Statement of Values

The Parker Education Subcommittee examined the challenges facing the Newton Public Schools. Our schools benefit from smart, talented teachers and have a record of success at providing quality education to thousands of Newton students, but in a globally competitive environment, we cannot rest on our laurels. We need to build on the strengths of our school system and shore up our weaknesses. Our schools should be among best in the country.

To achieve this goal, we need to question every aspect of public education and to create an environment of continuous improvement, allowing us to find better and more cost-effective ways of providing world-class public education.

Our work was based on three shared values. Newton residents want our schools to:

A) Offer all of our students excellent academic instruction;
B) Provide students with an environment that is conducive to learning; and
C) Improve school management and planning practices to improve decision-making, communication, operational efficiency, and overall effectiveness.

For each of these value statements, we propose a number of specific initiatives including implementation timetables and success metrics.

A) Academic Excellence

Our schools should provide academic challenge to every student at every grade level. A rigorous, high quality academic program has been a hallmark of the Newton public school system, reflecting the commitment of our community and teachers. Going forward, we must work to ensure that our students master the skills, knowledge and expertise they need to succeed in the twenty-first century. Toward that end, we propose the following initiatives:

1) **Strengthen math and science education;**
2) **Maintain and enhance art and music offerings;**
3) **Restore elementary school foreign language instruction;**
4) **Update Career and Vocational-Technical Education for the twenty-first century with a wide array of technology-based offerings; and**
5) **Set academic goals for each student and measure improvement.**

1) Strengthening Math and Science Education

Statement of Problem and Opportunity

In the coming decades, students with strong abilities in math and science will enjoy a substantial advantage in the marketplace. According to the National Science Board[1], job growth in the science, technology, engineering, and math (STEM) fields is outpacing overall job growth by a factor of 3 to 1. In addition, a workforce with strong math and science abilities is critical to the nation's well-being. The National Mathematics Advisory Panel convened by the U.S. Department of Education noted that a population's skills in math and science are critical to leadership in "medicine and health, in technology and commerce, in navigation and exploration, in defense and finance, and in the ability to understand past failures and to forecast future developments." (p. 1)

Compared to other Massachusetts communities, fewer students in Newton are pursuing careers in STEM. The standard measure used to track performance

1 National Science Board. 2008. Science and Engineering Indicators 2008. Volumes 1 and 2. Arlington VA. National Science Foundation. NSB Report numbers 08-01, 08-01A.

in this area is the percentage of SAT test takers who select a STEM career choice in their SAT survey response. For Newton, that measure has held steady at close to 15% over the last 5 years. The state average is 20% and the Massachusetts STEM initiative target is 26%. In the specific STEM areas of mathematics, physical science, engineering and computer/information technology, there is strong evidence of a significant bias hampering the performance of our female students. Relatively few of our high school students apply to or are accepted by leading STEM colleges and universities.

Summary of Proposed Solution

We will work with our teachers and the School Administration to identify the most effective and successful tools and techniques for teaching math and science and bring those resources and approaches to Newton. Towards this end, we will participate actively in the Massachusetts Science, Technology, Engineering, and Math (STEM) initiative by creating a Newton STEM panel.

Discussion and Implementation Plan

Of critical importance in math education in elementary and middle school is to prepare students for success in algebra, which the National Mathematics Advisory Panel has identified as a "keystone" for success in math in general. The 2008 MCAS scores indicate that Newton students do relatively well, but a close look at what the scores mean indicates there is room for improvement. For example, nearly 3 in 4 of students in Grade 4 scored proficient or better on the MCAS, but "proficient" corresponds to getting 72% of the points on the exam. That means that more than one-quarter of all Newton 4th graders scored below 72% on an exam that contains material that all students are supposed to have mastered. Grade 8 scores are similar. The Grade 10 scores appear to be an improvement, with 68% of Newton students scoring in the "advanced" category. But qualifying as advanced requires getting only 75% of the points on the Grade 10 math MCAS, which means that nearly a third of Newton's 10th grade students scored below 75%.[2]

Responses to a survey[3] conducted in Newton in 2004 also indicate there is room for improvement. That survey reported that approximately 1 in 7 parents of middle school students and 1 in 4 parents of high school students pay for math tutoring outside the school system (Survey, p. 21). Only 39% of elementary school parents agreed that the curriculum's "math content is demanding enough to meet the learning needs of their children" (Survey, p. 23). Teachers likewise have expressed concern about the curriculum. For example, only 38% of elementary school teachers reported that they were satisfied with the Everyday Math curriculum (Survey, p. 7).

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2 MCAS scores are available from the Massachusetts Department of Elementary and Secondary Education at http://www.doe.mass.edu/mcas/results.html?yr=2008 (accessed October 18, 2008). The correspondence between raw test scores and MCAS scaled scores (≥ 240 = proficient and ≥ 260 = advanced) is detailed in: Massachusetts Department of Elementary and Secondary Education. 2008. Guide to the Spring 2008 MCAS Reports for Schools and Districts. Appendix A. Available at http://www.doe.mass.edu/mcas/2008/questionnaire/08Spring_InterpGuide.pdf. Accessed October 18, 2008.

3 Cross Group Analysis, Newton Public Schools Mathematics Curriculum Survey, 2004, p. 21. Prepared by Learning Innovations at WestEd. Available at http://users.rcn.com/simondolan/CrossGroup%20Survey%20Tables.pdf.

