EXHIBIT C-2
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Report of Findings and Recommendations
Belmont Public Schools
Instructional Modeling and Innovation Group
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At no time since the Massachusetts Education Reform Act of 1993 have we experienced so many changes in curriculum, instruction, and assessment in the Belmont Public Schools. Federal and state mandates have combined with the district's Strategic Plan Goals to result in significant changes to what we teach, how we teach it, and how we know that students are learning. This report will provide information on the current state of instruction and innovation in the Belmont Public Schools as well as projected trends and needs for the next five years.

Curriculum

In the Belmont Public Schools, as with all schools in the Commonwealth, all subjects derive their curriculum from the state standards, known as the Massachusetts Curriculum Frameworks, found on the Department of Elementary and Secondary Education web site at this address: http://www.doe.mass.edu/frameworks/current.html. Recent changes at the state and national level have resulted in changes to the BPS curricula for English Language Arts, Mathematics, Science, Social Studies, and English as a Second Language.

In 2011, new standards were approved for two subjects, English Language Arts (ELA) and Literacy and Mathematics. Both of these Frameworks incorporate the standards of the national Common Core State Standards, and have resulted in significant changes to the curricula of these two subjects. In addition, we have made changes to the curricula for science and social studies to address standards around reading, writing, and research in these subjects. District curriculum leaders have led teachers in the work of reviewing, revising, and developing curriculum documents in all grades and subjects, K-12. As a result of this analysis, a new math program, Envision (Pearson, 2012), was selected and implemented in grades K through 5 in September 2013. Envision more closely aligns with the new math standards, which we anticipate will result in a stronger foundation in mathematical concepts as well as problem solving skills.

Critical to the success of this work is the professional development for and ongoing supervision and coaching of teachers to ensure that the written curriculum is understood and deeply embedded at the level of unit and daily lesson planning. Belmont benefits from the expertise of its curriculum specialists, as is evidenced by students' strong performance on state assessments that measure mastery of the ELA, mathematics, and science standards.

Another significant change to curriculum is in the area of English language development for students who do not speak English as their first language, or English language learners (ELLs). In 2010 the Massachusetts Board of Elementary and Secondary Education adopted the standards developed by a multi-state consortium, World Class Instructional Design and Assessment (WIDA), which includes standards to ensure that English language learners can access the content of all subjects in classes with native English-speaking students. ELL teachers, working under the supervision of the ELL Director, have developed new curricula for students of different proficiency levels, while simultaneously providing professional development to all teachers on WIDA standards and requirements to differentiate instruction for ELLs to ensure that they have equal access to learning the content of each subject even while they are in the process of learning English. A second component of this state mandate is that all core academic teachers, and all administrators who supervise them, must obtain the Sheltered English Immersion (SEI)

endorsement on their educator licenses to verify that they have the skills and knowledge to provide this instruction. Belmont began offering the 45-hour graduate course to earn the SEI endorsement in October 2013, and will continue offering the course for the next two years, in accordance with the plan laid out by the Department of Elementary and Secondary Education. Given the marked increase in ELL enrollment experienced this year, along with the federal and state requirement that all ELLs be taught by an SEI trained teacher by July 2016, we anticipate that we will need to continue providing access to the graduate course beyond what the state has allocated and funded.

In October 2013 the state announced a delay in the process of revising the Science/Technology Engineering (STE) Curriculum Framework, citing the many initiatives currently in process as the reason for prolonging the review and adoption of the proposed draft until at least the 2015-16 school year. District-led initiatives in the area of science are ongoing in spite of this delay at the state level. The aforementioned work to incorporate reading and writing standards in science has resulted in revisions to some of the units of the science curriculum for grades K-5. Additional science units will be revised over the next few years. Technology engineering and robotics are two areas that require increased time and investment in the next five years. New courses have been implemented at Belmont High School, and an additional course is proposed for 2014-15. During the next five years, there will be a continuing focus on science, technology engineering, and mathematics (STEM) curriculum in grades K-8 with a focus on incorporating foundational learning opportunities.

