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High School Graduates Report on Reform Efforts in Their High School Senior Year

Wayde Killmeyer

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HIGH SCHOOL GRADUATES REPORT ON REFORM
EFFORTS IN THEIR HIGH SCHOOL SENIOR YEAR

A Dissertation

Submitted to the School of Education

Duquesne University

In partial fulfillment of the requirements for
the degree of Doctor of Education

By

Wayde Killmeyer

August 2009

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Wayde Killmeyer

2009

DUQUESNE UNIVERSITY
SCHOOL OF EDUCATION
INTERDISCIPLINARY DOCTORAL PROGRAM FOR EDUCATIONAL LEADERS

Dissertation

Submitted in Partial Fulfillment of the Requirements
 For the Degree of Doctor of Education (Ed.D.)

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July 1, 2009

HIGH SCHOOL GRADUATES REPORT ON REFORM EFFORTS IN THEIR HIGH
 SCHOOL SENIOR YEAR

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ABSTRACT

HIGH SCHOOL GRADUATES REPORT ON REFORM EFFORTS IN THEIR HIGH SCHOOL SENIOR YEAR

By

Wayde Killmeyer

August 2009

Dissertation Supervised by Dr. Jean R. Higgins

The senior year of high school has long been problematic. It is seen by many as a year of leisure between the rigors of high school and the rigors of college or career that are yet to come. Schools, school districts, teachers, and administrators struggle with ways to make the senior year more interesting and useful to students, often instituting programs with this purpose in mind. Time, money, and other scarce resources are expended in this pursuit, but little is done to find out if the programs are having the desired effect.

This study carried out a mixed-method analysis of the opinions of students who had graduated from three different types of school districts in Western Pennsylvania: one urban, one suburban, and one rural. Graduates were presented with the Senior Year Program Survey, a researcher-developed instrument which asked questions about five specific programs that may or may not have been offered in their school during their

senior year. Some respondents who expressed an interest in further participation were then interviewed by telephone to explore their opinions in more depth.

The results of the surveys and the results of the interviews combined to create a picture of which programs were perceived by these graduates to have been useful to them in the years since their high school graduation. Overall opinions were measured, as well as comparisons of college-bound students vs. non-college-bound, and male vs. female. Recommendations are made for current school administrators who may be considering instituting, continuing, or discontinuing such programs. Suggestions are also made for follow-up studies with larger, or differently-chosen participants.

DEDICATION

This dissertation is dedicated to the extensive network of friends, family, and coworkers who supported, encouraged, and sometimes ridiculed me toward the goal of finishing this project. Specifically, I thank:

Debbie, Marge, and Dawn: Your support has been practical, unquestioned, and unwavering. I appreciate all that you have put up with from me as I struggled toward this goal.

Mom, Dad, and Tim: With your own impressive accomplishments you always kept me on my toes. I know that you would be proud of me whether I did this or not, but it is nice to have one more thing on the “good” side of the scale.

Emma and Billy: You have given me unconditional love always, laughs when I desperately needed them, but most importantly for this purpose, time and space to work that sometimes had to be carved out of our limited and precious time together. You are the best children a man could ask for.

Sue: Somehow, you see in me the promise of all that we can build together. Your love and support have been limitless. You always inspire me and help me to be the man that you think I am. Thank you.

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CHAPTER I

PROBLEM STATEMENT

High school teachers and administrators recognize that students' reluctance to take the senior year seriously, or, senioritis, is becoming one of the biggest barriers to student learning in the twelfth grade (Amen & Reglin, 1992). Seasoned faculty members can recall when high school seniors entered a slump late in the second semester of their last year of high school. With college acceptances in hand, or post-secondary plans for employment already set, the last quarter of the senior year looked more and more meaningless to these near-graduates. Not only were academic issues being ignored during this period of breaking away from high school, but school rules and regulations also held less and less meaning for the fourth-quarter senior. Thus between pranks, "senior skip days," and a general increase in incidences of disrespect, twelfth-graders, as a group, became less and less focused on academics as the senior year waned.

In recent years, however, educators have noticed a new trend. The senior slump, or disease of senioritis, has begun to manifest itself earlier and earlier in the senior year, with the symptoms often appearing now in the first weeks of school rather than the last (Viadero, 2001a). College-bound seniors are aware that colleges will judge them, and possibly admit them, based upon their eleventh grade courses and grades. Therefore, senior year courses appear to be meaningless (National Commission on the High School Senior Year, 2001a, p. 6). When a student is applying to college to major in engineering, it may be hard to convince him or her that fulfillment of the high school fine arts graduation requirement is an issue of great concern. In a recent survey of graduating

seniors in Virginia, a full 50% of students gave one of two responses: either that their senior year “could be much more meaningful,” (44%) or was a “waste of time” (6%). A further 6% were “not sure” how they felt about their senior year. This leaves a 44% minority, then, of high school seniors who answered that their senior year was “useful and prepared me for the future (Summary of RateYourFuture.org, 2005).”

Many seniors satisfy the vast majority of their graduation requirements before the senior year begins. Only by instituting rules establishing a minimum number of yearly credits can seniors even be kept in the building for something resembling a full school day. Seniors sense that they have already done almost everything that is required of them before the year begins. Why *should* they take this year seriously?

Senior skip days are now scheduled to coincide with, and lengthen, the Labor Day holiday early in the first semester rather than the Memorial Day weekend late in the second semester. Lack of interest in studies commences with the first homework assignment and continues throughout the year. Belligerence and lack of respect for school authorities, a contentious issue with teenagers at the best of times, becomes the senior’s standard mode of operation beginning with the first day of school (Ch’en, 2001).

Given all of these negative issues surrounding the senior year and students’ lack of interest therein, what solutions present themselves? One solution is to create new and different options for the senior year that are different from the standard eight periods of classes per day. New options are being instituted in high schools all over the United States to make the last year of high school more meaningful to students.

One of these new options, certainly, would be to eschew the twelfth-grade year altogether and allow students who have fulfilled graduation requirements at the end of the

eleventh grade to move on to college or career. Some schools have established programs that allow gifted students to accelerate their way through the curriculum and enter college early, but such programs usually apply to a very small percentage of the population and are expected to be initiated and pursued by the student rather than by the school. Others have established entirely new curricula for the end of high school, only one feature of which is an early exit option.

Financial Concerns

New curricular options other than early graduation are necessary for several reasons, not least of which would be the fact that districts may be loath to dismiss large numbers of their students. After all, monetary reimbursements from state and federal funding sources are tied to enrollment. Lower enrollment would mean reduced funding. Changing the curriculum and keeping students in school for their senior year would be more fiscally sound for districts than would be encouraging them to leave. This argument appears to put financial concerns ahead of what is best for students, but, unfortunately, low funding is a concern with which many school districts must deal.

School district funding in Pennsylvania is based upon two main sources of revenue. Local taxes fulfill, on average, 59% of a school district's budget, while state taxes fill in about 35% more. Some federal tax money and other funding sources are used to fund schools, but they are minor compared with these other two.

Local tax income is based upon property values in the district and remains relatively unchanged from year to year, unless a district imposes tax increases. State funding, on the other hand, is based mainly upon student enrollment. While the state

used to fund as much as fifty percent of school budgets, that number has slipped in recent years to the 35% quoted above (*Funding Pennsylvania Public Schools*, 2007). These precious state funds, then, are guarded jealously. Thus, to ask school districts to encourage their seniors to graduate before they have completed the twelfth grade is to ask them to also pass up the money that their enrollment would bring.

Student Ability

Student ability is another factor that would limit the number of students who would be able to take advantage of an early graduation option. In the grades leading up to their senior year, students generally follow very full schedules of classes. Almost every course that is taken in those early years is required for graduation. By the time they reach their senior year, most students have very few graduation requirements left to fulfill. To graduate from high school in Pennsylvania, for example, students are required to take four credits of only one subject: English (Pennsylvania Code, 2006). By earning only three credits in each of the other required subjects pupils can fulfill the minimum state requirements for graduation. Therefore, if students were to be put on an ambitious schedule of classes in the ninth, tenth, and eleventh grades, they could take all of the courses that the state requires of them in three years, and an early graduation could be accomplished.

How many students, though, have the ability and desire to follow such a heavy schedule in the ninth, tenth, and eleventh grades? Certainly a particular amount of innate ability would be required for students to complete their high school studies in three years. Those who cannot carry out such an ambitious schedule must still be served. Other

options to intensify the senior year curriculum must be available to ensure that every senior, at every ability level, has something meaningful to do during this last year of high school.

Guidance

Another factor that contributes to the negative perception of the senior year is a lack of plans for what some of these students might do in the years immediately following graduation. There is no point in enhancing a student's senior year if that student has no post-secondary plans. Therefore, a strong guidance component would have to be part of any wide-scale revamping of the senior year.

This guidance component serves various purposes. Not unlike current guidance department goals, one purpose of guidance under a new senior year scheme would be to help students develop post-secondary plans. Whether it is to be college, work, or the military, students should know the path toward which they are advancing and take an appropriate set of courses, participate in appropriate internships, or complete appropriate senior projects. It may be the case that, due to any number of factors, a particular school does not offer appropriate training for what is to follow. A new senior year menu of offerings might fill this gap. Ultimately, then, the decision of what to offer to high school seniors is not one to be taken lightly, capriciously, or without sound advice.

Age-Based Concerns

The emotional and intellectual development of students would argue against early graduation for many. Adolescents, as eleventh graders certainly are, may or may not

have reached a stage in their emotional and intellectual development at which they are ready to take the next step into their adulthoods. Adolescence is a long and comparatively slow maturation process, with distinct stages of development. Generally speaking, eighteen-year-olds are in a different stage from those who are just one year their juniors (Allen & Stoltenberg, 1995; Freeman & Brown, 2001).

Likewise, students who have graduated from high school and been in college and/or the work force for several years would have a different outlook from the eighteen-year-old who rails against continued confinement in the twelfth grade. With a few more years of maturity and experience comes an opinion of the senior year of high school that may be more worth listening to. The senior year is recent enough to be remembered clearly, and its effects, or lack thereof, still pertinent to the individual. What might such a recent high school graduate have to tell us about the ways in which the senior year might have been made more relevant to the years immediately following graduation? What are we currently doing wrong, and how can we fix it? What are we currently doing right, and how can we enhance it?

Not only do these questions need to be answered in a meaningful way for us to make the most of the educational opportunities that we provide for our children, but they might be answered in different ways for different students. Students perceive their surroundings, their support systems, and their overall educations in different ways depending upon their level of maturity, their socioeconomic status, and their gender (Herzberg, Hammen, Burge, Daley, et. al. 1999). Elements of the senior year that one group might find useful and engaging might be viewed as a waste of time by a similarly-educated, but differently-situated, group of students

The senior year of high school has lost meaning. We essentially squander one year of education for our children. Given, though, that the senior year is not going to go away, educators have been on a years-long quest to redesign the senior year, imbuing it with many options. As educators advise students on the best route to take in exiting high school, they can use various pieces of information. One of these is a knowledge of what options are available and which one would fit which student best, based upon his/her ability and maturity level. Ultimately, though, it might be the students themselves who are best equipped to give us the advice that we need about what was lacking in their twelfth-grade education and how it can be improved. Programs aimed at making improvements to the senior year have been instituted at state and local levels. The problem is that we do not know whether these programs that have been put into place to improve the high school senior year such as senior research projects, community service requirements, and others, are having the desired effect.

Rationale

The high school senior year is fast becoming a wasted opportunity for education. Students are in the public school system for a comparatively short span of thirteen years or less, and thus we cannot afford to lose one year of that schooling to boredom, disinterest, or inertia. Attempts are already being made at many high schools to find meaningful “employment” for high school seniors. Through such devices as internships, senior projects, college-in-high-school programs, or even the possibility of leaving high school altogether at the end of the eleventh grade, many schools and school districts are doing what they think is best for their senior students. With nothing more to go on than

the opinions of current seniors, however, it is difficult for one to know whether these practices really made a difference to seniors after they graduated. Unless some follow-up is initiated with graduates, there is no way to know if these programs helped graduates in those few post-high-school years.

By questioning recent graduates, one may glean the effectiveness of different programs. The advantages and disadvantages of these reforms can thus be reported. Comparatively recent high school graduates will have valuable insight as to what worked and what did not work in their own high school senior year.

Historical Background

High school in general, and thus the senior year, has remained relatively unchanged for the past century (Conley, 2001). Overall curriculum, goals, and philosophies have been aimed at preparing one set of students for college and another set for the world of work. Although minor variations on these themes have cropped up, with one focus sometimes overshadowing the other, these two goals have stood fast. However, the past twenty years or so have seen a spate of interest in improving education in general, and the high school experience in particular (Conley, 2001). Therefore, this overview will focus on recent developments pertaining to the high school senior year.

Since the introduction of several pieces of federal legislation aimed at educational improvement, some of the interest shown by lawmakers has itself been aimed at the high school senior year. In particular, former Governor Mark Warner of Virginia (Hebel,

2003) and former Governor James McGreevey of New Jersey (Johnston, 2003) both laid claim to moral high ground in their respective states by way of statements concerning the sad state of the high school senior year. Both addressed the problem with a mix of proposals that they hope will help college-bound and non-college-bound seniors.

Warner felt that the senior year is wasted, claiming that college-bound seniors lose interest in high school as soon as the college acceptance arrives in the mail. Non-college-bound seniors, on the other hand, pay little attention to the last year of high school because it does not truly prepare them for a career (Hebel, 2003, pg. A22).

Warner recommended that his state institute a plan whereby college-bound seniors can earn a full semester's worth of college credit during the high school senior year. Non-college-bound seniors would have had an equal opportunity to take courses toward a certification in industry. (Hebel, 2003, pg. A23).

