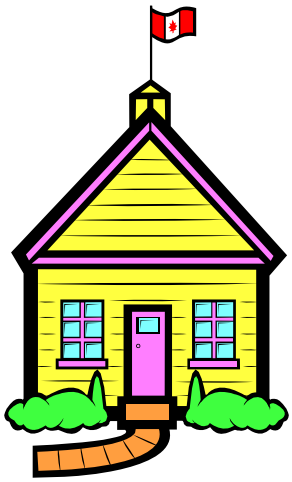
SECONDARY SCHOOL REFORM

C O S T A N A L Y S I S

Part I



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SECONDARY SCHOOL REDESIGN COST ANALYSIS

Introduction

To determine the fiscal feasibility of implementing the recommendations of the Ad Hoc Committee's Proposal on Secondary School Redesign, a team of research and content staff, with assistance from an external consultant, conducted a cost analysis during the summer of 2008. The purpose of the study is to determine, in broad terms, the costs — to the state and to local boards of education — of developing, implementing and then maintaining a different system of education for Connecticut's students in Grades 6-12. The study relied on several sources of data including data drawn from annual state collections, national estimates, current contract costs and a survey of districts conducted in July. The following analysis incorporates all of the Commissioner's parameters for the redesign project. It is divided into six sections: Student Success Plan and Support System, Credit Requirements and Personnel, Curriculum, Assessment, Facilities and Incentives, with specific parameters included in each section. Where appropriate, costs are estimated at the state (CSDE) and individual district levels.

Section A. Success Plan and Support System

1. Estimate the cost of implementing a statewide student success plan program and student support program that is proactive in providing a "whole child" intervention to ensure success when students enter high school.

2. Estimate the number and costs for new supplemental and remedial teachers and paraprofessionals who will be necessary to support students who are unprepared to succeed in all of the required courses and pass the accompanying assessments. The student support system estimate should include costs for remedial labs in 6th and 9th grades, after-school and summer programs and courses at community colleges.

3. Determine state and district costs for additional personnel needed to require all students to complete a "Demonstration/Capstone" project during their junior or senior year.

Section B. Increased Credit Requirements and Additional Personnel

1. Determine the costs at CSDE associated with increasing the total number of credits required for graduation from 20 to 24 (25).

2. Estimate the number of new teachers needed to staff all of the required core subject areas by 2011, most pointedly in the areas of mathematics, world languages, science and guidance.

3. Estimate the number of new personnel needed by the SDE to administer and manage all of the programs associated with the Secondary School Reform proposal.

Section C. Curriculum

1. Estimate the cost of writing and developing a Grade 9-12 state-sponsored model curricula for such courses as Algebra I, Geometry, Algebra II, Biology, US History and English; include estimates of the costs needed to engage selected groups of 10 – 15 teachers in the core subject areas to participate in the development of model curriculum guides that define rigorous content standards, and incorporate 21st Century Skills for each course. In addition, the guides would include formative assessments, model interim/benchmark assessments, and model end-of-course assessments.

2. Estimate the cost of the infrastructure connecting all of Connecticut's middle schools to the Internet through the Connecticut Education Network (CEN).

3. Estimate the costs for training teachers to use new and available technologies to enhance instruction, and to make use of web-based assessment technologies.

Section D. Assessment

1. Estimate the cost of replacing the Connecticut Academic Performance Test (CAPT) and developing a new "end-of-course" assessment system, for Grades 8-12 in five content areas: Algebra I, Algebra II, Biology, English II and American History. These assessments may be modularized and administered at different times of the year, preferably online.

2. Analyze what it would cost to convert Connecticut's existing CAPT assessment into a modular-based testing program, based on interdisciplinary courses of study instead of classical, stand-alone courses like Algebra. The modular system would assess English, Writing, Mathematics and Science, as we currently do with CAPT.

3. Estimate the cost of providing the PSAT to all Grade 10 and 11 students in District Reference Group (DRG) H and I, and administering the Programme International Student Assessment (PISA) to a sample of the state's 15-year-old students to determine how they perform in comparison to their counterparts in other countries.

Section E. Facilities

1. Estimate the cost of the additional classrooms and or space renovations that will be needed to conduct lab sciences for 3 years for all students. A similar analysis is needed to explore the teaching of health and physical education.

Section F. Incentives

1. Determine the cost of providing scholarships as incentives to Connecticut students who, through a combination of grades and test scores, score at high levels and are prepared to enroll in any of Connecticut's state universities.

SECTION A:
STUDENT SUCCESS PLAN AND SUPPORT SYSTEM

Section A: Success Plan and Support System/Personnel

1. Student Success Plan

Increasing student engagement and personalizing the experiences students have in secondary school increases the likelihood that students will remain in school and succeed in developing academically, socially, emotionally and physically. The Student Success Plan is an electronic vehicle by which students are able to individually set academic, personal and social goals annually, working with an adult advisor in their schools, and develop a portfolio to chart their progress toward their goals. There are many vendors that offer low cost web-based applications that allow students to create and monitor their own plans, as well as exploring career cluster interests. Two rollout options are presented below.

Option 1: The first option is limited to Connecticut public school students, beginning with all students in Grades 6 through 10 for the first year (2009-10), and adding one grade in each of the next two years so that all students in Grades 6 through 12 would be able to develop Success Plans by the third year (2011-12). The primary costs to CSDE would be security access for all students in the designated grades, a consultant to provide district support (legislative change, guidelines, coordinate professional development) and a small amount of resources to implement the program. For this option, costs will remain fairly stable after Year 3 unless CSDE chooses to enhance the system in the future.

State Costs			
	Year 1 (Grades 6-10)	Year 2 (Grades 6-11)	Year 3 (Grades 6-12)
Security Access	$310,000	$355,000	$410,000
CSDE Consultant	$110,000	$110,000	$110,000
PD/Rollout Conference	$20,000	$10,000	$10,000
Total	**$440,000**	**$475,000**	**$530,000**

Option 2: The second option would roll out the program to all students in Grades 6 through 12 in 2009-10, and also make it available to students in Adult Education programs. In subsequent years, graduates of Connecticut's public high schools, along with students in Grades 6 through 12 and in Adult Education programs, would continue to have access. At the state level, the additional costs for Option 2 would be for the greater number of individual student licenses.

