation is administered initially in grade ten. However, because New Tech has never had a grade ten cohort, no state assessment data is available for the school. Grade ten state testing will begin in the 2005-06 school year when that grade is added to the school's enrollment. To date, state graduation test data has not been a driving factor in determining or managing student achievement at the school.

State end-of-course tests in core courses such as English and Algebra 1 are administered where mandated by the state and district. Teachers diligently use the results to adjust course and project content. They find the data especially helpful in ensuring the innovative, project-based curriculum is aligned with state standards. Project definitions and requirements are reviewed and adjusted on an ongoing basis to ensure coverage of prescribed academic standards.

However, even without a focus on high-stakes testing, available indicators would suggest that the school and its students are achieving and being successful. The 2004 Academic Performance Index (API) used by California rates New Tech at 770 on a statewide performance target of 800 or above. That score surpasses the district and state averages of 702 and 592 respectively and represents a year-over-year increase for the school itself of 20 points, higher than both the district and the state.

3. Commitment to Excellence

The genesis for this outstanding small high school was initiated in 1992 when members of the local business community began discussing the idea of a unique school in which students would learn the skills necessary to succeed in the new economy. Frustrated with the perceived lack of skills and knowledge possessed by high school students, the local business and industry community approached the district and expressed a strong need for preparation of students for careers in technology-based businesses. For four years, a partnership of educators, parents, and motivated community leaders planned what they deemed would be an educational revolution. Frustration became inspiration and New Tech opened its doors in 1996. Originally a school of choice for 11th and 12th graders, over 800 students have

graduated and gone on to an impressive list of top colleges, universities, and internships with nearby Silicon Valley companies.

Now in the process of converting to a four-year high school with a maximum enrollment of 400 students (100 in each grade level), its success has brought recognition as a demonstration site by California and the Bill and Melinda Gates Foundation. As a result, through its foundation, the Gates Foundation, and other funding sources, New Tech has become a flagship school in helping with what soon will be 14 other replication sites throughout California and other states. Its mission statement says, “Our mission is to prepare students to excel in an information-based, technologically advanced society.” The mission is supported through core values that are part of the day-to-day functioning of the school, such as:

- We believe that all people, regardless of social or economic conditions, must be provided the capacity to take charge of their lives. Through new models of teaching and learning, they will be enabled and empowered to make critical decisions for their futures.
- We believe that we must treat others in our school and community with respect, tolerance, and a kind heart and genuine concern for their well-being.
- We believe our flexible business/education environment teaches and encourages student responsibility, independence, and resilience while building life skills in collaboration, project management and leadership.
- We believe that we must continue to develop and preserve the community of trust that defines the New Tech learning environment.

In terms of commitment to excellence, the school “stayed the course” in terms of the mission, vision, and core values that guided the planning process and resulted in the creation of the school. There continues to be a mission-connect. New Tech is an example of a small model high school that has not wavered from the extensive planning involving community partners that resulted in the original partnership mission and vision over 10 years ago.

4. Personalization of Instruction

The educators at New Tech understand that rigor, relevance, reflection, and relationships form the core of a great high school. There is a strong commitment to the personalization process in which educators help students assess talents and aspirations, plan a pathway which is self-directed, work in collaboration with others on rigorous tasks, use data to maintain a record of explorations, and demonstrate learning against clear standards using a variety of media and technology. The close support of adult mentors guides the personalization process. Examples of personalization of instruction and the commitment to relationships include: a commitment to a rigorous and relevant 12th grade and flexible extracurricular offerings generated by student interests and talents. Students and staff say, “One thing is clear. If the organization of your choice doesn’t yet exist, you can always invent it.”

There is a commitment to project-based learning (PBL) with students being challenged to solve real-life problems with the world as their classroom. Curriculum and instruction in every class focuses on PBL which engages and builds on student interests and passions, provides a meaningful and authentic context for learning, allows students to take the lead, and builds in opportunities for reflection and self-assessment. Students make the decisions for all aspects of the project, from selecting a topic to designing

the implementation steps to organizing the work and to presenting the results. The projects focus on issues that affect students' lives. At the same time, PBL is committed to "making it fun!"

