

PHS i3 Validation Grant

A. Need for the Project and Quality of the Project Design

The Portland Public School Department (PPS) is applying for an \$11.2 million Validation grant from the US Department of Education’s Investment in Innovation (i3) program. This project, which we call “Pathways to Success” will target Portland High School, one of three high schools operated by PPS. It will help implement whole school changes in structure and instructional practice that will support success for all students regardless of ability.

Portland High School (PHS) is the most diverse high school in Maine’s largest and most diverse city. It has failed to meet Adequate Yearly Progress in math and reading for seven straight years and over 20% of the incoming students do not graduate four years later. While small by other states’ standards, PHS has many of the

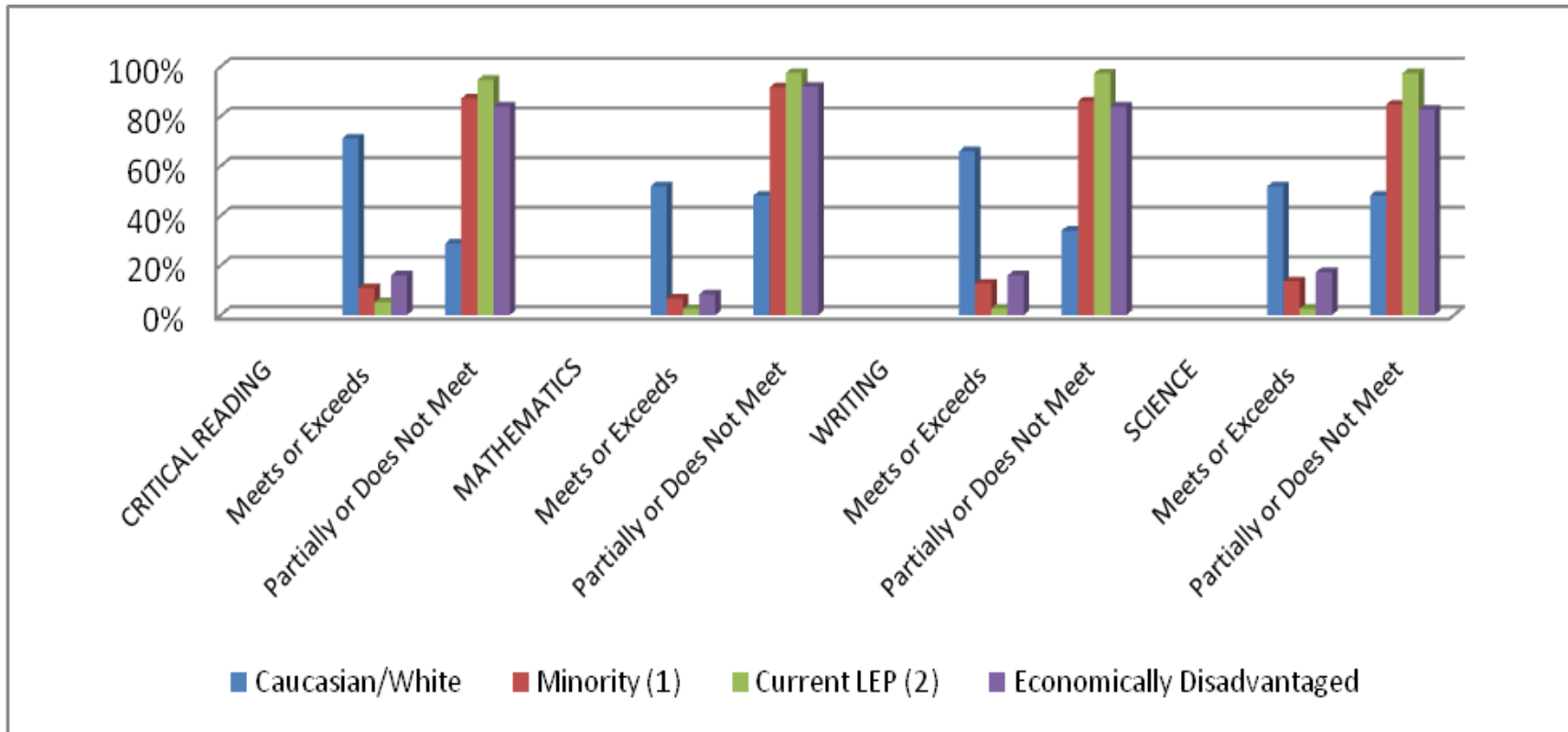
Fig. 1: Portland High School		09/10
Total Enrollment		912
Race/Ethnicity		
White		58.3%
African-American*		25.1%
Asian-American		10.4%
Hispanic		5.0%
Other		1.0%
Free & Reduced Lunch Eligible		52.0%
Language Minority		33.0%
Special Needs Students		11.8%

* These students are predominantly foreign born, coming to Portland as refugees with their families

characteristics of inner city schools. These include a large and growing percentage of minority students, many of whom are English Language Learners (ELL), as well as students coming from families with intergenerational poverty. Since 2006 only 3-5% of low income and minority students, despite comprising 40% - 50% of each class, take AP courses at PHS, illustrating that PHS has not been successful at helping them achieve at higher levels.

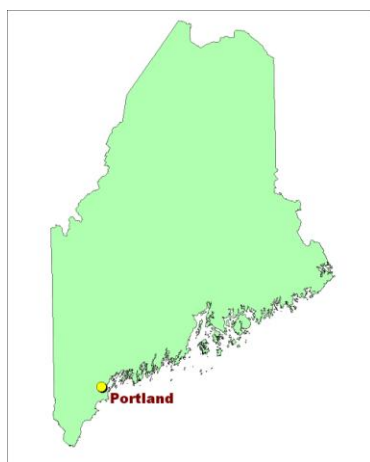
Furthermore, minority, limited English proficient (LEP- or ELL students) and economically disadvantaged students are performing far more poorly on the standardized Maine High School Assessment tests than White/Caucasian students (see Figure 2, below). PHS' participation rate in these tests has been at 78% in recent years, well below Maine's required threshold of 90%.