State Costs			
	Year 1 (Grade 6-12) Adult Ed, Workforce	Year 2 (Grade 6-12) Adult Ed, Workforce	Year 3 (Grade 6-12) Adult Ed, Workforce
Security Access (with Portfolio)	$435,000	$485,000	$535,000
CSDE Consultant	$110,000	$110,000	$110,000
PD/Rollout Conference	$20,000	$10,000	$10,000
Total	**$565,000**	**$605,000**	**$655,000**

District Costs

Costs at the district level may vary considerably. Currently about 15 percent of the districts in the state report they already have success or learning plans in place for each student or for specified subgroups such as low performing or special education students. Implementing a success plan program would require the allocation of resources even if the state provides the funding for the electronic delivery systems. Building level staff would be needed to work as advisors to individual students or with groups of students to develop plans and monitor them over the course of the school year.

2. Student Support Programs (Instructional Support for At-Risk Students)

Prior to increasing graduation requirements, Student Support Programs need to be implemented in conjunction with creating a Success Plan for each student. Those programs would identify the resources needed to proactively create a 'safety net' and increase the engagement of each individual student who is identified as 'at-risk' of dropping out of school or failing the more rigorous academic courses. The program would identify the adult or teams of adults, including parents and community resources (e.g., family resource centers), who would work with the student to plan, implement, monitor and, periodically, adjust the program to ensure that each Connecticut student graduates from high school with the skills and dispositions to be successful in the post-high school phases of their lives. Support programs would not be limited to remedial after school tutorials or summer school for academic subjects, but would also target each student's social, emotional and physical developmental needs along with engaging parents to support their children as learners.

State Costs

Currently about 20 percent of Connecticut public school students score below the proficient level in mathematics and/or reading on the Connecticut Mastery Test (CMT) in grades six through eight and on the CAPT in grade 10. Below, three state supported options are outlined to provide support for its most at-risk middle and high school students. The per student estimate for providing instructional support to students is based on an average teacher salary costs of $330 per day ($60,000) to provide the equivalent of 25 additional days of instruction to small groups of 15 students. This costs out to $440 per student allocation for instructional support for students scoring below proficient on the state assessment. To support the non-academic aspects such as increasing parental involvement and addressing the social, emotional and physical needs of the students, the per-student cost is augmented by $100. Note: Some students may need more targeted assistance of five students to one teacher.

Estimate: $540 x 8,000 students = $4,320,000 per grade

Option 1: Begin with Grades 6 through 10 in the first year and add one grade each in the next two years to support all at-risk students in grades 6 through 12 by the third year.

State Costs			
	Year 1 (Grades 6-10)	Year 2 (Grades 6-11)	Year 3 (Grades 6-12)
Total	**$21,600,000**	**$25,920,000**	**$30,240,000**

Option 2: Phase in the support to targeted grades, with full support by for at-risk students in grades 6 through 12 by the third year.

State Costs			
	Year 1 (Grades 6, 8, 10)	Year 2 (add Grades 7, 9, 11)	Year 3 (Grades 6-12)
Total	**$12,960,000**	**$21,600,000**	**$30,240,000**

Option 3: Provide support to all at-risk-students beginning in Year 1 (2009-10). The annual cost would be $30,210,000.

Each option would require one CSDE consultant ($110,000) to administer the grants to districts and to support districts. The support would include providing models of best practice to help districts to recruit and train volunteers from the communities to serve as mentors for students, working with community organizations and local businesses, connecting with other agencies across the state that also work with children and young adults (e.g., social service agencies, libraries, YMCA, Boy Scouts, Girl Scouts) to expand the support system beyond the school day. Additional cost would be incurred to engage more parents in the secondary education program.

District Costs

The cost of implementing a support program for each at-risk student in a district varies dramatically across the state. Many districts will be able to absorb the costs within their current allocations of state and federal funds. The largest burden will be in the DRG H and I districts. The state dollars provided to districts will be intended to supplement, not supplant, the investment that districts are making in improving the educational program each student receives.

3. Capstone Project

The Capstone project requirement for graduation provides every Connecticut public school student the opportunity to integrate the academic knowledge and skills with the 21st Century Skills they acquire in an individualized project that is designed as a transition from high school to the next stage of their lives (e.g., college, workforce, military, etc.).

The following is a proposed timeline for implementation to provide districts with time to integrate the project into their graduation requirements and train staff. During Year 1, the CSDE would propose legislation defining the requirements of the Capstone project, develop guidelines for districts and hold a statewide conference.

Timeline			
Year 1	Year 2	Year 3	Year 4
- Guidelines - Legislation - Conference - Grants	Grants	Grants	Full Implementation

State costs are disaggregated by year and represent a relatively inexpensive investment for the potential positive impact that such a project would have for individual students. The primary cost to the state over the four-year implementation phase would be the equivalent of one CSDE staff member dedicated to the initiative to draft legislation, establish and communicate guidelines to the state's public high schools and convene a statewide conference to showcase the work of districts that already have Capstone projects as a component of their district graduation requirements. CSDE would provide small grants to the districts already requiring Capstone projects to serve as demonstration sites for other districts and to work with the staff of those other districts as they plan for implementation.

State Costs				
	Year 1 Information and Legislation	Year 2 Planning and Phasing In	Year 4 Planning and Phasing In	Year 4 Full Implementation
Conference	$10-15,000			
Grants	$70,000	$100,000	$100,000	
Coordinator	$110,000	$110,000	$110,000	$110,000
Total	**$190-195,000**	**$210,000**	**$210,000**	**$110,000**

District Cost

Cost will vary across districts. Approximately 40 percent of the districts report they already have a senior or Capstone project in place. Districts may incur costs if they have a new dedicated staff member to coordinate their activities or release staff members from a primary teaching section to supervise groups of students who are working on their projects. Some consideration must also be given to providing some level of resources to economically disadvantaged students so they have access to the same quality of experiences as their more advantaged peers. The Capstone project provides an opportunity for community groups to offer support, both personnel and other resources, to enhance the experiences of its young adults as they prepare to transition from secondary schools.

SECTION B:
INCREASED CREDIT REQUIREMENTS FOR GRADUATION AND ADDITIONAL PERSONNEL

Section B. Increased Credit Requirements for Graduation and Additional Personnel

1. Increase the total number of credits required for graduation from 20 to 24 (25)

State Costs

The recommendations from the Ad Hoc Committee on Secondary School Reform propose increasing from 20 to 24 (25) the number of credits required to earn a Connecticut public school diploma. The credit increase is virtually cost-free to CSDE; any needed work (e.g., law change, circular letter, etc.) could be incorporated into the work plans of current staff. If legislation required the state to monitor the courses students take, this would necessitate one additional information technology staff member ($110,000) and funds to enhance and maintain the CSDE longitudinal data system. Some consideration should be given to purchasing a Statewide Student Information System (SIS) that districts would use to manage their student information requirements. This would streamline the exchange of information between the state and districts, and reduce district expenses on the varied systems they now use (approximately $6,000,000).

