Funding Early College High School: Hold Harmless or Shared Commitment

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Abstract: Early college high schools are a promising but expensive pathway to college readiness. Most such schools are supported with state funds and/or grants. This descriptive case study presents an early college program, now in its fourth year in a traditional high school, in which the families, high school and local community college shared the entire cost. Data from document analysis and interviews with administrators, parents, and students clarified the funding plan and participant reactions. Joint ownership increased parental engagement, student academic commitment, and administrator attention. The results suggest that learning to cope with the cost of college, which this program necessitated, is an important aspect of college readiness for both students and parents. The model of shared responsibility is contrasted with the “hold harmless” model of government/foundation support that relieves schools and families of the cost of early college programming. The findings and policy recommendations are applicable to LEA and SEA leaders, philanthropies, and scholars in educational financial policy.

Keywords: advanced placement programs; college readiness; dual enrollment; financial policy; learner engagement; Massachusetts; parent financial contribution; philanthropic foundations; private financial support; school support; state aid.
Financiando escuelas secundarias que anticipan estudios superiores: compromisos inofensivos o compartidos

Resumen: las escuelas secundarias que anticipan estudios superiores son un camino prometedor, pero caro para la preparación universitaria. La mayoría de estas escuelas son financieras con fondos estatales y / o subvenciones. Este estudio de caso descriptivo presenta un programa de “Early College”, en su cuarto año en una escuela secundaria tradicional, en el que las familias, la escuela secundaria y la universidad de la comunidad local compartieron el costo total. El análisis de documentos y entrevistas con administradores, padres y estudiantes permitió entender el plan de financiación y las reacciones de los participantes. El financiamiento conjunto aumentó participación de los padres, el compromiso académico de los estudiantes, y la atención de los administradores. Los resultados sugieren que aprender a lidiar con el costo de la universidad, que este programa requiere, es un aspecto importante para la preparación de los estudiantes y padres de familia. El modelo de responsabilidad compartida es contrastado con el modelo de apoyo gubernamental/fundación que alivia las escuelas y las familias de los costes de la programación universitaria temprana. Las conclusiones y recomendaciones de política son aplicables a los líderes de la LEA y SEA, organizaciones filantrópicas y estudiosos de políticas de financiamiento de la educación.

Palabras clave: programas de colocación avanzada; preparación para la universidad, inscripción dual; política financiera.

Escolas secundárias que antecipam do ensino superior: compromissos inofensivos ou compartilhados

Resumo: as escolas secundárias que antecipam o ensino superior são uma forma promissora, mas caro para a preparação universitaria. A maioria dessas escolas são financiadas com recursos estaduais e/ou doações. Este estudo de caso descriptivo apresenta um programa de "faculdade cedo", em seu quarto ano em uma escola secundaria tradicional, onde as famílias, a escola e a comunidade local colégio dividiram o custo. A análise de documentos e entrevistas com gestores, pais e alunos ajudaram a entender o plano financeiro e as reações dos participantes. O financiamento conjunto resultou em maior envolvimento dos pais, o envolvimento acadêmico dos alunos, e a atenção dos administradores. Os resultados sugerem que aprender a lidar com o custo da faculdade, que este programa requer, é um aspecto importante da preparação de alunos e pais. O modelo de responsabilidade compartilhada é contrastado com o modelo de escolas públicas de apoio / fundação e familias que eximem dos custos do programa de faculdade temprana. As conclusões e recomendações de política são aplicáveis aos líderes do LEA e SEA, as organizações filantrópicas e estudiosos do financiamento da educação política.

Palavras-chave: programas de colocação avançada, preparação para a faculdade, inscrição dupla, a política financeira.

Introduction

Early college high schools are an increasingly popular approach for promoting college readiness among under-achieving high school students. Each early college high school is a close collaboration between a high school and a post-secondary institution (two-year or four-year), in which college courses are provided with ample support to high school students as early as ninth grade. After four or five years, many students graduate with both a high school diploma and a post-secondary associate of arts degree. There are over 300 in America today (Zehr, 2010). While a few
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Schools are decades old ("Middle college high school," 2012), over 270 were launched in the past ten years through the Early College High School Initiative (Jobs for the Future [JFF], 2012a) with support from the Bill & Melinda Gates Foundation and policy guidance from Jobs for the Future, a Boston-based organization that partners with 43 states across America to focus on “education for economic opportunity” (JFF, 2012b). There are now early college high schools in at least 30 states, with concentrations in New York, California, Texas, Georgia and, especially, North Carolina (JFF, 2010). A report on the 75,000 students served by the ECHSI schools revealed that 79% were students of color and 61% were eligible for free- or reduced-price lunch; almost half were destined to be the first in their family to attend college (JFF, 2009). Most early college high schools are located on a college campus, thus increasing familiarity with college culture (JFF, 2010). Early college high schools present multiple inter-organizational challenges, including how to address college tuition costs in a high school budget. JFF publications offer various models, where costs are typically shared by the state, the local district, and private funders (Goldberger & Haynes, 2005; Webb, 2004).