Figure 2: Portland High School: Maine High School Assessment Scores, 2009



PHS' average daily attendance is 84%, far lower than Portland's other two high schools; Deering (92%) and Casco Bay (98). Over 20% of PHS' incoming students do not graduate from the school. Clearly, PHS' programs and structure are not meeting the needs of the students with the greatest challenges. The challenges of the student body reflect those of the city as a whole.

Fig. 3: Portland's Location in Maine



Portland is Maine's largest and most diverse city and its business, service, and cultural center, with a population of 62,560 (US Census, 2008). It has been home to a federally funded Refugee Resettlement program for over 30 years, bringing an estimated 12,000 primary refugees to Maine. Since 2001 these numbers have swelled by an additional 4,600 "unanticipated arrivals" and asylum seekers. In 2000, 91.3% of Portland's population was white, but by

2008 this number had decreased to 87.2%, largely due to the influx of refugees. Currently, Portland's public schools have over 1,800 students who come from homes where over 50 different languages are spoken. These students represent about 25% of PPS' total enrollment; some 1,400 of them (78%) are identified as ELL. Portland also has a high concentration of poverty, with roughly 10.6% of families and 16.2% of individuals below the federal poverty level, compared to 8.4% and 12.6% for Maine as a whole.

Nevertheless, PHS is highly regarded, and the school offers numerous programs and support systems to help students succeed. Staff and students at PHS describe the school as unique, safe, exciting, energizing, welcoming, and inclusive. Every year PHS does graduate 78.6% of its students, many of whom go on to attend the nation's top colleges, and several of whom receive recognition from the National Merit Scholar program (13 in the last 3 years). While these changes have not improved the performance of students who are ELL, have

disabilities, or at risk of dropping-out, the faculty has instituted changes in structure and curricula over the last several years to improve learning opportunities for struggling students, including:

- A 9th grade partial teaming model to improve collaborative planning was introduced in 06/07;
- A Global Studies Certificate program, introduced in September 2009, that capitalizes on the school's diversity and encourages a global perspective in learning;
- A state-recognized alternative education program that integrates math, science, health, art, and physical education curricula. Other program features include teaming and looping;
- A program for students with Aspergers to help them succeed in mainstreamed classes, which provides them with supports in Social Academic Independence Learning (SAIL);
- Doubling the number of hearing-impaired students in the last 3 years, from 12 to 24, which has required increased professional development to help teachers work with interpreters, and offering an American Sign Language (ASL) class to teach signing to hearing students to help them communicate;
- Portland's Academic Support System (P.A.S.S.), is a peer tutoring program now in its 4th year. P.A.S.S. is a volunteer program that pairs student tutors with peers needing help in core content areas. Pairs meet once weekly. The program has helped students improve their skills, improve their grades, and obtain course credits;
- About 20% of PHS students have enrolled in Latin classes each year for the last five years. Teachers loop with students which helps improve retention in the program. About 30% of Latin students win a national award every year.

The largest and most successful change in the Portland Public Schools came in 2005 when the Portland School Committee established the Casco Bay High School (CBHS). The school was created with a grant from the Bill and Melinda Gates Foundation through the Expeditionary Learning Network's Outward Bound Program. Expeditionary Learning Schools (ELS) promote high academic achievement through real world projects and products within an active, engaging, and rigorous college preparatory curriculum. CBHS is a school of choice for approximately 250 students in grades 9-12. It began with a freshman class and added a class in each consecutive year until it is now a full four-year high school. CBHS is housed at PATHS, a regional arts and technical high school located in another part of the city. Portland embraces

school choice, so that students may attend the high school of their choice regardless of where they live. Over the last five years CBHS has grown to mirror PHS in its demographics; 43% of students are eligible for free and reduced lunch, 19% have special needs, and 21% are ELL.

CBHS has enjoyed substantial success with a student population profile substantially similar to PHS'. It graduated its first class in the spring of 2009; 100% of graduates were accepted to college, and in 2008 the school was rated 10th of 130 Maine high schools on state assessments compared to PHS's rating of 103. For the first time, enrollment demand has grown so that there is a waiting list for the 2010/2011 school year. CBHS will use a "loaded lottery" to ensure CBHS' student demographics continue to reflect those of the district as a whole. In a survey of the school's educational environment (My Voice Middle/High Survey©), CBHS students demonstrate more favorable attitudes toward school than most of their peers nationally. For example, 85% of students report "school is a welcoming and friendly place" (compared to 62% nationally); that "students respect their teachers" (71.5% compared to 39% nationally); "learning can be fun" (76.2% compared to 64% nationally); and that "teachers care about me as an individual" (75% compared to 48% nationally.) Clearly, there are components of CBHS' structure and instructional practice that are effective in reaching all students.

One option available to students who drop out of PPS is to enroll in Youth Building Alternatives (YBA), an alternative education and vocational skills building program for youth ages 16-24. YBA is operated by LearningWorks, a 501c3 community-based social services agency located in Portland's West End, about a mile from PHS. YBA students spend about 50% of their time receiving individualized instruction aimed at helping them complete requirements for a high school diploma or to obtain a GED. The other half of their time is spent learning vocational skills, primarily by renovating and building affordable housing. Wraparound services

such as case management, substance abuse counseling and other support services help these young people stay in school and succeed, some for the first time in their lives. From 2006-2008 YBA enrolled 88 students. Of these, 60.2% graduated and 57% of these received GEDs. Additionally, for students such as these, who are chronically absent from school and without aspirations, YBA has an 81% attendance rate and a remarkable 88% placement rate into jobs or further education upon graduation. YBA students have many barriers to success such as low literacy rates, substance abuse, family upheaval, homelessness, pregnancy/parenting, and correctional system involvement. These challenges, and the fact that almost had all dropped out of school prior to enrollment in YBA, makes YBA an important ally to the PPS in helping teens and young adults complete their education.