Student life is personalized with students participating in an advisory program organized by grade level. Students are assigned a teacher who works with them throughout their career at New Tech. The goal is to provide each student with an adult advocate who can facilitate a flow of information between the student, administrators, home, and community. The advisory curriculum has been designed by educators and students receive a grade and credits each year. Each student works with his or her advisor to design a personal learning plan that is revisited and revised as the student's needs and goals change.

The online student grading and evaluation process is personalized. Typically, students receive several grades for assignments, projects, and papers. Categories include: content, writing, critical thinking, work ethic, collaboration skills, and presentation skills. When a student turns in a paper or completes an assignment late, only the work ethic category is affected. In other words, the paper might still be an excellent demonstration of mastery of content and writing skills. Students and parents can access grades in all courses at any time online.

Personalization, relationships, and smallness are the keys to New Tech's success. Students say, "It does take our teachers time to learn how to do it the New Tech way." They also believe that is easier for new teachers compared to the adjustment for veteran teachers. Students say that "Because it gives you choices, you have the ability to shape your life and to shape the school everyday. When you make the right choices, you better the community, not only for yourself, but for others around you." One student said, "We do projects that allow us to have more fun and remember more. Sometimes I can't forget stuff teachers have told us even if I try to."

5. 9th Grade Resources

This is the first year for enrollment of 9th graders. New Tech follows its 10 replication sites in moving to a full four-year model. In 2005-06, this 400-student high school will feature 100 students in each of four grades. Consistent with a comprehensive planning model, preparation for the 9th grade class took nearly one year. Smallness allowed the staff to identify needs and plan in an efficient and effective manner. New Tech continues the belief that honors and remedial programs will be limited. The goal is to select middle-level students and "stretch" them to greatness. As such, there is an extensive recruitment and information-generating initiative that occurs during 8th grade. Since the number of student applicants exceeds the 100 spaces available in 9th grade, a blind lottery is used to select students.

Resources devoted to 9th grade success are considerable and growing. The advisory program was developed in response to enrolling 9th graders. Peer support programs are in place; recognition of the need for academic interventions exists; the staff is implementing literacy initiatives for those struggling with reading; a summer boot camp is sponsored for incoming 9th graders; extra content is offered for 9th graders struggling with math and reading; and supplemental classes are offered. A teacher, selected as a peer coach, has designed a special math tutorial model.

6. 12th Grade Resources

The rigorous, relevant, and reflective 12th grade is intense. Students say that they are “stressed to the end.” The educators are committed to a quality transition from grade 12 to the college and career opportunities the students face after high school. In addition to the district’s graduation requirements, students must successfully complete additional requirements in order to receive the New Tech Diploma, which include:

- A 20-hour community service project and a senior year 50-hour community internship
- Required interdisciplinary courses in American studies and political studies
- A required course entitled Digital Media I
- A web-based professional digital portfolio which is outcomes-based
- Five computer application competencies: Word, Excel, Access, PowerPoint, Keyboarding
- Four Napa Valley Community College courses (12 units total), which are counselor approved.

The digital professional portfolio requires students to demonstrate proficiency in the eight learning outcomes of New Tech that state the knowledge and skills necessary for success beyond high school. The learning outcomes in which all students must demonstrate proficiency are: curricular literacy (content standards), technology literacy, written communication, oral communication, critical thinking and problem solving, collaboration skills, citizenship and ethics, and career preparation. All assessments of student work and grades are linked to the learning outcomes.

All 12th graders complete the New Tech senior project. This is a yearlong project that culminates in a presentation to a panel of community members that evaluates student skills in problem solving, time management, decision making and the ability to work independently.

A teacher in a role as a “coach” coordinates the 50-hour educational internship required of seniors. The internship prepares students for success in the workplace and strengthens their skills for real-world employment. The motivated 12th graders have many skill qualifications, but need a place to practice and polish in preparation for life after high school. Students fulfill their internship requirements in a variety of areas including education, government, law, business, medicine, and technology.