This article presents a descriptive case study of an early college program that relies on no state government funding and very limited philanthropic support. Beginning in grade 10, academically average students take three or more college courses as part of their regular school day at the high school, accumulating up to 35 general education college credits by graduation, primarily in the Humanities. The program invests heavily in practices known to promote student engagement for academic success (Kuh, 2009), such as team-teaching and integrated learning communities (Tinto & Love, 1995). The credits are concurrent, so students earn credit toward high school and college graduation at the same time. This model is now being replicated in Massachusetts and New Hampshire. College readiness includes many academic and psychological factors, including the daunting task of figuring out how to address steep tuition costs. This model, which calls for a family financial contribution, promotes college readiness in parents as well as students.

Literature Review

This review begins with a discussion of the concept of college readiness, which is the primary reason for the national interest in early college high schools. A proper understanding of college readiness should shape policy. This is followed by a discussion of the national Early College High School Initiative (Hoffman, 2003) as well as the strengths and challenges of early college high schools in the United States. The third topic is the challenge of scalability for educational innovations such as early college high schools. The review concludes with four summary propositions, which help guide the case study (Baxter & Jack, 2008).

Defining College Readiness

College readiness is a national concern (Aud, et al., 2011; Menson, Patelis, & Doyle, 2009) and one focus of the President Obama’s blueprint for educational reform (U.S. Department of Education, 2010). The widespread lack of college readiness for students entering two-year colleges is evidenced by the 42% of first-time undergraduates who required at least one remedial course on entering college in 2007 (Digest of education statistics, 2012). The problem was even more severe in Massachusetts, where 65% of high school graduates who went on to a state community college needed at least one remedial course (Massachusetts Department of Higher Education, 2012).

1 The Commonwealth MA-Transfer program offers automatic transferability among all the state colleges to any student who completes a pre-determined set of 34 credits; the scope and sequence of the early college program described in this paper follows this set.
Although some argue that remedial coursework completion boosts graduation prospects (Bettinger & Long, 2005), others point out that the remediation hurdle is often the first step to dropping out (Feldman & Zimbler, 2012; Vandal, 2010). At community colleges, only about 60% of students will complete their remedial courses and fewer than 10% of students referred to remedial coursework will graduate within three years (Complete College America, 2012, pp. 2-3). There is also a high financial cost since remedial courses are estimated to require between $1,607 and $2,008 per student at public community colleges (Strong American Schools, 2008). Therefore, two-year community colleges are under pressure to increase retention and graduation rates (Boggs, 2011).

College readiness is not well defined. Conley defined this as “the level of preparation a student needs in order to enroll and succeed – without remediation” in college (Conley, 2008). He described four facets of college readiness including cognitive strategies, content knowledge, academic behaviors and contextual skills and knowledge (Conley, 2008, p. 1), but some of these are not easy to measure. Some scholars have also criticized this list because it overlooks contextual factors, such as socioeconomic status and family history, and holistic factors such as self-efficacy concepts and cultural capital (Hernandez, 2011). For example, many low-income students give up plans for college because they do not think they can afford it (Attewell, Heil, & Reisel, 2011) or lack the role models of college-educated parents or siblings.

Relaxing the boundary between high school and college is a popular way to address college readiness needs. Students with some earned college credits on their transcript are more likely to enroll in college right after graduation (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007). Furthermore, these students gain academic momentum and are more likely to persist in college. Adelman specified the number of credits: “Six is good, nine is better, and 12 is a guarantee of momentum” (Adelman, 2006, p. xx). High school students can gain college credits through Advanced Placement (AP) or dual enrollment courses. However, while AP and dual enrollment courses are usually subscribed by students in the top academic quartile (Bailey, Hughes, & Karp, 2002; College Board, 2008), early college high schools often target students from lower academic quartiles (Hoffman & Vargas, 2010; JFF, 2009). A second advantage is that early college high schools offer further experience with college registrars, transcripts, academic support services, as well as a full slate of college courses, making them more authentic (Hoffman, 2009). With a strong emphasis on personalized student support, students succeed academically and the requisite college readiness skills are acquired incidentally and incrementally.

The Early College High School Initiative

Early college high schools are not cheap; nearly all are supported with philanthropic start-up funds and/or state government allocations (Webb, 2004). In addition to the cost of tuition, other costs include textbooks, college fees, facility costs, and tutors. In 2002, the Bill & Melinda Gates Foundation, along with the Carnegie Corporation of New York, the Ford Foundation, and the W.K. Kellogg Foundation, began partnering with 13 subsidiary organizations to launch or redesign hundreds of early college high schools. The nationwide Early College High School Initiative was coordinated by Jobs for the Future (Goldberger & Haynes, 2005; Hoffman, 2003). The foundations and, in some cases, state governments provided start-up grants in the range of $400,000 (Goldberger & Santos, 2009). One study examined the cost of planning and implementation and found that early college high schools cost 5% to 12% more than regular high schools (Webb, 2004, p. 2). The study also found that:

Revenues and funding streams for early college high school have been problematic, and few school planners have adequately determined how to pay for the combination
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of high school and college costs, including coordination and collaboration, tuition, books, and fees. (Webb, 2004, p. 2)

JFF promoted state government support for the added cost of early college high schools, following the model of state-funded dual enrollment programs (Hoffman & Vargas, 2010). To strengthen their argument, JFF offered in-depth analyses of emerging support structures in Texas, Georgia, Ohio, Utah, and California (Goldberger & Haynes, 2005; Goldberger & Santos, 2009; JFF, 2006; Webb, 2004) and policy advice for other state governments (Hoffman & Vargas, 2010). In this way, JFF hoped to relieve high schools, school districts and colleges of the extra expense by shifting the financial responsibility to the states.