PHS's record of failing to make AYP for seven straight years in both reading and math, low high school completion rate (74.1%), and low average daily attendance rate (84%), combined with the faculty and the department's proven capacity to innovate, make PHS an excellent candidate for the whole school change proposed for this i3 Validation grant. Our plan is grounded in the research on Talent Development High Schools and Career Academies described in Section B, below, while drawing on the lessons learned from other PHS initiatives, establishing the CBHS, and from LearningWorks' YBA work with high school dropouts.

(1) Exceptional Approach to Priority Needs

PPS is applying under **Absolute Priority 4--Innovations that Turn Around Persistently Low-Performing Schools, and Competitive Preference Priority 7- Innovations to Address the Unique Learning Needs of Students with Disabilities and Limited English Proficient (LEP) Students.**

Our vision is to adopt whole school changes in structure and instructional practice that support success for all students regardless of ability, using as a model the Talent Development High School (TDHS) developed by Johns Hopkins University's Center for Social Organization of Schools (CSOS). This is a research-based, whole school reform model for high schools such as PHS that face serious challenges with student attendance, achievement scores and dropout rates. The TDHS model features small learning communities; professional development to help faculty improve their classroom skills; teaming; strong interventions in 9th grade; and upper grade career academies. The TDHS research is described in more detail under B., below. PHS' data demonstrate that interventions which isolate and target low performing students are not successful in improving their educational outcomes. We believe whole school changes are necessary in order to address the needs of the roughly 50% of students who are failing to meet state educational standards, are dropping out, or at risk of doing so.

While it has been implemented in many states there are currently no TDHS schools in New England, and Portland offers some distinct attractions as a site for implementing this model. PHS' ELL population is quite diverse, speaking over 40 languages and representing many cultures, which is different from a typical high minority inner city population. Also, Portland, and Maine as a whole, has for several years embraced a technology initiative that began with providing every 7th grader in the state with a laptop. PPS expanded this initiative to its high schools in the current fiscal year. The investment in technology, by both PPS and the State of Maine, increases PHS' ability to individualize instruction and strengthen students' digital literacy. Use of technology also makes learning more engaging and relevant for many students.

The tables in Figure 4 depict current practice at PHS, proposed changes, and the expected benefit to all PHS students, including ELL students, students with disabilities, and those from high poverty backgrounds.

Figure 4: PHS Current Structure/Practice, Proposed Changes Using i3 Grant, and Expected Benefits

<i>Structural Changes</i>		
Current Structure	Proposed Changes	Expected Benefits
Partial 9 th Grade Team model	Full team model in 9 th Grade ¹ , as per TDHS model	<ul style="list-style-type: none"> • Reduces isolation and anonymity • Supports personalized learning • Improves interdisciplinary planning • Expedites identification and interventions of struggling students
Homogeneous Groupings	Heterogeneous Groupings (with flexible groupings during instruction), as per TDHS model	<ul style="list-style-type: none"> • Improves student outcomes • Reduces academic stratification
Limited Looping	Expand looping	<ul style="list-style-type: none"> • Improves consistency of instruction • Improves grade to grade transitions • Deepens relationships between teachers and students

¹ “Teaming” is defined as a set group of teachers who work with a set, cross-section of students for an extended period of time. The purpose of the team is for the teachers: to collaboratively plan curriculum and instruction, including interdisciplinary study and projects when synergistic; to holistically monitor student progress and collaboratively plan for student needs; to establish common instructional, academic and behavioral expectations that amplify their classroom impact on student growth and achievement; to intentionally develop a community of learners that brings out the best, socially and academically, in each student.

Structural Changes

Current Structure	Proposed Changes	Expected Benefits
No Career Pathways	Career Pathways in Grades 11-12, as per TDHS model	Creates pathways for all students to access post-secondary instruction/training
Limited time for faculty to engage in collaborative planning	Days added to school calendar, as well as release time, to allow time for collaborative planning and coaching needed to implement the TDHS model	Improves instructional coordination
Limited extended school day & year learning opportunities	Substantially increased school day & year learning opportunities for ELL and low performing students	Increases options for acquiring skills/knowledge that helps ELL and low performing students meet standards
	Added web-based learning opportunities, as well as dual enrollment in college or vocational learning options	Increases options to personalize learning for students connected to their Career Pathways
Limited academic/vocational programming within PPS for students at high risk of dropping out	Integrating LearningWorks' YBA program into PPS	Strengthens continuum of educational alternatives within PPS for students who might otherwise drop out

Changes to Instructional Practice

Current Practice	Proposed Changes	Expected Benefits
Experiential learning and individualized instruction not uniformly practiced throughout PHS	Teachers will expand use of experiential learning and individualized instruction	Benefits students with different learning styles, instructional needs
Assessment across PHS is not standards-based	Implement standards-based instruction school-wide	Uniform high expectations of all students
Insufficient professional development available to support changes in instructional practice	Provide extensive professional development to support adoption of the TDHS model and changes in instructional practice, including topics such as ELL instruction, teaming, Career Pathways. ²	Improve faculty’s skill/knowledge in how to work with ELL, students with disabilities, and at-risk students
Insufficient use of student data to inform individual instruction as well as classroom, grade, and school-wide planning	Use Infinite Campus, TABLEAU, Northwest Educational Assessment, (NWEA) ACCESS ³ , and Acu-Placer to track student activity and deepen analysis of student achievement	Improved measurement and tracking of student performance to inform instruction Supports more rapid changes to instructional practice and programming

² Career Pathways is integrated instruction and supports to help prepare students for post-secondary training and education, and to increase the relevance of education to future employment.

³ ACCESS for ELLs® (*Assessing Comprehension and Communications in English State to State for English Language Learners*) is an English language proficiency test administered annually in Maine to all English language learners (ELLs) in kindergarten through grade 12. ACCESS for ELLs® meets the federal requirements of assessing ELLs’ proficiency levels in the domains of speaking, listening, comprehension, reading, and writing and is aligned to Maine’s *Learning Results* academic content standards.