Hoping to make his proposal more than just lip-service based on hunches, Warner implemented a plan, known as Senior Year Plus, encompassing two elements: Path to Industry, and Early College Scholars (Warner, 2005). The former provides certifications for students hoping to enter the workforce upon graduation, while the latter allows students to earn up to a semester's worth of college credit while completing their senior year of high school. This keeps students in the high school classroom, and with them the tax money that they add to the budget, while providing something meaningful for their future. In order to assure that his programs addressed real student concerns, the governor instituted a survey of graduating seniors. Over ten thousand students responded to the on-line survey in its first year, and their feelings were compiled and presented to the

annual meeting of the nation's governors in July of 2005 (P.A. Blake, personal communication, August 12, 2005).

Warner's colleague in New Jersey, James McGreevey, echoed some of Warner's sentiments while governor of that state. McGreevey called the senior year a "rest stop" for students who enter the year with their graduation requirements having already been met (Johnston, 2003, pg. 19). Where he differed from Warner, however, was in the sense that he made no distinction between college-bound and non-college-bound seniors. His feeling was that all graduates must be more technologically savvy. Therefore, he added a technological competency test to the battery of tests that was already required for graduation from the state's high schools (Johnston, 2003).

New Jersey school districts offer a full menu of options to their seniors to keep them interested in education and motivated to work. One of these options is to leave high school as soon as a majority of graduation requirements have been met. The remaining requirements can be completed at a local college or university (Chmelynski, 2004). Community service projects or internships can also replace the senior year, or students can choose to take a traditional full schedule of senior year classes (Chmelynski, 2004). Students who complete their high school requirements at the college level are still considered high school students, thus the school district does not lose them for enrollment, and funding, purposes.

While McGreevey's personal concerns focused on technology skills for all students, and Warner looked to college or career readiness, both had one eye on the bottom line as they made their proposals. McGreevey felt that technological competency would make more New Jersey high school graduates employable, thus minimizing their

presence on the unemployment rolls (Johnston, 2003). Warner felt that there was a monetary savings to students and parents in his plan because by entering college with a semester of coursework completed, the students will graduate college earlier and lessen the state's burden of educating them (Hebel, 2003 and Warner, 2005).

Other lawmakers follow suit in encouraging high school seniors to make inroads into their college courses. The state of Florida, for example, has instituted a state K-20 system of education rather than the traditional K-12. This plan merges all state-run education under one budgetary, curricular, and strategic umbrella, from kindergarten through graduate school at state universities. One of the results is that the high school senior year should be more meaningful because it will lead, seamlessly, into the first year of study at a state university (Richard, 2002).

Maryland, in a similar bid for educational consistency, is developing a K-16 system. The main goal of this plan, like the one in Florida, is to provide a connection between high school and post-secondary education. State university professors have worked with the state to develop the standards that will be used to revamp high school curricula in order to integrate this new system (Conley, 2001).

Georgia, too, is in the race for a seamless, statewide, educational system. Theirs is known as a P-16 system, in order to include preschool. This system has very specific goals to enhance the high school to college experience, although little of it is aimed directly at the high school senior year (Conley, 2001).

The Colorado legislature, on the other hand, is taking a hard look at the senior year. Several state senators on the budget committee have embraced the idea of eliminating it altogether. Not that they wish to simply save money by thrusting students

out of the system, but because the monetary savings thus realized will be used to beef up preschool programs. The general feeling among these lawmakers is that preschool preparation is more important to future academic success than is the oft-wasted senior year of high school (Rubin, 2003).

Although all critics are in agreement that the traditional high school senior year is becoming meaningless, they differ in their proposals to solve this problem. Many feel that the twelfth grade curriculum and graduation requirements should be upgraded, rather than just eliminating the requirement of a senior year altogether. Others are in agreement with Warner of Virginia in thinking that colleges need to work more closely with high schools to make the overall curriculum, and thus the senior year, more meaningful to students (Rubin, 2003).

The state of Oregon may well have been in the forefront of high school reform. As far back as the early 1990's, Oregon had begun to rethink its high school experience. This was not done to improve the transfer from high school to college, but to improve the transfer from high school to work (Conley, 2001). The state's university system had earlier set standards for entrance, to which high schools were then required to adhere. Following on that model, occupational competency became the focus of the Oregonian reforms (Conley, 2001). The senior project, as an authentic assessment, has become the primary exit assessment in some Oregon high schools (Rickey & Moss, 2004). This has had the effect of keeping students engaged in meaningful work throughout their senior year.

Many of the reforms discussed above were imposed upon school districts by state legislatures. Hamann (2005) reiterates the importance of these reforms coming from

some authority higher than the district or the individual school building. In his study of high school reform in Vermont and New Hampshire, it is clear that, for reforms to take hold, they must be systemic changes brought about at the state or federal level. If the changes are initiated at a local level, they are too dependent upon changeable factors, such as individual administrators, or team members. Hamann tells us that “high schools are hard to change, but, even when they are purposefully changed, too often the change is temporary, disappearing when a teacher retires, a principal moves, or a superintendent is fired (p. 2).” When, however, these reforms are part of a system of change, they are much more likely to stay in effect.

In particular, Hamann (2005) promotes the leadership of the state education agency (SEA) as the manager of these systems of change. His point is that real, sustainable, reform cannot be undertaken by a single school or school district. What is needed is for an SEA to step forward and say that it, the agency, is going to change the way education takes place in its state. This would obviate the need for any individual school or district to create consensus, to “sell” stakeholders on what might be best practices, and most importantly, to find funding for the initiatives. Ideally, all of this would be researched, coordinated, and paid for at the state level.

Echoing much of what the state governors see as potential improvements to their high school programs, the National High School Alliance (NHSA) finds that not just the senior year, but the entire high school *mélange* must be changed (Manzo, 2005a). The NHSA advocates mentors for all students. It also advises that districts should devise strategies to ensure student engagement, empowering educators while at the same time holding them accountable for performance. A restructuring of senior year curricula is

also advocated so that the courses taken in a high school senior year more closely align with college entrance requirements and first-year college courses. At the same time, more support for schools is sought so that these recommendations do not become just another in a series of unfunded mandates (Manzo, 2005a).

Accountability is a politically charged word, and can be used to define what needs to happen with students as well as with administrators. While studies like those of the NHSA stress accountability for professional educators (Manzo, 2005a), students, too, must take some responsibility for their own learning. Manzo (2005b) also demonstrates that students not only need to be challenged and held accountable, but that this is, indeed, what they desire. Students who have not met with academic success in their regular high schools often find success by completing their high school careers on a college campus, even though it is more academically challenging (Manzo, 2005b; see also Koszoru, 2005).

Stringfield and Yakimowski-Srebnick (2005) agree that accountability is "... the most unifying theme of the national- and state-level calls for public school reform (p. 47)." They also reveal one of the reasons that students who have already graduated are rarely considered as participants in studies about school programs and school reform. The reason is that these efforts in schools usually have two goals: to raise student achievement and to raise graduation rates (Stringfield and Yakimowski-Srebnick, 2005). Once a student has graduated, the reform is assumed to have succeeded because that part of the effort has been fulfilled; the student has contributed positively to the high school graduation rate. Therefore, the prevailing theory seems to be that it would be superfluous to track down these students later to ask about the usefulness of the reform programs,

because we supposedly already have the answer. This researcher disagrees with that assessment. Although it is important to have these measures of success, i.e. attendance and graduation rates, another important factor is whether the programs that were instituted to increase those other measures, also had the result of improving the lives of students after their high school graduation.

Our nation's declining on-time graduation rate (Barth, Haycock, Huang, and Richardson, 2000, p. 6) is a phenomenon that some see as being at odds with attempts to hold high school students more accountable. If we bombard students with high stakes testing, give them more rigorous work to do, and threaten their very graduation as a consequence of poor performance in class and on the tests, are we not taking a risk that the students will simply drop out rather than face those consequences? Possibly, says Barton (2006), but there are ways to combat that risk. One of these is to provide enough counseling for students that they can overcome the familial and environmental factors that most likely contribute to their poor performance. Unfortunately, "...these professionals can hardly perform such work given the current ratio of 1 counselor to almost 300 high school students (Barton, 2006, pg. 18)." This underscores the aforementioned need for more counseling as part of any reform effort in our high schools.

While trying to hold seniors accountable for their education through the twelfth grade, many states adopted high-stakes testing that would determine whether or not a student graduated at the end of the senior year. Currently, nineteen states require such tests before a diploma will be awarded, while seven other states are in the process of phasing in their own tests (Vogel, 2006, p. 37). Each state decides for itself which subjects and what content to test, with disciplines ranging from straight math and English

to a wide spectrum of subjects. Almost as variable as the material tested from state to state is the variability in the grade-level of students being tested in these exit exams. More than half of the states that have high-stakes testing, or 54%, test, or plan to test, students in the tenth grade, while over 30% of these states test in multiple grades, from seventh through eleventh (Vogel, 2006, p. 38). None gives the initial test in the twelfth grade. A state-by-state summary of exit exam practices is contained in Table 1.

Table 1

Exit Exams by State, Grade Level, and Test Alignment

States	Test in Grade(s)	Tests Aligned To
Minnesota, New Mexico	8 & 10	No Stated Alignment
Indiana	10	Grade 9
South Carolina, Utah	10	Grade 10 and Below
Alaska, Arizona, Florida, and Idaho	10	Grade 10
Massachusetts, Ohio, Washington, and California	10	Academic Subjects
Nevada	10	Grade 8 - 12
Louisiana	10 & 11	Grade 9 – 12
Alabama, Georgia, and New Jersey	11	Grade 11
Texas	11	Academic Subjects
North Carolina	Various Grades	Grade 8
Tennessee	Various Grades	Grade 10
New York	Various Grades	Grade 9 – 12
Maryland, Mississippi, and Virginia	Various Grades	Content

Generally speaking, then, state-mandated testing to prove high school competency can contribute to senioritis rather than eradicate it. Because the testing does not actually take place during the senior year, and because in most cases the exams do not measure anything beyond tenth-grade knowledge, there is no incentive for students to take an interest in senior year studies (Schroeder, 2001). In other words, it is not the students

who are to blame for the senior slump, but rather we should blame a system of education that appears to encourage students to stop learning before their senior year even begins.

Schroeder (2001) points out that senioritis is a problem that occurs only in the United States and reports what other countries do to avoid this senior-year shutdown. Mainly, these alternate schemes consist of holding the high-stakes testing at the end of that country's equivalent of the senior year. These exams test content knowledge that is assumed to have been learned right up through the end of that year. So, while high-stakes testing may be a valid component of a revamped senior year, the way it is currently carried out in the United States is not as helpful to students as it might be.

National academic assessments have been used in the United Kingdom (UK) since 1917. Through various permutations, culminating in the current General Certificate of Secondary Education (GCSE) examination, the goal has remained essentially the same. The aim of these exams has been "to discriminate adequately across the ability range in a variety of content areas (Educational Policy Research Reform Institute [EPRRI], 2002)." Put perhaps over-simply: students who do well on these examinations are granted admission to UK universities, while those who do less well are not afforded that opportunity. An alternative, non-academic, test also exists; the General National Vocational Qualification (GNVQ). Through a complicated point system, in which GNVQ scores are equivalenced to GCSE scores, it is possible for a student to enter university by taking sufficient GNVQ exams. This, however, rarely happens and students who opt for the GNVQ find themselves being guided forcefully into vocational careers (EPRRI, 2002).

The two tests, then, given at the end of a student's career in compulsory education, have become the de-facto dividing line between the college-bound and the non-college-bound. Unlike their American counterparts, both sets of students know that, in order to achieve their personal goals, performance on these examinations is of paramount importance. They further know that they will be tested on material and content that was supposed to have been learned up through that current year.

Compare this with the French system of assessment, in which there is one examination, the Diplome National Brevet (DNB). This is a combination of a standardized test and the results of continuous assessment from the student's educational career. Because of the continuous assessment aspect of the DNB, each local educational entity is responsible for its own scores and "the quality of the school varies enormously (EPRRI, 2002, pg. 52)." Therefore, in order to bring some consistency to the process, calls are being made for the reform or abolition of the DNB. It is, however, still used as a determining factor in college admissions in France.

Italian schools prepare students to take several standardized tests throughout their compulsory schooling years. The first, at age 11, leads to the Primary Leaving Certificate, which is known to have almost no failures. The second, occurring at the end of the intermediate years, leads to the Intermediate School Leaving Certificate. As in the French system, part of this assessment consists of a standardized test and part of it is based on continuous assessment. Again, due mainly to the continuous assessment feature, there are essentially no failures of this examination. From here, students may choose to enter secondary education or choose to pursue certain trades.

The secondary years of formal education use continuous assessment to determine whether students will pass from one year to the next. To determine eligibility to attend a university, however, students must pass a state examination for their matriculation diploma. From there, students with passing scores may choose to attend a university, take vocational courses, or take on an apprenticeship.

The following similarities are noted among the discussed systems of education and assessment. These three examples in the UK, France, and Italy, show how the testing may vary, but in each case the examinations are seen as gatekeepers to university study. Each of these countries has an educational system that is centrally controlled by its respective government. The assessments are given at the end of that particular country's years of compulsory education, and they test knowledge that should have been learned through that final year.

Contrast all of this with the American system. Exit exams vary greatly because of the decentralized control of education. Although consequences exist for poor performance on individual state examinations, low scores will, in reality, not keep a student out of college. And, finally, most states test knowledge in the tenth or eleventh grade that was to have been learned in years prior to that. Again, this is a perfect formula to produce students whose senior year means nothing to them in terms of their immediate future.