Secondary and postsecondary institutions are compensated for each student’s education in such a way that each is “held harmless” for jointly creating pathways with the academic, social, and financial supports to ensure that all students complete key college courses by graduation. (Hoffman & Vargas, 2010, p. 10)

Hold harmless is a legal term found in contracts, which means the client is protected from financial liability. One law dictionary describes this as “an agreement between parties in which one assumes the potential liability for injury that may arise from a situation and thus relieves the other of liability” (“Meriam-Webster's Dictionary of Law,” 1996). Hold harmless is a policy assumption of the Gates-funded Early College High School Initiative. While the cost of early college high school is substantial, there is nothing inherent in the design to preclude financial support from sources other than the state government.

Students enrolled in early college high schools are not eligible for federal financial aid since they do not have a high school diploma. Early college costs could potentially be offset by other savings (reduced dropout rates, greater college matriculation rates, less reliance on costly remedial college coursework, increased college completion rates, and greater long-term income prospects), but these savings have yet to be demonstrated and would not be immediate. Gates funding ended in 2009, by which time over 300 schools had been started. However, the nationwide recession coupled with the loss of Gates support meant that some schools were forced to close their doors (Zehr, 2010), so the funding challenge is far from solved. At this time, most school districts and colleges have not embraced the early college high school approach.

Scalability

The Early College High School Initiative now faces the challenge of scalability, similar to many other educational innovations (Baker, 2004). Local conditions, including idiosyncratic expertise and enthusiasm, accommodating policies, and philanthropic support can generate innovation but ultimately limit scalability. The initiative looked to policy advocates, such as JFF, and state governments to preside over diverse district conditions for widespread implementation of the early college high school design. Adoption of the early college high school model is complicated by multiple other barriers that are common to inter-organizational partnerships, such as differing professional cultures, academic expectations, governance, schedules, support networks, accreditation standards, and contractual bargaining unit agreements (Corrigan, 2000; Slater & Ravid, 2010; Weerts & Sandmann, 2008). These barriers differ from state to state and even between districts and colleges within states, thus complicating the partnership work.

The idea of easing the barrier between high school and college is not new, according to Kisker (2006) who traced the idea from the 1930s up through the final decades of the 20th century (when such schools were called “middle college high schools”). Kisker concluded (as did Hoffman & Vargas, 2005), “No state has in place all the policies necessary to support early college high schools” (2006, p. 83). As a result, she recommended “multiple pathways” from high school to
college that would not overlook the historic successes of Advanced Placement, International Baccalaureate, dual enrollment and similar programs (2006, pp. 83-84). All this suggests partnership agreements that are locally negotiated and contextually sensitive.

In conclusion, this review of the literature suggests four propositions. Kisker (2006) suggests multiple pathways to introduce students to college standards and expectations, which would include early college, but also Advanced Placement, dual enrollment and so on; In light of President Obama’s call for college readiness for all students by 2020 (U.S. Department of Education, 2010), students in the lower academic quartiles should be included; A budget for college readiness, including early college high school options, should be affordable and sustainable. Finally, returning to the earlier discussion of college readiness, which is the foundation for all these strategies, an approach to college readiness should be holistic, addressing contextual and cultural elements, as well as Conley’s four factors (Conley, 2008).

Methodology

This study begins with the four propositions above, which are derived from the literature, and asks, “How might a high school enhance college readiness using an early college high school model that is comprehensive as well as affordable and sustainable?” Case study methodology is appropriate when investigating a question of “how.” This methodology allows participants to tell their story so that contextual details, often inseparable from the actual phenomenon under study, can be included (Baxter & Jack, 2008).

The case presented here involves a partnership between a suburban Massachusetts high school and a nearby public community college to address college readiness skills. Early in the partnership, the institutional leaders called the author of this paper to conduct a minimum five-year outside evaluation that would track students from grade 10 through the second year of college, thus documenting the long-term impact of the program. As a former high school principal with positive experiences in school-university partnerships, the author found this research opportunity unique and promising. Research funding covered the cost of transportation to the school site, but no other remuneration. Acting as a participant-observer, the researcher joined a small group of leaders from both institutions on a planning and design team, which met semi-monthly throughout the duration of the evaluation. The team included, at various times, an academic vice president and a dean from the college, the district superintendent, district director of curriculum, high school principal and vice principal and three guidance counselors. At the time of this writing of this paper, the first cohort of grade 10 students had just graduated, all with plans for college in the fall. A very large amount of data was collected and analyzed over three years, which led to annual reports on student outcomes (Leonard, 2010a, 2012a), as well as targeted reports on program design (Leonard, 2009), student support structures (Leonard, 2010b), interagency points of negotiation (Leonard & Fidler-Carey, 2011), and institutional leadership (Leonard, 2012b). The purpose of this paper is not to report on student outcomes, but to describe the financial structure of the early college program, which was a primary strategy in attempting to reach all students. This case study also assumed an instrumental purpose, since it challenged the JFF “hold harmless” proposition.