The 12th grade is rigorous, relevant, and reflective. It reinforces what some students thought they might like to do after high school. For others, it is an eye-opener to get a reality check about what they thought they wanted to do. At the end, all 12th graders reflect upon how the real world is different from the classroom; their achievement of the eight learning outcomes; and how what they learned will benefit them the rest of their lives.

7. Use of Data

The use of data reflects the school’s innovative program and reform vision. With no 10th grade students, New Tech has not had to be overly focused on high-stakes state achievement test data. However, the state and district system of end-of-course tests in benchmark courses such as Algebra 1 or English provides teachers and curriculum consultants with data that helps them better align learning, especially

project-based learning, with standards. The school's largely project-based curriculum is adjusted for coverage or emphasis based on student performance on end-of-course tests. Given the largely textbook-free and lesson-free curriculum, teachers find this process to be a helpful use of data and curriculum mapping.

The most important student data that is used is collected in digital portfolios, which provide the structure and repository for student work and record the evidence of proficiency across a variety of measures. Staff and students believe that these authentic and digitized assessments provide more thorough and more meaningful documentation of how well students are meeting their goals than traditional transcripts and student data records. Portfolios include a personal statement, a current résumé, project and work samples, contact information, internship-related reflections, letters of recommendation, and current assessments. They also provide current transcripts of student performance and achievement for each of eight key indicators (learning outcomes) called Established School-wide Learning Results (ESLRs) by subject area. These digital transcripts, accessible 24-7 by both the teaching staff and by each individual student, provide a percentage-based grade for each indicator and overall indicators. They also maintain a record of absences and tardiness, which directly impact the student's work ethic and effort grade. From the master transcript, viewers can check scores on specific assignments to determine how the overall grades were determined. Rubrics are available and used for each ESLR and for each project.

Survey data is also collected regularly from students. Students and teachers debrief after projects are completed to assess their effectiveness and efficiency in driving learning. The school is also conducting an attitudinal survey of seniors and an alumni-tracking survey. All survey data is directed toward program improvement.

Because the school must recruit its students from across the district and beyond as space permits and capacity dictates, retention and intake rates are important data. Recruiting and retaining the right students and teachers are critical to the school's success so it is conscious of transfers-out, grade eight recruitment, and upper-class enrollments. For example, the school is aware that 30 of 85 current juniors have indicated that they will transfer back to their community high schools after this school year, an abnormally high ratio in the school's history. Although such a loss will leave a gap in the school's enrollment, the pattern is typical: a certain number of students who are attracted to the school by its approach ("no homework, no textbooks, and no bells") soon discover that the high expectations placed on them are beyond their levels of comfort or interest.

Overall, New Tech makes effective and creative use of data to complement its vision and mission.

8. High-quality Curriculum and Instruction

The curriculum is rich and varied for a small alternative high school with a limited number of staff and students. Standard course offerings include the usual core academics, but with some significant and purposeful variations, all of which support the mission of lifelong learning and workplace readiness. For example, instead of traditional biology or chemistry, all of the sciences are integrated into Scientific Studies. Physics is combined with Algebra 2. American Studies integrates American literature and United States history. The integrated courses are team-taught. The school's emphasis on project-based learning lends itself to collaborative teaching and subject integration. There is also an interesting emphasis on dramatic arts in English and other coursework. The intent is to provide students with the confidence and presentation skills needed to complete their internships and community-service work and become successful and effective workplace-ready communicators.

The core curriculum also includes an advisory program organized by grade level. A student is assigned to one teacher who then works with him or her throughout the student's years at the school. The advisory teacher becomes an advocate for his or her students. The teacher facilitates information flow among the student, administrators, the home, and the community. Additionally, the advisory program engages students in a variety of important skills and topics, including collaboration, conflict resolution, learning styles, career planning, technology skills, portfolio development, and college advisement. Advisories are graded and provide 2½ credits per year. The New Tech common curriculum also requires completion of a senior-year project and skills course, a digital media design course, the creation of a digital portfolio and 12 college-credit units.