In order to identify options to improve math education in Newton, the school system should convene a panel of administrators, educators, and parents to investigate the following potential enhancements:

- Streamlining of the curriculum at the elementary and middle school levels, with an increased emphasis on ensuring fluency with math facts (e.g., addition and multiplication tables), an understanding of and fluency with standard arithmetic algorithms (e.g., long multiplication), fluency with the manipulation of arithmetic and algebraic expressions, development of a sound understanding of critical pre-algebra skills (e.g. understanding of fractions and how related operations), and a renewed emphasis on solving rich, multi-step word problems.
- Improvements to the system of ability grouping to promote meaningful progress towards the Newton public school stated goal of ensuring "that every child is challenged at his or her appropriate level" (http://www.newton.k12.ma.us/curriculum/curriculum/math.html).
- Improving the preparation of math teachers in Newton through enhanced professional development and teacher mentoring.

Although Newton reviews our math curriculum approximately once every five years, more focus in this area is needed. The Newton STEM panel would provide recommendations much more quickly than the existing process. The panel would consider changes to address revisions to the Massachusetts Math Curriculum Framework, which are scheduled to be complete at the end of 2009. The panel would also research best practices in other communities. For example, Brookline has a new engineering initiative that we might want to adopt in Newton. In addition, the panel would look at issues beyond the curriculum, such as teacher training. It would also explore partnerships with the business community. Composition of the STEM panel would include a wide range of views, including parents, teachers, students, and Newton residents with relevant expertise, such as scientists, engineers, and mathematicians.

As Mayor, Ken Parker will work to organize and appoint the Newton STEM panel, putting it in place by July 1, 2010.

2) Maintaining and Enhancing Art and Music Offerings

Statement of Problem and Opportunity

The arts are a fundamentally important part of culture, and an education without them is impoverished and leads to an impoverished society. Studying the arts should not have to be justified in terms of anything else. The arts are as important as the sciences: they are time-honored ways of learning, knowing, and expressing.[4]

Faced with increasing financial pressure and state and federal mandates, many Massachusetts cities and towns have chosen to reduce or even to eliminate arts offerings, such as painting, theater, and band. We believe that these enriching subjects are essential to a well-rounded academic experience.

Summary of Proposed Solution

We will treat the arts as core academic subjects that must be offered to all students

4 Harvard Project Zero, "The Arts and Academic Improvement: What the Evidence Shows," Translations, Winter 2001.

at all grade levels.

Discussion and Implementation Plan

Newton has long held a reputation for excellence in the arts. Our high school theater productions are renowned. Consistent, equitable support for music, theater, and art beginning in our elementary schools is necessary to maintain our excellent high school arts programs. In the 2008-2009 school year, fees were implemented for elementary school instrumental music instruction. We should gather and assess data on the effects of these fees. If participation in music instruction has decreased due to fees, we should develop a fiscally-responsible plan to remove the fees as an obstacle to participation.

We should achieve consistency in arts electives among our schools not by eliminating offerings in some schools, but by improving our offerings throughout our system. Areas of excellence, be they specific teachers, students, or programs, should be encouraged to the fullest extent possible.

Music and art are core academic subjects. Music and art teachers need professional oversight, peer-review, and time to collaborate across schools and grades to maintain our excellent program. We will strongly support building time for peer-collaboration into each teacher's weekly schedule.

> *As Mayor, Ken Parker will work with the School Committee to protect art and music from being cut during each year's budget process.*

3) Restoring Elementary School Foreign Language Instruction

Statement of Problem and Opportunity

According to the Massachusetts's Global Education Advisory Council, "The study of a second language, particularly of the world's most widely spoken languages, is increasingly important for engagement in the global marketplace and for national security. Language study must begin early and be of sufficient duration and quality in order to successfully communicate with people of other cultures and to appreciate their culture."[5]

A Newton education should include opportunities to help our students grow up to be citizens of the world. Toward this end, we should restore cuts to elementary school foreign language programs.

Summary of Proposed Solution

We will create a volunteer task force to assess options for returning foreign language instruction to elementary schools.

Discussion and Implementation Plan

Newton's school system has long been a leader in global education. We began one of the nation's first student exchange program with China. Currently our high schools have exchange programs with Mexico, Nicaragua, Spain, France, Prague, Russia, and China. Our system-wide mission statement is "To educate, prepare, and inspire all students to achieve their full potential as lifelong learners, thinkers, and productive contributors to our global

5 Global Education Advisory Council 2007-2008 Report, Massachusetts Department of Elementary and Secondary Education

society."

Foreign language instruction during the Elementary school years offers a unique opportunity to children for foreign language fluency. Difficult budget years in the past lead to the elimination of foreign language instruction in Newton Elementary schools. In our increasingly global environment, these offerings are more important than ever.

As Mayor, Ken Parker will work with the School Committee to organize and appoint a foreign language task force by July 1, 2010 with a final report due by July 1, 2011.

4) Updating Career and Vocational-Technical Education

Statement of Problem and Opportunity

Just as we are concerned with core competencies in traditional subject areas (e.g., math, science, English, and history), and the promotion of creativity through music and art offerings, we must also be concerned with the practical application of the core competencies and creativity. The entire field of real world design, creation, and maintenance are in play here. These activities develop in students a range of complementary skills that greatly increase their chances of success in a rapidly evolving world.

Summary of Proposed Solution

We will offer middle and high school students a wide range of career and technical-vocational course offerings, emphasizing technology-based offerings that will provide our students with the skills they need to compete and to succeed in a global marketplace.

