Partnering with Secondary Schools: Bridging Education from High School to College

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Introduction

The last year of high school is supposed to be one of the best times in a student's life. However, being a high school senior can be overwhelming with sports, band, student council, debate and youth groups, and after-school jobs, not to mention the high school classes themselves. But being a senior also means it's time to prepare for the future and for an increasing number of seniors this includes pursuing a college degree. Good grades in core classes are important for college admission but in today's competitive environment, the relative level of course difficulty also plays a significant role. Consequently, though class rank and GPA continue to be critical for assessing college potential, students are probably better off with a B in a College freshman English class than an A in physical education in high school. Taking college courses while in high school demonstrates to a college admission board the student's capability, motivation, and that going to college is more than just his or her "Plan B." Further, a college course taken while in high school can earn credits toward a college degree and simultaneously prepare the senior for the transition from high school to college. Students get a direct, first-hand sense of college level material, that it's a far cry from high school coursework in most cases. Certainly, the benefits seem to justify the investment.

Today, many farsighted seniors seek options to get an early start in college while still finishing their high school education. The two basic options include taking "Advanced Placement" courses with an exam and/or enrolling in a college course their last year in high school. The College Board Company, the administrators of the SAT, initiated the former program in order the offer an opportunity for high school students to get a jump on college. Created in 1955, the early "Advanced Placement" program features only eleven courses to high school students. Today, 34 courses across 19 subject areas are offered. Students who complete a course have the opportunity to take a national exam. The exam score may qualify them to receive college credit or advanced placement in a university or college curriculum. Although each university or college determines minimum placement scores, some universities, such as Penn State, do not give college credit for the "AP" scores for specific courses like the freshman English. A Penn State freshman may receive advanced placement with a high "AP" score, but everyone still nevertheless must take freshman English.

"Proceedings of the 2005 American Society for Engineering Education Annual Conference & Exposition Copyright © 2005, American Society for Engineering Education" Certain "AP" options in high school designed to avail students with opportunities like the ones discussed have evolved to a status where they are reserved only for students who demonstrate above average or higher grades. High schools seem to be polarizing into two camps: the academic "haves" and "have-nots." These "AP" courses, once the pinnacle of secondary-school achievement, are now considered obligatory for virtually every student with designs on a high class rank or acceptance to a competitive college. When faced with a choice, students largely eschew traditional honors programs, "aboveaverage" tracks, and anything else that is not "AP."

This paper explores the second option of allowing high school seniors to enroll in college courses. First, it explores the concept of exporting college courses directly to high school campuses through partnering agreements. Then it addresses some of the implementation methodology that has already successfully supported the first iteration of this partnering initiative. Finally, some emerging program assessments will be explored in an attempt to catalogue the costs and benefits from various aspects of the program.

The Program Concept

Penn State Harrisburg has initiated a partnering program with a local secondary school – Hershey High School, Hershey, Pennsylvania – to help build a bridge from the high school to college. Although similar arrangements may be common between other colleges and high schools, this program is unique in that the Penn State Harrisburg courses are taught at the high school during the day and integrated into the student's class schedule. This allows a senior to complete their high school requirements and attend Penn State Harrisburg as a college student at the same time. Typically, over 25 Hershey students per year, start their college experience at Penn State University. This program gives these students an early opportunity to start their Penn State course work while still completing high school. However, the program is not just for students bound for Penn State. If the high school student chooses to go to another college, then the Penn State courses should normally transfer to that institution with a valid transcript issued by the University registrar. The broad-based availability to any qualified student was a critical element of this initiative. The courses included in this partnering program are offered to all seniors, not just the "best" or "most qualified." Therefore, it represents a real opportunity where the average student can participate along with high achieving students to get a jump on their college education.

Initially, Penn State only offered two courses during the first year of this partnership – English 015, "English Composition," and ED & G 100, "Engineering Graphics." Consistent with most colleges, all Penn State freshmen are required to take this basic English composition course. Similarly, an engineering graphics drawing course is required for the majority of engineering degrees at Penn State as with many engineering colleges. Consequently, these two courses represented a logical choice that would benefit most Hershey students going to college and seeking to take one or both of these courses.

A critical element to any course is the instructor, but perhaps even more so here since the concept envisioned the course being taught at the high school campus ideally by qualified high school faculty. Selecting local faculty would also benefit the student by selecting a "known" entity, maybe even a friendly face that may not intimidate a perspective student who is boldly considering a college course. Penn State and Hershey High School worked together in finding high school instructors with qualifications to teach the college courses. The high school teachers submitted their credentials for review and approval by the academic unit. These high school/college adjunct teachers were given the college syllabus for their respective course and participated in a college teaching workshop to assist their preparation.