District Costs

The costs at the district level would vary depending on the number of credits each district requires already and the actual number of credits students currently earn. In 2006, only 17 percent of the districts in the state had fewer than 23 credits as the minimum required to graduate from their high schools, and 16 percent required more than 25 credits. The general increase in the statewide number of required credits is likely to impact only a small number of districts. Increases in the specific courses required for graduation will have a greater impact at the district level. The largest cost will be district investment in new, additional teachers to cover the increased requirement in specific subject areas such as mathematics, science and world languages, along with additional needs for guidance counselors. Districts may incur additional costs if they subscribe to virtual web-based course offers to supplement the courses they currently can offer.

2. New teachers & guidance counselors to staff core required subject areas & expanded programs

In addition to increasing the number of credits that Connecticut public school students must earn to graduate for high school, the Ad Hoc Committee on Secondary School Reform proposed specific course requirements including four credits in mathematics, including Algebra II; three lab science credits, including chemistry; and a minimum of two credits in world languages. The cost at the state level for additional teachers to teach these courses is identified below, along with an estimate for additional counselors needed to strengthen the support system for students who may struggle to meet the new requirements.

Cost estimates of adding these courses are based on 2007-08 certified staff file data that indicate a full-time teacher's typical assignment is five sections of a subject. Using 2006-07 data, it was determined that the average class size was 20 students. While an average class size of 20 students was used to produce the cost estimates and is considered to be manageable, the CSDE recognizes that students in need of additional supports would benefit from an even smaller class size. Appendices A through C contain information on the impact at the district level. These

estimates are based on 2007-08 high school enrollments and do not account for dropouts who in the future might be retained in the schools, thus increasing class sizes.

Mathematics, chemistry and world languages are three of the state's designated educator shortage areas. While the primary purpose of this analysis is to address the need for additional teachers to meet new requirements and what that might cost, there are other, less tangible costs that impact hiring additional staff. In order to attract qualified teachers, the CSDE would partner with higher education to ensure that teachers are better prepared to teach in diverse environments. In order to retain teachers in hard-to-staff districts, incentives (both monetary and otherwise) most likely will be required. In order to ensure a successful initial teaching experience for these teachers, additional mentors must be trained and utilized.

The state's teacher certification regulations are currently undergoing revisions, and CSDE staff members are considering how these revisions, and existing certification requirements, might affect districts' ability to fill positions in certain subject areas. It has been proposed that allowing students to take courses online would alleviate the need to hire additional teachers. How certification regulations might impact this proposal is being investigated. Finally, the No Child Left Behind (NCLB) law's highly qualified teacher requirements must also be taken into consideration when proposing changes to how students take courses.

Mathematics Teachers

In 2007-08, 23,775 (63.3 percent) graduates earned at least four credits in mathematics, when the state requirement was three credits. There is a wide range in the percentages of 2007-08 graduates earning at least four credits in mathematics across districts in Connecticut, with some districts exiting less than five percents of their graduates with at least four credits while others had more than 90 percent of their graduates earn at least the fourth credit. Aggregated to the state level, Connecticut did not have a sufficient number of teachers teaching mathematics in its public high schools in 2007-08 to permit all of its high school students to take a mathematics course that year. Assuming an average class size of 20 (the 2006-07 state high school average), Connecticut would have had a shortfall of an estimated 14.8 full-time equivalents (FTEs). Using the 2007-08 average salary of $62,206 for mathematics teachers, the cost of hiring those additional teachers would have been about $930,000.

Unfortunately, that number masks a greater cost problem because at the district level there is an uneven distribution of excess mathematics teachers across the state, and excess teaching capacity in one district cannot serve to cover a shortfall in another district. For example, the Connecticut Technical High School System (CTHSS) had the capacity to teach an additional 80 sections, compared with Bridgeport, which would have needed 59 more sections to meet the district requirement. By only considering the cost of the shortfall of classes, the costs rise to $6,083,010 across the districts. Appendix A contains an estimate of district level need for additional high school mathematics teachers.

Some districts have the capacity to staff additional sections of mathematics by reassigning teachers in their high schools to teach mathematics, who may have a partial or full-time assignment in another subject area. When considering the impact of dually certified teachers in mathematics and other subjects, the state level deficit of mathematics sections is nearly eliminated if those teachers were assigned to full-time mathematics. However, including this

excess capacity does not alleviate all of the district level problems. Some districts just do not have the excess capacity to make up for the shortfall. For example, Waterbury could potentially cover 10 of their shortfall of 17 mathematics classes with staff teachers teaching in other subject areas, but would still have a deficit of 7 classes. Thirty-seven districts would have had shortfalls even when the excess capacity was included. To cover that shortfall in mathematics would cost over $3 million across the districts in the state, and perhaps would have caused sections of other courses to be uncovered.

Districts will incur other costs such as additional textbooks and classroom materials, and academic support for students who in the past would not have been required to successfully complete the specific mathematics courses.

Chemistry Teachers

In 2007-08, 33,660 (87.7 percent) of Connecticut high school students earned three or more credits in science and 26,229 (69.9 percent) earned a credit in chemistry. During any school year, about one-fourth of the students enrolled in Connecticut public high schools would need to be enrolled in chemistry so that all students would have taken the course by the year they graduated.

In 2007-08, there were not enough sections of chemistry taught across the districts in Connecticut to accommodate one quarter of high school students enrolled in the state's public high schools. The state offered 317 fewer chemistry sections than needed to accommodate all of the students who would have needed to take the course, based on an average class size of 20 students. To hire the 63.4 teachers needed to cover these sections would cost in excess of $4,019,292 a year based on the 2007-08 average science teacher salary of $63,869. If the analysis were limited to only districts that were short chemistry sections, districts across the state would need 113 chemistry teachers for a total cost of $7,191,649.

When teacher assignments are examined more closely the picture looks less problematic at the statewide level. Some 300 teachers in 2007-08 who were certified to teach chemistry had partial or full-time assignments in other subject areas. If those teachers were reassigned to teach chemistry exclusively (5 sections), the deficits in sections would have been eliminated statewide. However, as in mathematics, the distribution of excess capacity to teach chemistry is not evenly distributed across districts in the state and some districts would still have a deficit in sections offered. Appendix B provides data on individual districts' capacity to meet the staffing needs for the new chemistry requirement, based on 2007-08 data, along with information on all sciences and biology. Twenty-six districts would still need to hire staff to provide additional chemistry classes at a cost of $1.2 million. This figure assumes that those teachers who are certified in chemistry, but not teaching it, will be willing to teach chemistry. It also does not address the negative impact of losing those teacher's sections from other subject areas (e.g., one of the teachers certified to teach chemistry was dually certified and was teaching French in 2007-08).