The Case Study Schools

Agassiz High School (AHS, not the real name) is the sole high school in a small suburban Massachusetts town. Demographic characteristics are presented in Table 1 alongside state statistics.
Table 1

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Agassiz HS</th>
<th>Massachusetts</th>
</tr>
</thead>
<tbody>
<tr>
<td>High school enrollment 2012</td>
<td>609</td>
<td>953,369</td>
</tr>
<tr>
<td>Percent non-white students 2012</td>
<td>6%</td>
<td>33%</td>
</tr>
<tr>
<td>Percent low-income (free or reduced lunch) 2012</td>
<td>21%</td>
<td>35%</td>
</tr>
<tr>
<td>Percent with Individual Education Plan 2012</td>
<td>17%</td>
<td>17%</td>
</tr>
<tr>
<td>Percent limited Eng. Proficient 2012</td>
<td>&lt;2%</td>
<td>7%</td>
</tr>
<tr>
<td>Percent proficient or advanced Math MCAS 2012</td>
<td>88%</td>
<td>78%</td>
</tr>
<tr>
<td>Percent proficient or advanced English MCAS 2012</td>
<td>94%</td>
<td>88%</td>
</tr>
<tr>
<td>Graduation rate 2010</td>
<td>85%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Source: Massachusetts Department of Elementary and Secondary Education, 2012b

Massachusetts has a high-stakes assessment (MCAS), which students must pass in order to graduate; AHS placed near the middle of all suburban high schools. There were 149 graduates in 2010 of which all but nine signaled intentions to attend a college (Massachusetts Department of Elementary and Secondary Education, 2012a). Within 16 months, however, only 121 students were attending a two- or four-year postsecondary institution; when combined with the graduation rate, this meant that only 69% of AHS students reached college by age 19 (see Table 2).

Table 2

<table>
<thead>
<tr>
<th>AHS Class of 2010 Graduation and College Matriculation Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 – 2010 student cohort</td>
</tr>
<tr>
<td>Number of students</td>
</tr>
<tr>
<td>Rate</td>
</tr>
</tbody>
</table>

Source: Massachusetts Department of Elementary and Secondary Education, 2012b

Agassiz is not a college town. In 2009, 37.2% of the adult population (25 years or older) had a bachelor’s degree, close to the state average of 37.8% (U.S. Census Bureau, 2010). School surveys indicated that parents of the first early college cohort averaged 2.43 years of post-secondary education; several of the students were first-generation college students. This was not a wealthy town, where the estimated median household income in 2009 dollars was $63,545, compared to a statewide figure of $64,425 (U.S. Census Bureau, 2010).

New England Community College (NECC, not the real name) is a nearby two-year institution of higher education in the Commonwealth’s network of two- and four-year public colleges. AHS was a top feeder school for NECC, sending 25 to 45 graduates on to study at the college each year. Tuition at NECC in SY2010-2011 was $146/credit (the figure used for the calculations below).

Data Sources

The focused aspect of the case study methodology challenges both validity and credibility. One remedy is to multiply the data sources and triangulate the data (Baxter & Jack, 2008). The data sources for this investigation included:
a. Documentation for the early college program, including financial documents, promotional literature, and the memorandum of agreement between the district and college.

b. Minutes from the semi-monthly planning meetings over a three-year period, collected by the author. This was the setting where the leaders made major financial decisions. These meetings were digitally recorded, transcribed and often redistributed to the team for verification.

c. Individual semi-structured interviews, by the author, with six members of the planning team.

d. Focus group interviews, by the author, with all seven teachers who taught grades 10 and 11 over a three-year period.

e. Focus group interviews, by the author, with a sample of 48 students in grades 10, 11 and 12 (out of a population of 74). The school selected 16 students from each of three cohorts (to be interviewed in groups of four) who represented the full academic spectrum of academic achievement.

f. Focus group interviews, by the author, with 30 parents, representing three cohorts of students. Parents volunteered for the interviews in response to a general invitation. Interviews included questions that addressed the program design, curriculum, teaching, outcomes, changes in attitude, and future plans. The data for this paper were extracted from these interviews.

Data Analysis

The interviews were digitally recorded, transcribed, and analyzed using W eft qualitative analysis software. The first stage of analysis was designed to capture the financial details of the early college program with fidelity; questions or discrepancies in the data prompted direct questions to members of the committee. Using a pattern-matching mode of analysis (Yin, 1994), the author sought to compare and contrast the Agassiz funding structure with various models found in the JFF literature. Using the method of constant comparison (Leech & Onwuegbuzie, 2007), interview transcripts were read in entirety, looking for specific references to codes or concepts, such as tuition, money, scholarships, financial aid, payments, and bursar. In the case of the focus group interviews, whenever a coded section was identified the surrounding transcript was examined to determine if other group participants wanted to challenge or accede to the individual comment. The quoted material in the results section below represents sentiments commonly shared by the participants. The second stage used an explanation-building mode of analysis to understand the effect of the financial plan on program participants, including students and parents (Yin, 1994).