Beyond the mandates and changes to state curriculum frameworks, Belmont continues to utilize its Curriculum Review Cycle and the structure of standing Curriculum Steering Committees (consisting of teachers, administrators, and members of the Belmont community) to support an ongoing cycle of program review and the development of seven-year plans of action. In the next five years, we anticipate that curriculum proposals will be developed in the areas of foreign language and library science, particularly in the elementary (K-5) grades.

Belmont has made significant progress in establishing the structures and personnel to continue to provide the high quality and rigorous curriculum that students need to be successful and productive citizens. Ongoing funding is needed to maintain current structures as well as to provide updated materials and resources to support changes to curriculum, including exploring online or digital resources. We anticipate an increased need for time within the school day, after school, and during the summer, for teachers and district leaders to develop the knowledge and understanding of the curriculum in order to successfully implement it consistently in all schools and grades. Curriculum, once written, is not permanent. It is a fluid document that is constantly reviewed and adjusted as teachers implement and find ways to improve it. In the coming years, we anticipate an increased reliance on web-based tools to store, update, and provide teachers immediate access to the curriculum documents.

Assessment

Assessment is the means by which we measure students' attainment of the curriculum standards, but more importantly it is the means to monitor ongoing progress, and to improve instruction to

ensure that all students are making progress and meeting the ultimate goal of proficiency. Assessment is both the state-mandated system, currently the Massachusetts Comprehensive Assessment System (MCAS) for all students and ACCESS, assessing English proficiency for English Language Learners, and the assessments that we choose to administer, either common to all students in that course or grade, or course/teacher-specific. All have their uses and their impact, and all are in the midst of change.

With the significant changes to state curriculum standards in English Language Arts and mathematics, a change to the current MCAS is underway. Massachusetts has joined a multi-state consortium, Partnership for the Assessment of Readiness for College and Careers (PARCC), and is currently in the process of transitioning to the PARCC tests. These tests will be for ELA and mathematics, initially for grades 3-8, and eventually also for high school. Science will continue to use the MCAS as its state measure. The Massachusetts Board of Elementary and Secondary Education approved a transition plan that includes field testing in 2014 and district choice (MCAS or PARCC) in 2015. By the fall of 2015, they will vote on whether or not to adopt PARCC. While we are confident that our students will be prepared for the content and skills included in the test, we anticipate an increased need for both technology hardware and staff in order to administer the assessment. In the initial years, there will be a paper option; however the test is designed and will ultimately only be administered as a web-based, computer-delivered test. In the next five years, we will need to increase the number of devices (such as desktop computers, laptops, or iPads with keyboards) in the schools in order to administer the estimated 4,000 tests in English and math to students in grades 3-8 and 10. Maintaining that infrastructure and ensuring the necessary technical support will require a corresponding increase in the number of technology support staff.

The data from state assessments helps us measure the quality of our curriculum as well as each individual student's progress. The data comes after the school year is over, however, and is not the best means for monitoring ongoing progress in a way that supports timely intervention to remediate a lack of progress. This is a key component of Response to Intervention (RtI), and one that has been successfully implemented to improve literacy in the elementary grades. [See Appendix A for a detailed report on the BPS RtI model for literacy.] The process for establishing a similar model of RtI for mathematics and behavior has begun, and there are examples of successful implementation in different grade levels in both areas. RtI for social/emotional learning is addressed in the report from the modeling group on Student Life. This report will address recommendations to improve RtI in the area of mathematics, specifically in developing the infrastructure and district-wide expectations.

Changing the math curriculum and investing in new resources (Envision) were the necessary first steps in improving math performance for all students. Critical to the success of an RtI program is high quality core instruction (Tier 1 instruction) for all students, with progress monitoring to determine who needs more focused additional instruction (Tier 2 and, if necessary, Tier 3) to master the content and skills. In the next five years, in order to achieve benefits for students in math similar to those achieved in literacy, we need to purchase commercial (perhaps online) assessments to collect data with sufficient frequency to know when students need additional instruction and in what areas. In addition, we need to purchase materials to support the instruction in Tiers 2 and 3. The literacy RtI program is supported by at least one literacy

specialist in each elementary school. We need a similar level of math specialists for each school to assist in the process of assessing students, analyzing data, and providing intensive additional instruction in math.