Discussion and Implementation Plan

This vital area deserves our strong and creative support. The basic skills in math, science, and the arts supported by communication skills built on literacy find life here in activities that include:

- Design and visual communication, including CAD (Computer Aided Design);
- Technical and engineering understanding and maintenance of machinery from automobiles to computers and computer networking;
- Designing and building mechanical/electrical/fluid system structures such as small buildings or robots;
- Human development studies, including the developing child; and
- Culinary arts.

This area will surely see new ideas developed as our students acquire a much more complex and sophisticated set of real world competencies than they may have in the past. Think of Leonardo da Vinci: scientist, mathematician, engineer, inventor, anatomist, painter, sculptor, architect, botanist, musician and writer. That is the vision for this area. Mathematics infuses engineering. Chemistry, physics and biology infuse culinary arts. Human visual perception infuses design and visual communication.

In order to ensure continued vitality in this area, we will ask the school administrators to conduct a systematic periodic review of our voc-tech offerings. The purpose of the review will be to evaluate how well the system's offerings are aligned with current and projected technologies and job market demands. Based on the findings of this group, we will make appropriate ad-

justments to our mix of voc-tech offerings.

As Mayor, Ken Parker will work with the School Committee to set up a voc-tech review process with a goal of issuing annual reports on the state of voc-tech in Newton starting in 2011.

5) Setting Academic Goals and Assessing Student Improvement

Statement of Problem and Opportunity

Every student has different academic strengths and weaknesses and individuals learn in different ways. Uniform treatment of students can result in some falling between the cracks and failing to progress in important subject areas. We should work with every student to set academic goals and to assess their progress in meeting those goals.

Summary of Proposed Solution

Every year, academic goals will be established for each student in the Newton Public Schools and parents will be kept apprised of progress toward achieving those goals.

Discussion and Implementation Plan

Newton currently has a highly regarded reading specialist program to help students whose reading skills are below grade level to catch up with their peers. This approach to goal-setting should be expanded to all subject areas. These goals should be differentiated for each student to provide them with challenge in every subject area. For example, a slow reader who is very strong in math, might have an English goal of improving reading comprehension, but might have a math goal of tackling advanced, above grade-level materials. By a similar token, a student with strong writing skills and weaker math skills might have educational goals to improve their math skills to grade level, but to do advanced writing projects.

The goal of this individualized approach is to ensure that every student realizes his or her full potential in every subject area. While students have natural strengths and weaknesses, it is not enough to accept underperformance in one area as a natural consequence of success in another.

These academic goals and objectives for each student should be mapped out over the course of a school year with measurable benchmarks at regular intervals. Teachers should provide students and parents' feedback regarding progress towards achieving these benchmarks. In cases where benchmarks are not being achieved, supplemental assignments, mentoring, and other educational tools should be used to improve student performance.

Newton teachers do much of this on an informal basis, but structuring the process of goal-setting and measurement can provide institutional support for these efforts.

As Mayor, Ken Parker will work with the School Committee and school administrators to formalize a system of individualized student goal-setting and progress-assessment in time for trial implementation during the 2010-11 academic year and full implementation the following school year.

B) Conducive Learning Environment

One of the great strengths of Newton has been the quality of our neighborhood

schools. To ensure that we realize the great potential of our children, not only do we need to provide them a strong academic curriculum but also we must pay attention to the environment in which their day unfolds. That environment includes teachers, classrooms, schools and the organization of their day from the moment they arrive at school in the morning through after school programs.

Essential to this positive learning environment are:

- **First rate classroom teachers** keeping pace with best educational practices;
- **Small class sizes** to ensure that each student receives excellent instruction;
- **Up-to-date classroom materials and equipment** to provide high quality information and communications to maximize teacher and student productivity;
- **Well-maintained school buildings** with sufficient flexibility to support evolving programs and student populations; and
- **A balanced, modern school day** to provide the right mix of academic, physical & social development and to ensure smooth and productive integration with end of day student activities.

In order to provide every Newton student a learning environment consistent with these values, we propose the following initiatives:

1) **Improve the classroom experience;**
2) **Improve school building management; and**
3) **Reinvent the school day.**

For more discussion of Expanded Learning Time (ELT) initiatives, please visit **www.Mass2020.org**.

1) Improving the Classroom Experience

Statement of Problem and Opportunity

The most valuable asset of the Newton Public Schools is our talented and dedicated teaching staff. In educating Newton students, our teachers manage to overcome many obstacles– from classrooms with wildly fluctuating temperatures to outdated textbooks to disruptive students. By supporting the efforts of our teachers, we can improve the classroom experience for all Newton students.

Summary of Proposed Solution

To improve the classroom experience for all Newton students, Newton should:

i) Provide teachers with the support they need, including training, tools, materials, and equipment;
ii) Involve teachers in the curriculum development process;
iii) Limit class sizes;
iv) Bring relevant technology to the classroom; and
v) Address classroom heath and quality of life issues.

Discussion and Implementation Plan

i) Supporting Teachers with Training and Tools

Nothing is more important than the front line classroom teachers with whom our children spend most of their school day. All too often our teachers are undermined by external factors that ignore the challenges they face in the classroom. For example, teachers recognize that a one-size-fits-all approach to teaching a given subject does not serve students who learn in different ways. Sometimes teachers find

it helpful to use supplemental materials, such as different text books, to help these students learn. Teachers should be given more discretion regarding which tools will help them best to serve their students and should be provided with adequate resources to bring necessary supplies, equipment, and other materials to the classroom. Teachers should no longer have to buy materials or equipment out of their own pockets.