Changes to Instructional Practice

Current Practice	Proposed Changes	Expected Benefits
Lack of an integrated and comprehensive system of supports for students to help them complete high school (such as tutoring, dropout interventions, literacy remediation, etc.)	Establish an integrated and comprehensive system of supports for students to help them complete high school	Establishing a continuum of services and supports allows all students to access assistance needed without getting placed in tracks
Students wishing to enroll in PATHS career-prep classes must travel to PATHS, which is a barrier to participation.	Bring PATHS courses to PHS	Strengthens Career Pathways options for all students.
Limited use of technology throughout PHS	Substantially upgrade current technology and provide professional development on authentic use of technology in classroom instruction in support of teaching and learning.	Deepens students learning and facilitates 21 st century digital literacy

(2) Project Goals and Strategies

Goal 1: Improve School Outcomes for PHS Students who are ELL, Have Disabilities, or Whose Low Performance Puts them At-Risk of Dropping Out

- A. Improve average daily attendance from 84% baseline to 92% by Year 5
- B. Increase school completion rate from 74.1 to 90% by Year 5
- C. Increase by 10% annually the percent of ELL who receive a 3 or better on the ACCESS test
- D. Make adequate yearly progress (AYP) by Year 5

(3) Consistency of Project with Research Evidence

Portland High School (PHS) shares the following characteristics with the schools that were the subjects in the studies below:

- History of poor student achievement
- Low completion rates
- Low average daily attendance
- Low enrollment in post-secondary education or training

Key Characteristics of Proposed Project at Portland High School:

- Small learning communities created by use of interdisciplinary teams for 9th and 10th graders, and Career Pathways for 11th & 12th graders
- Move to heterogeneous groupings by eliminating the “General Track” (with flexible groupings during instruction)
- Expanded use of looping
- Extended school day and/or year to provide additional learning time, especially for ELL students and those with disabilities
- Strong planning and professional development for faculty to support changes in school structure and in instructional practice, to include workshops, coaching, and peer mentoring
- Conversion to standards-based assessment

Research-Based Models

1) Talent Development High Schools (TDHS):

Key Characteristics of the TDHS Model:

- Small learning communities achieved by use of 9th grade interdisciplinary teams and Career Academies for 10th - 12th graders
- Heterogeneous groupings
- Extended school day and/or year
- Strong planning and professional development for faculty to support changes in school structure and in instructional practice, to include workshops, coaching, and peer mentoring
- Use of standards-based assessment

Research Evidence:¹

(For 9th grade students at TDHS schools compared to comparison schools)

- 5% increase in attendance (average increase of 9 extra school days/year)
- 8% more students promoted from 9th to 10th grades
- 8% more students completed basic academic curriculum
- Increase in total credits earned (avg. 2/3 of a full-year credit)
- 10% increase in students who had earned 3 math & 3 English credits by 11th grade

¹ Kemple, J. J., Herlihy, C. M., & Smith, T. J. (2005). *Making progress toward graduation: Evidence from the Talent Development High School model*. New York: MDRC; and What Works Clearinghouse Topic Report, Intervention, Talent Development High Schools, July 16, 2007, <http://ies.ed.gov/ncee/wwc/reports/dropout/tdhs/research.asp>

2) Career Academies

Key Characteristics of Career Academies:

- Small learning communities created by use of interdisciplinary teams;
- Students take classes together for at least two years;
- College prep curriculum organized around one or more of 16 “career clusters” (groupings of occupations and broad industries) that help students see relevance of school to a field of work;
- Partnerships with employers, the community and local colleges.

Research Evidence:²

- 13% increase in students staying in school
- 13% increase in students progressing in school (earning credits, grade promotion, etc.)

² What Works Clearinghouse Topic Report, *Dropout Prevention*, September 2008

B. Strength of Research, Significance of Effect, and Magnitude of Effect

(1) Discussion of Moderate Evidence of Proposed Practice, Strategy, or Program

The US Dept. of Education’s What Works Clearinghouse (WWC) found a “potentially positive” effect for the TDHS model helping students progress in school. The research WWC reviewed was a quasi-experimental study whose research design included multiple cohorts of entering ninth-grade students from 11 Philadelphia high schools; five TDHS and six matched comparison schools. The study, conducted by Kemple, Herlihy, & Smith (2005), found that students using *Talent Development High Schools* earned an average of 9.5 course credits over the first two years of high school, while comparison group students earned 8.6 course credits. In addition, *Talent Development High Schools* students were more likely to be promoted to tenth grade than comparison students (68% vs. 60%). Both differences were statistically significant. Since persistently low student achievement is one of the issues PPS is seeking to address through our i3 proposal, this finding was of great interest and relevance to PPS.

The authors of the study reviewed by WWC found statistically significant improvements in a number of other areas, including 5% increase in attendance (average increase of 9 extra school days/year); 8% more students completed basic academic curriculum; an increase in total credits earned (avg. 2/3 of a full-year credit); and a 10% increase in students who had earned 3 math & 3 English credits by 11th grade.

Based on a review of four studies the Comprehensive School Reform Quality Center (CSRQ, 2006) found that the TDHS model demonstrated moderate evidence of positive effects on student achievement overall, and specifically for reading and math. CSRQ also found moderate evidence of positive results for attendance and grade promotion rates, and some limited evidence for dropout and graduation rates and student discipline. The evidence for links between research and the model's design was very strong (the highest rating), as was the evidence of professional development/technical assistance for successful implementation. The CSRQ Center considered the findings of two of these studies to be *conclusive*, meaning the CSRQ Center has confidence in the results of each study (these were Balfanz, Legters, & Jordan (2004), and Kemple, Herlihy & Smith (2005)). Both studies used a matched-group, quasi-experimental design.