While an RtI program in the elementary grades is critical to the development of the foundational learning, the need to use formative assessment to track a student's progress continues into middle and high school, as does the need to have structures to support students who are not making progress. While some commercial assessments exist, in most subjects and grades, Belmont teachers have been developing "common assessments," administered at pre-determined times to evaluate not only students' progress but also teachers' success providing the instruction. In the next five years, it will be increasingly important to provide time for teachers of common subjects and grades to meet to analyze data from common assessments for these purposes. We will also need to acquire a structure or platform for storing student learning data to facilitate the analysis across multiple teachers, as well as to comply with this component of the state's new educator evaluation system. We are required to measure all educators' impact on student learning through the analysis of District-Determined Measures (DDMs) or common assessments of student learning and growth. As mentioned, we had already begun the process of developing these assessments. Beginning in 2014-15, we will start collecting data from the DDMs to determine, based on three years of data, if a teacher has a low, moderate, or high impact on student learning. More than three hundred teachers will be rated on three years of data of two DDMs. A storage platform is critical to the successful implementation of this mandate, but additionally, and more importantly, to the successful use of student learning data to improve instruction and learning for all students.

Instruction

Clearly articulating the elements of effective instruction has been an area of focus for some time, and will continue to be so in the next five years. The Leadership Council has developed instructional models, differentiated by level (elementary, middle, high), defining these elements. The documents, combined with the new rubric for educator evaluation, have been shared and discussed with teachers, and are part of ongoing conversations as they are observed and given feedback. The primary change instituted with the new educator evaluation system is that all teachers are observed more frequently, for a shorter duration (not a full class period), and the observation is not announced in advance. The cultural shift, and one that has been embraced by Belmont's professional teaching faculty, is of a regular and ongoing conversation around effective instruction, based on observations and artifacts shared by teachers, with the goal of continuous improvement in both instruction and student learning.

While aggregate assessment data shows evidence that most students are meeting or exceeding learning goals, we continue to have persistent achievement gaps among the subgroup populations: English language learners, students with learning disabilities, African American students, and economically disadvantaged students. This is and will continue to be an area of focus in the coming years; we must continue to develop instruction and support structures to ensure that all students complete their education in the Belmont Public Schools well prepared for college, careers, and as engaged citizens. Developing stronger RtI programs in all academic areas is one component of that work, but it also requires continued research and analysis of core instruction coupled with regular checks on understanding to monitor growth and learning.

The research and development of different instructional models has been underway in a number of forms. Through professional development led by principals and directors at the school and district level, new strategies are implemented. The district's Professional Learning Teams, now in their fourth year, have provided significant impetus to the work of uncovering areas of student learning that are less successful and attacking the problem with innovative solutions designed by teachers and district leaders.

Throughout the district there are pilot projects exploring ways that technology can support innovative instruction, and from the pilot at the high school we have now embarked on an ambitious plan to equip each student with an iPad as the instructional tool for use in all classes. Currently all grade 9 students have received the device; each subsequent year will add a grade to complete the acquisition of the tools. Significant professional development time has been dedicated to the work of developing teachers' expertise so that they can maximize the potential for engaging students and helping them become successful independent learners, communicators, problem solvers, and critical thinkers, and they have eagerly embraced the opportunity. Exploration of innovative instructional models, such as flipped instruction (when the "lecture" occurs via video for homework, and the homework is done in class with teacher support and guidance), are being explored and will continue to be an area of focus in the coming years. There are also innovative pilot projects at the middle school, currently focused in grade 8 science, in the teaching of English language learners throughout the district, in art at the Wellington, and in grade 2 at the Butler. We anticipate an increase in projects such as these, and welcome the financial support for both the tools (grades 8-12) and the professional development (grades K-12) from the Foundation for Belmont Education's Innovative Teaching Initiative, a four year campaign that will infuse $450,000 into the district from 2013 through 2017.