By a similar token, our teachers need support to improve their skills and to keep pace with changes in the educational environment with appropriate and continuous support for professional development. Such professional development includes close collaboration among teachers at the same school, as well as with teachers at other schools in our system and beyond, especially with the increasing availability of remote collaboration tools. Teacher collaboration and training should be scheduled so as not to interfere with classroom instruction. Exceptional teachers should be rewarded for their performance with stipends to attend professional development conferences and other training events.

ii) Involving Teachers in the Curriculum Development Process

In most service-based organizations, a top-down management model usually fails to incorporate feedback from the people who are providing services on the front lines. Involving service professionals in management decisions helps everyone to focus on objectives and builds a feedback loop into the decision-making process. Education is no exception to this paradigm. We should take advantage of the experience embodied in the teaching staff by relaxing rigid requirements that they always use fixed curricula and instructional materials for all of their students. Our teachers should play a role in the curriculum development process, offering their insights as to which changes would be useful and productive. At the same time, curriculum coordinators should spend some of their time teaching, so that their knowledge of curriculum theory is complemented by practical classroom experience. This interactive process will both help to focus our curricula on strategies that support students' academic success, and will also improve teachers' commitment to those curriculum frameworks.

iii) Limiting Effective Class Sizes

Class size is one of the most important factors influencing the extent to which each student receives sufficient attention. Past discussions of this issue in Newton have focused on average class size at each grade level, a statistic that does not highlight the existence of some very large classes. We propose to change the approach to class size management by establishing an acceptable range for each grade level and re-allocating resources as needed to make sure that no classrooms fall outside this range, since one lost year can have a lasting negative impact on a child's education. We also propose to make use of parent volunteers, teachers' aides, graduate student assistants, retired volunteers, and other available resources to provide additional individual attention to students, lowering the burden on teachers and reducing the effective class size for all of our students, who will have more quality individual attention.

iv) Bringing Technology to the Classroom

In this rapidly changing world, we know that technology plays an increasingly important role in our continuing success at all levels. Traditional tools such as chalk and blackboards, pencils and paper, books and libraries have served us well, but

now have powerful digital counterparts. Reading, writing and arithmetic remain core educational elements, but the instructional material and teacher collaboration tools are rapidly going digital. Our investment in technology for each classroom and each school needs careful attention to ensure that our children and teachers are well served and well prepared across the school system.

Our education technology strategy should be focused in three areas: improving students' comfort and skill in using computer applications (e.g. Internet research, creative design software, etc.), providing students an understanding of how computers are programmed, and using technology to teach traditional subjects. All too often, we focus our efforts on the first objective, not putting adequate thought and preparation into the others. For example, it is not enough to provide computers in the classroom simply so students can learn about their use. We should also be taking advantage of computer programs that help students to learn foreign languages, algebra, and other subject material. We should hold our technology to the same performance standard to which we hold our professional staff: is it producing the measurable results we seek?

v) Address Classroom Health and Quality of Life Issues

Teaching a classroom of students with diverse abilities and interests is difficult enough without having to cope with threats to the health and comfort of students and faculty, such as poor air quality and classrooms that are very cold or hot. Each of our schools should establish and meet strict criteria for its physical environment. Classroom temperatures should be in an acceptable range, air filters in HVAC systems should regularly be cleaned or replaced, as needed. Rugs should either be removed or kept dry and clean to avoid the growth of fungus and other allergens. These issues should all be addressed under new school building management practices, as discussed in Part (2) of this section, below.

Proper nourishment is another prerequisite for learning. We should make improvements to our school lunch program to offer fresh, nutritious choices to all our students, using organically-grown and/or locally-sourced ingredients where feasible.

As Mayor, Ken Parker will work with the School Committee to address these educational environment issues, starting in 2010 with a system-wide teacher survey.

2) Improving School Building Management

Statement of Problem and Opportunity

The maintenance of our twenty-one school buildings has been neglected for years and, until recently, little attention has been paid to the long-term space needs of our school system.

Summary of Proposed Solution

To make sure that our school buildings meet the needs of students now and for future generations, Newton should:

i) Improve building maintenance and
ii) Develop a cost-effective facilities plan that provides adequate space and flexibility to meet our future needs.

Discussion and Implementation Plan

i) Improve Building Maintenance

Our plan to develop a citywide facilities maintenance plan is discussed in detail in the Finance & Management section of this document. There are two additional points specific to the discussion of school building maintenance. First, the presence of students in the schools presents a unique maintenance challenge. It is essential that our school building maintenance program not disrupt teaching and learning during the school day. That means that while some maintenance activity can take place in common areas of the school during the school day, most school maintenance staff should work a later shift that begins as students depart the building or, in some cases, at night. Well thought-out resource allocation will allow us to stay current with preventive maintenance of our schools and address problems in a timely way without impacting the school day.

The other issue affecting school maintenance planning is that each school's principal is responsible for his or her building's overall function. We should take advantage of this built-in asset by empowering principals to manage the routine maintenance of their buildings. Offering principals some local management control over maintenance issues would not delegate responsibility to them for major maintenance items (e.g., the replacement of a boiler), but it would give them the authority and resources needed to address in a timely manner less substantial but much more frequent issues (e.g., repair of a leaking faucet). By providing each principal with some discretionary maintenance resources, many small problems will be addressed quickly, preventing them from turning into big problems.

ii) Develop a Cost-Effective, Long-Term Facilities Plan

Managing our twenty-one school buildings requires full lifecycle management. That includes taking care of regular maintenance, making sure that new demands (such as changes in the student population) are met as they arise, and making sure each school is fully utilized as a school system asset. Each building should play a clear role in a comprehensive plan for school system facilities that covers both short-term and long-term needs, including the renovation or replacements of school buildings.