What Works Clearinghouse completed a review in 2008 of dropout prevention programs. The review focused on three outcome domains: staying in school, progressing in school, and completing school. The WWC looked at 84 studies of 22 dropout prevention interventions that qualified for review. Of these, 23 studies of 16 interventions meet WWC evidence standards—11 without reservations and 12 with reservations. **Career Academies** was one of four interventions cited as having potentially positive effects in two domains; both staying in and progressing in school. WWC found 13 percent average improvement in school retention for students in Career Academies, as well as a 13 percent average improvement in students' measures of credits earned and grade promotions.

(2) Importance and Magnitude of Effect

This is a whole school change project that will affect all PHS students. There are approximately 912 students at PHS annually; over a 5 year period the project will involve about

1,900 unduplicated students. Of these, about 1,140 will be 9th graders during the study, and about half (50%) will be students who are ELL, have disabilities, or have other issues such as poverty that put them at high risk for dropping out. Figure 5, below, calculates the magnitude of effect over a one-year and a five-year period based on the prior research. Over the 5 year period, we are projecting that compared to baseline levels there will be an additional 57 9th grade students who improve attendance; 91 more 9th graders who are promoted from 9th to 10th grades; and 91 who complete basic academic curriculum that helps them progress towards meeting standards for graduation.

For ELL, disabled, and at-risk students, we project that compared to baseline levels an additional 114 students will improve their attendance; 182 will be promoted to the next grade; and 182 will complete basic academic curriculum that helps them progress towards meeting standards for graduation.

Figure 5: Projected Impact on PHS Students of i3 Pathways to Success Project

All 9th Graders	Evidence	Total 9th Graders/Year	# Students Affected/Year	Over 5 Year Period
• Improved attendance	0.05	228	11	57
• Promoted from 9th to 10th	0.08	228	18	91
• Completing basic academic curriculum	0.08	228	18	91
All ELL, Disabled, Low Performing Students	Evidence	Total ELL, Disabled, Low Performing/Year	# Students Affected/Year	Over 5 Year Period
• Attendance	0.05	456	23	114
• Promoted to next grade	0.08	456	36	182
• Completing basic academic curriculum	0.08	456	36	182

C. Experience of the Eligible Applicant

(1) Past Performance in Implementing Complex Projects

The planning and implementation of CBHS from 2005 to the present has been a complex undertaking, requiring creation of a 3rd high school within the Portland Public Schools. The expeditionary learning model had been in place at Portland's King Middle School for over 15 years, so the model was not new in Portland. However, it had not been applied at the high school level. In early 2005 the Portland School Committee accepted a \$600,000 start-up grant from the Gates Foundation (through Expeditionary Learning, or EL) to start a new high school to be phased in over a four-year period, one grade per year. An EL School Designer worked closely with PPS to begin design of the school and to recruit teachers and students. Intensive planning took place through the remainder of the winter, spring, and summer of 2005 in order to prepare to open the 05/06 school year with the first freshman class.

Almost all of the CBHS staff were hired by June 2005. The staff engaged in three weeks of summer training, including an off-site EL institute, and two weeks of a local institute designed by CBHS' Principal and two EL "school designers" (also known as school coaches). CBHS staff also convened several student, parent and teacher summer task forces to address start up issues ranging from grading to school culture. These task forces each issued recommendations to the full faculty for review, revision and approval.

CBHS was at 75% enrollment for the first three years of start-up. However, the publicity around the achievements of CBHS' first graduating class in spring 2009 has moved many parents and students from the "wait and see" column. In the current academic year grades 10-12 are still slightly below their capacity but the 9th grade class is full, and there are 50 students on the waiting list for the fall 2010 9th grade class (36 from Portland and 14 from out of district). We

anticipate full enrollment in all four grades at CBHS by 2013, and plan to move CBHS out of its current location and into PHS in order to accommodate the growing demand, though the school will be capped at its maximum enrollment of 400 students.

(2) School Improvement and Achievement Data

The evidence that PPS has succeeded in substantially closing the achievement gap between groups of students comes from CBHS. With similar student profiles, the two schools performance rates are as shown in Figure 5, below:

Figure 6	CBHS	PHS
State rank in high schools, 2008, (out of 130 schools)	10 th	103 rd
Student 4-year completion rate	79.1	74.1
Average daily attendance	98%	84%
Students accepted to college, 2008	100%	75%

D. Quality of the Project Evaluation

(1) Proposed Methods of Evaluation

The Center for Education Policy, Applied Research, and Evaluation (CEPARE) at the University of Southern Maine will conduct the external evaluation of the proposed project. The evaluation plan presented here employs quantitative and qualitative methods to measure the project’s impact on PHS students, assess the fidelity of implementation of the TDHS model, and to monitor whether project activities throughout the 5-year period are conducted as proposed. The evaluation plan for the project replicates elements of the research plans from four prior studies; as discussed in the Evidence section of this proposal, these studies were rated as “very strong” by the Comprehensive School Reform Quality Center (CSRQC) for the link between research and the model’s design, and the link between professional development/ technical

assistance and successful implementation. Two of the studies met What Works Clearinghouse's criteria for quasi-experimental design. CEPARE will employ an interrupted time series design to compare impacts at PHS to baseline measures prior to implementation of the TDHS model. To further isolate the effects of TDHS, data from a comparison high school with similar student demographics will also be collected and contrasted to growth at PHS. A multi-level logic model adapted from the TDHS literature will be used to guide data description, data collection, and to develop hierarchical linear analysis models for interpreting the student assessment data. Through its ongoing research relationship with the Maine Department of Education CEPARE has existing access to student and school level assessment data.

The overall evaluation plan employs quantitative and qualitative methods to a) measure the project's impact on Portland High School students, and b) assess the fidelity of implementation of the TDHS model and monitor whether project activities are conducted as proposed. A benefit of this dual approach of the evaluation plan will be the ongoing use of formative findings to modify the program implementation as necessary.