The advisory course adds another significant element to each student's program of studies: a Personal Learning Plan (PLP). Students work with their teacher-advisors to devise their plans and each PLP is revisited and revised as needed. A more complete picture of the rigorous and relevant blend of curriculum and instruction comes from an understanding of the school's commitment to project-based learning (PBL). PBL is the backbone of New Tech's unique learning environment. Instead of daily assignments, teachers periodically assign projects and problems with multiple and varied components such as a written essay with a website or a PowerPoint presentation accompanied by a photo essay. Projects are done either individually, in pairs, or as small groups and they are typically presented to classmates as culminating activities. Project due-dates are set well in advance so students can develop time management and independent learning skills. Teachers are always ready to assist or to help students master key skills and knowledge needed to move ahead within a project, but the hard work and impetus to learn must come from the students.

Projects designed by teachers, consultants, and others in the New Tech Network cover key academic standards in an applied, problem-solving context. A typical New Tech Course includes 10-15 projects in a year, each project lasting three to eight weeks. Example projects are stored and published in a online Project Library accessible to all teachers in the network. Most are interdisciplinary and require students to demonstrate proficiency in core outcomes across multiple subjects. All use technology as a learning, reference and presentation tool. Although students can draw upon whatever source of information they choose, the school has no traditional library; there are no core textbooks in most courses; and all scheduling, tracking, recording, and "production" of the projects is done electronically. Students are adept at a host of computer applications and digital media. Technology is integrated to such an extent that it has become nothing more than an assumed learning tool and a standard way of doing things. Rich technology supports the project-based learning that is a trademark of the school's programs.

Overall, the engaging combination of a demanding curriculum, abundant technology tools, and a focus on independent, rigorous, and relevant project-based learning has captivated New Tech students. Students almost universally testify to newfound levels of engagement and enjoyment of learning in ways they could never have found in more conventional classroom settings with teach-and-test instruction.

9. Leadership/Systems Approach

Leadership is an expectation for students and staff members. The principal who has served New Tech impressively since 1996 is a critical leader. His style is one that is demanded by the vision and mission of the school — passionate, optimistic, empowering, collaborating — with leadership distributed to all students and staff members. One example of distributed leadership is implementation of the advisory program. Data indicated that students needed a personalized mentor to stay with them the entire four years of high school. The principal and other leaders selected the advisory model. Collaborating with staff, a decision was made to offer advisory as part of the school schedule on Mondays. However, once

the expectations were set, the teaching staff was charged with the responsibility of designing the advisory curriculum.

An elective leadership class for students is offered. There was recognition by educators and students alike that three character expectations — trust, respect, and responsibility — had eroded and needed attention. The leadership class was assigned a project to reestablish these three exemplars and students and adults alike provided the emphasis and strategies. In addition, PBL requires a leader and learning partnership between every teacher and student in every class. As a result, students recognize their teachers as learning partners. Together, both lead in all classes.

The relationship between the bargaining unit (union) and the teachers and administrators of New Tech is important. The superintendent and board of education have a commitment to interest-based bargaining. As a result, teachers receive a set percentage of funds coming into the district each year for salary raises, which means during good times they get more, but during lean times, less. A special feature is that the staff of each building may request a waiver for certain contractual conditions. Buildings can apply for these contract waivers if the entire staff votes “yes.” One teacher “no” vote will veto the desired waiver request. The result is that at New Tech, there are numerous waivers that allow the staff and administrators to conduct business in a different kind of way in order to achieve the vision and mission of the school.

Because teaching at this school requires different skills and a unique commitment to excellence, the teacher recruitment and selection process is especially important. Again, leadership is distributed with a process whereby candidate teachers deliver demonstration lessons to students and faculty and are interviewed individually by several teachers before a new member of the teacher team is offered a position.

The teaching staff selects one peer to be their site coach and the mentor for first-year teachers. This person plays a critical role in “leading” and coaching all members of the faculty. Because New Tech is a demonstration site for other high schools interested in replicating a similar model, there are numerous opportunities for teachers to be “promoted” to a facilitator role assisting the new schools. This means that educators such as the site coach are in demand for a promotion and the faculty has a regular opportunity to select its new peer leader.