We currently have a School Committee approved Long Range Facilities Plan that calls for the replacement of four elementary school buildings: Angier, Cabot, Zervas and Ward. The plan could cost more than $100 million and rests on a central assumption that elementary school building size should be allowed to rise as high as 500 students. However, there is a serious controversy about the optimal size for elementary schools, with advice coming from some quarters that 360-400 is a sounder number and experiences with other school systems favoring even 300 as the optimal size. Studies have shown smaller schools have higher student attendance rates, higher graduation rates, and higher parent participation rates. Teachers have also stated they feel more empowered in smaller schools.[6]

In addition, the sentiment of the Newton community expressed at a recent forum is that we should preserve Newton's system of neighborhood-based elementary schools. This sentiment appears to favor smaller rather than larger schools. It is critical to resolve this important question in an open manner with strong community involvement before committing to a specific building program, as the community's approval will be critical to successful stewardship of our school system assets.

As part of our effort to meet the individual needs of every student, we should be open to innovative approaches to the creation of learning spaces. That means designing spaces that are informed by changes in teaching techniques and technology. It may also mean adapting existing buildings for educational use.

Turning to the state of individual schools, it is clear that we need to make substantial improvements especially in the maintenance area. Support for each school also needs to be matched to its needs. A balance should be struck to ensure that each school has sufficient local control and has a sound planning process in place to provide good intelligence for system wide action.

In pursuit of these goals, we need to make more effective use of school councils (see Management and Planning section below).

On a more day-to-day basis, the response time for ordinary building maintenance items has increased to months, calling into question the effectiveness of the current maintenance system. This system needs review and adjustment to improve its responsiveness, effectiveness, and customer service. More pervasive use of web technology would allow the maintenance system to be more accessible to the community so that parents, students, and teachers can provide useful feedback regarding its effectiveness.

It is also widely acknowledged that school building maintenance has been chronically under-funded, a practice that results in much higher school building costs in the long term. The way to address this problem is to have budget priorities that support the most cost effective maintenance approach.

6 Brian Crosby, Smart Kids, Bad Schools, Thomas Dunne Books, New York, 2006, p. 15.

In summary, the key priorities here are:

- Full lifecycle school building management including long and short range facility plans;
- Identifying the optimal size for our neighborhood schools;
- Strengthening school councils to optimize administration, teacher, parent and community input;
- Systematic creation and use of School Improvement Plans generated by school councils for effective system-wide planning and budget action; and
- Effective employment of web technology to track all aspects of school building management

As Mayor, Ken Parker will increase maintenance funding in the Fiscal Year 2011 operating budget and will work with the School Committee to implement other building management reforms at that time. Care will be taken not to pit maintenance and repair needs against space needs in the capital planning process.

3) Reinventing the School Day

Statement of Problem and Opportunity

The Newton Public Schools operate on a schedule that evolved based on the needs of an agrarian society and that has not been significantly updated in centuries, let alone to accommodate recent changes in work patterns and to take advantage of modern technology. By re-examining our assumptions about when school should be in session and what educational activities can take place outside of the formal school day, we can make better use of education resources and help all of our students to succeed.

Innovation Example: Expanded Learning Time in Boston

The Massachusetts Expanded Learning Time Initiative is a partnership between Massachusetts 2020 the Massachusetts Department of Education, and Boston public schools is currently studying the effect of expanded learning time. The initiative started during of 2006-2007 school year. After the first year of expanded learning time there was significant improvement in academic achievement compared to prior to the start of the study. While the participating schools were under-performing schools, they achieved a 44% and 39% increase in the percentage of students achieving proficiency in Math and English respectively. As part of the agreement with the Boston teachers union to allow the initiative permanent experienced teacher's participation was voluntary. While in the initial year only about 50% of teachers participated in the initiative the first year that number jumped up to 90% participation in the second year. The initiative is currently being expand to provide information about suburban and rural schools with an additional 67 schools receiving grants to join the program in the 2009-2010 school year.

Summary of Proposed Solution

Newton should work with other communities to create a coalition to assess best practices in Expanded Learning Time (ELT) in Massachusetts and to produce a plan to take advantage of ELT in Newton.

Discussion and Implementation Plan

"Classroom teachers are consistently asked to do more in the same or less time. In fact, the school day is still markedly shorter than the work day, leaving many students unsupervised and unengaged in the afternoons. I will fund extended day initiatives, including additional compensation to teachers and other professionals, to enable more learning time for our kids."

– Governor Deval Patrick

"How can children learn what they need to succeed in the global information age when schools still operate on schedules designed for the industrial age?"

– Senator Edward M. Kennedy

As evidenced by these quotations, there is a serious endeavor underway in Massachusetts to reinvent the school day. Chris Gabrieli is a prime mover in this effort and has written a book with Warren Goldstein: *Time to Learn*, which argues the case for reinvention. See also: http://www.mass2020.org/index.html which describes the Gabrieli Massachusetts 2020 initiative designed to support expanded learning time (ELT) and after-school programs.

The organization of the school day, originally designed to serve the needs of an agrarian society, is finally drawing attention as an opportunity not only to modernize our approach but also to recognize that the safety net, which used to be provided by a parent at home at the end of the school day, has fallen away so that the time between the end of school and parents' return from work has now become a time where school-based influence and management is vital.