The primary purpose of the first focus is to systematically collect and analyze data to provide project staff with formative feedback on the effectiveness of project activities in improving student outcomes. The benchmarks and evaluation activities that will be conducted appear in Figure 7, below. To determine the initial impacts of the TDHS implementation, the following information will be collected:

- Average daily attendance rates at PHS will be compiled quarterly and provided to project staff for ongoing information. On an annual basis, changes in attendance rates will be statistically compared to a high school with similar student characteristics.
- Student assessment data (10th and 11th grade PSAT & 11th grade SAT performance for all

students, and annual ACCESS scores for ELL students) will be analyzed on an annual basis to compare longitudinal changes in PHS student performance to those at the comparison high school, using Hierarchical Linear Modeling (HLM) and controlling for prior performance on 8th grade Maine Educational Assessments (MEAs). CEPARE may also assist district staff as needed for analysis of PHS students' PSAT and SAT responses by item, so that project staff receive school-level diagnostic information in a timely manner. Item-level data are currently provided to Maine schools in raw form by the College Board through contractual agreements.

- Changes in grade level progression (including graduation), course completion rates, and number of courses completed at PHS will be calculated and contrasted to the comparison school.
- Changes in student attitudes and engagement will be evaluated through annual PHS student surveys, and annual surveys of teachers and instructional staff at PHS and the comparison school. TDHS survey instruments will be used with appropriate modifications. Follow-up interviews will be conducted with selected respondents as needed for clarification and exploration of emergent issues.
- Feedback will be elicited from all participating administrators and project staff through evaluator participation in leadership team meetings; CEPARE staff will assist in identifying specific concerns and will conduct selected follow-up interviews as needed. Lessons learned will be shared with the Advisory Committee, in team meetings, informal communications with staff, and formal annual reports.

In its second (summative) focus, CEPARE will measure the fidelity of the implementation of the TDHS model. Using most of the data collection measures described above (assessment

scores, surveys, and interviews), plus observations of classroom teaching practices, professional development sessions, and other selected activities, CEPARE will provide annual feedback to the project team and funding agency evaluating PHS’ progress toward full implementation of the TDHS model. The proposed monitoring activities for the various components of the TDHS model are listed below:

Figure 7

Benchmark	Measure	Feedback to Pathways to Success Staff & Advisory Committee
<i>Student Impacts</i>		
Improve PHS average daily attendance from 84% at baseline to 92 % at Year 5	Compare changes in average daily attendance at PHS to the comparison school.	Avg. PHS daily attendance rates calculated monthly; comparisons generated annually.
Increase PHS student completion rate from 74.1% at baseline to 90% at year 5	Compare changes in grade level progression (including graduation), course completion rates, and number of courses completed at PHS to the comparison school.	Rates calculated each year & longitudinal comparisons provided to project staff.
PHS will make AYP by Year 5.	Using existing performance reporting tool CEPARE will assist in comparing trends to the comparison school.	Comparative analysis provided annually, and for trends over 5 years.
Improve academic achievement for PHS students overall, and for ELLs, disabled, & low-income students	Use 10 th & 11 th grade PSAT scores, 11 th grade MHSA scores, & ACCESS scores (for ELLs) to compare student growth to the comparison school.	Comparative analysis provided annually, and for trends over 5 years.
Improve student attitudes & engagement.	Annual student surveys (instruments from TDHS with appropriate modifications); teacher interviews.	Comparative analysis provided annually, and for trends over 5 years.
<i>Fidelity of Implementation of TDHS Model Elements & General Monitoring</i>		
9 th & 10 th grade interdisciplinary teams, extended learning,	Classroom observations; Interviews & surveys of Pathways to Success leadership team, PHS administrators,	Findings shared in annual reports; ongoing findings shared with Advisory

heterogeneous groupings	& curriculum coordinators; CEPARE attendance at leadership meetings; student surveys; artifacts from problem-based student work.	Committee, in informal communications and leadership team meetings.
Teacher professional development (quality and appropriateness)	External observations of selected events; teacher surveys & select interviews.	Annual reports.

(2) Potential for High Quality Data and Performance Feedback

Data will be shared with the Pathways to Success leadership team (which includes the Project Director, the PHS Principal, Curriculum Coordinator, and LearningWorks Executive Director) and Advisory Committee at least annually. The average daily attendance will be analyzed at least bi-monthly by the Advisory Committee. Measures of student attitudes and engagement will be conducted annually by the evaluation team and results will be reviewed by the Advisory Committee and the project leadership team.

(3) Potential for Evaluation Results to Support Replication

The proposed study design will yield data on the effectiveness of the key elements and approach of the project. This includes changes to school structure and to instructional practice, as well as the relevance and effectiveness of the professional development needed to support the whole school change. Data will be collected on student performance as well as school climate. The study design will use a quasi-experimental approach drawn from previous research on the TDHS model.

(4) Sufficiency of Resources for Proposed Project Evaluation

PPS’ i3 proposed budget includes \$980,000 for the 5-year research project. This will cover the full cost of planning and implementing the study, including developing or adapting

qualitative survey instruments, conducting interviews, analyzing research results, meeting with the Pathways to Success leadership team and Advisory Committee, and writing reports.

(5) Rigor and Independence of Proposed Evaluation

The Center for Education Policy, Applied Research, and Evaluation (CEPARE) at the University of Southern Maine will conduct the external evaluation of the proposed project. CEPARE is completely independent from PPS. Neither the project developer nor the implementing staff will have a role in evaluation. The evaluation plan employs both quantitative and qualitative methods to measure the project's impact on PHS students, assess the fidelity of implementation of the TDHS model, and to monitor whether project activities throughout the 5-year period are conducted as proposed. CEPARE will employ an interrupted time series design to compare impacts at PHS to baseline measures prior to implementation of the TDHS model. To further isolate the effects of TDHS, data from a comparison high school with similar student demographics will also be collected and contrasted to growth at PHS. A multi-level logic model adapted from the TDHS literature will be used to guide data description, data collection, and to develop hierarchical linear analysis models for interpreting the student assessment data.