In agreement that American students are not the ones to blame for their attitudes toward their high school education is Van Winkle (2005). In his business model, the students are our consumers and not our raw materials. If students are the consumers, then what is the product that we deliver to them? "The curriculum is the real product of the

school,” answers Van Winkle (p. 43). The senior year needs to be reestablished as a viable aspect of a student’s education, as a fundamental component of the curriculum, and as a year of education that offers something meaningful and useful to students.

It is generally accepted that the senior year of high school must change in some fundamental ways if American schools are to keep pace with their foreign counterparts. The “old” rationale for high school, i.e. to prepare students for college or the workforce, is breaking down under our twenty-first-century lifestyle. Students recognize these gaps between intent and practice and take the “practical” approach of ignoring those elements of schooling, like the senior year, that do not appear to directly affect them or to contribute to their futures in any positive way (Conley, 2001).

Conley (2001), however, quotes an interesting statistic of the National Commission on the High School Senior Year. Students in the United States, despite this gamesmanship concerning what they will or will not attend to, recognize that school is important. They report, in higher numbers than their foreign counterparts, a belief that doing well in school is paramount in quality of life and career considerations. This sentiment is echoed in a study commissioned by the U.S. Department of Education, in which 96% of students say “doing well in school is important to their lives (Paige, 2005, pg. 16).” Mark Warner’s aforementioned survey of graduating seniors also emphasizes this finding, with 90% of his participants responding that high school has been useful (Summary of RateYourFuture.org, 2005). Therefore, one may conclude that all is not lost for our students. With some restructuring of the high school experience, our students can take all of their schooling experiences seriously and perform at more acceptable levels of achievement.

As stated above, the problem is that we do not know which of the various programs designed to improve the senior year are having a positive effect on the lives of our students after they graduate. It is this oversight that this study will help to remedy. When its results are known, it is hoped that we will have a better understanding of which of the named senior year programs are worth continuing, or how to tweak them so that they are useful for all students.

Theoretical/Conceptual Framework

The initial assumption, gleaned from the historical evidence above, and the research cited below, is that the high school senior year is in need of a major overhaul. Students do not take their senior year seriously, and indeed are victims of a system that appears to discourage them from doing so. Many state departments of education have proposed ways of restructuring the high school experience and the senior year. A majority of these proposals involve giving students the option of either leaving high school to go on to college or career, or of completing college credits and/or business internships in their high school during the senior year.

Other proposals to overhaul the senior year involve such disparate suggestions as more graduation requirements, more competency testing, and/or the requirement of senior projects, portfolios, and other alternative competency testing. Each of these ideas has its merits, but all are mired in the existing K-12 system, requiring twelve years of primary-secondary schooling, despite any evidence of a student's readiness for college or the

world of work. Recommendations from diverse sources, such as those comprising the National Commission on the High School Senior Year (NCHSSY), have condemned the current system as too constricting. In its final report, the NCHSSY decries the fact that “[e]ducational institutions, families, and communities are not meeting the educational needs of more than 50 percent of the students enrolled in public and private schools in the United States (National Commission on the High School Senior Year [NCHSSY], 2001b, p. 7).” The Commission further charges that this translates to more than thirty million students who “are being poorly served by their institutions and communities (p. 9).”

What do the graduates themselves, though, have to say about the high school senior year? They have recently lived through it and, for better or worse, have seen its aftermath in their daily lives since graduating. Did it seem to be a waste of time while it was occurring, but then turn out to have been useful after all? Did it seem very relevant at the time, but in retrospect look less so? What can be done so that it feels relevant while students are high school seniors and so that this perceived relevance is borne out in the years that immediately follow graduation? These in-depth questions were broached in the follow-up interviews that followed the initial survey.

Study Purpose and Research Questions

With essentially every available expert in agreement that the high school curriculum overall, and the senior year in particular, needs to be revamped, one is required to attend to those who have already been through this process to find out what works and what does not work. The purpose of this study was to canvass the opinions of

high school graduates with regard to the usefulness of their senior year in high school. Of specific interest is whether the experience of the senior year is seen as preparing them for their post-high-school lives and careers.

After all, the process of education requires two participants: the entity that imparts the educational program (the school district, the individual teacher, etc.) and the entity that is the willing recipient (i.e. the student). Although current educational wisdom dictates that we expand these roles, neither of these participants can do the job alone. The school requires the student as much as the student requires the school. Among the many jobs of the school is to make sure that the program that is being offered is one that is useful to the student. The education that the student earns should help to equip the student with the tools with which to build a successful life, however one defines the term.

When we make changes, then, to the educational program, these changes should be filtered through the lens of improving student achievement to prepare students for the life following graduation. Is a program change being instituted, for example, that gives students more seat time? This may help to fulfill some state requirement, but does it contribute positively to the students' education? Is it something that students will think of in later years as something that is useful to them, or will it contribute to the perception, expressed above in the responses to Warner's graduate survey, that the senior year is a waste of time?

In addressing these concerns, the following research questions are being asked. To what extent do recent high school graduates of Western Pennsylvania public school districts, up to five years removed from their senior years, feel that programs offered in their final year of high school to make their senior year useful and meaningful had the

desired effect? Will there be significant differences in the perceptions of the senior year as experienced by college bound students versus non-college-bound? Will there be significant gender differences in the perceptions of these senior year programs?

Study Significance

As one becomes convinced that high school seniors are being short-changed in their public education, one begins to investigate the myriad ways in which this deficiency is being addressed. From the governor's mansion to the local schoolhouse, educators are implementing plans to make the high school senior year more relevant to students. In rare cases, the seniors themselves are asked to contribute to the discussion.

All of these individuals, though, look at the senior year as it is occurring and may or may not like what they see based upon current circumstances. Changes are made, new programs and initiatives are offered, and, again, judgments are rendered based upon everyone's current level of satisfaction. Three, four, or five years down the line, however, high school graduates may look back and realize that what they thought was useful and relevant while it was occurring turns out to have been useless to the life that followed graduation. Would it not be prudent to ask these graduates for the input that is missing? It would behoove us to find out what it is that seniors did in their senior year that was useful, and what they did that turned out to have been a waste of time.

The significance, then, of this research is that it will answer a question that may not have been studied before. The questions, as stated above, are the following. Do high

school graduates feel that the programs instituted to improve the senior year of high school are proving to be useful by actually helping them in the life that follows their graduation? Further, when it comes to these senior year programs, is there a significant difference between the perceptions of college bound seniors as opposed to non-college bound? The information is needed so that administrators and decision-makers will have one more piece of data in their arsenals when deciding what the best course of action is for finishing out students' high school careers. Should they continue with a full complement of high school courses; take advantage of vocational training; pursue internships and/or community service projects; or eschew the senior year and leave high school behind to enter the world of college or work?

The question of gender differences is also significant. Although overall support for a particular reform program may be low, it may also be biased in favor of one gender or the other. Would schools eliminate a program if almost every female graduate found it to be useful and males did not? This would not necessarily be the deciding factor, but it would be a useful piece of information to have when faced with such decisions.

CHAPTER II

LITERATURE REVIEW

The problem is that, to many high school seniors, the senior year of high school has become a more and more meaningless experience. For example, a recent survey of graduating seniors in the State of Virginia reveals that a full 50% of respondents said that their senior year “could be much more meaningful,” or was a “waste of time (Summary of RateYourFuture.org, 2005).” Not only have seniors fulfilled the vast majority of requirements for graduation by the end of the eleventh grade, but early in the senior year many of them have already been accepted into college, or have decided that they are not going to attend college. Either way, they are aware of a significant disconnect between what they are expected to do during that last year of high school and what they will be doing a few months hence, after graduation (National Commission on the High School Senior Year, 2001a, p. 6).

We, then, as educators and the architects of their senior year experience, must deliver a curriculum that will suit the needs of the diverse set of learners in our schools. The senior year must not be allowed to deteriorate into, or, in many cases, continue to be, a year of seat time tolerated for the sake of the more meaningful years that will follow. We must allow other options for students that will let them follow their interests, and that will make the senior year one that gives them something useful.

Even granted that some programs can be put into place to accomplish this goal, who is it that decides whether or not the senior year has been useful? We cannot assume that any change that we make has produced positive results. If we assume such, then we fall into the trap to which Stringfield and Yakimowski-Sreblick (2005) alerted us above,

i.e. the belief that some nominal gain in achievement or graduation means that goals have been met. Some states, districts, or even individual administrators recognize that there are flaws in this logic and are taking steps to find out what students think of their educational experiences. Cassel (2003), in fact, posits that it is the civic duty of students, and their parents, to evaluate the high school and provide feedback about their experiences.

Cassel, a licensed school psychologist of many years standing, has developed two rating scales, the Senior Student High School Rating Scale (SHRS) and the Parent High School Education Scale (PHSES). Each is meant to be used by senior students and by their parents, respectively, to rate their high school experiences. Although his areas of concern are not completely consistent with those expressed by the National Commission on the High School Senior Year, they are a good starting point for a school that is looking to improve its offerings based upon consumer feedback. For example, each of Cassel's survey items states what he considers to be a best practice in high school education, and then asks the respondents to rate their high school based upon that criterion (Cassel, 2003).

Some of the inconsistency between the recommendations of the NCHSSY and the two surveys produced by Cassel can be explained by the fact that the report of the National Commission on the High School Senior Year, as its name suggests, is focused strictly on the senior year, while Cassel concerns himself with four years of high school, grades nine through twelve. The three goals put forward by the NCHSSY aim to make the senior year more relevant by using their Triple A approach: improve alignment, raise achievement, and provide more (and more rigorous) alternatives (NCHSSY, 2001b).

Some of the alternatives suggested for seniors by the NCHSSY include a culminating project, internships, research projects, the availability of college-level course work, and participation in community service activities (NCHSSY, 2001b, p. 22). Both studies, those of Cassel and of the NCHSSY, have their advantages, and in fact it might be said that each has something to learn from the other.

The best practices espoused by Cassel would amount to nothing if the senior year continued in its current vein. The recommendations of the NCHSSY, on the other hand, are too broad to be implemented in one year. Starting with the senior year and working backwards, through the three or four years of high school, would provide a better overall high school experience for all students and improve more than just the senior year.

The federal government agrees with the sentiment that, although the senior year is important, the overall climate of high school must change. According to Kusler (2004), the general opinion on capital hill appears to be that, although test scores indicate that the No Child Left Behind (NCLB) legislation is making great improvements in elementary and middle school achievement, very few changes have taken place in high schools. Mathews (2005) echoes this sentiment. So, apparently, does the American public. A recent poll by the Educational Testing Service (ETS), the people who bring us the SAT, finds that, among those polled, an overwhelming majority feels that high school students are not being challenged enough, and over thirty percent believe that major reforms are needed (Reid, 2005).

This researcher's study, however, concerns itself with the senior year as a first step to general high school improvement. Houston (2006) posits three distinct stages in high school reform: post-Sputnik, post- "A Nation at Risk," and the present day, in the

age of No Child Left Behind. He points out all the extra work that people; students, teachers, and administrators; have been coerced into doing at each “developmental stage” of high school reform. Despite all of this extra work, schools do not really appear to have changed all that much. Many are still the houses of boredom that most adults remember from their youths, where students simply put in seat time to gain diplomas (Houston, 2006). What changes have been put into place to try to transform these diploma mills into the launching pad for successful post-high-school careers, whatever those careers may hold? And, in the opinions of those who have supposedly benefited from the current reforms, how successful have those reforms been?

Reform Programs Undertaken

Many government agencies, school districts, and individual administrators have implemented reforms aimed at making the entire high school experience, or at least the senior year, more meaningful to students. Among these is the Jobs for America’s Graduates (JAG) program. This was begun as an initiative aimed at improving the senior year for at-risk students, but it has since trickled down into the entire high school repertoire. It includes elements such as internships that provide work experience for both college-bound and non-college-bound students, and a beefed-up guidance program that provides support for all students as well. As with the recommendations of the NCHSSY, the NHSA, and the Cassel surveys mentioned above, the senior year/entire high school dichotomy is thus addressed. Boasting a ninety percent graduation rate among its at-risk students, JAG would appear to be successful (Lewis, 2004). What would graduates of

this program, several years removed, have to say about its effect on their lives after graduation? This would be an interesting finding

Senior Year Plus

Senior Year Plus (SYP) is a program instituted by former Governor Mark Warner of Virginia. Governor Warner was also the chair of the Governors Committee on Educational Reform. His interest in the senior year has been ongoing and active. SYP is a two-pronged initiative, designed to provide more opportunities to both college-bound and non-college-bound students. They are called, respectively, the Early College Scholars Program, and the Path to Industry Certification (Governor of Virginia, 2005).

The thinking behind Governor Warner's projects is that some sort of training beyond a high school diploma would serve all students well as they enter the world of college or work. This belief is backed up by the research of, among others, Marcotte, Bailey, Borkoski, and Kienzl (2005). They verify through a longitudinal study stretching back to the mid-1970's that a community college education shows a significant difference in the annual incomes of those students who receive one. Although the effects of a college education on later income is well-documented (Gore, Kadish, and Aseltine, 2003), the significance of this study is that even the relatively modest educational gains produced by attendance at a community college can have a significant effect on future earnings (Marcotte, Bailey, Borkoski, and Kienzl, 2005). Therefore, Warner's theory is borne out, that even those students who do not pursue four-year degrees need some sort of training or education beyond that which is provided in high school.

Although Governor Warner initiated a practice of surveying outgoing seniors about their senior year experiences, these surveys are not planned to become longitudinal studies. The first one was distributed to the class of 2005 and provides a snapshot of what that senior class thinks of its last year of high school. Year after year, as these snapshots accumulate, they will provide an ongoing picture of how the seniors themselves perceive their senior year to be improving, or not. A fuller snapshot, a 3-D picture, if you will, could be obtained by following up with graduates a few years down the line.