We have an opportunity to ensure that each school day is balanced with enough time to cover the curriculum and the right mix of work and play and social interaction. The issue of ELT and best managing our school assets in that context is a vital one. The corollary to this is that we also have an opportunity to ensure that after-school programs throughout the city integrate well with this new approach.

Newton has the opportunity to work with other interested Massachusetts communities to study the school day and to research best practices in ELT. In addition to forming this coalition to conduct research and share information, we should form a local task force to pursue implementation of ELT measures in Newton. This ELT task force should be charged with producing a plan to assess Newton's ELT options, including a cost-benefit analysis of each of the proposed measures to expand learning time.

We should also form an After-School Committee, comprised of parents, students, community representatives, school representatives and aftercare providers to evaluate the varied after-school programs in Newton with the goal of offering high quality after-school educational experiences to all our students. This committee would be charged with providing the School Committee an annual report assessing each school's aftercare offerings.

As Mayor, Ken Parker will work with the School Committee to organize and appoint both the ELT Task Force and After-School Committee by January 1, 2012.

C) Management and Planning

The greatest challenge facing the Newton School System is the same challenge that faces our other city services: making the most of limited resources. We need to foster an environment of collaboration, accountability, and openness to new ideas to be able to provide superior educational services at affordable costs. Only by putting Newton back on sound financial footing can we keep the promise to the next generation of Newton students that they will receive an education that is second to none.

In order to get the most from our available resources, we propose five initiatives:

1) **Foster a culture of collaboration and continuous improvement;**
2) **Set clear goals and measure results;**
3) **Improve communication and teamwork;**
4) **Make use of available community resources; and**
5) **Remove obstacles to success and achieve operating efficiency.**

1) Fostering a Culture of Collaboration and Continuous Improvement

Statement of Problem and Opportunity

Every day, Newton teachers are developing innovative approaches to educating their students – from using new technology to explaining an important point in a different way. The same thing is going on in other schools around Massachusetts and the nation. We should make sure our teachers see it as part of their job to talk with colleagues in Newton and beyond, sharing ideas and learning from each other's experience.

Summary of Proposed Solution

We should make better use of School Councils, School Improvement Plans, and inter-municipal cooperation to improve public education in Newton.

Discussion and Implementation Plan

The opinions of our teachers, parents, neighbors and students are an important measure of the effectiveness of our schools. The valuable insights from these groups should be incorporated into the school system's goals regarding various aspects of education, including class size, anti-bullying, facilities repair, coordination of SPED services, and the math curriculum. The School Improvement Plan created by each School Council provides a tool to accomplish this goal.

Individual schools are required by law to have a School Council, an advisory body made up of teachers, parents and community representatives. Each School Council is co-chaired by the school's principal. School Councils are required to create an annual School Improvement Plan.

According to the Massachusetts Department of Education, "The school council is an advisory body that works together to provide ideas and opinions to help the principal. In this context, council members assist by:

- Providing information and recommendations relevant to the educational needs of students
- Reading and discussing the budget with the principal to understand the implications for goals and activities in the school improvement plan

- Participating actively in the process of analysis and planning that results in the identification of annual goals, activities, outcomes, and resources that will lead to school improvement."[7]

Each year the School Improvement Plan is required to be sent to and reviewed by the school district's Superintendent. We would argue that for School Improvement Plans to be truly effective they should be also reviewed by the School Committee. Individual School Improvement Plans should both inform and reflect the Newton Public Schools' system-wide goals.

7 Massachusetts School Council Handbook, Massachusetts Department of Education, June 2001, p.13.

"Schools, teachers, and districts are required to align their plans strategically as a means of coordinating planning for improvement and ultimately increased student achievement. For example, the school council statute says that the school improvement plan shall be consistent with the educational policies of the district as well as with state goals and standards. The Regulations on Recertification require each educator to have a professional development plan that is aligned with the school and district improvement plan. When all of these plans are goals are well conceived and in harmony with each other, the school community as a whole can be more effective in improv-

ing student achievement."[8]

As Mayor, Ken Parker will work with School Department officials to make sure that each school's School Improvement Plan is reviewed annually and that its recommendations and needs are incorporated into the discussion on our Districts' system-wide Goals and the annual budget process. In addition, during his first year as mayor, he will arrange to meet with individual School Councils and learn first hand of the challenges and opportunities at their school. We will also share information and resources with other communities, as discussed in the Finance & Management section.

2) Setting Clear Goals and Measuring Results

Statement of Problem and Opportunity

As part of the effort to build on the strengths and shore up the weaknesses of the Newton Public Schools, it is important to track progress. However, there is no consensus regarding what measures of student performance are most meaningful.

Summary of Proposed Solution

By building a consensus among educators and policymakers regarding which measures of educational success are most meaningful, we will be able to track progress and allocate resources more effectively and efficiently to achieve our system-wide goals.

Discussion and Implementation Plan

Educators know that the appropriate use of data can measure student progress, evaluate program and instructional effectiveness, guide curriculum development and resource allocation, promote accountability and, most importantly, ensure that every child learns.[9]

Readily available quantitative indicators regarding the performance of the Newton Public Schools are mixed. While SAT scores remain strong, MCAS scores have declined relative to statewide averages. Newton's high schools have been in a slow, steady decline in Newsweek's ranking of Top U.S. Public High Schools, for example Newton South High School has declined from a Newsweek ranking of 286 in 2002 to a ranking of 912 in 2009. Newsweek's rankings are based on the number of students who successfully complete an Advanced Placement (AP) exam, International Baccalaureate (IB) exam, or Cambridge test. The ranking may not be an important indicator of overall educational performance, especially for students not planning on attending a four year college. Nonetheless, because there is a strong correlation between a student's successful completion of an AP, IB, or Cambridge test in high school and a student's successful completion of college in four years, our high schools' decline in Newsweek's ranking should not be dismissed out of hand.