10. Relationships Driven by Guiding Principles

New Tech is a model of student and adult civility. The guiding principles of trust, respect, and responsibility are ingrained in every class and how students and staff conduct themselves on a daily basis. The adults who serve the students fully understand that they are exemplars and it is their responsibility to model what they expect from students. Likewise, students know it is their responsibility to influence their peers. New Tech is a personalized environment driven by quality relationships between and among students and adults.

11. Professional Development

The innovative and differentiated learning program is supported by a parallel, but equally individualized and informal system of professional development for teachers. Professional development is a major schoolwide emphasis, especially reinforcing the school's relationship-based, technology-enhanced, small learning community culture and instructional approaches.

All teachers receive initial and ongoing training from the principal, staff mentors, and New Technology Foundation coaches on PBL, which is the primary learning and instructional mode. The theoretical underpinning of PBL at New Tech includes constructivism, Howard Gardner's eight multiple intelligences model, and the work of the Buck Institute of Education. Although most teachers in American public schools have touched on PBL in their pre-service training, New Tech teachers are purposefully recruited, hired, and supported to ensure they possess advanced levels of proficiency and comfort in this type of learning. There is a high degree of collaboration among teachers and time is set aside in teaching schedules for reflecting on as well as planning and review of student learning. Many of the teachers, like the students, are at the school because it offers clear alternatives to instructional and curricular approaches at other, more conventional high schools. Also following the pattern of the school's students, teachers who find the environment not well suited to their teaching styles or interests tend to move on or back to other schools.

Teachers must be highly adept in computer skills and have the capacity to develop specific and considerable expertise in deploying the school's NTH Learning System™, the set of proprietary, networked desktop applications that drives learning and curriculum. The "tools" in the system that teachers must master include:

- Project Briefcase, which allows a teacher to put all of the materials and resources needed to run a project/unit in one secure digital document library.
- Course Agenda/Calendar, which allows teachers to create an online course agenda to organize classroom activities in long blocks with PBL. Teachers can "push" deadlines or reminders on to students' personal calendars as well as onto the school's master calendar.
- Digital Journal, which is like a traditional journal where teachers can post a prompt and ask their students to respond to it. They can also use the journal to collect homework assignments or for class warm-up activities. Student responses and postings are private so that only the teacher can see them. Teachers can address students individually as well.
- Bulletin Board is used by teachers and administrators to create student and teacher discussion forums for instructional or general-interest purposes. Moderators can control content and access.
- Staff Agenda is an interactive communications tool used for meeting agendas, announcements, and staff discussions.
- Awards and Certificates can be created digitally with secure certificates used as evidence of achievement on student portfolios.
- Internship Management captures tracking, progress, and evaluation information on student internship experiences.

- Parent Participation documents the use of parent volunteers. This device allows the school to post and track mandatory parental volunteerism. Parents can access the digital posting to choose from tasks in need of doing that are listed by administrators and teachers.
- Digital Polls allow students and staff to cast secure and authenticated ballots or express opinions on school surveys.
- Evaluation Tool, Group and Individual allow teachers to create, post, and store rubrics used to evaluate student performance on projects, including student peer evaluations. Students can enter peer evaluations of projects and exhibitions as well as see their own evaluations, which they can mark as public for use as evidence on their graduation portfolio. Students can read peer evaluations submitted. Only the teacher can determine which peers submitted them. Teachers also use this tool for record keeping and to track and store student performance data.

Each teacher is also specifically trained in use of the school's digital grade book, an innovative rubric that is used to evaluate each student's project performance and overall progress in each of several workplace-related modes including work ethic and effort, subject knowledge, presentation skills, writing mechanics, collaboration, and critical-thinking skills. By understanding the workings and philosophy behind this evaluation tool, teachers become increasingly adept in PBL and committed to the school's overall approach.

The NTH Learning System™ including the grade book drives and reinforces the learning mode of the school. As well as being an instructional, curricular, assessment, and administrative tool, it is also an ongoing in-service support structure for all teachers. Just by using the system, the teachers and other staff reinforce and enhance their understanding of the school's approach to learning.