Case studies can suffer from non-random sampling or biased interpretation of the data. For example, the AHS early college students were not randomly selected, but volunteered to join the program at the end of grade nine. During data collection, students and parents volunteered to be interviewed. However, over three years of engagement with the planning team provided ample time to develop deep understandings of the program. All research findings were shared with the planning team for verification or correction.

Results

Working as a participant-observer, the author was able to collect data for three academic school years, using both a pattern-matching and an explanation-building mode of analysis to develop an understanding of the financial aspect of the early college program. The final report was shared with members of the planning team to ensure accuracy. The results can be organized around the four propositions developed from the literature review.
a. Multiple pathways introduce students to college standards and expectations

For 10 years, AHS offered three pathways for students to earn college credits. Students could take AP courses; this was challenging in that students had to score very well on the final exam if they hoped to earn college credit later. They could also enroll in dual enrollment (DE) courses taught by NECC faculty members. Sometimes, the state supplied DE funds, which made the courses free. However, the support varied from year to year and budget constraints eliminated all funding from 2001 to 2008 (Massachusetts Department of Higher Education, 2010). Furthermore, the guidelines stipulated that eligible students have a 3.0 grade point average, which eliminated most students. Finally, there were a small number of “articulated” high school courses, where the curriculum was aligned with NECC standards so students could earn college credit at no cost. These three pathways were largely restricted to students in the top academic quartile, who took Honors-level courses in the first two years of high school. In 2008, leaders from AHS and NECC, concerned about college readiness, began to discuss plans for an early college program. The team began by studying and visiting other early college programs. Over a period of 18 months, the team tailored a solution that was suitable for students, parents, the high school, and the college, which would be a fourth route to college readiness. This route would offer more credits than the previous alternatives.

b. Students in the lower academic quartiles should be included.

The new early college program specifically targeted students in the two middle academic quartiles (based on freshmen grade point average), who were selectively recruited at the end of their freshmen year. These students had weak or unrealistic college aspirations, signaled through interview responses (some students boasted of doing no homework, for example), mediocre GPAs (between 2.0 and 3.0 on a 4-point scale) and limited enrollment in Honors courses. These students did not aspire to AP courses and were academically ineligible for the DE and articulated courses. In the first year, 31 sophomores volunteered for the first early college classes, some with strong encouragement from parents and guidance counselors, about one third of eligible students. Each year, a similarly-sized cohort signed up, as the sophomores moved on to junior-year college classes. Over three years, students averaged 9.4 college credits/year with a 91% pass rate; the first cohort of seniors graduated with as many as 35 transferable college credits completed.

The primary purpose of the early college program was to draw academically average (middle quartile students) into a new pathway toward college. A secondary goal was to coax these students into the other pathways as well, which began to occur in grades 11 and 12. The first pilot cohort of 31 students all passed three college courses in grade 10 and earned nine college credits each. Transfers in and out left 29 students in grade 11, a year in which faculty shortcomings undermined student effort. 23 students earned 12 credits each and five also elected to take a dual enrollment course, earning three more credits. Six students failed the college courses, but one of these students still elected to take a dual enrollment course and earned three credits. Only 18 students continued with the early college program in grade 12, each earning three more credits; some of these students also took AP and dual enrollment courses. Ten students left the early college program, but two of these students also enrolled in an AP course. Overall progress is summarized in Table 3 (credits for AP courses were not included, since credit awards are determined on a college-by-college basis).
Table 3

<table>
<thead>
<tr>
<th></th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student enrollment</td>
<td>31</td>
<td>29</td>
<td>18</td>
<td>Xx?</td>
</tr>
<tr>
<td>Early college credits accumulated</td>
<td>279</td>
<td>276</td>
<td>51</td>
<td>606</td>
</tr>
<tr>
<td>Dual enrollment credits accumulated</td>
<td>0</td>
<td>21</td>
<td>27</td>
<td>48</td>
</tr>
<tr>
<td>Total per year</td>
<td>279</td>
<td>297</td>
<td>78</td>
<td>654</td>
</tr>
</tbody>
</table>

Source: Massachusetts Department of Elementary and Secondary Education, 2012b.

Returning to Adelman’s benchmark for academic persistence in college [“Six is good, nine is better, and 12 is a guarantee of momentum” (Adelman, 2006, p. xx)] we can report that every participant in the first graduating cohort earned nine or more credits, 26 students earned 12 or more credits and 22 students earned 20 or more credits during the three years. After three years, 16 students had acceptance letters for four-year colleges, nine students for two-year colleges and technical schools, and the remaining students either (1) went to work, (2) dropped out, or (3) transferred and could not be tracked. Post-secondary outcomes will be tracked using National Clearinghouse data.

c. A budget for college readiness, including early college high school options, should be affordable and sustainable.