Through both district leadership and teacher initiative, we have made progress and expect that in the coming years we will continue to advance in this area. Additional expertise in integrating technology to improve instruction would enhance our ability to drive instructional innovation. We anticipate an increased need for technology integration specialists, along with increased personnel for maintaining the technology hardware and infrastructure that this type of innovation demands. What will instruction look like five or ten years from now? That is not clear, but what is clear is that it will continue to change as we continue to meet ever-changing needs of students for a future that is also in flux.

This report of the current state and future trends of curriculum, instruction, and assessment in the Belmont Public School illustrates how we have successfully adapted to and implemented new federal and state mandates, while also continuing to explore innovations through our own initiatives stemming from the district Strategic Plan. Below is a summary of areas that we anticipate will need to be addressed in the coming years in response to the changes outlined in this report.

<u>Curriculum</u>

- Science curriculum, K-12, to address changes to the state standards for science

- Increased focus/courses in the area of STEM (science, technology, engineering, mathematics)
- Elementary foreign language
- Elementary library science
- Increased use of digital/online resources
- An online platform to store, update, and provide teachers access to curriculum documents

Assessment

- An increase in the number of devices (desktop computers, iPads) to administer online assessments, including those mandated by the state
- Additional technology support staff to support and maintain expanded infrastructure
- Establish systematic RtI program for mathematics, supported with the purchase of diagnostic assessments, instructional materials, and mathematics specialists, similar to RtI literacy model
- Additional commercial assessments to monitor learning, especially K-5, to support RtI literacy and math learning, as well as science and social studies
- Time for educators to develop common assessments, especially middle and high school, all subjects
- Time for calibrating the scoring of common assessments, as well as time for data meetings to compare results in order to reap the benefits for improved teaching and learning
- An online storage platform for all common assessment data, both for the benefits outlined above as well as for the process of rating educators' impact on student learning through analysis of District-Determined Measures as required by Educator Evaluation system

Instruction

- Improved instruction and support structures to improve learning for students in subgroup populations (ELLs, students with disabilities, African-American students, economically disadvantaged students)
- Continued exploration of innovative instructional models
- Technology instruction specialists to increase expertise in the exploration and implementation of technology to improve instruction

Respectfully submitted,
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Appendix A

BPS Response to Intervention (RTI)
Prepared by Jaynene Dellitt-Young, Elementary Curriculum Specialist for ELA and Social Studies

Elementary Schools have adopted 8 Core Principles of RTI (NASDSE):

- We can effectively teach all children.
- Intervene early.
- Use a multi-tier model of service delivery.
- Use a problem-solving model to make decisions within a multi-tier model.
- Use scientific, research-based, validated intervention/instruction to the extent available.
- Monitor student progress to inform instruction.
- Use data to make decisions. A data-based decision regarding student response to intervention is central to RTI practices.
- Use assessment for 3 purposes (screening, diagnosis, and progress monitoring).

Elementary Schools follow the following Tiers of Instruction:

Tier I

What	• For every student in the general education setting • Core instructional program • 80% of students will likely hit benchmark
Assessment	All Administered • Fountas and Pinnell Benchmark System • DIBELS Benchmark Assessment • Spelling Assessment • Sight Word Assessment • Writing Assessment • Comprehension Assessment
Who (Student)	All Students • Whole Class • Small Group (below benchmark more frequently) • Individual
Who (Teacher)	Classroom teacher / Possible aide support
When	Literacy Block • 90 minutes (K-2 blocks) • 5x/week (3x uninterrupted)
Where	In Classroom
How	• Flexible grouping (guided reading/strategy reading) • Differentiated instruction

Frequency of Progress Monitoring	• Benchmark Testing (BME) • PM if teacher determines a need