Implementation Methodology

The methodology for implementing the program begins in the early spring of the junior year when parents attend a meeting to learn about program options and in particular the various courses the students may take. This information briefing is provided jointly by Hershey High School and Penn State Harrisburg representatives prior to the students scheduling courses for their senior year. Following the briefing, the juniors work with high school counselors to schedule the high school courses offered in conjunction with the Penn State courses. For the final step in registration, the juniors couplete a modified Penn State application form that includes the high school courselor's recommendation that the perspective senior can do college work.

Once accepted, the student will be a Penn State student during their senior year with all the rights and privileges normally associated with college. After they attend an orientation session similar to other entering freshman, they receive a student ID card and their Penn State computer account. They have full access to all university resources including the computer network system, library usage, and any other campus resource available to Penn State students.

Implementation success dictates that the program is fully compatible with the high school daily schedules and regimen. The college courses are integrated directly into the student's day-time high school schedule and are aligned with a second, related high school course. The college course and high school class are two totally separate courses offered at the same periods but on different days. The college/high school students are assigned into special class sections for these classes. The adjunct high school teacher teaches the college material one day and on the next day the high school material to the same class. This alternating schedule was challenging but ultimately rewarding and popular for both the instructors and students.

Implementation costs had to be kept low to successfully launch the program in a public high school environment. The high school seniors participated at a significant tuition reduction with the University providing grants to reduce the tuition to about 1/2 the normal cost. Since the students primarily were using high school facilities, computers, instructors, etc., costs normally associated with these items and assigned to college students could be partially defrayed which helped reduce the cost. These measures served collectively to make the program affordable for all students.

Program Assessment

Current plans envois the program being offered several years with an ongoing assessment and evaluation on the implementation methodology as well as the potential to expand it to other high schools and perhaps to other subject matters and courses that the high school and college feel are beneficial. The following are emerging preliminary insights regarding this initial program effort:

- Although school and college resources were initially integrated to bridge the high school experience to college and to reduce costs, the familiarity of the facilities, resources, and personnel set the groundwork for success and created a "user friendly' environment conducive for learning. By offering the college course in the student's high school classroom, students felt more at ease in a familiar environment which allowed them to focus on the course learning objectives. Camaraderie and esprit-de-corps became a strong bond among the students who already knew and clicked with their fellow students since they were other Hershey School seniors. Support areas already available to the student further aided course work and included computer systems, drawing and printing devices, audio visual technology, and the library both at the High School and at Penn State. By having high school teachers serve as course instructors, the high school students again felt at ease with a familiar person.
- Location and access were big factors in the success of the program. The program by design was integrated directly into the student's high school daily schedule and delivered on site. Therefore, the student did not have to drive to another location where the college course was being offered. Also, since the course was offered during their regular daytime class schedule, the class time did not limit student involvement in after-school extra-curricular activities, hinder their job work schedules or employment opportunities, or make them feel that they are attending school most of an entire day during their last year in high school. This aspect of the program was reported to be a significant factor in the apparent popularity of the courses.
- During the semester, Penn State and Hershey High School integrated several trips to the college campus as a part of the college course. The high school seniors used the library, attended seminars or cultural presentations, and participated in events with other college freshman. This directly provided the seniors with the experience of college life before they are full time students on campus.
- The reduced tuition makes the courses and consequently the program affordable for the students as well as the faculty.

Conclusion

The Penn State University at Harrisburg is working deliberately to build a bridge to ease the transition from high school to college for eager students with a thirst for

knowledge. This program brings courses from Penn State Harrisburg to the high school campus and integrates them into the student's class schedule. Seniors can complete their high school and attend Penn State Harrisburg at the same time. Characterized by a broad-based availability to any qualified senior, average and gifted alike, it represents a real opportunity for seniors to get a jump on their college education. This program demonstrates the utility of promoting student readiness for college before they leave high school and reinforces their commitment to education by mapping out their next step in their academic future.

Bibliography:

Arquette, Cecile M. Ph.D, " A University- Public School Key- Pal Partnership," T.H.E. Journal, December 2004, page 10.

De Vise, Daniel, "Enrollment in Advanced Courses Surging at High Schools", Washington Post, December 11, 2004. (www.washingtonpost.com)

Krumrie, Matt, "Take College Classes Now," Nextstepmagazine, September, 2004, page 12 (www.nextstepmagazine.com)

Wallis, Claudia; "How Smart is AP," Time Magazine, page 54, November 8, 2004

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