School Success Profile

The team of Powers, Bowen, and Rose (2005) examined school reform efforts that were based on results of the School Success Profile (SSP). The SSP is a multi-part, multiple-choice survey that asks students to give their impressions and feelings about their community and school. Questions like, “Do you feel that your teachers care about you,” and “Do people seem to move into and out of your neighborhood a lot” are included (SchoolSuccessProfile.org, 2006).

Believing that school reform cannot succeed unless it encompasses the entire social context in which the child is trying to learn, the SSP dimensions were examined in relation to desired outcomes for students, like Trouble Avoidance and Academic Performance (Powers, et al., 2005). Reforms were initiated, mainly by social workers, based on the results of the SSP, and their effectiveness gauged on those same students at a later date in their high school careers. Results were generally as one might expect, with behavior of friends and home academic environment showing a strong positive

correlation with academic performance. Other results were more surprising, with parent education support, for example, showing a negative correlation with academic achievement. The researchers speculate that these unexpected results are a direct consequence of the self-reporting nature of the data. For example, if a student has a parent with high educational expectations, then that student is more likely to self-report low academic achievement relative to the parental expectations (p. 182).

By focusing on those dimensions that are shown to have a positive impact on the desired outcomes, schools can implement reforms that will help students to achieve more in their high school years. Do the gains made as a result of the SSP studies carry over into the post-high school years? A separate study is needed to answer this question.

School To Work

Several states, including New York, Pennsylvania, and Maryland, have begun School-to-Work (STW) programs as a means of making the high school experience more relevant to the needs of their students. The original intent of STW was to provide a smooth transition from high school to the workplace. In fact, STW was originally modeled on apprenticeship programs that are popular in other parts of the world. According to Gehring (2001), “many looked to school-to-work programs as this country’s version of the successful career education and apprenticeship programs in countries such as Germany and Japan (p.21).” American educators, though, found that not only did parents want more of an academic base for their children, but so did employers for their future employees. This has caused STW programs to shift their focus so that academics are stressed along with workplace skills.

Evidence also indicates that participation in these revamped programs has resulted in higher academic achievement among non-college-bound students. Looking at just one measure, enrollment in AP courses, lends credence to this finding. The number of students enrolled in AP courses at a magnet school in Maryland that employs the STW model has doubled since the school began to stress academics in its STW program (Gehring, 2001).

STW is echoed in the work of Gore, Kadish, and Aseltine (2003), who prefer the term career centered education, but are basically dealing with the same student population of non-college-bound students. Viewed through the lens of “the forgotten half (Gore, et al., 2003),” their study examines the effect of the School-to-Work Opportunities Act of 1994 and its impact on the career prospects of students who graduate from high school under its auspices.

The quality of the jobs obtained by these students is compared with their level of participation in the school reforms related to the act. As with the SSP study above, many of the results were surprising. Students, for example, who were able to focus on a career major in high school, found themselves to be underemployed or underutilized in their jobs. The overall finding was that students do not benefit from reforms initiated by the Work Opportunities Act of 1994. The young people in this study were two years out of high school at the time, and the authors list this, along with small sample size, as a possible limitation of the study (Gore, et al., 2003). A larger study, with students who have been out of high school for a longer period of time would avoid the “period of floundering,” of which Gore, et al. speak.

College Alignment

Many of the findings and much of the research presented above are encapsulated in a report by Viadero (2001b), who presents a prescription to improve high schools. It does not include more laws, regulations, or accountability to government. Instead, she focuses on many of the recommendations of the NCHSSY and other educational research bodies. Such reforms as making a clearer transition between high school senior year courses and college first year courses are not only common sense, but have been adopted in several states, as related in the introduction above and echoed here. One call that is made by Viadero, though, that is not found in other studies, is her notion that it is not just the high school that is responsible to make that smooth transition possible. Colleges, she says, should work with high schools to redesign their own first-year courses to more closely match what the high school is teaching. In other words, collaboration is called for. Once again, though, the missing element in the discussion is the opinions of the college students themselves, which this study addresses.

An exception to the general lack of attention to student opinion is the study completed by Earl and Sutherland (2003), investigating the effect of student engagement of widespread high school reform in Ontario, Canada. The reforms taken on in the Ontario school systems caused widespread unrest, striking, and general dissatisfaction among teachers and administrators. As follow-up studies were undertaken, these researchers recognized the importance of listening to student input on how these reforms may have affected their ability to function in schools (Earl and Sutherland, 2003, p. 340).

The Secondary School Reform (SSR) program that was the cause of so much turmoil in Ontario had many distinct elements. The government specified a change in

funding sources, legislated class size restrictions, and condensed the length of the secondary school curriculum from five years to four. Students, aware that these reforms would have implications for them in their efforts to complete their high school education, expressed disappointment in their government for putting them in this difficult position. As with Gore, et al. (2003) noted above, it would be interesting to conduct a longitudinal study to find if the particular students who felt abandoned and betrayed as high school seniors would still feel that way several years in the future. Additionally, it would be illustrative to produce several repeating studies to find if seniors continued to feel this way year after year.

In a move that closely mimics one of the recommendations of the NCHSSY, a Florida public school district in Broward County has formed The College Academy. The author describes this as "...a beautiful hybrid ... [that] provides the atmosphere and curriculum of college, balanced with the support structure of high school (Koszoru, 2005, p. 25)." This would appear to be the ultimate in alignment between high school courses and those that will be provided at local colleges, called for by many of the leading voices in high school and senior year reform. It certainly attacks those last, oft-wasted, years of high school by making itself available only to juniors and seniors.

The College Academy program is selective and small. Only three hundred students are allowed to participate and they form a school within a school on the Broward Community College campus. It also benefits students in another way stressed by reformers, which is that it treats them more like the young adults that they are. On the college campus, there are no hall passes, bells ringing, nor any of the other accoutrement

of high school. It is simply an academic setting for academic work; a nice collaboration, giving students and schools what they want.

Building Community

The importance for students of feeling that they are members of the school community is emphasized in a study by Smerdon (2002). She assails the general impression that students who attend school and do well automatically have a feeling of membership in that school. Many other factors, such as parent expectations and compulsory attendance laws, contribute to student attendance. By looking at the underlying psychological need for, and definition of, membership, Smerdon finds that not only is the incidence of perceived membership lower than had been supposed, but it is also more important than one might believe it to be. A strong correlation exists between membership and academic success. Therefore, it would behoove us to pay attention to the factors that will increase this perception among students, not least of which would include holding some degree of respect for their opinions.

Research Gaps

Research studies on the success of high school reform programs, or on proposed programs, have overwhelmingly taken high school students as their subjects. These subjects are normally high school seniors, but underclass students are sometimes surveyed. One notable exception exists, and it is the study carried out by Gore, et al

(2003). Even there, though, the researchers admit that, at only two years out of high school, their participants were perhaps not sufficiently mature, nor advanced in their careers, to be the best subjects of the study.

For several reasons, it is less useful to survey current high school seniors regarding the relevance of their senior year studies than it would be to question them at some later time. For one thing, if the current senior year curriculum is not academically challenging, students may opt to praise it rather than run the risk of being given more, and more challenging, work to do.

Another problem simply relates to teenage attitudes. A study by Pierce (2005) reveals just how much of an adolescent's mindset is determined by his/her peers. From the way that they dress to the way that they interact with teachers, high school students admit that they often strike a pose that is contrary to their real feelings about their education. Several years removed from these pressures, students should be able to give a more honest answer to the question of how relevant their senior year was.

Phelan, Davidson, and Cao (1992) agree that peers can color a student's perspective when it comes to his/her sense of belonging and being connected to high school. In their study of what students look for in a school, these researchers found that most students want the same things from their school that teachers want, with a safe environment being a top priority. Safety from their peers is the most-cited concern with both populations.

Finally, since the purpose of high school is to prepare students for the years that immediately follow, we may miss the mark when we ask current seniors how relevant their senior year experience was. They have not yet experienced those following years.

With the perspective of a few years of college or career behind them, a slightly more mature young adult should give answers that the high school senior could not have foreseen.

DeMoulin (2000a) espouses the advisability of allowing high school seniors and their parents to evaluate their, or their children's, high school experience. Given how neither population yet knows how the high school education they received will serve them in the years to come, both sets of respondents are being asked for their opinions too early.

In a separate study, the same researcher does take into account the opinions of younger students in order to compare them with the opinions of graduating seniors in that same school (DeMoulin, 2000b). His statistical analysis reveals that there is no significant difference between their responses on the SHRS. An interesting follow-up would be to see if the opinions of the younger students change as they approach graduation, and to see if the older students answer differently after they have been out of high school for some period of time exceeding two years.

The aforementioned Phelan, et al. (1992) also surveyed younger students, beginning their study in the freshman year of high school. These same students were followed and surveyed periodically, but only for the following two years. They were excluded from further study before they reached their senior year.

Given the admission that two years is too soon to ask, and the general finding that students are not usually asked for their opinions of high school after it is over, it is easy to make a case that a study like the currently proposed one is needed. If two years is too

soon for a survey of how high school did or did not help in subsequent career or college work, perhaps three, four, or five years will prove to be an illustrative amount of time.

By surveying graduates at this distance beyond high school's end, they will have had more years to attend, or graduate from, college and possibly either get a career started or proceed to graduate school. At the very least, they may have a more solid idea of when and how they might graduate from college, what their work career has been like, and what they might do next. It is the culling of the opinions of these graduates that was the ultimate goal of the current study.

Longevity of change should be a concern in many of the research studies quoted herein. Not only would a longitudinal study have been of interest in the DeMoulin (2000a) study cited above, but it would also have been useful for Gore, et al. (2003) and for Earl and Sutherland (2003). An article in *What Works in Teaching and Learning* (Anonymous, 2003) details reform efforts in Kansas City, MO, schools. The most striking objection brought forward by the public had to do with whether or not Kansas City's school reforms would last. Follow-up studies with groups of graduates, and repeating studies with current students, preferably seniors, would answer this question.

Given all of the above, it would appear that a hole exists in the research. The opinions of students, gleaned after they have had a chance to test their senior year experiences in the world of college or work are vital to an understanding of what we do right, and what we do wrong, in the embattled high school senior year.

Alternative Solutions

Researchers are beginning to see the advantages of offering alternatives to the traditional high school senior year. Several have studied the issues involved and offer their own take on what it might be that would keep seniors interested in school right up to their graduation date. Lindahl, Long, and Arnett (2002) describe a school system that ramps up its efforts through the last three years of high school.

The collaboration that they have developed between a community college and its local high schools takes a major step toward ensuring that high school seniors are prepared for the college work that will follow their high school careers, and resonates with the findings of Marcotte, et al (2005). Whether proceeding to work or to college, each student will find something valuable and relevant in this program, the main focus of which is career planning and goal setting.

Wade (1999) reports on a program at Woodlands High School, in Hartsdale, New York, that does not fritter away a year of education by forcing students to sit through classes that they perceive to be unnecessary and/or irrelevant. There, a program known as WISE (Woodlands Individualized Senior Experience) allows students to follow whatever path is deemed appropriate for them. Through counseling and advisement, students are able to explore alternatives to traditional classes. These can take the form of college courses, internships, or such diverse independent study options as documentary-making or automotive repair. So successful has the WISE program been, that it is being franchised and offered to other schools that are willing to follow its prescribed curriculum. Again, alternatives that focus on student choice and relevance lead the way in making the high school senior year worthwhile for students.

It is by focusing on existing programs like these, and eliciting responses from comparatively recent high school graduates that alternatives to the traditional high school senior year may be found that will make a positive difference for students. By using what works, discarding what does not, and sticking with best practices, educators may be able to create a model senior year that will make sense for, and be embraced by, high school seniors everywhere.

Questions of Gender

One of the research questions associated with this study is whether gender plays a role in determining how useful students find the various high school senior year initiatives to have been. It is already clear that there is a gender gap in the areas of mathematics and science, but it is also true that the gap is slowly closing (Simon, 2006). Whether this good news is the result of No Child Left Behind, or the efforts of initiatives like the National Summit on the Advancement of Girls in Math and Science, it is obviously useful to pay attention to how girls and boys learn differently.

Just as Simon (2006) relates that girls are making gains in mathematics in the early school years, Van Nelson and Leganza (2006) report that gender is not necessarily a predictor of success in college mathematics courses. Their study found that any gap that may have existed between the mathematical abilities of males and females as they entered college has disappeared as the sophistication of the mathematics courses increased. Although the gender gap still exists in the middle and high school years, it can be overcome, as has been borne out in these studies.

Others get to the root of why gender gaps exist by looking at the differences between boys and girls who are diagnosed with learning disabilities as opposed to their undiagnosed peers. It was found that, in the absence of a diagnosis, adolescent girls tended to internalize their course failures as problems within themselves. Boys, on the other hand, did not allow such failures to compromise their self-perception (Crosnoe, Riegle-Crumb, & Muller, 2007). In these cases, gender differences should play a large role in determining what schools should and should not do when confronted with ways to improve learning for boys and girls.

Given the information that boys and girls not only learn differently, but that they also react differently to setbacks and to offers of help, it makes sense to make an issue of gender when completing a project like the one herein proposed. Similarly, then, to those studies presented above, the present study would like to find if certain senior year reform programs were more successful for boys or for girls. Such information would be invaluable in planning future high school programs, whether such plans would be to add to those programs that already exist, subtract from the current number, or to scrap them altogether.

DiPrete and Buchmann (2006) echo this sentiment in their study of the gender gap in the completion of college. In this gap, it is the women who are showing more success and who are reaping the benefits, mentioned above in studies by Marcotte et. al. (2005) and Gore et. al. (2003), of post-secondary education. It is the women who more likely finish college and, again, reap the rewards in terms of higher lifetime income that college graduates earn. Therefore, it is clear that gender is still an issue with which we need to concern ourselves when designing educational programs.