This cost portion of this analysis only accounts for teacher's salaries. It does not include the additional cost of benefits for any new teachers, the cost of additional textbooks, lab materials and supplies, new facilities, etc, which districts would need to incur.

World Language Teachers

The Ad Hoc Committee on Secondary School Reform recommends that every Connecticut high school graduate should earn a minimum of two credits in world languages. To achieve this, about half of the high school students in the state would have to be enrolled in a world language course annually. In 2007-08, Connecticut public high schools needed to provide 4,735 sections of world language so that students could earn two world language credits by graduation, based on an average class size of 20 students.

According to the certified staff file, 5,590 world language sections were taught in 2007-08. This is based on the FTE of world language teachers reported and the five classes per full-time FTE standard used for NCLB. To meet the minimum of the proposed 2-credit requirement, the state has sufficient capacity. This would require, however, limiting students' access to world language instruction (both number of years of study and variety of languages offered) in some districts to ensure that every student is given the opportunity to earn two credits.

When individual districts are taken into account most districts offer more than enough sections, but there are exceptions. The distribution of the capacity is unequal across the districts in the state. There is a great deal of capacity in Avon, where the number of sections offered permits nearly every student to take four years of a language and almost none in the CTHSS. Appendix C contains individual districts and their offerings and capacity. It also includes estimated cost to the districts that would fall short in their ability to offer all students two credits of world language. Using the average salary for world language teachers, the cost to the district is an estimate. If the state were just to add capacity to those districts that are currently not providing enough instruction to allow students to meet the two credit requirement, it would cost the state approximately $4,500,000 a year.

Guidance Counselors

During 2007-08, Connecticut public high schools employed 843.7 guidance counselor FTEs to support 174,948 students. The state average ratio of students to counselor was 207.4:1. Reducing the statewide ratio of students to guidance counselors to 200:1, would require 30.5 more counselors distributed across the state for total salaries of $2,097,119 annually, based on the 2007-08 average counselor salary of $68,758. Reducing the ratio further to 190:1 would require an additional 77 counselors, with a salary cost of $5,294,366. Reducing the ratio even further to 180:1 would require an additional 97.2 counselors, with a salary cost of $8,818,443.

However, the distribution of counselors is not uniform across the state's high schools. The district ratios ranged from 133.5:1 to 394:1, indicating there is likely to be considerable disparity in the services that counselors can provide from one district in the state to the next. The ratios are lowest for districts in DRGs A through C and highest in DRGs H and I, where the greatest numbers of at-risk students are enrolled. By reducing the ratios in districts that have ratios above the 200:1 levels (not redistributing counselors), the district costs would be $6,074,426 across the state.

If it is assumed that guidance counselors will be given the additional responsibility of overseeing and implementing student success plans in addition to their responsibility for creating student

course schedules, then lowering the ratio of students per counselor is essential. Counselors must have sufficient time to learn about each of their student's strengths in order to help them be successful in high school and beyond. Appendix D contains district statistics regarding the number of counselors each district employs, the ratio of students to counselors, and the estimated cost of lowering the ratios.

Final Consideration About Teachers

The analyses of the excess capacity of mathematics, chemistry and world language teachers were conducted independently, so that when analyzing one of the three subject areas, for example chemistry, certified chemistry teachers teaching either mathematics or world language were not excluded from the analyses. Therefore, the estimates of need for additional teachers may be an underestimate of the true need since some teachers will not be available from the excess capacity pool.

3. Additional CSDE Personnel Needed to Support Secondary School Reform

New personnel will be needed at CSDE to administer and manage all the Secondary School Reform programs and initiatives and some current staff will need to change assignments to take on new responsibilities. This section addresses new CSDE responsibilities that are not addressed in other sections of this report.

Program Evaluation

One CSDE consultant or an external program evaluator will need to be hired to plan and conduct formative and summative evaluations of the effectiveness of the Secondary School Reform initiative. It is likely the legislature and governor will charge the Department with reporting on outcomes. ($110,000)

Grant Writer

With the large costs associated with the initiative, the Department may need to search for some sources of external funding to support some components ($110,000).

Information Technology

Increased reporting requirements will necessitate increased data and information needs. At least one additional information technology staff member will need to be dedicated to collections and analyses ($110,000).

Additional Personnel

Additional clerical staff will most likely be necessary to meet data and reporting requirements. In order to better serve districts, it is likely that specialists in the areas of secondary education, middle school education, English Language Learners and special education will be needed (approximately $500,000).

SECTION C:
CURRICULUM

Section C. Curriculum

1. Model Curriculum

The development of state Model Curriculum for core high school subjects is a central component of the Secondary School Reform initiative. All students deserve equal access to high quality curricula. The development of optional model curricula will provide all districts with clear and consistent competencies and standards for each core required course. Individual districts currently spend thousands of dollars on curriculum development. Many do not have the staff and time to dedicate to the development of quality curriculum. Stand alone course curricula are proposed for eight to twelve courses including Algebra I, Algebra II, Geometry, Statistics and Probability, English 9 and 10, U.S. History, Biology, and Civics. The development cycle for each model curriculum would be:

Year 1	Year 2	Year 3
- Curriculum Development - Planning Teacher Professional Development	- Pilot Implementation (20 Schools) - Teacher Professional Development	- Full Implementation (180 Schools) - Teacher Professional Development

Committees of 10 to 15 educators will work with a contractor to develop model curriculum guides for each course. These would include the components of the attached curriculum development document along with incorporating 21st Century Skills into the model curricula. The model curricula will include a range of assessments including: examples of formative assessments that are used throughout instruction to inform teachers and students about the progress being made; benchmark or interim assessments that are given at specific times during the course to monitor the program and student progress; and model final exams to be given at the end of the course. See Appendix E for a summary of the curriculum development protocol. There are four options presented below for the development of eight courses. The first two differ in the number of days of professional development made available to district staff involved in implementing the curriculum, based on a train the trainer model. *Total costs would be 50 percent higher for 12 courses.*

State Costs			
Option 1	Year 1	Year 2	Year 3
Development and Implementation	$300,000	$10,000	$20,000
Professional Development (10 Days)		$75,000	$540,000
- Total per Course	$300,000	$85,000	$560,000
- Total for 8 Courses	$2,400,000	$680,000	$4,480,000

Option 2	Year 1	Year 2	Year 3
Development and Implementation	$300,000	$10,000	$20,000
Professional Development (5 Days)		$40,000	$300,000
- Total per Course	$300,000	$50,000	$320,000
- Total for 8 Courses	$2,400,000	$400,000	$2,530,000

Options 3 and 4: Stagger the development costs over a five-year period beginning with Algebra I, English 9 and 10 and Biology in Year 1; Geometry, Algebra II and Civics in Year 2; and Statistics and Probability and U.S. History in Year 3. Option 3 below summarizes the costs for the model curriculum development including providing 10 days of professional development and Option 4 provides the cost with five days of professional development.