In addition to the embedded NTH Learning System™, teachers and staff also reflect on and embrace the school's mission of education reform, reinforced and modeled daily by the school and foundation leadership. The teaching staff embraces project-based, technology-enriched, and student-centered active learning and minimizes lecture, textbook-based, or other passive and teacher-centered instruction. Inspired by Principal Mark Morrison and Foundation Director of Curriculum, Paul Curtis, each teacher assumes a role that, to use Mark's metaphor, "approximates that of an athletic coach: a caring and collaborative but no-nonsense authoritative resource whose role is clearly to optimize each individual student's performance and level of achievement." Teachers are expected to know each student well and to address individual needs on a one-to-one basis. They collaborate with colleagues and value shared support and encouragement. They also discuss individual student progress and how to keep students on task. Teachers recognize the extra time and efforts that such an instructional approach entails and understand that teaching at this school would not be the ideal "fit" for every teacher.

One-on-one collaboration and shared knowledge are the primary tools of professional development. Teachers have five hours built into their weekly schedules for non-instructional co-planning activities. As with student learning, each teacher is expected to take responsibility for his or her own professional growth, but all recognize that assistance and support are no farther away than their closest colleague.

Professional development of a more structured nature is provided by an annual, five-day summer conference for all teachers, those at New Tech and at other affiliated campuses supported by the New Tech Foundation. Foundation staff, administrators, and experienced teachers facilitate the sharing and learning experiences provided. Three times a year the foundation sponsors "Meeting of the Minds," day-

long conferences for all New Tech Network schools to bring together role-alike teachers, and “Director’s Dialogues” for principals, to share best practices and plan and discuss issues of long-term impact on the New Tech movement. In addition, weekly Monday morning staff meetings and bi-weekly teacher collaboration meetings provide focus on school and professional learning topics and training. The small learning community environment of the school also facilitates regular and informal collaboration and planning. In the integrated courses, one-on-one teacher conferences and meetings happen daily and on an as-needed basis. Administrators and staff participate in professional development training as part of the district’s master in-service plan for all educators.

The emphasis is clearly on helping teachers help themselves to become comfortable and optimally effective in the school’s particular approaches to learning and instruction. Within the framework of the school’s overall philosophy and its mission, teachers are given relatively free rein to do whatever it takes to help their students succeed. Teachers are encouraged to be flexible and versatile problem solvers who can be effective without formal structures and rules and who recognize that initiative, improvisation, and experimentation are supported.

Each teacher and administrator individually and collaboratively views his or her own professional development as promoting, not just understanding, the school reinvention philosophy that underpins the New Tech Foundation movement. Teachers recognize that they are part of something special and actively position their own continuous learning and professional development to support that larger cause. Professional development is more of a belief system than a program.

12. Other

Other exemplary initiatives support the collaborative learning environment. The Parent Support Team (PST) is New Tech’s version of a parent club or organization. During 2004-05, PST collected a one-time donation of \$100 from each family to support student/school activities, college book scholarships for seniors in financial need, scholarships for some of the graduating seniors, and more. In addition, parents make a commitment to volunteer a minimum of 10 hours per year. Parents play a key role along with community experts by serving as juries for student projects. A parent task database contains the various opportunities available and much of the communication occurs online. During 2004-05, over 900 hours of parent volunteering was logged. In addition, the principal conducts regular focus groups with parents to collect anecdotal feedback.

This year, a commitment to an extensive-follow-up survey of 800 alumni was made. The leaders of the high school and New Tech Foundation firmly believe that the primary assessment of the excellence of the high school is demonstrated by what students do after high school. The follow-up study, with over 500 graduates responding to an extensive online survey, has provided impressive proof that the school is accomplishing its mission. In addition, the school features an innovative awards and recognition program for students. In addition to grade point average, students receive quarterly awards for visionary leadership, performance, teamwork, attitude, and academic improvement. There are numerous student and adult celebrations.

Twelfth graders were asked what advice would they give to other larger, comprehensive high schools. Since these students attended a comprehensive high school in grades 9 and 10, they have some experience in other settings. Their primary recommendation is that students need to be treated as individuals, not numbers. They would like to see all teachers care more and make an extra effort to get to know each student. They also believe that PBL, featuring a student and teacher team approach, is far more effective than normal high school teaching strategies. Seniors also indicated that lecturing has minimal

value. If it is used, teachers need to make it far more exciting in order to motivate students to learn. They would like to see more passion, fun, humor, and emotion from teachers. Finally, the seniors encourage teachers to stop relying so much on the textbook as the curriculum. Instead, make a real effort to teach what is relevant after high school.