CHAPTER III

METHODOLOGY

Research Approach

Many high schools use new and innovative programs to make the senior year more meaningful to students. Through the use of the Senior Year Program Survey (SYPS) and a semi-structured interview, both developed by the researcher, this study investigates the opinions that high school graduates have about these programs. Data was collected from recent high school graduates who have been out of high school for three to five years to gauge their memories and opinions of programs instituted to improve the high school senior year. The opinions of these recent graduates have been compiled and used as a basis for a study of what works and what does not work in the senior year. The definition of “what works” is defined as what these graduates found to be useful in the years since their high school graduation. For example, if a graduate identified an internship as something that made a positive difference in subsequent endeavors, then, for that particular graduate, that internship was something that worked.

Other researchers, named in the introduction and review of literature above, have looked into this question of what can improve the senior year. They reappear here as being among those who have informed the development of the survey that was used in this study. In particular, some of the best practices espoused in the Senior Student High School Rating Scale (SHRS) and the recommendations of the National Commission on

the High School Senior Year (NCHSSY) were used as the basis for the survey developed by the researcher, as explained below.

In the SHRS, each survey item states what is considered to be a best practice in high school education. The respondents are then asked to rate their high school's performance based upon that criterion. Some of the items about which students are queried include the school's use of portfolios, the existence of school songs and slogans, general student knowledge of standards, the existence of school-to-work programs, and the rigor of their school's requirements for graduation (Cassel, 2003).

The SHRS was developed by Cassel, a school psychologist of over sixty years experience. It has three different comparative norms, based upon the number of students enrolled in the high school being rated. Exiting seniors rate their high school on each of Cassel's ten best practice items, and, ideally, the results are given to the school administration for their consideration (Cassel, 2000).

The NCHSSY makes three recommendations for the senior year. The three goals put forward by the NCHSSY aim to make the senior year more relevant by using what they call the Triple A approach: improve **a**lignment, raise **a**chievement, and provide more (and more rigorous) **a**lternatives (NCHSSY, 2001b). Some of the alternatives suggested for seniors by the NCHSSY include a culminating project, internships, research projects, the availability of college-level course work, and participation in community service activities (NCHSSY, 2001b, p. 22).

Like the SHRS, the survey for this study names a best practice in high school education and asks subjects if this was a practice used in their high school senior year. For example, one survey item deals with alignment of senior year courses with first-year

college courses, which is one of the recommendations of the NCHSSY. Among those for whom this program was in place in their high school, respondents state whether or not this particular aspect of their senior year was of any help to them in the subsequent few years after graduation.

In addition to questions about their high school senior year experiences, the survey also gathers biographical data about the participants. Age, gender, and occupation since leaving high school are requested. These form the basis of the descriptive statistics that are a part of the results of this survey.

This is a mixed-mode study utilizing qualitative and quantitative methods. Data was collected by way of surveys. The responses to the surveys were examined, sorted, and aligned according to trends that emerged in the answers.

Likert scale questions were used and some biographical information elicited so that the responses could undergo statistical analysis as described below. For example, might there be significant gender differences in the level of satisfaction with students' senior years? Will students who completed community service projects have been more satisfied with their senior years than those who did not? Whatever other queries presented themselves during the course of the quantitative portion of the data analysis, though, the primary research question remains: what do recent high school graduates, three to five years removed from their own senior years, see as the successes and failures of their senior year reform programs?

In the final survey question, study participants were asked if they would be willing to participate in a follow-up interview. It is this interview that provides the data for the qualitative portion of this study. The goal was to obtain a rich variety of interview

responses by performing semi-structured interviews with several different types of respondents. If possible, respondents will be chosen for the interview who have given a variety of responses. From among those who expressed their willingness to be interviewed, two male respondents and two female respondents were randomly chosen; one each college-bound and non-college-bound. The hope was that opposing pairs like this would be helpful in discerning the reasons that certain programs are considered to be useful by different groups of students. Since graduates are asked for biographical data in the beginning of the survey, these distinctions were evident.

Data Collection and Recording

Invitations to participate in the survey were mailed to 898 students who graduated from three different types of high schools in Western Pennsylvania. The researcher used a database of names and addresses of high school graduates from three different Western Pennsylvania school districts. The addresses are the parent addresses for each graduate. This information is culled from the Washington School District (WSD), an urban school district, Seneca Valley School District (SVSD), a suburban district, and Avella Area School District (AASD), a rural district. Because SVSD is much larger than its rural and urban counterparts in this study, a randomly selected subset of the SVSD students was used so that the disparity in their numbers was mitigated somewhat. As it is, 166 surveys were mailed to AASD graduates, 328 were mailed to WSD graduates, and 404 were mailed to SVSD graduates

The surveys went out in two waves. The first mailing was sent to everyone on the list, in other words, to all AASD and WSD graduates, and to the randomly selected

graduates of SVSD. The recipients were given a deadline by which it was hoped that their responses would be returned. Each response envelope was coded so that the respondent was known to me through a key that was kept in an Excel spreadsheet. As each envelope was returned, either completed or by the post office as undeliverable, a notation was made for that recipient.

Two weeks after the initial deadline, another set of surveys was mailed to every address from which no response had been received. This second wave had a new deadline, approximately two weeks from the date of mailing. Again, as each response was returned, a notation was made in the Excel spreadsheet. When two weeks had passed beyond that second deadline, the survey was considered to be closed. Any responses that came back after that were put in with those that had been returned as undeliverable.

The last question on the survey asked respondents if they were willing to participate in the follow-up interview. These interviews were conducted by telephone rather than by mass mailing, as the questions were tailored for the particular responses that each participant gave on the survey. Participants were asked the questions and the interviewer audio-recorded the responses.

To rate the usefulness of high school reform programs in the initial survey, respondents were given a Likert scale of 1 to 5, where a rating of 1 represents a statement about a reform that “does not describe me at all,” and a rating of 5 represents a statement that “describes me perfectly.” With only that much guidance, it is assumed that a rating of 1 and 2 can be grouped together as representing programs that were not very descriptive of the respondent; ratings of 4 and 5 can be grouped together as representing

statements that described the respondent very well, and that a rating of 3 meant that the respondent was neutral about the statement, finding it, at best, marginally descriptive.

Why, then, use this scale? Why not use Likert-scale replies of just 1, 2, and 3? The reason is that the scale of 1 to 5 gives respondents the opportunity to make finer distinctions. It would be frustrating to have to rate something as completely true, completely false, or of neutral value. Perhaps a respondent does not really agree with a particular statement, but he or she would not be willing to go so far as to say that it was completely invalid. The presence of a 2 as a possible low rating gives an outlet to such feelings. Similar justification exists for the 4 on the high end of the scale.

The average of these ratings will rarely come out to be an integer, so an assumption will have to be made as to the cutoff between true, false, and neutral responses. The ranges of average rating values given in Table 2 will therefore be used.

Table 2

Likert Scale Interpretations

Range of Average Ratings	Meaning
1.00 to 2.49	Low Agreement
2.50 to 3.49	Neutral
3.50 to 5.00	High Agreement

Sample

The SYPS was mailed to the last known home address of 898 high school graduates from three different school districts in Western Pennsylvania. Of this number, 18.5% (166 of 898) were mailed to graduates of the Avella Area School District (AASD), a rural school district, 36.5% (328 of 898) were mailed to graduates of the Washington

School District (WSD), an urban school district, and 45% (404 of 898) were mailed to graduates of the Seneca Valley School District (SVSD), a suburban school district.

After the initial mailing and one reminder, 115 surveys were completed and returned. This represents an overall return rate of 12.8% (115 of 898). A larger number of surveys, 196 of the 898 (21.8%), were returned, unopened, by the post office as undeliverable. Taking into consideration the number of surveys that never reached their intended recipients, the return rate of those that did reach the students' homes was 16.4% (115 of 702). Among the survey respondents, 34.8% (40 of 115) were male and 65.2% (75 of 115) were female. Also, 76.5% (88 of 115) of the respondents were college-bound, and 23.5% (27) were non-college-bound.

Data Processing, Analysis, and Interpretation

The first response from participants is as described above, on a survey mailed to their homes, or, more likely, to their parents' homes, since this would have been the students' last known addresses when they graduated from high school. Aside from biographical information, the surveys contain Likert items as well as yes/no questions. Numerical data, as returned on the Likert survey items, has been examined and the different levels of responses garnered.

More specifically, for each of the five high school reform programs on the survey, each graduate answered whether or not it was available in their senior year. This allowed, then, a straightforward calculation of the frequency with which graduates accessed the programs that were available and the number of graduates who said these

programs were not available. Next, those who answered that they were exposed to a particular program were asked to rate its usefulness in their lives in the succeeding years.

The results of the survey were maintained in an Excel spreadsheet, which was then downloaded into SPSS, the statistical analysis package. From there, independent sample t-tests revealed whether or not there are significant differences between any two groups that are identified. For example, did significantly more men than women find a particular reform program to have been useful to them in the years following high school graduation? Due to the fact that responses from a Likert scale are not truly interval, but are, rather, ordinal in nature, the Mann-Whitney U test was also run on all of the data to see if it produced results that agreed with the independent-samples t.

Answers given by each set of respondents tell something about the population being studied. Significant differences are or are not found in each area. Either way, there is something important to be learned. For example, subjects were asked about senior research projects. If there are no significant differences between the responses given by college-bound graduates and work-bound graduates, then it may be concluded that this improvement to the senior year is universally perceived to be a positive one if the responses were positive, and vice-versa. If, however, some college students have a generally favorable view of senior research projects and others do not, then there is something different to be discovered. Exactly what that might be would be revealed in the follow-up interviews.

Ultimately, all of these responses contribute to the goal of finding a way to make the high school senior year more meaningful. Recent graduates provide perspectives as to which innovations really were valuable and which were merely “more of the same” in

their high school experiences. Their responses, then, help to answer the research question of what recent high school graduates, three to five years removed from their own senior years, see as the successes and failures of their own senior year.

Methodological Assumptions

The researcher makes several methodological assumptions. Several of these are related to the quantitative portion of the data analysis. The observations obtained through the initial survey are independent samples. The groupings of the respondents will be such that no one set of responses will depend upon any other set.

Each group is assumed to be approximately normal, but, due to variations in group size, homogeneity of variance between the samples cannot be assumed. The size of my sample allows me to make the assumption about normality. Encompassing, as it does, three graduating classes from each of three different school districts, the initial survey was sent out to 898 recipients. Having achieved more than a ten percent return rate, with 115 responses being recorded altogether, there are more than a hundred participants. This is enough to allow an assumption of normality. Because homogeneity of variance cannot be assumed, however, Levene's test was conducted to test this condition for each t-test.

Study Limitations

The study is limited to high school graduates in the vicinity of Pittsburgh, Pennsylvania. Responses from students statewide, or even nationwide, may yield

different results. It would be interesting and useful to see replications of this study with different populations.

An additional limitation is that the initial surveys as well as follow-up invitations to participate were mailed to the last known address of these graduates. Participation is therefore limited to those graduates who are either still living in their parents' home, or who still have close contact with their parents, also assuming that the parents live at the same address that they lived in when the student graduated from high school. Although, in the three-to-five years after high school we may believe that this would be the normal state of affairs, it still precludes those whose parents may have moved, or who do not keep in touch with them. As evidence of the transient nature of many families, 196 surveys were returned by the post office as undeliverable to the addresses that were provided by the school districts involved. This is actually a higher number than the number of surveys that were filled out and returned (115).

Summary

A mixture of qualitative and quantitative analyses is being used to answer the research questions. What do high school graduates, three to five years removed from their senior year, see as the successes and failures of their high school senior year? A researcher-designed survey was used to gather initial data regarding the usefulness of select senior year reform programs, particularly those recommended by the National Commission on the High School Senior Year (NCHSSY) and the Senior Student High School Rating Scale (SHRS). These other surveys have already been used with sitting high school seniors to gauge the usefulness of programs, rate high schools on their

attention to the senior year, and to make recommendations for senior year improvements. Since this study is concerned with many of these same issues, they were logical starting points.

A selection of respondents who agreed to do so was interviewed using a researcher-designed semi-structured interview instrument. Results of these interviews are also used to help answer the research question. Of interest is also the question of gender differences in the perceived usefulness of different senior year programs.

CHAPTER IV

RESULTS

The purpose of this study was to determine if high school graduates, three to five years removed from their high school senior year, found their senior year programs to have been useful to them after high school graduation. Among the many programs and innovations that school districts implement to improve the high school senior year, each should have the eventual result of improving the lives of the students, not just for that year, but also into their futures. The results of this study may be useful to school administrators when trying to decide which of these senior year programs to implement, keep, or cut.

In addressing these concerns, the following research questions are being asked. To what extent do recent high school graduates of Western Pennsylvania public school districts, up to five years removed from their senior years, feel that programs offered in their final year of high school to make their senior year useful and meaningful had the desired effect? Will there be significant differences in the perceptions of the senior year as experienced by college bound students versus non-college-bound? Will there be significant gender differences in the perceptions of these senior year programs?

Demographics and Rates of Return

In the summer of 2008, the Senior Year Program Survey (SYPS) was mailed to the last known home address of 898 high school graduates from three different school districts in Western Pennsylvania. Of this number, 18.5% (166 of 898) were mailed to

graduates of the Avella Area School District (AASD), a rural school district, 36.5% (328 of 898) were mailed to graduates of the Washington School District (WSD), an urban school district, and 45% (404 of 898) were mailed to graduates of the Seneca Valley School District (SVSD), a suburban school district.