We need to assess the data and our schools to see whether or not this external ranking decline matters. We must ask if this decline is symptomatic of a relative weakening of our educational product or are our schools being measured using inappropriate indicators.

For each educational goal, we should

8 ibid., p. 29

9 Paul D. Houston, Ph.D., Executive Director, American Association of School Administrators, Using Data to Improve Schools: What Works, PDF, June 2002, p. iii.

develop metrics that allow us to assess progress. The key to any reasonable measurement system is to evaluate overall performance in as fair and consistent a way as possible. These metrics should serve as clear indications of how our school system is achieving the objectives we set for it. These measures should be determined through a conversation with Newton teachers, students, administrators, School Committee members, and the parent community.

Since our goal is to provide academic challenge to all students by providing them with the tools they need to succeed, we cannot limit our measures to one segment of the student population. For this reason, AP or MCAS scores alone are not an adequate measure of the performance of our high schools, let alone our overall school system. Rather, we should adopt measures that show us whether students are mastering material better than they did the year before and achieving their academic objectives and potential.

Newton should examine educational performance measurement models developed elsewhere and develop a measurement model that draws on the best of what has been pioneered. Our goal should be to develop a system of quantitative report cards for each of our schools, as well as for subject areas and grade levels. For example, we should be able to rate our success at teaching third-grade math and compare that grade to our performance during the previous school year.

Once Newton teachers, administrators, School Councils, and School Committee members have agreed to these system-wide educational performance measures, we should set annual goals for improvement and track our performance. Just as we grade our students, we should grade ourselves with respect to the quality of education we are providing.

As Mayor, Ken Parker will work with the School Committee to develop this system of goal setting and performance measurement with a goal of implementing this EduStat system in time for the 2011-12 academic year.

3) Improving Communication and Teamwork

Statement of Problem and Opportunity

Providing an excellent education to every student in the Newton Public Schools will require us to overcome some of the obstacles to cooperation and collaboration that confront organizations of all sizes. Turf battles, professional jealousy, and mistrust can stand in the way of the kind of cooperation and communication needed to succeed in the face of the enormous challenges facing our schools. To achieve the ambitious goals we set for our schools will require everyone to pull in the same direction.

Summary of Proposed Solution

We must develop a culture of cooperation and collaboration in the Newton Public Schools, in which Newton teachers benefit from the innovations and experience of their colleagues in other classrooms, other schools, and other communities. To achieve this level of teamwork will require institutional support from principals, school administrators, parents, city leaders, and the community at large. We will recognize and acknowledge collaborative efforts and expedite dispute resolution.

Discussion and Implementation Plan

> "Turf battles happen everywhere - in hospitals, government agencies, associations, school systems and private industry. Silos can be created around an individual, a group, a division, a function, or even a product line. Wherever it's found, silo mentality becomes synonymous with power struggles, lack of cooperation, and loss of productivity. And always, the customer/client/patient is the ultimate loser. " [10]

Most Newton teachers regularly reach out to colleagues and avail themselves of professional development opportunities to learn what is working in other classrooms around Newton and beyond. Unfortunately, teachers seeking to take advantage of this knowledge sometimes encounter institutional resistance. For example, a math teacher who notices that some of her/his students are having difficulty grasping a new concept may be aware of a similar situation elsewhere in which an alternative text book was used to help the struggling students. In a silo-dominated environment, that teacher would have to overcome considerable institutional obstacles to get approval for the acquisition and use of that text book.

Under a cooperative model, there would be an expedited review and approval process for acquiring supplemental materials whose effectiveness has been demonstrated elsewhere, as well as local (school-based) funds so that the purchase could be made in a timely way. With a specific problem identified that the new text book was designed to address, there would then be a simple evaluation process regarding its effectiveness. If it was a success, it would then be made available to other Newton teachers, as needed.

In this manner, resources are allocated to encourage cooperation, collaboration, and innovation. New tools and techniques are quickly explored and the successful ones are made available more broadly.

As Mayor, Ken Parker will work with the School Committee to develop and implement an annual educational self-evaluation process that identifies obstacles to cooperation and collaboration and develop strategies to eliminate them. He will also work with the School Committee to allocate resources during the annual budget process for teachers to pilot the use of tools and techniques learned as a result of collaborative efforts.

4) Making Use of Community Resources

Statement of Problem and Opportunity

Many Newton residents, including parents and retirees, are willing and able to volunteer their time and skills to the Newton Public Schools. We also have public institutions, colleges, businesses, and other community resources that could greatly benefit the Newton Public Schools. We can more systematically take advantage of these resources by developing a plan to identify and to make use of them.

Summary of Proposed Solution

As part of a coordinated effort to take advantage of available community resources, Newton should:

i) provide parents with structured opportunities to contribute to their children's schools;
ii) develop a guest lecturer program;
iii) expand mentoring programs;

10 Carol Kinseye Goman, PhD, "Tearing Down Business "Silos", The Sideroad, Blue Boulder Internet Publishing, 2007

iv) work with area colleges; and
v) create internship and community service programs in cooperation with Newton businesses and institutions.