E. Strategy and Capacity to Bring to Scale

(1) Capacity to Reach Proposed Number of Students

Current year enrollment at PHS is 912 students. The proposed interventions will affect the entire student body, though some programming will be targeted to the roughly 456 (50%) of the student population that is ELL, disabled, or low performing and at-risk of dropping out.

Because this is a school-wide intervention PHS will have access to all students during the five-year grant period. The partnership with LearningWorks will expand PHS' capacity to reach

those students at greatest risk of dropping out as well as re-enrolling some who may have already dropped out. Expanded school day and year options will provide additional opportunities for LEP students to improve their math, science, reading, and writing skills so that they can meet standards and continue their progress towards earning a diploma. Students with disabilities will benefit from this as well. Expanded teaming and looping will improve connections between teachers and students, personalizing instruction and minimizing students' sense of getting lost within the larger school. Expanded use of experiential learning and individualized instruction, the use of technology, and Career Pathways will help make learning more relevant and engaging, and better prepare students for post secondary training and education.

LearningWorks is a critical partner in reaching the target populations. LearningWorks has for many years provided English as a Second or Other Language (ESOL) training to new immigrants and refugees, as well as a free, drop-in computer lab. Here volunteers provide tutoring in math and English, and provide assistance with online job searches, writing resumes, and maintain email contact with friends and family. LearningWorks also provides an afterschool program at an elementary school in Portland's West End, and offers a variety of programs to provide vocational skills training and alternatives to detention for teens involved in the Juvenile Justice system. The Youth Building Alternatives (YBA) program has been operating since 1994 as an alternative education program serving at-risk youth between the ages of 16 – 24 years old. The program includes academics, GED preparation, vocational education, job skills, life skills, and counseling. One result of the expanded partnership between LearningWorks and PPS is that YBA will be able to serve more students, and students enrolled in YBA will be able to remain enrolled at PHS and earn credits they need to graduate with a diploma. Additionally, LearningWorks has a number of programs appropriate for students who are at-risk and/or are

ELL. These include Skills for Responsible Thinking (a cognitive behavioral therapy); Anger Management; Community Service opportunities; ESL classes for young adults (ages 18-24); and housing for youth that are homeless. All of these programs will be made available to PHS students as a result of the partnership with LearningWorks.

PHS plans to contract with Johns Hopkins University's Center for Social Organization of Schools (CSOS) to provide technical assistance in planning and implementing the TDHS model, including changes in school structure, instructional practice, staffing, strategies for improving college awareness among students, parents, and the community, and professional development for administrators and staff. We have included funds in our proposed budget to cover these consulting costs. In addition, the skills and expertise of the CBHS teachers and administrators will be available to PHS during the implementation process through coaching and teacher in-service training; this will expedited when CBHS moves from its current location into PHS.

(2) Applicant Capacity to Bring Project to Scale

Over the 5-year project period we expect this project to affect approximately 1,900 students, of which approximately 950 (50%) will be ELL, students with disabilities, low income, or at-risk of dropping out. The proposed changes to school structure, including interdisciplinary teaming at the 9th and 10th grade levels and heterogeneous groupings will facilitate engagement of all students. In addition, over the 5-year period all PHS faculty will be expected to complete a minimum of 5 courses in ELL instruction to improve their capacity

(3) Feasibility of the Proposed Project to be Replicated Successfully

The TDHS model was created by the Johns Hopkins University's Center for Social Organization of Schools (CSOS). CSOS has already established the TDHS model in over 23

cities across the country, serving over 100 high schools. CSOS has the infrastructure in place to replicate the model, with any changes by the results of this study once it has been completed.

This Pathways to Success project will test the efficacy of the TDHS model in settings where there is a high ELL population, as well as students with disabilities, high poverty, and at risk of dropping out. It will also test the model in a small city; TDHS high schools studies to date have been in much larger inner cities with high minority populations that are primarily African-American and Hispanic. The study design includes qualitative surveys and interviews to collect data on the ease of implementation of the TDHS model, and the satisfaction of students, teachers, and administrators with it.

Pending favorable outcomes PPS will replicate TDHS at Deering High School, which is comparable in size to PHS. While it previously had a more homogeneous, Caucasian population, in the last three years DHS' demographics, and its students' academic performance, has been trending closer to PHS. Support for future replication efforts could come from the Maine Department of Education as well as the Maine State Legislature, which have been looking for models to improve schools and student outcomes across the state.

(4) Cost Estimates of Proposed Project

The cost of the proposed project, including start-up, operating, indirect costs, consulting fees to JHU CSOS, and the evaluation is \$11,223,531. On an annual basis, these per/pupil costs (based on an average projected student census of 912) break down as follows in the Total Costs column. Note that for replication purposes, if the costs of the Evaluation and the TDHS Consulting fees are removed, the overall cost is reduced to \$9,240,021 and the per student cost is reduced dramatically.

	Total Costs	Cost Without Evaluation & TDHS Consulting Fees
Year 1:	\$ 2,827	\$ 2,403
Year 2:	\$ 2,770	\$ 2,331
Year 3:	\$ 2,735	\$ 2,288
Year 4:	\$ 2,199	\$ 1,774
Year 5:	\$ 1,776	\$ 1,335

Note that costs decrease about 37% between Year 1 and Year 5, reflecting start-up costs such as professional development, equipment, and technology purchases which are not included in Years 4 and 5.

(5) Dissemination Mechanisms

The Muskie Institute will publish evaluation results through peer-reviewed journals, both print and online. Presentation of evaluation results will also be made at statewide, regional, and national conferences, especially any organized by the US Dept. of Education as part of the i3 communities of practice.

The PHS i3 evaluation results will be shared with other schools across Maine through regularly scheduled meetings of principals as well as at the annual statewide education conference. The Maine Department of Education has expressed a keen interest in the TDHS model, as has the state Legislature’s Education Committee (see letter from State Senator Justin Alfond, attached) and will support our efforts to disseminate research results throughout the state. In particular, there are a relative handful of larger, more urban high schools whose

demographics (except perhaps for the presence of high numbers of ELL) closely mirror Portland's own. These include Saco, Biddeford, So. Portland, Lewiston, Auburn, Westbrook, Augusta, and Bangor. PPS will outreach to these schools particularly to share evaluation results.