The purpose was to contact high school graduates who had been out of school or three, four, or five years. Because their addresses were obtained from their high schools, there was no guarantee that these students, or their parents, still lived at those addresses. As can be seen by the following results, more surveys were returned as undeliverable than were actually completed and returned, thus confirming that many of these students and their families had moved in the years immediately following their high school graduation.

After the initial mailing and one reminder over a period of six weeks, 115 surveys were completed and returned. This represents a 12.8% return rate (115 of 898). A larger number of surveys, 196 of the 898 (21.8%), were returned, unopened, by the post office as undeliverable. Taking into consideration the number of surveys that never reached their intended recipients, the return rate of those that presumably did reach the students' homes was 16.4% (115 of 702).

Respondents from each type of school district, as a percentage of the number that were initially mailed, show a sizable difference in response rate. From AASD, a rural district, 19.3% (32 of 166) were returned, completed. This, however, uses the total number of surveys that were mailed. Of the 166 surveys that were mailed to AASD graduates, 35 were returned as undeliverable, so only 131 made it to their intended

recipients. Therefore, of those who received the surveys, 24.4% (32 of 131) completed and returned them.

From the urban district of WSD, 9.2% (30 of 328) of the surveys were completed. Again, though, 84 surveys were returned, undeliverable, by the post office. Therefore, only 244 surveys were delivered to their intended recipients. This means that 12.3% (30 of 244) of delivered surveys were completed and mailed back.

Finally, in SVSD, the suburban district, 13.1% (53 of 404) were filled out and returned. 77 of the mailed surveys were returned by the post office, never having been delivered, so only 327 were delivered to the graduates in question. Therefore, of those that were delivered, 16.2% (53 of 327) were completed and returned.

Table 3

Return Rates of Surveys by School District

District	Surveys Mailed	Surveys Delivered	Returned Unopened	Percent Delivered	Returned Completed	% Compl. Mailed	% Compl. Delivered
AASD	166	131	35	78.9	32	19.3	24.4
SVSD	404	327	77	80.9	53	13.1	16.2
WSD	328	244	84	74.4	30	9.2	12.3
Totals	898	702	196	78.2	115	12.8	16.4

Surveys were mailed in the summer of 2008, so to reach students who had been out of high school for three, four, or five years, students who had graduated in 2003, 2004, and 2005 were contacted. Respondents were spread evenly across the three graduation years. Of the completed surveys, 33.9% (39 of 115) were returned from the class of 2003, 31.3% (36 of 115) were returned from the class of 2004, and 34.8% (40 of 115) were returned from the class of 2005. Of the 115 completed surveys, 27.8% (32 of 115) were returned from AASD, 26.1% (30 of 115) were returned from WSD, and 46.1%

(53 of 115) were returned from SVSD. Among the survey respondents, 34.8% (40 of 115) were male and 65.2% (75 of 115) were female. Also, 76.5% (88 of 115) of the respondents were college-bound, and 23.5% (27) were non-college-bound.

The “college-bound” and “non-college-bound” designations were assigned as the surveys were returned. One of the initial questions in the survey asks what the respondent’s primary occupation has been since high school graduation. Those who responded that they had been attending school were classified as college-bound, while those who listed some job or occupation were classified as non-college-bound. What the students’ intentions were during their high school years is a moot point for the purposes of this study, since the intention is to find out how their senior year programs served them during the years following high school. What they actually did after high school may have been a different path from what they intended to do, but our interest is in what they actually did, not in what they intended to do.

Table 4

Return Rates by District, Graduation Year, Post-Graduation Occupations and Gender

Category	Number	Percent
AASD	32	27.8
SVSD	53	46.1
WSD	30	26.1
2003	39	33.9
2004	36	31.3
2005	40	34.8
College-Bound	88	76.5
Non-College-Bound	27	23.5
Male	40	34.8
Female	75	65.2

Questions Regarding Availability of Programs

Respondents were asked to consider five different senior year programs that may or may not have been offered in their school district during their senior year. If the program was offered, the graduates were asked if they availed themselves of it. If they did, then they were asked to give their opinions about it in three areas, each related to the usefulness of that program, or to an administrator's understanding of what that program was meant to accomplish. For example, if graduates had completed some community service during their senior year, participants were asked if it made a lasting change in the way that they think about the world, other people, and their community. It was these three questions about a program in which the student had participated that are the Likert-scale items, the results of which will be judged using the value ranges listed in Table 2 above.

The completion of a senior research project was the first senior year program about which participants were asked. So that they would understand exactly what was meant by this term, a short description was given:

A senior research project is an undertaking in which students perform scholarly research on a topic of their choice. Often, part of the project involves making a presentation to faculty and/or student committees. Was a senior research project required as part of your senior year experience?

Because a culminating project of some kind is required for high school graduation in the state of Pennsylvania, graduates, rather than being asked if a senior research project was available to them, were asked if they completed one. There are exceptions to the

requirement, which is why it is important to ask this question about completion, rather than about availability. 99.1% of respondents (114 of 115) reported that they were required to complete a senior research project, and the same number reported that they did, in fact, complete one.

Participants were asked if completion of an internship or externship was required of them during their senior year. Again, a short description of what this means was included in the question:

An internship or externship allows students to work with a partner from the world of business to gain experience in a particular field or type of workplace. These endeavors usually involve the production of some artifact (for example, a business report or PowerPoint presentation), and may also include an exhibition to the high school faculty of what was learned. Was an internship or externship required as part of your senior year experience?

The question of a requirement was used instead of a question about availability. This is because internships are always available from a variety of sources outside of the school district, so interested students can complete one, even if it is not required. A very small number of respondents, 9 of 115 (7.8%) claimed that an internship was required as part of their high school senior year. Despite it not having been required, 12.2% of respondents (14 of 115) completed an internship during their senior year, and were thus eligible to respond to the three Likert-type items concerning the results of their internships.

The third program about which respondents were quizzed was the availability of courses in their senior year that were aligned with courses at a local college or university.

In order to provide seniors with a more successful transition to college, some high schools work with a local

college or university to *align* senior year high school courses with freshman year college courses. *These are not AP or College-in-High-School courses and they do not award college credit.* These are regular high school courses. They serve, though, as an introduction and background to a course that one might take the very next year in college. Non-college-bound students also take these courses as part of the regular high school curriculum. Were courses available to you in your senior year that were closely aligned with college courses? If you don't know whether or not such courses were available to you, then please check No.

Offering this type of course is one of the Triple-A recommendations of the NCHSSY.

29.6% of respondents (34 of 115) reported that such courses were available to them. Of the number who had college-aligned courses available, 73.5% (25 of 34) completed them. So, 21.7% of overall respondents (25 of 115) completed college-aligned courses in their senior year.

Graduates were asked if they completed any Advanced Placement (AP) or College-in-High-School (CHS) courses.

Some high schools offer special courses that are equivalent to college courses. They are more *rigorous and challenging* than the normal high school curriculum. They usually have a special name, like Advanced Placement (AP), or College-in-High-School courses. The high school offers these courses so that students get used to working hard and can see the benefit of applying themselves. Also, for those who are going on to college, these courses offer a small taste of what college work will be like. Were any of

these course options available to you in your high school senior year?

What differentiates these from college-aligned courses is that these rigorous courses can lead to the student being awarded credit at a number of higher-education institutions upon their completion. 93.9% of respondents (108 of 115) reported that these courses were available to them in their senior year. Of the number who had them available, 52.8% (57 of 108) completed the courses. The percentage of overall respondents, then, who completed AP or CHS courses was 49.6 (57 of 115).

The last program about which respondents were asked was the requirement to complete community service during the senior year.

Some high schools include a certain amount of community service as a graduation requirement. It is not only the job of schools to educate children in academic subjects, but also to educate children to be good citizens and productive members of society. Many people believe that completing community service helps to instill values that we need in our citizens. Was a community service project required during your senior year of high school?

Like the internship question above, graduates were asked if this was a requirement, not just if it was available. Because community service is always available from various community groups for those who want to complete it, it would have been redundant to ask if it was available. It was more illustrative to ask if it was required. 9.6% of respondents (11 of 115) reported that the completion of community service was required of them during their senior year. Despite the lack of a requirement, 52.2% of respondents (60 of 115) completed community service and were thus eligible to answer the Likert-type items concerning community service.

Table 5**Availability of Senior Year Programs and Completion Rates**

Program	Number <u>Available/Required</u>	Percent	Number <u>Completed</u>	% Completed <u>vs. Available</u>	% Complete <u>vs. All Response</u>
Sr. Research Project Req.	114	99.1	114	*	99.1
Intern/Externship Req.	9	7.8	16	*	13.9
College-Aligned Available	34	29.6	25	73.5	21.7
AP/CHS Courses Available	108	93.9	57	52.8	49.6
Community Service Req.	11	9.6	60	*	52.2

* Percentage not reported because these programs are available to all students.

Statements Regarding the Usefulness of Programs

Participants who filled out a survey were asked whether or not they had participated in each senior year program that was of interest in the study. They were then asked to rate specific statements concerning the usefulness of those programs in their lives since graduation. The statements were different for each of the programs because each program is meant to have a different purpose in the student's life and in future studies or employment.

Despite these different programs, and different statements tailored to each, the null hypothesis for each means comparison remains the same. There are two null hypotheses for each statement:

1. The average response given by the college-bound (CB) group will be equal to the average response given by the non-college-bound (NCB) group.
2. The average response given by the male group will be equal to the average response given by the female group.

An independent-samples t-test is performed for each set of groups, CB vs. NCB and male vs. female. The results are measured at the .05 level, two-tailed. Due to the ordinal nature of Likert-type data, the Mann-Whitney U was also used to make these comparisons. It showed agreement with the t-test in all but two incidents, which will be discussed as each of these areas of disagreement occurs. Levene's test is also used on each data set because homogeneity of variance cannot be assumed. There was one set of data that did not have homogeneity of variance and this, too, is pointed out at the appropriate place in the data analysis along with the steps that were taken to account for this circumstance.

Senior Research Projects

The first program about which graduates were queried was the senior research project. As stated above, this program, in the guise of a "culminating project," is actually required of all students for graduation by the state of Pennsylvania. Therefore, it would have been a moot point to ask if it was available. But because there are a few exceptions under the law, students were merely asked if they, personally, were required to complete such a project. As related in Table 5 above, 99.1% (114 of 115) participants responded that they were required to complete one.

For those who did complete a senior research project, three follow-up statements were given. They follow, with the average of the participants' responses to the Likert-type items. The scale that is used is the one that is described above and consists of a response of 1 to 5, with 1 meaning "does not describe me at all," and 5 meaning "describes me perfectly."

The first statement regarding senior research projects indicates one of the intended outcomes of students completing such a project. The statement was “Completion of my senior research project expanded my knowledge of the topic that I researched.” The average of responses to this statement was 3.65, which, according to the chart given in Table 2 on page 48 above, shows high agreement with the statement. Among college-bound (CB) graduates, the average response was 3.72, again showing high agreement. Among non-college-bound (NCB) students, the average was 3.41, which, on Table 2, falls into the neutral range. Male response to this statement averaged 3.50, while female response was 3.73, both of which are in the high agreement range.

Table 6

Completion of My Senior Research Project Expanded My Knowledge of the Topic That I Researched

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg
114	3.65	87	3.72	27	3.41	40	3.50	74	3.73

The CB group showed higher agreement with the statement concerning expanded knowledge ($M = 3.72$, $SD = 1.168$) than the NCB group did ($M = 3.41$, $SD = 1.217$). Levene’s test showed a significance of .461, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference, however, was not significant, $t(112) = 1.219$, $p = .226$, two tailed. Therefore, we fail to reject the null hypothesis. The difference in the mean responses cannot be attributed to the students’ post-graduation plans.

What can be said about the mean of male vs. female responses? The male group showed lower agreement with the statement concerning expanded knowledge ($M = 3.50$,

SD = 1.132) than the female group did (M = 3.73, SD = 1.220). Levene's test showed a significance of .780, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference was not significant, $t(112) = -.984$, $p = .327$, two tailed. Therefore, we fail to reject the null hypothesis. The difference in the mean responses cannot be attributed to the students' genders.

The second statement about senior research projects concerned the idea that such a project would cause a student to want to learn more about his/her topic. Using the same Likert scale, participants were asked to respond to the statement, "Completion of my senior research project made me want to learn more about the topic that I researched." The average of all responses to this statement was 3.10, which indicates neutral agreement. CB participants gave an average response of 3.29, while NCB graduates produced an average response of 2.63. Both of these results fall within the neutral range in Table 2. Male respondents answered, on average, 2.97, and female respondents averaged 3.16. Again, both of these fall within the neutral range.

Table 7

Completion of My Senior Research Project Made Me Want to Learn More About the Topic That I Researched

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
114	3.10	87	3.29	27	2.63	40	2.95	74	3.23

The mean of the CB group (M = 3.29, SD = 1.257) is higher than that of the NCB group (M = 2.63, SD = 1.245). Levene's test showed a significance of .887, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference was significant, $t(112) = 2.381$, $p = .019$, two-tailed. The null hypothesis is

rejected. The difference in means can be attributed to the difference between being a college student after high school and not being a college student. For college-bound high school seniors in this study, completion of a senior research project did make them want to learn more about the topic that they researched to a more significant extent than was true among the non-college-bound respondents.

The male group had a lower average response ($M = 2.95$, $SD = 1.260$) than did the female group ($M = 3.23$, $SD = 1.299$). Levene's test showed a significance of .383, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(112) = -1.109$, $p = .270$, two-tailed. We fail to reject the null hypothesis and cannot attribute this difference in means to a difference in genders.