Lessons Learned

There are numerous important lessons that can be replicated in other settings, including:

- *Small Makes a Difference.* Within small schools or small learning communities, the advantages of personalization, leadership autonomy, parent and community engagement, and providing rigor and relevance to the key transitions of grade 9 and 12 are noteworthy.
- *Unity of Purpose.* There is no “mission creep” at New Tech. The school has remained true to its mission, vision, and core beliefs since its development more than 10 years ago. The eight learning outcomes have remained the same.
- *12th Grade Meaning.* Students are engaged to the end of 12th grade. As a result, they are prepared for the educational and career opportunities that exist after high school.
- *Personalization and Relationships.* New Tech is a model of the comprehensive nature of a personalized educational program, which includes positive relationships.
- *Technology as a Tool.* Students and staff make little mention of technology. Technology is embedded in how students and staff do business on a daily basis. Technology is a primary tool for the school to achieve its mission but there is a clear recognition that it is only a tool.
- *Rigor and Relevance.* This is a school that has extensive rigor within a framework whereby students are able to apply their learning in a relevant manner. Because of the commitment to PBL, students experience real-life projects that show the relevance to them personally and to society.
- *Assessment.* This is an assessment, data-driven school. The use of rubrics, peer evaluation, and feedback and the entire approach to assessing student performance is authentic.
- *Commitment to Middle-Level Students.* With very limited honors and remedial courses, the commitment is to recruit and “stretch” middle-level students who are often minimally successful in the traditional comprehensive American high school. This occurs through relevant learning and personalization of the curriculum and instructional processes. Students who might be considered “non-conforming” at another high school can be extraordinarily successful in this setting.
- *Learning and Leadership Partnerships.* This is clearly a partnership-driven high school with students, staff, community, and parents engaged on a regular basis. Supported by leaders from the New Technology Foundation, New Tech monitors and adjusts its programs and practices on a regular basis based upon engagement and feedback from the learning partners.

Principal's List of Five Greatest Strengths

When asked to identify the five greatest strengths of New Tech, the principal and other members of the leadership team agreed upon the following:

1. *Curriculum.* New Tech teachers turn state-mandated content standards into engaging, academically rigorous, and integrated projects that foster active learning, higher order thinking skills, and more authentic evaluation of the standards and 21st century skills.
2. *Assessment for Learning.* The eight learning outcomes (curricular literacy/content standards, collaboration, critical thinking, oral communication, written communication, career preparation, citizenship and ethics, and technology literacy) are assessed through rubrics. All rubrics and grades for projects and courses are accessible online at all times by students and parents.
3. *Technology and the New Tech Learning System (LS).* New Tech has one-to-one student-to-computer ratio, state-of-the-art computer network, and a full array of software tools available for students and teachers to do their work. In addition, it has a unique technology platform that serves as a collaborative learning environment for students as teachers. The LS houses all projects, assessment rubrics, course calendars, and reports. It is a student-facing system, the environment through which students work. The LS uses custom built digital tools that support the project-based methodology, classroom management of a PBL environment, communication, and authentic assessment.
4. *Partnerships.* Partnerships are designed to support a changed student high school experience. New Tech realizes that no small school can do it all and has therefore developed important partnerships with the school district, county office of education, local community college (students take a minimum of four college courses), parents, and business partners (internships) to provide a broad set of experiences designed to get students thinking about life after high school.
5. *A Teaching and Learning Organization.* New Tech has, as part of its mission, developed important strategies for sharing its learnings. These strategies include connect days for incoming students and parents, study tours for educators and decision makers, training programs for new teachers entering the school, and replication work for communities seeking to build a similar school of their own.

ICLE released the case study at the Model Schools Conference in Nashville, June 26-28, 2005. The compendium of 25 model schools' case studies is available from ICLE at http://www.leadered.com/model_schools.html.