The cost of the emerging early college program was a major concern. The leaders were determined to create a sustainable program that would allow them to accept multiple cohorts of students and track them through high school and two years of college. In the end, they decided that state support was too unreliable and that grant funding would, at best, be only temporary. Team members reasoned that parents and students would take the program more seriously if there was some financial investment on their part, even for the poorest families. A theory of action, which called for shared responsibility, resulted in a cost that was distributed among the students and parents, the high school and college. The real and in-kind contributions will be explained below.

The college offered a memorandum of understanding that proposed to “establish a cost of the program that does no more than repay expenses.” In the Agassiz plan, parents paid a flat fee of $600/year for grade 10 (nine credits) and grade 11 (12 credits), a cost that averaged 46% of the normal campus tuition rates. Parents liked that the program provided significant early savings on college costs; as one mother said, “It’s nice for the parents that it’s basically two classes for the price of one.” In the senior year, families paid $600 for two fall semester courses; in the spring, seniors could take regular courses on campus at 65% of the normal tuition rate. The total cost for seniors averaged $1265 for 13 credits. Low-income families (determined by the federal free and reduced price lunch program) received assistance from a local education foundation and paid $54 to $108 per year. Over three years of operation, all families were paid up-to-date at the end of the academic year.

By the second year, the planning team realized that over 40 students would have to be enrolled in each cohort in order for the $600 parent contributions to cover the all college costs – a number that was far higher than what teachers recommended for optimal student support. In short, the district could choose to maximize enrollments to reduce school costs while jeopardizing student success or choose instead to contribute district money to hold down class sizes. Table 4 illustrates the balance between student enrollments, family contributions and school contributions to a locally funded early college program. To achieve cohort sizes of about 30 students, AHS eventually contributed about $28,000/year.
Table 4
Early College Costs and Alternative Payment Schedules

<table>
<thead>
<tr>
<th>Total EC students, grades 10-12</th>
<th>60</th>
<th>81</th>
<th>90</th>
<th>104</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual cohort size</td>
<td>20, 20, 20</td>
<td>27, 27, 27</td>
<td>30, 30, 30</td>
<td>35, 35, 34</td>
<td>40, 40, 40</td>
</tr>
<tr>
<td>Five instructors @ $11,000</td>
<td>$55,000</td>
<td>$55,000</td>
<td>$55,000</td>
<td>$55,000</td>
<td>$55,000</td>
</tr>
<tr>
<td>Books</td>
<td>$6,000</td>
<td>$8,100</td>
<td>$9,000</td>
<td>$10,400</td>
<td>$12,000</td>
</tr>
<tr>
<td>Annual fee to NECC</td>
<td>$18,000</td>
<td>$18,000</td>
<td>$18,000</td>
<td>$18,000</td>
<td>$18,000</td>
</tr>
<tr>
<td>TOTAL school costs/year</td>
<td>$79,000</td>
<td>$81,100</td>
<td>$82,000</td>
<td>$83,400</td>
<td>$85,000</td>
</tr>
<tr>
<td>Parent fee @ $600/yr.*</td>
<td>$36,000</td>
<td>$48,600</td>
<td>$54,000</td>
<td>$62,400</td>
<td>$72,000</td>
</tr>
<tr>
<td>and school contribution</td>
<td>$43,000</td>
<td>$32,500</td>
<td>$28,000</td>
<td>$21,000</td>
<td>$13,000</td>
</tr>
<tr>
<td>Parent fee @ $800/yr.*</td>
<td>$48,000</td>
<td>$64,800</td>
<td>$72,000</td>
<td>$83,200</td>
<td>$96,000</td>
</tr>
<tr>
<td>and school contribution</td>
<td>$31,000</td>
<td>$16,300</td>
<td>$10,000</td>
<td><strong>$200</strong> ($11,000)</td>
<td></td>
</tr>
<tr>
<td>Parent fee @ $1000/yr.*</td>
<td>$60,000</td>
<td>$81,000</td>
<td>$90,000</td>
<td>$104,000</td>
<td>$120,000</td>
</tr>
<tr>
<td>and school contribution</td>
<td>$19,000</td>
<td><strong>$100</strong> ($8,000)</td>
<td>($20,600)</td>
<td>($35,000)</td>
<td></td>
</tr>
</tbody>
</table>

* $600/year represents 46% of the normal NECC tuition rate; $800/year represents 61% and $1000/year represents 76%.

By the third year, NECC developed an early college package that could be shared with other area high schools. They charged schools the cost of instructors and books, along with a flat fee of $18,000/year, which paid for consultations, program evaluation, a college liaison, annual student testing, and six days of professional development for the faculty. Each high school could decide what to charge parents and students. NECC made no profit; as with all state community colleges under pressure from the Commonwealth to increase retention and graduation rates (Boylan, 2007; Plummer & Nellhaus, 2008), they were eager to explore any strategy that would increase college readiness. A second high school opened a program in 2011 and a third was slated to begin in fall 2012. In addition, two other state community colleges have mimicked the model and opened similar early college programs with a shared financial accountability plan.