The third and final statement concerning senior research projects indicated that respondents may have learned a skill that has been useful to them in the ensuing years. The statement was, "Completion of my senior research project caused me to learn research techniques that I have used frequently since then." Overall response to this statement averaged 2.84, which is in the neutral range. CB and NCB responses averaged 3.03 and 2.44, respectively. While 3.03 is in the neutral range, 2.44 falls into the category of low agreement. Finally, male agreement with this statement was neutral, at an average of 3.05, and female agreement was also in the neutral range at 2.82.

Table 8

Completion of My Senior Research Project Caused Me to Learn Research Techniques That I Have Used Frequently Since Then

n	avg. resp.	CB	CB	NCB	NCB	male	male	female	female
		n	avg.	n	avg.	n	avg.	n	avg.
114	2.84	87	3.03	27	2.44	40	3.05	74	2.82

The CB group had a higher mean ($M = 3.03$, $SD = 1.234$) than the NCB group ($M = 2.44$, $SD = 1.340$). Levene's test showed a significance of .405, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is significant $t(112) = 2.127$, $p = .036$, two-tailed. The null hypothesis is rejected, and we can attribute the difference in means to the college-attendance attributes of the groups. The college-bound graduates learned research techniques that they have used to a more significant extent than the non-college-bound group.

The average of the male responses ($M = 3.05$, $SD = 1.339$) is higher than the average response of the female participants ($M = 2.82$, $SD = 1.275$). Levene's test shows a significance of .766, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(112) = .886$, $p = .377$, two-tailed. We fail to reject the null hypothesis. The difference in these means cannot be attributed to gender differences.

Internships and Externships

The next question in the survey concerned those who completed an internship or externship, which, for the sake of expediency, will be referred to as internships for the remainder of this report. As stated above, 13.9% of all respondents (16 of 115) completed an internship. Those who did were then asked to respond to three statements about their experiences and the usefulness of those internships in their lives after graduation. The first statement related to this topic made reference to the fact that these internships often take place with a potential employer. The statement was "Completion

of my internship/externship was instrumental in helping me to learn about the world of work.” Among the 14 graduates who completed an internship, the average response to this statement was 3.86, which, according to Table 2, is in the high agreement range. Among the twelve college-bound (CB) graduates who completed an internship, the average response was 4.17 which is in the high agreement range, while among the four non-college-bound (NCB) respondents, the average response was 2.50, which is in the neutral range. Male respondents, numbering eight, gave an average response of 3.62, which is also in the high agreement range, while the eight female respondents also showed high agreement with an average response of 3.88.

Table 9

Completion of My Internship/Externship was Instrumental in Helping Me to Learn About the World of Work

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
16	3.86	12	4.17	4	2.50	8	3.62	8	3.88

The CB average response ($M = 4.17$, $SD = 1.193$) is higher than the NCB average response ($M = 2.50$, $SD = 1.732$). Levene’s test showed a significance of .122, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is significant, $t(14) = 2.175$, $p = .047$, two-tailed. The null hypothesis is rejected and we can attribute the difference between means to the difference in college attendance after high school graduation. College-bound graduates felt, to a more significant extent than non-college-bound graduates, that completion of their internship was instrumental in helping them to learn about the world of work.

The male average response ($M = 3.62$, $SD = 1.506$) is lower than the female average response ($M = 3.88$, $SD = 1.553$). Levene's test showed a significance of .941, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(14) = -.327$, $p = .749$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The next statement about internship completion was, "Completion of my internship/externship helped me to decide what I wanted to do for a living when I finished my education." Overall response to this statement averaged 3.07, in the neutral agreement range. Among CB respondents, the average response was 3.33, also neutral, but 1.79 among NCB graduates, which is in the low agreement range. Responses from male graduates averaged 2.88, while female graduates gave responses averaging 3.00. Both of these are in the range of neutral agreement with the statement.

Table 10

Completion of My Internship/Externship Helped Me to Decide What I Wanted to Do for a Living When I Finished My Education

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
16	3.07	12	3.33	4	1.79	8	2.88	8	3.00

The CB average response ($M = 3.33$, $SD = 1.155$) is higher than the NCB average response ($M = 1.79$, $SD = 1.500$). Levene's test showed a significance of .569, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is significant, $t(14) = 2.217$, $p = .044$, two-tailed. Based upon the t-test, the null hypothesis is rejected and we can attribute the difference between means to the

difference in college attendance after high school graduation. This means that college-bound respondents felt, to a more significant degree than non-college-bound respondents, that their internship helped them to decide what they would do for a living when they finished their education.

In this case, though, the Mann-Whitney U disagreed with the t-statistic result. According to the Mann-Whitney, $p = .080$, which is not a significant result. In that case, we fail to reject the null hypothesis, and the difference in means cannot be attributed to the college-attendance status of the respondents.

The male average ($M = 2.88$, $SD = 1.246$) is lower than the female average response ($M = 3.00$, $SD = 1.604$). Levene's test showed a significance of $.457$, which, being greater than $.05$, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(14) = -.174$, $p = .864$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The third and final statement about internships expressed a desired outcome, that students would be able to transfer knowledge from their internship to their life of school or work. The statement was, "Completion of my internship/externship improved my perception of my teachers at school and/or my employer." The overall response to this statement averaged 3.07 , which is in the neutral range of responses. CB and NCB responses averaged 3.42 and 1.75 respectively. The first of these is in the neutral range, while the second is in the range of low agreement. Male respondents averaged 3.38 to this statement, while females responded 2.62 on average. Both of these are in the neutral agreement range.

Table 11**Completion of My Internship/Externship Improved My Perception of My Teachers at School and/or My Employer**

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
16	3.07	12	3.42	4	1.75	8	3.38	8	2.62

The CB average response ($M = 3.42$, $SD = 1.621$) is higher than the NCB average response ($M = 1.75$, $SD = 1.500$). Levene's test showed a significance of .635, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(14) = 1.809$, $p = .092$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 3.38$, $SD = 1.598$) is higher than the female average response ($M = 2.62$, $SD = 1.847$). Levene's test showed a significance of .363, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(14) = .869$, $p = .400$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

College-Aligned Courses

The next question on the survey concerned respondents' participation in courses at the high school level that were aligned with courses at a local college or university. The first statement for the 25 participants who completed such courses referred to the fact that completion of such a course is supposed to lead to a smooth transition to college.

The statement read, “My college-aligned courses helped me to succeed *in* my first year after my high school graduation.” The average response to this statement was 3.56, which is in the high agreement range. There were 21 CB respondents and their average response was 3.57, also indicating high agreement. The 4 NCB responses averaged 3.50, which, according to Table 2, is the lowest score in the high agreement range. The 13 male respondents to this statement gave an average response of 3.46, which falls into the neutral response range, while the 12 female participants produced an average 3.67 response, which is in the range of high agreement.

Table 12

My College-Aligned Courses Helped Me to Succeed *in* My First Year After My High School Graduation

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
25	3.56	21	3.57	4	3.50	13	3.46	12	3.67

The CB average response ($M = 3.57$, $SD = 1.207$) is higher than the NCB average response ($M = 3.50$, $SD = 1.291$). Levene’s test showed a significance of .927, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(23) = .107$, $p = .915$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 3.46$, $SD = 1.127$) is lower than the female average response ($M = 3.67$, $SD = 1.303$). Levene’s test showed a significance of .537, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not statistically significant, $t(23) = -0.422$, $p = .677$, two-tailed.

The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The second statement about college-aligned courses indicated that the advantage that was hoped to have been gained in the first year would carry over into subsequent years of college. The statement was, "My college-aligned courses helped me to succeed *beyond* my first year after my high school graduation." The average overall response to this statement was 2.96, in the neutral range of responses. Among CB respondents, the average was 2.81, also neutral, while the NCB responses averaged 3.75, which is in the high agreement range. Male respondents gave an average result of 3.00, while female participants averaged 2.92, both of which land in the neutral agreement category.

Table 13

My College-Aligned Courses Helped Me to Succeed *Beyond* My First Year After My High School Graduation."

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
25	2.96	21	2.81	4	3.75	13	3.00	12	2.92

The CB average response ($M = 2.81$, $SD = 1.470$) is lower than the NCB average response ($M = 3.75$, $SD = 0.957$). Levene's test showed a significance of .168, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(23) = -1.219$, $p = .235$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 3.00$, $SD = 1.354$) is higher than the female average response ($M = 2.92$, $SD = 1.564$). Levene's test showed a significance of .530,

which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(23) = 0.143$, $p = .888$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The last statement in this category indicated the hope that experiencing this pre-college course would give students an understanding of what college coursework would be like, and thus aid them in making decisions concerning continued schooling. The statement said, “My college-aligned courses helped me to choose whether or not I would continue my education after high school.” Over all participants, response to this statement was, on average, 2.40, which is in the low agreement range. CB graduates averaged 2.38, which also indicates low agreement. NCB graduates gave an average response of 2.50, which is the lowest score in the neutral agreement range. Male participants gave an average response of 2.54, in the neutral range, while female graduates responded with an average of 2.25, which indicates low agreement.

Table 14

My College-Aligned Courses Helped Me to Choose Whether or Not I Would Continue My Education After High School.”

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
25	2.40	21	2.38	4	2.50	13	2.54	12	2.25

The CB average response ($M = 2.38$, $SD = 1.499$) is lower than the NCB average response ($M = 2.50$, $SD = 1.732$). Levene’s test showed a significance of .567, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(23) = -0.142$, $p = .888$, two-tailed. The null hypothesis is

not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 2.54$, $SD = 1.664$) is higher than the female average response ($M = 2.25$, $SD = 1.357$). Levene's test showed a significance of .143, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(23) = .473$, $p = .641$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

Rigorous Courses

The fourth survey question asked if participants had completed rigorous offerings like Advance Placement (AP) or College in High School (CHS) courses during their senior year. As with the other questions, three statements followed for those who did complete such courses. The first of these expressed the idea that the rigor of these courses would lead to deeper understanding. The statement read, "My AP/College courses helped me to learn a subject more deeply than I would have learned it in my regular courses." Among those 57 respondents who completed such courses, the average answer given was 4.07, showing high agreement with the statement.

Among CB graduates who completed this type of course, of which there were 49, the average response given was 4.16, and among the 8 NCB, the average response was 3.75, both of which show high agreement with the statement. Male respondents, numbering 15, gave an average response of 4.40, while the 42 female respondents gave an average answer of 4.00, again, both showing a high level of agreement.

Table 15**My AP/College Courses Helped Me to Learn a Subject More Deeply Than I Would Have Learned it in My Regular Courses**

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
57	4.07	49	4.16	8	3.75	15	4.40	42	4.00

The CB average response ($M = 4.16$, $SD = 1.028$) is higher than the NCB average response ($M = 3.75$, $SD = 0.886$). Levene's test showed a significance of .882, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(55) = 1.072$, $p = .288$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 4.40$, $SD = 0.910$) is higher than the female average response ($M = 4.00$, $SD = 1.036$). Levene's test showed a significance of .832, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(55) = 1.323$, $p = .191$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The second statement to which participants were asked to respond stated, "Working hard in my AP/College courses inspired me to work hard in all of my other courses." Responses to this question from everyone who completed such courses averaged 3.05, which shows neutral agreement. College-bound (CB) respondents averaged 3.12 and non-college-bound (NCB) graduates averaged 2.62, both of which are

neutral responses. Among males, the average response was 3.07 and among females it was 3.05, both of which, like all the others for this question, fall into the neutral range.

Table 16

Working Hard in My AP/College Courses Inspired Me to Work Hard in All of My Other Courses

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg
57	3.05	49	3.12	8	2.62	15	3.07	42	3.05

The CB average response ($M = 3.12$, $SD = 1.333$) is higher than the NCB average response ($M = 2.62$, $SD = 1.811$). Levene's test showed a significance of .458, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(55) = 0.992$, $p = .326$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 3.07$, $SD = 1.387$) is higher than the female average response ($M = 3.05$, $SD = 1.306$). Levene's test showed a significance of .869, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(55) = 1.323$, $p = .962$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The third and final statement regarding these rigorous courses concerned the possibility that the student learned something, other than the course material, that was of use in later years. Specifically, it stated, "Completion of my AP/College courses helped me to learn studying techniques that I have used frequently since then." Overall

responses to this statement averaged 3.40, which shows neutral agreement. CB graduates responded with an average of 3.57, which shows high agreement, while NCB graduates gave an average response of 2.38, falling into the low agreement range. Male and female respondents both averaged 3.40, which shows neutral agreement.

Table 17

Completion of My AP/College Courses Helped Me to Learn Studying Techniques That I Have Used Frequently Since Then

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
57	3.40	49	3.57	8	2.38	15	3.40	42	3.40

The CB average response ($M = 3.57$, $SD = 1.323$) is higher than the NCB average response ($M = 2.38$, $SD = 1.061$). Levene's test showed a significance of .410, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is significant, $t(55) = 2.428$, $p = .019$, two-tailed. The null hypothesis is rejected and we can attribute the difference between means to the difference in college attendance after high school graduation. College-bound graduates felt, to a more significant degree than non-college-bound graduates, that their AP courses helped them to learn study techniques that they have used frequently.

The male average response ($M = 3.40$, $SD = 1.549$) is equal to the female average response ($M = 3.40$, $SD = 1.289$). Levene's test showed a significance of .289, which, being greater than .05, indicates that homogeneity of variance can be assumed. Although the fact that the mean difference is zero would seem to indicate that the independent samples t-test is superfluous, it has been completed regardless. It concurs that there is no significant difference between these means, $t(55) = -0.012$, $p = .991$, two-

tailed. The null hypothesis is not rejected, as the difference in means, such as it is, cannot be attributed to the differences in gender.

Community Service

The fifth survey question, having to do with a specific senior year program, asked graduates if they had participated in community service during their senior year. As stated above, very few (11 of 115) were required to do so, but more than that number did so without it being required of them (60 of 115). The first statement to which those 60 responded was one that gets to the heart of why a school might require young people to complete community service. It said, “My community service project made a lasting change in the way I think about the world, other people, and my community.”