State Costs		
Year	**Option 3** 10 Days of Professional Development	**Option 4** 5 Days of Professional Development
1	$900,000	$900,000
2	$1,155,000	$1,050,000
3	$2,535,000	$1,710,000
4	$1,850,000	$1,060,000
5	$1,320,000	$640,000
Total	**$7,760,000**	**$5,360,000**

2. Middle School Connectivity to the Connecticut Education Network

To improve student access to high quality instructional opportunities, the remaining 65 to 70 middle schools in the state that have less than adequate connectivity to the CEN need to be connected or upgraded in order to provide fiber connections to the schools to access the Internet.

Option 1: Connections through Long-Term Lease – On average, connections will cost approximately $40,000 per school building. This would total $2,600,000 - $2,800,000, and provide 20 years of connectivity. Additionally, districts would incur maintenance fees after several years, which are estimated to range from $4000-$7000 per year.

Option 2: Connections through Monthly Service – Connectivity services can be purchased on a monthly basis, at a current rate of $1500/month/school ($18,000/school/year). To connect the remaining 65-70 middle schools would cost $1,170,000 - $1,260,000 yearly.

3. Cost of Training Teachers to Use New Technology

Enhanced technology alone will not improve students' academic performance. Teachers will need professional development to use newly available technologies to enhance instruction and to make use of web-based assessment. Administrators will require training to be able to evaluate

teachers' effectiveness in appropriately integrating new technology and 21st century skills into curriculum, instruction and assessment.

Option 1: Train middle and high school subject area teachers and administrators on a rotating schedule over five years through the Regional Educational Service Centers (RESCs). (This option is based on a train the trainer model.) Estimated cost: $2,250,000

	Training Year				
Cohort to be Trained	1	2	3	4	5
- Mathematics - Science - World Language - Administrators	√	√	√		
- English Language Arts - Social Sciences - Technical Education		√	√	√	
- Physical Education - The Arts - Support Professionals - Other Disciplines			√	√	√

Option 2: Provide funding to the RESCs to offer statewide subject-specific professional development in integrating technology. All subjects would be available every year, though not necessarily in each RESC. Additionally, grants for in-school coaching could be made available. Estimated cost: $1,450,000 per year (120 days of professional development – average of 20 per RESC = $1,200,000 and grants for in-school coaching could be $5,000 – average of 50 grants = $250,000).

SECTION D:
ASSESSMENT

Section D. Assessment

1. End of Course Assessment Costs

Scenario 1: The Ad Hoc Committee on Secondary School Reform proposed replacing the CAPT with end-of-course exams beginning with the entering high school class of 2012 (2016 graduating class). Every graduate will be required to pass the end-of-course exam in each of five subjects. CAPT will continue as the state accountability assessment under NCLB through at least 2012. In early 2009, the Department will need to issue a Request for Proposals (RFP) to secure a contractor to develop, administer, process, score and report results for the new end-of-course assessments. At least through 2012 there will be an overlap in the administration of the CAPT and new end-of-course exams.

Beginning in 2009, items will be developed for end-of-course exams in Algebra I, Algebra II, English 9 and 10 (reading and writing), Biology (life science), and U.S. History, to be able to administer these assessments at the conclusion of block-scheduled and full-year courses. Therefore, annual administration would require three operational forms and one breach form per course, per year. The breach form is an alternate form, equivalent to the operational form, that is administered to individual students or a group of students where a breach in administration occurs (e.g., cheating, illness during testing, fire alarm interruption, etc.). Test blueprints and specifications need to be completed by April 2009 for Algebra I, English 9 and 10 and Biology, and by October 2009 for Algebra II and U.S. History. Field testing will take place in 2010 and 2011. For students with disabilities, assessments based on alternate achievement (AA) standards and modified achievement (MA) standards will also need to be developed and administered in the same grades as the standard end-of-course exams test and grade administering.

	Testing Phase-In Year and Grades Tested			
Subject Area	2012	2013	2014	2015
Algebra I	8, 9	8, 9, 10 & Retesters	8, 9, 10 & Retesters	8, 9, 10 & Retesters
Algebra II		10 - Students took Algebra I in Grade 8	10, 11	10, 11 & Retesters
Biology		10	10 & Retesters	10, 11 & Retesters
English 9 and 10		10	10 & Retesters	10, 11 & Retesters
U. S. History		10	10, 11	10, 11 & Retesters

The table below provides a summary of the costs for end-of-course test development and administration from 2009-10 through 2014-15, with full implementation for all subjects beginning in 2013-14, based on the schedule on the previous page.
Estimates are based on the average number of students across the multiple grades who would be enrolled in the courses, with approximately 20 percent retaking the exams annually because they failed the previous year.

End-of-Course Exam Cost Estimates			
Year	Item & Test Development	Test Administration and Scoring	Total
2009-10	$2,721,116		$2,721,116
2010-11	$2,721,116	(Gr. 8) $600,500	$3,321,616
2011-12	$1,054,249	$1,513,134	$2,567,383
2012-13	$1,169,962	$5,874,458	$7,044,420
2013-14	$1,223,160	$10,314,333	$11,537,493
2014-15	$1,239,883	$11,858,631	$13,098,514
Total	**$10,129,486**	**$30,161,056**	**$40,298,542**

Scenario 2: This section estimates the cost of continuing to use the CAPT as the state's high school accountability test. Under the NCLB requirements for Peer Review of each state's content and achievement standards, the U. S. Department of Education granted Connecticut full approval, with recommendations, for its assessment system, which has the CAPT as the assessment used to measure high school students' proficiency in mathematics and reading, and during this past year in science. Even if end-of-course exams are implemented to replace CAPT as the state's high school assessment, CAPT will need to be administered through at least 2012-13 to fulfill federal reporting requirements.

The following table provides estimates for continuing to use the CAPT as the state's high school assessment until 2014-15. Currently the federal NCLB legislation has targeted 2014 as the year in which all students in Connecticut, and the United States, must meet the proficiency standard on its statewide assessments.