The AHS program was expensive, but brought other cost-benefits. Each day, there was one high school teacher and one college professor in each classroom, who co-taught the cohort; each represented their own contractual bargaining unit. The high school gained college faculty members who taught concurrent credit courses in history, art, business, and other topics to the early college students. In effect, the high school was purchasing part-time equivalents, rather than hiring full-time teachers. As the principal said after paying $21,000 the first year: “We look at $21,000 in our budget, and that $21,000 is really worth $120,000 because I’d have to put two more full time instructors in there at $60,000 plus. So you’re getting a lot for your money as a taxpayer.”

Participating teachers received six days of paid professional development on college expectations and team-teaching strategies. Other expenses such as some textbooks, materials, classroom space, technology, and library were provided to students as part of the normal cost of operations. The principal, several guidance counselors and the district curriculum director devoted hundreds of hours on the planning and implementation of the program, supported by the superintendent who also attended many meetings.

d. The approach to college readiness should be holistic, addressing contextual and cultural elements, as well as Conley’s four factors

Of the four propositions, this is the most difficult to substantiate, since what comprises a “holistic” approach to college readiness is not altogether clear. As was explained earlier in the literature review, early college programs attempt to address Conley’s four factors (cognitive
strategies, content knowledge, academic behaviors, and contextual skills and knowledge) through an authentic college experience. In this respect, the AHS early college program was no different. However, readiness for college also includes financial confidence; low-income students often decline to apply for college simply because they do not think they can afford it (Attewell, et al., 2011). The early college model presented in this paper helped students, as well as families, become acclimated to the cost and the financial culture of college. Each year, there was initial confusion about invoices, who the bursar was, where checks were to be sent, and what were the consequences of missed payments. Parents adjusted their budgets to include tuition payments. The early college program was designed to increase college readiness in students; no one realized that parents might need college readiness as well. Parents discussed the cost of college with their children and they planned together how to address the expense. Some students worked after school to help pay for this. When asked, “Do you help pay for the early college classes?” one student replied, “Some of it,” another specified, “I do; I went three-quarters and my Mom went one-quarter,” while a third student, whose hobby was riding horses, offered, “I work shifts at my barn, but the money goes – I don’t even see it – it goes straight towards taking money off of what my parents pay.” In grades 10 and 11, the tuition cost was reduced, so the classes were affordable. In the senior year, families faced the full cost of tuition, especially in the second semester, so in this way, they were eased into the financial burden of college. The early college program saved them money in the initial years and then gradually introduced them to the full tuition cost.

There was another benefit from the family contribution. While the teachers insisted on passing work on every assignment, many of the students were unaccustomed to completing homework assignments. Teachers communicated with parents via email and telephone calls and found, to their delight, that parents were more willing to apply pressure from home, given their financial investment. In effect, the school experienced an unexpected increase in engagement between faculty and parents. In contrast, the principal described his conversations with many other parents about incomplete homework: “The trouble is, when we give the students a zero, you won’t make them keep writing. You just let them off! We call you and you tell us not to call any more.” On the other hand, the early college parents were highly supportive of faculty demands and insisted that their children complete assignments, so their children succeeded. Either the program unwittingly selected for engaged parents or the added factor of tuition payments stirred them to get more engaged.

Those students who contributed to the early college cost also experienced an added incentive to succeed, as illustrated by the motivation of this male, which resembled that of any college student:

I think if I quit it’d be a waste of money. I think if my mother paid for it, it’d be different. I’d still be getting a B, not like an A. I think I’d be less dedicated and I wouldn’t be committing myself to everything, staying up late, studying or writing papers or something, but since I pay for it….

As the planning team had hoped, the family financial contribution (even the small amount required of the neediest families) gave added ownership in the program and boosted academic effort and parental engagement. Financial confidence was an important aspect of overall self-efficacy. As one parent said, “If you can be successful while you’re in high school, in a college course, then you know you can do it.”

The early college program was launched in September 2009 with 31 middle academic quartile 10th grade students. After one year, the sophomores had earned nine concurrent college credits on an NECC transcript. They enrolled in 12 more credits in school year 2010-2011; seniors accumulated up to 35 credits by graduation, more than a year of college coursework. Every graduate
in the first student cohort had plans to immediately attend a two or four-year college. These students will be tracked through the first two years of college.

**Discussion**

There are numerous challenges to the early college high school concept, with the financial challenge being the focus of this paper. Despite unprecedented seed money from numerous foundations, widespread state government adoption and support of early college high schools is not ensured. This paper argues that an alternative approach to funding early college high schools, based on shared local responsibility, offers numerous advantages.

Most early college high schools are small, self-contained programs; many are located on a college campus. The Agassiz model was incorporated in the district high school and ran alongside other college readiness programs, such as the AP and dual enrollment. At AHS, students in the upper academic quartile tended to adhere to the traditional pathways of Honors-level courses, followed by AP, DE, and/or articulated courses. For over ten years, these pathways were largely ignored by students in the middle academic quartiles. The Agassiz early college program opened an alternative route to these students. Marginal students were encouraged to enroll and able to succeed because of the strong student supports, including team teaching and integrated learning communities. Overall, the number of students getting ready for college increased. Depending on their confidence and the number of years they enrolled in the program, students could earn as few as nine or as many as 35 credits. As their academic confidence grew, some students also began enrolling in AP courses and summer DE courses in addition to the early college options. The neglected “middle students” are a concern in many high schools (Delisio, 2009; Swanson, 2005) and the Agassiz program offered an effective approach to direct them toward college.