Tier 2

What	• Small group instruction • Based on data • Additional to Tier I, Core instruction • 5%-15% of students
Assessment	• All Tier I assessments Also may include: • PSI (Phonics Screener for Intervention) • PASI (Phonological Awareness Screener for Intervention) • Additional CBM data
Who (Student)	• Small Groups of 3-5 students • Dependent on grade level skills
Who (Teacher)	• SPED Teacher, Reading Specialist, SPED Aides, Grade Level Aides/Assistants, Classroom Teacher
When	• Supplemental, in addition to Core Instruction • Outside of Literacy Block (could be during, if teacher has seen these students first-then students receive additional differentiated instruction later in the block from another interventionist) • 3-5x per week, 30 minutes (in addition to the core) • Walk to 30 minute block • In classroom
Where	General education setting (classroom) – Or – Pull out location
How	• Homogeneous grouping (3-5 students)
Frequency of Progress Monitoring	• Tier I Benchmark Testing (BME) • PM at least 1x per month • PM based on 3 points of data
Frequency of Intervention Provided	• No less than 3x per week • Minimum of 20-30
Duration of Intervention	• 4-6 weeks (3 points on benchmark before being released) • Depends on skills, rate of progress, whether student is making adequate progress based on established protocol

Tier 3

What	• Small group instruction • Based on data • Additional to Tier I, Core instruction • 5% of students

Assessment	• All Tier I/Tier II assessments Also may include: • Further diagnostic testing
Who (Student)	• Small groups of 1-2 students • Dependent on grade level skills
Who (Teacher)	• SPED Teacher, Reading Specialist, SPED Aides (?????)
When	• Supplemental, in addition to Core Instruction • Outside of Literacy Block (could be during, if teacher has seen these students-students receive differentiated instruction as well as Tier II support) • 5-6x per week, 30 minute blocks (in addition to the core) • Walk to 30 minute block, in classroom (after initial instruction, additional pull out)
Where	General education setting (classroom)-AND-Pull out location
How	• Homogeneous grouping (1-2 students)
Frequency of Progress Monitoring	• Tier I Benchmark Testing (BME) • PM 2x per month • PM based on 3 points of data
Frequency of Intervention Provided	• No less than 5x per week • Minimum of 20-30 minute blocks (in addition to core instruction)
Duration of Intervention	• 4-6 weeks (3 points on benchmark before being released) • Depends on skills, rate of progress, whether student is making adequate progress based on established protocol

Components of RTI Process In Place:

Literacy (K-2)

- Common District Assessment Calendar
- Universal Screener with DIBELS three times a year
- Common Writing Prompt (3 times a year)
- Diagnostic assessments two to three times a year
- Core phonics program (Fundations)
- Tier 2 Intervention that meets three times a week for six to eight week cycles (5 rounds per year)
- Progress monitoring 1-2 times a month for students in intervention groups
- Data meetings that foster data analysis, dialogue, and regrouping at least three times a year
- Intervention materials for phonological and phonemic awareness, phonics, and fluency
- Literacy folders for storing and recording individual student's assessment data
- Excel file for storing grade level assessment data

Literacy (3-4)

- Common District Assessment Calendar
- Universal Screener with DIBELS once a year with follow-up one to two times a year
- Process for MCAS analysis in each building
- Common Writing Assessment (3 times a year)
- Diagnostic assessments two to three times a year
- Data meetings that foster data analysis, dialogue and regrouping
- Intervention materials for phonics and fluency
- Excel file for storing grade level assessment data

Recommendations for Reading:

- Identify a common assessment (DDM)
    - Piloting all grades 2-4 in 2013-14
- Secure funding for common assessments and additional resources
    - Re-evaluate assessments to provide the best information on critical skills with the most efficient use of time and money
- Investigate a data software system
    - Many assessments with data entry and analysis consuming large amounts of time for reading teams
- Continue the process of creating common curriculum maps
    - Working with the TODCM system for writing. Need adequate time to further develop reading maps.
- Provide professional development in Tier I (Core) differentiation
    - More PD necessary for reader's workshop, understanding the Common Core, and close reading strategies.
- Continue to review the RTI process and tiers of instruction with each elementary building
    - More training with all staff (ELL, SPED, & Reading teams to get on the "same" page)
- Further growth of RTI process in 3rd/4th grades
    - More interventionists are necessary for 3rd/4th RTI model

Overall-Positive Impact over time:

- Kindergarten-differentiated instruction earlier and much more specific to student skill needs
- First-Changes in pacing of core instruction impact oral reading fluency and early reading
- Second-Reduced intervention groups in the areas of phonics and fluency/more emphasis moving back to comprehension
- Third/Fourth-Less phonics instruction/more emphasis on comprehension and writing instruction