CAPT Cost Estimates				
Year	Item & Test Development	Test Administration and Scoring	Online Option	Total
2009-10	$300,000	$5,508,144	$600,000	$6,408,144
2010-11	$315,000	$5,783,557	$630,000	$6,728,557
2011-12	$330,750	$6,072,735	$661,500	$7,064,985
2012-13	$347,288	$6,376,372	$694,575	$7,418,235
2013-14	$361,652	$6,695,191	$729,304	$7,786,147
2014-15	$379,735	$7,029,951	$765,770	$8,175,156
Total	**$2,034,425**	**$37,465,950**	**$4,081,149**	**$43,581,524**

Scenario 3: This scenario proposes an integrated system for instruction and assessment in which district staff administer state-developed end-of-course exams accounting for 20 percent of the student's final grade. CAPT continues as the state's accountability test and students who score below proficient in Grade 10 on any of the four sections must retake the CAPT in Grade 11. Students who had not met the proficiency standard in mathematics or science by Grade 11 must take a fourth year of the subject. The state will provide resources so that Grade 10 and 11 students in DRGs H and I can take the PSAT, and have increased access to Advanced Placement courses and exams. Finally, Connecticut will participate in the 2012 administration of the PISA

to get a baseline measure of the state's 15-year-old students' performance relative to their international peers.

PSAT Cost			
	Grade 10	Grade 11	Total
DRG H	$4,935	$4,427	$9,362
DRG I	$6,768	$5,893	$12,661
Total	**$11,703**	**$19,320**	**$22,023**

The annual estimated cost to the state to cover the cost of the PSAT for Grade 10 and 11 students in DRGs H and I would be approximately $22,023.

2. Cost of Advanced Placement (AP) Exams

Each AP course has a corresponding AP exam that is administered in the spring of the school year. The cost of administering the exam is about $85 per exam per student. The cost of supporting each Grade 11 student in DRGs H and I to be administered one AP exam annually would be about $900,000.

3. Cost of Connecticut Programs for International Student Assessment (PISA) in 2012

PISA is administered every three years internationally. Connecticut should invest in a state level administration of the assessment to get a benchmark measure of how well its 15-year-old students perform compared with their counterparts in other countries around the world. About 50 high schools would need to be part of the sample for a cost of about $300,000.

SECTION E:
FACILITIES

Section E: Facilities

1. New Facilities Needed to Support Secondary School Reform

In July the staff from the Department conducted an on-line survey of state superintendents to gather information about potential costs to the districts to renovate existing facilities or expand their facilities to accommodate the needed space for the increase in courses that graduates would need to take and the expanded services to implement the Success Plans, Support Systems and Capstone experience. Of the 135 entities in the state that have high schools, 73 (54.1 percent) responded. The response rates, by DRG, ranged from a low of 33.3 percent for DRG H to a high of 63.2 percent for DGR B.

About half (50.6 percent) of the districts responding to the survey indicated that the proposed increase in high school graduation requirements would require their district to renovate existing space or add classrooms. Districts indicated they would meet their space needs by building a new facility (34.1 percent), bringing in modular classrooms (34.1 percent), altering existing space in their buildings (56.8 percent) or implement virtual labs (38.6 percent). The increase in number of rooms ranged from one to 15 to 20 per building. Cost estimates ranged from $50,000 to nearly $50 million. Appendix E contains a summary of the districts' survey responses. Since superintendents were not informed that their responses would be incorporated into a public document, each district name has been replaced with its DRG designation.

SECTION F:
INCENTIVES

Section F: Incentives

1. Incentives for Graduates

One component of the Secondary School Reform initiative is creating incentives to attract a larger, better prepared pool of graduates to the state colleges and universities. The average tuition cost of attending the state's community colleges for one year is about $2,500; for universities in the State University System is about $5,000 per year and for UCONN is about $6,250.

Option 1: Provide two-year scholarships for Grade 10 students who scored at the advanced level on all four sections of the CAPT (about 3,000 students per year), when they graduate from high school to attend:

Community College	$15,000,000
State University System	$30,000,000
UCONN	$37,500,000

Option 2: Only provide scholarships to the advanced scoring-students in DRGs H and I who are eligible for free/reduced price lunch (about 250 students per year), when they graduate from high school to attend:

Community College	$1,250,000
State University System	$2,500,000
UCONN	$3,125,000

Secondary School Reform Cost Analysis: Part II
District Impact of Secondary School Reform Initiatives

Introduction

Part I of the **Secondary School Reform Cost Analysis** examined the state level costs of implementing the recommendations of the Ad Hoc Committee's Proposal on Secondary School Redesign. Part II summarizes the statewide costs of the proposal's initiatives to the local boards of education and is organized into the same six sections as the document it complements. The cost analyses rely on data drawn from annual Connecticut State Department of Education (CSDE) Staff File collection and a survey of districts conducted in July. It is divided into six sections: Student Success Plan and Support System, Credit Requirements and Personnel, Curriculum, Assessment, Facilities and Incentives. Costs are estimated at the aggregate state level for all districts, charter schools and Regional Educational Service Centers (RESCs) that have high schools, and appendices include the costs at the individual district levels. There is a wide range of potential impact of the cost of implementing all of the components of the Ad Hoc Committee's recommendations, from virtually no cost to many of the districts in DRGs A and B, to incredibly large increases to some of the districts in DGRs G, H and I.

The table on the following page identifies the statewide district-level costs associated for each section of the Secondary School Redesign Proposal.

Initiative	Middle School	High School	Total Statewide District Costs
Success Plan			
Annual Staffing	$11,303,474	$12,731,935	$24,035,409
Support System			
Annual Staffing	$0	$0	$0
Capstone			
Annual Staffing		$12,731,935	$12,731,935
Annual Teacher Increase			
25 Credits		$17,883,322	$17,883,322
Mathematics		$6,083,010	$6,083,010
Chemistry		$7,191,649	$7,191,649
World Language		$4,500,767	$4,500,767
Guidance		$6,074,426	$6,074,426
Model Curriculum			
PD (8 courses)	$227,500	$2,050,000	$2,277,500
PD (12 courses)	$227,500	$3,075,000	$3,302,500
Fiber Connectivity	$2,800,000		$2,800,000
Staff PD	$3,753,750	$4,228,125	$7,981,875
Infrastructure (Varies dramatically by disrict)			
Major construction		Up to $50 million	Up to $50 million
Renovation		$45,000 per room	$45,000 per room
Modular		$45,000 per module	$45,000 per module
Virtul classrooms		$400 per student	$400 per student

Section A: Success Plan and Support System/Personnel

1. Student Success Plan

If the state supports the electronic infrastructure so that every student in Grades 6 through 12 developed a student success plan to guide and monitor their progress through secondary school and into college or the workforce after graduation, districts would need to provide staff to support students. Many districts already have sufficient staff to assign each student or group of students to an adult advisor. If each of the 182 middle schools and each of the 205 high schools in the state hired one teacher to oversee the student success plan program, at an average salary of $62,107, the total cost to districts across the state would be $24,035,409.