Starting an early college high school is an enormous undertaking, which requires significant fund-raising, facility procurement and student recruitment. Rather than competing with the traditional district high school, the Agassiz model offered a cost-effective way to bring the advantages of the early college high school to more students. Since the model was incorporated into the regular high school, the challenge of finding and financing facility space was obviated. Other expenses, including administration, communication, transportation, and insurance costs, which are unavoidable with an independent early college high school, were obviated. Students were recruited from within the school, rather than being competitively lured from other schools.

Furthermore, the Agassiz model was affordable. Families understood that they were paying discounted tuition rates and saving on the overall cost of college. A local foundation, which was created to support public education in the town, provided assistance to low-income families, so no students were excluded for financial reasons. Still, some question whether the Agassiz model would work in an urban environment. In 2011, NECC opened a second early college program in an urban district where families paid a larger tuition fee, which did not discourage growing enrollments in the second year. Low income families understand value as well as anyone. For example, many educators used to assume that urban students could not afford a personal computer, but the academic advantages of home computing erased that doubt.

There is nothing in Agassiz plan that precludes state government funding, which could easily be layered on. An important policy question, however, is: what is the best way to provide state support for early college programs? Should state funding replace parental, college, and school payments? This is the hold-harmless model of funding, which has been problematic, since government funding has been inconsistent. Across the country, state governments are struggling with budgetary obligations in this prolonged recession. Historically, the dual enrollment programs in
many Massachusetts high schools expanded and contracted in concert with state funding. Rather than assuming all the costs of early college programming, state funding could provide incentives, such as scholarships to students or awards to high schools and colleges that are effective. In this way, local stakeholders could assume primary responsibility for early college programs.

Instead of being free from liability, the parents, college, high school, and community (through the education foundation) shared liability for these students and their preparation for college. They were answerable, as if to say, “We won’t let our students down.” Recognizing that state support for dual enrollment disappeared from 2001 to 2008, they found a way to own the problem locally. Thus, the Agassiz model was sustainable, independent of state support or major foundation funding. Taxpayer support for higher education has been shrinking in many states (Lyall & Sell, 2006), so support for higher education is not reliable. The model presented in this paper offers schools the means to begin early college programming immediately, regardless of state budgets, and the assurance that the program will not be threatened with future budget cuts.

The Agassiz model of shared responsibility addressed aspects of college readiness that were bypassed with the hold-harmless model of state funding. If the primary purpose of an early college program is to get students ready for college, then regular tuition payments should be a part of that plan. The financial challenge of paying for a college education was addressed head-on. Students and parents learned from the first day that college was not free, but that the costs were manageable and not a sufficient reason to decline college. They learned to navigate the college culture that included a bursar, tuition invoices and payment plans. Students found added incentive to work hard because of the financial obligation; parents got engaged in their children’s success. Parents modeled financial planning and responsibility for their children. Parents as well as students needed financial college readiness skills. The financial burden increased in the senior year, further preparing students for the full cost of college. Families saved money on the total cost of college by participating in the early college program.

The Agassiz model was also replicable; NECC launched a second edition in a nearby urban district in 2011 and a third edition will open in New Hampshire in fall 2013. Two other community colleges have started similar programs with high school partners. Rather than replicate the exact AHS program schedule and courses, the schools chose to replicate the process, so that each school could create the most appropriate schedule, set of courses, and mix of high school and college instructors. The innovation process included regular on-site meetings for planning and monitoring, engagement with key stakeholders, and formative and summative evaluation. Local engagement was indispensable for effective implementation and well worth preserving. NECC did not simply “pick up and plug in” one of the early college high school models that were extant in the literature; they spent 18 months tailoring the models to local conditions before the first student enrolled and another 18 months fine-tuning everything, including the financial structure. In the Agassiz case, careful attention from college and high school leaders, motivated in part by their financial stake in the initiative, appeared to be indispensable for success. In other words, not only parent engagement, but also administrator engagement increased because of the financial investment. In contrast, the older AHS dual enrollment classes, which were held harmless because of state funding, never generated the same level of attention and collaboration among high school and college administrators.

Educators look for scalability, which is a loose measurement of how well an innovation can be broadly duplicated across the country. The litmus test of scalability assumes that there are blanket solutions to many of the problems we face. Scaling assumes that what works in Massachusetts will also work in other states, whereas historical data might prove otherwise. In fact, the struggles of the Early College High School Initiative with diverse state regulations, union agreements and financial
Support systems suggest the very opposite. In the case study presented here, the litmus test was always student success, not scalability, an approach which stimulated rather than discouraged innovation. In conclusion, the Agassiz model of shared financial responsibility seems to offer promising advantages for local student, parent and administrator engagement, affordability, replicability and long-term sustainability. Further research is warranted to track the future of the Agassiz model, as well as similar programs now emerging in New England.

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