Discussion and Implementation Plan

i) Providing Opportunities for Parental Participation

Parents play many roles in their children's education. Parents advocate for their children's needs, tutor their children, encourage their success, and monitor their progress, working with teachers to make sure challenges are being provided and goals are being achieved. Parents also work with teachers and principals to organize special events, raise funds, and advocate for the general needs of their children's schools. Parents are highly motivated to improve the learning environment in their children's schools. Despite being busy with work and other responsibilities, many parents are willing to volunteer their time and effort to address school needs.

Parents can serve as guest lecturers, can organize and lead enrichment activities, and can offer mentoring to students in need of academic help. This type of involvement by parents in the overall programming of the school can be encouraged and supported by structuring opportunities with clear time-commitments and expectations. For example, it is much more likely that a busy parent would agree to lead a student band, math club, robotics team, or other enrichment activity if the hours of the program were regular and consistent and if the program had the full support of teachers and administrators.

Rather than responding to budget pressure by reducing or eliminating enrichment programs, school administrators should ask parents whether they can volunteer to lead these types of activities and programs. These efforts can also be part of the re-examination of the school day, discussed in Part B of this section on pages 77-84.

ii) Developing a Guest Lecturer Program

Challenging material can often be clarified when described in a different way. Students can be excited and motivated by an inspiring speaker who relates academic subject matter to solving problems in the real world. Unfortunately, time pressure, standardized testing requirements, and curriculum structures can limit available classroom time for guest lecturers. Newton should seek to expand what is currently offered by our Creative Arts and Sciences program by developing a guest lecturer program.

For example, Newton is home to thousands of scientists, mathematicians, doctors, engineers, architects, accountants, and other professionals who use math in their work every day. If we were to create a structured math guest lecturer program that was integrated into the curriculum at every grade level, we could invite regular participation from members of these professions. We could have a geometry unit taught at the appropriate grade level by architects and an algebra guest lecture offered by accountants. With clear time commitments and program requirements, we could then invite participation from qualified Newton residents.

Guest lecturer programs with multiple units that require longer time commitments may be of interest to retired Newton residents.

iii) Expanding Mentoring Programs

Parents, retirees, and other volunteers interested in offering mentoring and tutoring to Newton students should be invited to participate in a structured program that

matches them with students whose needs correspond to their expertise. The program should provide these mentors with information on relevant curriculum objectives and student goals. Mentors would be encouraged to sit in on a class or two to see how material is being presented and could also provide feedback to teachers regarding which points are in need of clarification and re-enforcement.

Our mentoring program should not be considered a substitute for small class sizes, but in cases where class sizes are at the higher end of our acceptable range, mentors can help students having trouble getting their questions answered in class. Mentoring is also valuable for students who learn at a different pace or have difficulty asking questions in class.

iv) Working with Area Colleges

There are two valuable types of relationships that the Newton Schools can develop with area colleges. First, we can create an educational internship program that asks a student to assist a teacher on a set schedule over the course of a semester or entire school year in exchange for course credit. Second, we should work with area colleges to create an advanced studies program for our high school students that allow them to take college courses in areas where they have exhausted our high school-level offerings.

v) Creating Internship and Community Service Programs

The flip side of bringing educational interns from area colleges to Newton schools is working with local businesses and other institutions to offer our high school students internships with them. Interns could help to manage a food pantry, run an office, or develop a new program at a community center. There are many institutions in our community that would welcome the opportunity to have a student intern helping them for a semester. For example, an intern could work with Angino Farm to help with community outreach.

A well-run internship program offers valuable life experience, teaches new skills, and provides students with a way to give back to the community.

As Mayor, Ken Parker will work with the School Committee to develop a student internship program with a goal of having the program in place in time for the 2010-11 academic year.

5) Removing Obstacles to Success and Achieving Operating Efficiency

Statement of Problem and Opportunity

All too often, teachers know what their students need and work hard to provide it, but are stymied by a lack of resources and other obstacles to success. At the same time, resources are not being used as efficiently and effectively as they should in cases of poor program management and redundancy.

Summary of Proposed Solution

Principals and teachers should be provided with school-based resources that can be used to address immediate needs. Similarly, bureaucratic and procedural obstacles to local management should be minimized. Administrative redundancies should be identified and eliminated.

Discussion and Implementation Plan

Fixing a leaky faucet should not require a burdensome requisition process. The same principle applies to the acquisition and use of educational technology. Just as principals should be given access to the resources they need to get repairs completed in a timely manner, they should also be afforded flexibility with respect to academic support resources. For example, if a teacher makes the case that some of his or her students would benefit from having access to a supplemental text or an educational computer program, the principal should have the flexibility to meet that request.

This school-based delegation of authority should contain high standards of accountability. By integrating financial reporting systems, school-based requisitions would be entered directly into the central procurement database, facilitating efforts to track expenditures and to measure effectiveness of new initiatives. Our efforts to support the creativity and innovation of teachers and principals will be coupled with results-tracking measures that help us to determine if an innovation should be replicated in other schools or discontinued altogether.

Other important components of school management reform include improving service delivery, lowering costs, and removing redundancies. The Finance & Management section of our ***Blueprint for Newton's Future*** goes into greater detail on these and other initiatives that will control costs and improve services in the Newton Public Schools.

> *As mayor, Ken Parker will work with the School Committee to improve School Department operating efficiency, including by hiring a new Superintendent with strong management skills.*

Notes