2. Student Support Programs (Instructional Support for At-Risk Students)

The cost of implementing a support program for each at-risk student in a district varies dramatically across the state. Many districts will be able to absorb the costs within their current allocations of state and federal funds. The largest burden will be in the DRG H and I districts. The state dollars provided to districts will be intended to supplement, not supplant, the investment that districts are making in improving the educational program each student receives.

3. Capstone Project

Cost will vary across districts. Approximately 40 percent of the districts responding to the summer 2008 survey reported they already had a senior or Capstone project in place. Districts may incur costs if they have a new dedicated staff member to coordinate their activities or release staff members from a primary teaching section to supervise groups of students who are working on their projects. If each of the 205 high schools in the state hired one teacher to oversee the Capstone project, at an average salary of $62,107, the total cost to districts across the state would be $12,731,935.

Section B: Increased Credit Requirements for Graduation and Additional Personnel

1. Increase the total number of credits required for graduation from 20 to 25

This will be the most expensive component of the Secondary School Reform agenda on an annual basis. The costs at the district level will vary depending on the number of credits each district requires already and the actual number of credits students currently earn. In 2006, only 17 percent of the districts in the state required fewer than 23 credits as the minimum required to graduate from their high schools, and 16 percent required more than 25 credits. The general increase in the statewide number of required credits would not impact all districts, but for some districts would require a substantial increase in staffing at the high school level, in general, and in staffing required courses. Increases in the specific courses required for graduation will have a greater impact across the state at the district level. The largest cost will be district investment in new, additional teachers to cover the increased requirement in specific subject areas such as mathematics, science and world languages, along with additional needs for guidance counselors. Districts may incur additional costs if they subscribe to virtual web-based course offers to supplement the courses they currently can offer.

Minimum Graduation Requirement of 25 Credits

To accumulate a minimum of 25 credits to graduate from a Connecticut public high school each student enrolled in grades 9 through 12 in the state would have to successfully complete 6.25 credits annually. Districts across the state would have the capacity to deliver the 25 credit minimum if the count of the total high school full time equivalent (FTE) of teachers who are teaching during any school year equals or exceeds the count of the number of course section needed so that each high school students can enroll in 6.25 credits, based on 20 students per section and a teaching load of five sections per FTE teacher.

For the 2006-07 school year, the following data are available to make the comparison. There were 176,803 students enrolled in grades 9 through 12 in Connecticut public schools. The total number of sections needed to meet the 25 credit minimum requirement would be 55,250 (176,803*6.25/20) and the total number of FTE teachers would be 11,050.2 (55,250/5). During that school year, Connecticut public schools employed 15,119.3 FTE teachers or 4,069.1 (37 percent) more than were needed to cover the 25 credit minimum. This suggests that many public school students are graduating with at least the 25 credit minimum, or that districts are offering many sections of courses with fewer than 20 students and some teachers may be teaching fewer than five course sections. So, it appears that statewide Connecticut has the capacity to provide all high school graduates with an education requiring a minimum of 25 credits.

The distribution of the excess capacity of high school teachers is not uniform across the state or within the District Reference Groups (DRGs) across the state. The range is from a low of 5 percent in New Britain to a high of 268 percent in Region 11. The table below breaks down the excess capacity in the state by DRG and also includes the capacity at the Connecticut Technical High Schools (CTHS), indicating the average, minimum and

maximum ratios for high school districts of at least 125 students. The ratio 1.37 for the state can be interpreted in the following manner: the state currently has 100 percent of the number of high school teachers to deliver a 25 credit program to every graduate of the state's public high schools, with a surplus capacity of 37 percent more teachers than were needed to staff the sections of courses at the 25 credit level. The 'extra' teachers may be assigned to provide more individualized educational services for students in small groups, such as those with disabilities, or to teach courses with relatively small enrollments such as Advanced Placement courses or the fifth or sixth year of a world language.

DRG	Average Ratio of Capacity to Need	Minimum	Maximum
State	1.37	1.05	3.68
A	1.47	1.34	1.64
B	1.32	1.15	1.56
C	1.46	1.22	1.95
D	1.36	1.13	2.12
E	1.62	1.26	2.56
F	1.40	1.14	3.68
G	1.28	1.14	1.78
H	1.25	1.19	1.78
I	1.30	1.05	1.53
CTHS	1.93	-	-

The tables in Appendix A contain information about the current capacity of individual districts, charter high schools and the RESCs to provide at least a 25 credit education to all of their graduates. Districts that have a ratio of less than 1.25 when comparing their current teaching FTE staff to the number of staff needed to deliver the 25 credit requirement may need to hire additional teachers just to meet the total credit requirement. A relatively small number of districts currently do not have that classroom teacher capacity. Doing so with current staffing levels may pose a challenge for these districts or seriously reduce their flexibility in offering a comprehensive high school program. The increase would have the greatest impact on Bridgeport, New Britain, East Hartford, Norwich Free Academy, and Bristol. The total cost of increasing staffing levels by 287.9 additional teachers for the 23 districts, 3 charter high schools and 5 RESCs that oversee high schools would be $17,883,322.

Impact of Specific Required Courses

In Part I of the Secondary School Cost Analysis, Section B discussed the statewide cost of increased teachers to meet the requirement for four mathematics credits, three science credits including chemistry and two world language credits, along with additional guidance counselors. Districts would incur the cost of providing teachers to staff their classrooms and additional counselors to support students. Estimated statewide numbers of teachers and associated costs first were calculated at the district level to determine the additional number of FTE teachers each district would need to provide enough staff, for example in mathematics, so that every graduate could meet the four credit requirement. Some districts have teachers certified in the specific subject area (like mathematics)

teaching sections of courses in other assignments areas who could teach mathematics, thus reducing the number of new mathematics teachers. However, it is likely that these districts would then need to hire replacement teachers to cover the required or elective course section of those teachers who migrated back to teach mathematics, so they would still incur the staffing costs to staff those classes. The cost for counselors is estimated for three student to counselor ratios, 200:1, 190:1 and 180:1, each below the current state average of 207:1. These are annual costs and need to be adjusted for each subsequent year, over a five year period of time, by about five percent.

The table below identifies the number of additional teachers for mathematics, chemistry and world language and counselors that districts that have a shortfall in their ability to provide enough teachers to fulfill the new graduation requirements.