F. Sustainability

(1) Resources and Support for Sustainability

The Portland Public Schools used an inclusive planning process for this grant that included the Superintendent, PHS teachers and administrators, CBHS teachers and administrators, the head of the teachers' union, and LearningWorks' leadership. The Portland School Committee received a thorough briefing and voted unanimously at its 5-4-10 meeting to support submission of this i3 Validation grant proposal.

Once awarded, an Advisory Committee will be established that will include teachers, building administrators, parents, students, and other stakeholders. The Steering Committee will be staffed by the Project Director.

The Validation grant will provide the resources PHS needs for managing the grant; for teacher planning time, professional development, and coaching during the change process; as well as some key technology and other equipment. Support for ongoing professional development following grant completion will be obtained through the PHS' annual budgeting process.

LearningWorks, a 501c3 nonprofit, is supplying an in-kind match valued at \$2,244,706 over the 5-year grant period. The match comes from personnel and fringe, travel, supplies, contractual and other costs related to integrating LearningWorks' YBA program into PHS to expand enrollment and expedite access to its programs and services for PHS students. This partnership will extend beyond the 5-year project period.

From Year 1 to Year 5 the budget decreases by 37%. Following Year 5, the ongoing costs of this initiative per year amount to less than \$1 million (primarily the added costs of YBA and extended learning). The Portland School Committee's current budget is \$80 million/year, so the additional costs of the initiative would amount to just over 1% of its annual budget.

(2) Potential and Planning for Incorporation into Ongoing Work

Once the transition is complete, and the new structure and instructional practices are in place, maintaining these would become the ongoing work of PPS, PHS administrators and teachers, and LearningWorks. The PPS will evaluate in Year 4 and 5 the potential for replicating the TDHS model into Deering High School, Portland's 3rd high school which is comparable to PHS in size and (increasingly) in student demographics and performance.

G. Quality of the Management Plan and Personnel

(1) *Adequacy of the Management Plan to Achieve Grant Objectives*

Figure 8: Pathways to Success 5 Year Workplan

Task	Who?	Year 1				Year 2				Year 3				Year 4				Year 5				Total
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Hire Project Director	S, P, T	X																				
Hire Evaluator	S, P, T	X																				
Hire contractual staff	S, PD, T	X																				
Contract with JHU/CSOS TDHS	S,P, T, PD																					
Establish Adv. Com.	PD, P, T	X																				
Purchase technology	PD, AC, T	X	X																			
Select and train teacher leaders	PD, P, T	5	X																			
Schedule teacher planning days	PD, P, SC, S, T	5	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3	5	3	3	3	40
Provide professional dev. to faculty on teaming, looping, instructional practice changes, technology use, ELL instruction	PD, T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Add extended day/year learning opportunities	PD, P, LW, T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Task	Who?	Year 1				Year 2				Year 3				Year 4				Year 5				Total
Increase # of students enrolled in extended day/year learning	PD, P, LW, T	100				100				100				100				100				500
Plan & implement 9 th grade teaming	PD, P, T	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Implement expanded grade looping	PD, P, T					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Plan 9 th grade seminar	PD, P, T, P/C	X	X	X	X																	
Implement 9 th grade seminar	PD, P, T,					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Plan Career Pathways Structure/curriculum	PD, P, T, P/C	X	X	X	X																	
Implement Career Pathways	T					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Incorporate YBA into alt. ed. program	P, LW, T, PD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Develop standards-based curriculum, assessments	P, LW, T, PD, St, P/C	X	X	X	X																	
Implement standards-based curriculum, assessments	PD, T, P, S, P/C					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Hire vendor to develop online learning	PD, T, P, St	X	X	X	X																	
Standardize digital	PD, T, P									X	X	X	X									

Task	Who?	Year 1				Year 2				Year 3				Year 4				Year 5				Total
course platform for all PHS courses																						
Train 9 th & 10 th grade teachers in dual enrollment	JHU/CSOS					X	X	X	X													
Expand AP opportunities and market to all students	PD, T, P					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Use technology to help track/assess, evaluate student performance	PD, T, P			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

S= Superintendent

PM= Project Manager

T= Teachers

AC= Advisory Committee

SC= School Committee

P= PHS Principal

LW= LearningWorks

P/C= Parents/Community

St= Students

CSOS= JHU CSOS Talent Development High School

(2) Qualifications of the Project Director & Key Personnel in Managing Complex Projects

The Project Director will be hired upon notification of grant award. We will seek candidates with a MA in Education, a minimum of 5 years experience in teaching, and 5 years in educational leadership. Experience in working with ELL students and/or students with disabilities is preferred. Also preferred is leadership experience in planning and implementing educational innovations at the classroom, grade, or whole school level. Prior experience with evaluations will be highly desirable. The successful candidate will have excellent verbal and written communication skills, and strong computer skills.

(3) Qualifications of the Project Director & Independent Evaluator

The evaluation will be conducted by Dr. David L. Silvernail, Ed.D., and his staff. Dr. Silvernail is Director of the Center for Education Policy, Applied Research and Evaluation (CEPARE) at the University of Southern Maine, and Director of Research for the Maine International Center for Digital Learning. Dr. Silvernail has over 25 years of research and education policy experience in school reform, and has conducted several studies of the Maine Learning Technology Initiative, an eight year statewide one-to-one laptop initiative. Dr. Silvernail's research focuses on high performing schools, school district efficiency, technology and digital learning, and open education resource learning. He has recently completed a three-year federally funded RCT study of the impacts of the laptops on mathematics achievement. The Pathways to Success Project Director will be the point person for obtaining the data required by Dr. Silvernail and his staff to complete the evaluation.