Staff Assignment	**FTE Teachers**	**Cost**
Mathematics	97.8	$6,083,010
Chemistry	113.0	$7,191,649
World Languages	68.0	$4,500,767
Guidance Counselors (200:1)	88.0	$6,074,426
(190:1)	118.0	$8,090,283
(180:1)	150.0	$10,330,126

Appendices B through F provide estimates of the costs of additional mathematics, chemistry and world language teachers and guidance counselors for each Connecticut public school, charter school or RESC that offers high school. The assignment area estimates are independent of each other and independent of the estimates in Appendix A for the total additional teachers needed to provide a minimum of 25 credits for each graduate. As a result, the total additional FTE teachers that a district would need to meet the new minimum 25 credit graduation requirement might comprise the needed mathematics, chemistry and world language teachers as well as teachers of other required and elective subjects and staff to support the Success Plan and Capstone project.

Section C: Curriculum

1. Model Curriculum

Professional development is a critical component of the implementation of each Model Curriculum the state will create. If the state provides 10 days of professional development per subject area (8 to 12) for one staff member from each high school in the state and the district cover the costs of substitutes, at a rate of $125 per day, the cost per high school would be $1,250 per subject area. The total cost per subject area state wide to the districts would be $256,250 and range from $2,050,000 for eight courses to $3,075,000 for twelve courses. This could be distributed over a three to five year time frame. In addition, professional development in the implementation of the Model Curriculum for Algebra I would need to be provided to middle school teachers at a cost of $1,250 per middle school or $227,500 to the districts statewide.

2. Middle School Connectivity to the Connecticut Education Network

To improve student access to high quality instructional opportunities, the remaining 65 to 70 middle schools in the state that have less than adequate connectivity to the CEN need to be connected or upgraded in order to provide fiber connections to the schools to access the Internet. If districts, rather than the state, had to provide the resources for the connectivity they would have two options:

Option 1: Connections through Long-Term Lease – On average, connections will cost approximately $40,000 per school building. This would total $2,600,000 - $2,800,000, and provide 20 years of connectivity. Additionally, districts would incur maintenance fees after several years, which are estimated to range from $4000-$7000 per year.

Option 2: Connections through Monthly Service – Connectivity services can be purchased on a monthly basis, at a current rate of $1500/month/school ($18,000/school/year). To connect the remaining 65-70 middle schools would cost $1,170,000 - $1,260,000 yearly.

Over time, Option 1 is the more cost effective.

3. Cost of Training Teachers to Use New Technology

District costs associated with the state providing training in incorporating new technology to improve student performance in all content areas would primarily entail paying for substitute teachers during the school year. The table below summarizes the school level cost for training, if the state provided five days of training and each middle and high school in the state was allowed one participant, at a district cost of $125 per day for a substitute teacher for each discipline. Districts may incur additional costs for incorporating the use of the new technology into their local curriculums, extending fiber connections throughout their buildings and upgrading their current level of hardware and software. The following table summarizes the district cost for releasing one staff member

per assignment area for training for a three-year cycle over a five year period of time. The total cost for training middle school teachers over a five year period would be $3,753,750. The cost of providing similar training to high school staff would be $4,228,125 over five years. The total for both middle and high school would be $7,981,875.

	Training Year				
Cohort to be Trained	1	2	3	4	5
- Mathematics - Science - World Language - Administrators	$2,500	$2,500	$2,500		
- English Language Arts - Social Sciences - Technical Education		$1,875	$1,875	$1,875	
- Physical Education - The Arts - Support Professionals - Other Disciplines			$2,500	$2,500	$2,500
Total Per School Cost	$2,500	$4,375	$6,875	$4,375	$2,500
Total for all Middle Schools	$455,000	$796,250	$1,251,250	$796,250	$455,000
Total for all High Schools	$512,500	$896,875	$1,409,375	$896,875	$512,500
Total Secondary	$967,500	$1,693,125	$2,660,625	$1,693,125	$967,500

Section D: Assessment

1. End of Course Assessment Costs

Continuing administering the CAPT would still require a staff member to serve as the District Test Coordinator to oversee the administrative activities; this fulfills the state's accountability responsibilities under NCLB. This would require districts to incur additional costs. For state developed end-of-course exams, which would be administered and scored at the district level, teachers would need to be trained to score model end-of-course exams as a component of the professional development they would receive in the roll-out of the Model Curriculum. The new assessments would be a component of or replacement for the local final exam, so the cost impact at the district level would be minimal.

2. Cost of Advanced Placement (AP) Exams

Each AP course has a corresponding AP exam that is administered in the spring of the school year. The cost of administering the exam is about $85 per exam per student. The cost of supporting each Grade 11 student in DRGs H and I to be administered one AP exam annually would be about $900,000 that the state would provide.

3. Cost of Connecticut Program for International Student assessment (PISA) in 2012

PISA is administered every three years internationally. Connecticut should invest in a state level administration of the assessment to get a benchmark measure of how well its 15-year-old students perform compared with their counterparts in other countries around the world. About 50 high schools would need to be part of the sample for a cost of about $300,000 and there would be no cost to the participating districts.

Section E: Facilities

1. New Facilities Needed to Support Secondary School Reform

In July the staff from the Department conducted an on-line survey of state superintendents to gather information about potential costs to the districts to renovate existing facilities or expand their facilities to accommodate the needed space for the increase in courses that graduates would need to take and the expanded services to implement the Success Plans, Support Systems and Capstone experience. Of the 135 entities in the state that have high schools, 73 (54.1 percent) responded. The response rates, by DRG, ranged from a low of 33.3 percent for DRG H to a high of 63.2 percent for DGR B.

About half (50.6 percent) of the districts responding to the survey indicated that the proposed increase in high school graduation requirements would require their district to renovate existing space or add classrooms. Districts indicated they would meet their space needs by building a new facility (34.1 percent), bringing in modular classrooms (34.1 percent), and altering existing space in their buildings (56.8 percent) or implement virtual labs (38.6 percent). The increase in number of rooms ranged from none to 15 to 20 per building, at a cost of $45,000 for a classroom renovation or modular addition. Cost estimates for more extensive renovations ranged from several thousand dollars to nearly $50 million. For the districts that responded with a cost estimate, the median cost was $620,000. Appendix G contains a summary of the districts' survey responses, by DRG designation.

Section F: Incentives

Incentives for Graduates

Districts would incur no additional costs in providing vouchers for high performing students to attend Connecticut's public higher education institutions.

Appendix A: Cost of Staffing Need to Meet the 25 Credit Requirement, by District

Appendix B: Cost of Staffing Need to Meet the Mathematics Requirement, by District

Appendix C: Cost of Staffing Need to Meet the Chemistry Requirement, by District

Appendix D: Cost of Staffing Need to Meet the World Language Requirement, by District

Appendix F: Cost of Staffing to Reduce the Student to Counselor Ratio, by District

Appendix G: Cost of Renovating Space or Building Facilities,
by District DRG