The overall average response to this statement was 3.58, which falls into the high agreement range. Among the 49 CB respondents to this statement, the average response was 3.61, also high. NCB responses averaged 3.14, which is a neutral response. Male respondents rated this statement at 3.62 on average, which shows high agreement, while female responses averaged 3.44, falling into the neutral range.

Table 18

My Community Service Project Made a Lasting Change in the Way I Think About the World, Other People, and My Community

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
63	3.58	49	3.61	14	3.14	24	3.62	39	3.44

The CB average response ($M = 3.61$, $SD = 1.239$) is higher than the NCB average response ($M = 3.14$, $SD = 1.351$). Levene’s test showed a significance of .579, which,

being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(61) = 1.226$, $p = .225$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 3.62$, $SD = 1.245$) is higher than the female average response ($M = 3.44$, $SD = 1.294$). Levene's test showed a significance of .658, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(61) = 0.572$, $p = .570$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The second statement concerns another good outcome of completing community service. We would hope that students who complete community service when they are young will be inspired to continue to do so throughout their lives. Thus the next statement said, quite simply, "Completion of my community service project made me want to continue performing community service."

Overall response was 3.67, which shows high agreement. CB responses averaged 3.67, which also falls into the high agreement range, while NCB responses averaged only 3.29, which is a neutral response. Male and female responses averaged 3.54 and 3.62, respectively, indicating neutral agreement from male respondents and high agreement from the females.

Table 19**Completion of My Community Service Project Made Me Want to Continue Performing Community Service**

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
63	3.67	49	3.67	14	3.29	24	3.54	39	3.62

The CB average response ($M = 3.67$, $SD = 1.281$) is higher than the NCB average response ($M = 3.29$, $SD = 1.267$). Levene's test showed a significance of .808, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(61) = 1.001$, $p = .321$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response to the statement ($M = 3.54$, $SD = 1.285$) is lower than the female average response ($M = 3.62$, $SD = 1.290$). Levene's test showed a significance of .820, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(61) = -0.221$, $p = .826$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The third statement about the completion of community service is, again, one of the desired outcomes of such service. The statements read, "Performing community service taught me the value of being a good citizen." The average of the overall responses to this statement was 4.07, showing high agreement. Among CB graduates, the average response was 4.06, also high agreement. NCB graduates gave an average

response of 3.43, which falls into the neutral range. Male responses averaged 4.25 and female responses averaged 3.72, both indicating a high level of agreement.

Table 20

Performing Community Service Taught Me the Value of Being a Good Citizen

n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg
63	4.07	49	4.06	14	3.43	24	4.25	39	3.72

The CB average response ($M = 4.06$, $SD = 0.996$) is higher than the NCB average response ($M = 3.43$, $SD = 1.399$). Levene's test showed a significance of .040, which, being less than .05, indicates that homogeneity of variance cannot be assumed. Because of this rejection of the null hypothesis dealing with the homogeneity of variance, an alternate t-statistic from SPSS is being reported for this instance. This t-statistic does not assume equal variances. The mean difference is not significant, $t(16.704) = 1.588$, $p = .131$, two-tailed. The null hypothesis dealing with the mean differences is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 4.25$, $SD = 0.989$) is higher than the female average response ($M = 3.72$, $SD = 1.123$). Levene's test showed a significance of .331, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(61) = 1.909$, $p = .061$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

In this case, though, the Mann-Whitney U test produced a contradictory result. According to the Mann-Whitney, the p -value is .047, which, being less than .05, indicates that the difference in means is significant. Therefore, we reject the null hypothesis and attribute the difference to the gender of the participants. Male graduates, to a more significant degree than female graduates, feel that their community service taught them the value of being a good citizen.

Statements Regarding Overall Satisfaction with High School

After answering the five survey questions about particular programs that may have been offered during their high school senior year, participants were asked to give responses to three statements about their overall high school experience. The responses to these statements were to be given using the same Likert scale as above, where 1 indicated “does not describe me at all,” and 5 meant “describes me perfectly.” As with the statements above, these statements were designed to say what it is that we hope students take away from high school in general, and from the senior year in particular.

The first statement read, “My high school senior year gave me opportunities to develop into a socially responsible adult.” Overall response to this statement from the 115 survey participants averaged 3.36, which indicates neutral agreement. CB and NCB graduates both gave neutral responses with averages of 3.49 and 3.07 respectively. Similarly, male and female respondents both showed neutral agreement with average scores of 3.38 and 3.37 respectively.

The CB average response ($M = 3.49$, $SD = 1.155$) is higher than the NCB average response ($M = 3.07$, $SD = 1.357$). Levene's test showed a significance of .470, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(113) = 1.565$, $p = .120$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 3.38$, $SD = 1.334$) is higher than the female average response ($M = 3.37$, $SD = 1.171$). Levene's test showed a significance of .217, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(113) = 0.007$, $p = .994$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

The second statement said, "My high school senior year provided me with skills that help me to cope with my life and responsibilities." Overall response to this statement was 3.05; a neutral response. CB and NCB responses were also neutral, at 3.17 and 2.63, respectively. Similarly, male and female responses were also neutral, with their averages being 3.15 and 3.03 respectively.

The CB average response ($M = 3.17$, $SD = 1.137$) is higher than the NCB average response ($M = 2.63$, $SD = 1.275$). Levene's test showed a significance of .279, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is significant, $t(113) = 2.101$, $p = .038$, two-tailed. The null hypothesis is rejected and we can attribute the difference between means to the difference in college attendance after high school graduation. College-bound respondents, to a more

significant extent than non-college-bound respondents, felt that their high school experience helped them to cope with life's responsibilities.

The male average response ($M = 3.15$, $SD = 1.231$) is higher than the female average response ($M = 3.03$, $SD = 1.162$). Levene's test showed a significance of .366, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(113) = 0.531$, $p = .596$, two-tailed. The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

"My high school senior year was an overall positive experience," was the final statement to which respondents were asked to respond. Overall agreement was high, with the average response being 3.83. CB responses averaged 3.98, which is also in the high agreement range. NCB responses indicated neutral agreement at 3.52. Male and female responses were both in high agreement, with 3.92 and 3.84 respectively.

The CB average response ($M = 3.98$, $SD = 0.996$) is higher than the NCB average response ($M = 3.52$, $SD = 1.399$). Levene's test showed a significance of .165, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(113) = 1.782$, $p = .077$, two-tailed. The null hypothesis is not rejected and we cannot attribute the difference between means to the difference in college attendance after high school graduation.

The male average response ($M = 3.92$, $SD = 1.141$) is higher than the female average response ($M = 3.84$, $SD = 1.220$). Levene's test showed a significance of .651, which, being greater than .05, indicates that homogeneity of variance can be assumed. The mean difference is not significant, $t(113) = 0.364$, $p = .717$, two-tailed.

The null hypothesis is not rejected, as the difference in means cannot be attributed to the differences in gender.

Table 21

Responses to General Statements Regarding High School Senior Year

Statement	n	avg. resp.	CB n	CB avg.	NCB n	NCB avg.	male n	male avg.	female n	female avg.
Responsible Adult	115	3.36	88	3.49	27	3.07	40	3.38	75	3.37
Skills to Cope	115	3.05	88	3.17	27	2.63	40	3.15	75	3.03
Overall Positive	115	3.83	88	3.98	27	3.52	40	3.92	75	3.84

Quantitative Results Summary

The results of each of the independent samples t-tests that were performed on the data are compiled below, in Table 22. For each of the questions posed above, the mean response is given for the college-bound groups and for the non-college-bound groups. The male average response is also listed, as is the female average response. With these means is listed the *p* value associated with the t-test that was used to compare those means. And, finally, for each pair of means is listed the simple yes-or-no answer to the question, is this difference significant? This completes the quantitative portion of the data analysis. The qualitative portion of the study continues below, following the summary table.

It should be noted that the reports of significance in the analysis above, and in the table below, were measured at the .05 level, two-tailed. Based upon the number of independent-samples t-tests that were conducted, it is possible that this level of significance is not definitive. Type I error, i.e. the rejection of the null hypothesis when it should not have been rejected, could have been introduced into the study by this comparatively low alpha level. None of the differences that are considered to be

significant in this study would have been considered to be significant at a more stringent alpha level, like .01 or .001.

Table 22

Summary of Statistical Analysis of Research Questions Based On Independent-Samples t-test.

Topic	CB	NCB		sig.	Male	Female		sig.
- Question	avg.	avg.	p	diff?	avg.	avg.	p	diff?
Sr. Research Project								
- Expanded Knowledge	3.72	3.41	.226	No	3.50	3.73	.327	No
- Want to Learn More	3.29	2.63	.019	Yes	2.95	3.23	.270	No
- Learn Techniques	3.03	2.44	.036	Yes	3.05	2.82	.886	No
Internship/Externship								
- Learn About Work	4.17	2.50	.047	Yes	3.62	3.88	.749	No
- Decide on Career	3.33	1.79	.044	Yes*	2.88	3.00	.864	No
- Improved Perceptions	3.42	1.75	.092	No	3.38	2.62	.400	No
College-Aligned Courses								
- Succeed In First Year	3.57	3.50	.915	No	3.46	3.67	.677	No
- Succeed Beyond First	2.81	3.75	.235	No	3.00	2.92	.888	No
- Continue Education	2.38	2.50	.888	No	2.54	2.25	.641	No
Rigorous Courses								
- Learn Subject Deeply	4.16	3.75	.288	No	4.40	4.00	.191	No
- Worked Hard	3.12	2.62	.326	No	3.07	3.05	.962	No
- Study Techniques	3.57	2.38	.019	Yes	3.40	3.40	.991	No
Community Service								
- Changed Thinking	3.61	3.14	.225	No	3.62	3.44	.570	No
- Want to Continue	3.67	3.29	.321	No	3.54	3.62	.826	No
- Value Citizenship	4.06	3.43	.131	No	4.25	3.72	.061	No ⁺
High School Satisfaction								
- Responsible Adult	3.49	3.07	.120	No	3.38	3.37	.994	No
- Skills to Cope	3.17	2.63	.038	Yes	3.15	3.03	.596	No
- Overall Positive	3.98	3.52	.077	No	3.92	3.84	.717	No

* Contradicted by Mann-Whitney U, $p = .080$

+ Contradicted by Mann-Whitney U, $p = .047$

Interview Results

As the qualitative portion of this study, four of the high school graduates who had completed the Senior Year Program Survey (SYPS) were interviewed. The surveys from those respondents who had indicated that they were willing to be interviewed were

divided into four categories: male college-bound, male non-college-bound, female college-bound, and female non-college-bound. One from each of these categories was chosen at random to be interviewed. If any of the chosen ones could not be reached, then another one was chosen.

The four interview participants were asked similarly-structured questions concerning a senior year program to which they had given noticeably high, or noticeably low, marks. They also had an opportunity at the end of the interview to make any comments that they would like to make. There were some striking similarities in the participants' answers, as well as some contradictory opinions among them. These will be pointed out in the paragraphs that follow, and explored in more depth in Chapter Five with the discussions of all of this study's results.

The answers from SYPS about which these four participants were asked were: low ratings for high school being an overall positive experience; high ratings for AP courses; high ratings for college-aligned courses; and high ratings for community service. Regardless of the program which the participants rated high or low, all were asked what it was that made their program useful, or, in the case of the participant who had an overall bad high school experience, what it was that made it bad. Table 23, below, shows the ratings of all of the interview participants as compared with the average response given by all graduates who answered the survey. It is interesting to note that none of the interviewees completed an internship and so would not be able to comment on that possible aspect of a senior year. Only one of them took college-aligned courses during his senior year, and rated them much differently from the overall average response.

Table 23

Overall Average Scores vs. Scores of Interviewees

Topic - Question	Overall avg.	CB Male	CB Female	NCB Male	NCB Female
Sr. Research Project					
- Expanded Knowledge	3.65	4.00	4.00	3.00	5.00
- Want to Learn More	3.10	3.00	3.00	3.00	3.00
- Learn Techniques	2.84	4.00	2.00	1.00	1.00
Internship/Externship					
- Learn About Work	3.86	N/A	N/A	N/A	N/A
- Decide on Career	3.07	N/A	N/A	N/A	N/A
- Improved Perceptions	3.07	N/A	N/A	N/A	N/A
College-Aligned Courses					
- Succeed In First Year	3.56	N/A	N/A	2.00	N/A
- Succeed Beyond First	2.96	N/A	N/A	4.00	N/A
- Continue Education	2.40	N/A	N/A	4.00	N/A
Rigorous Courses					
- Learn Subject Deeply	4.07	5.00	3.00	N/A	N/A
- Worked Hard	3.05	5.00	3.00	N/A	N/A
- Study Techniques	3.40	5.00	3.00	N/A	N/A
Community Service					
- Changed Thinking	3.58	5.00	4.00	5.00	4.00
- Want to Continue	3.67	5.00	4.00	4.00	5.00
- Value Citizenship	4.07	5.00	4.00	5.00	4.00
High School Satisfaction					
- Responsible Adult	3.36	3.00	3.00	3.00	4.00
- Skills to Cope	3.05	4.00	4.00	4.00	2.00
- Overall Positive	3.83	5.00	2.00	4.00	5.00

N/A Indicates that a respondent did not fill out this section

Those who had good experiences in their programs named things like independence and being forced to work hard as the things that made their programs useful. One typical response, for example, came from a male, college-bound graduate of a suburban school district. He said, “There was less of the teacher holding your hand and more of them putting the responsibility on you.” Although this participant was speaking specifically about his happiness with his AP courses, this theme, of being treated like an adult, was important to all of those who were happy with their senior year experiences.

A male, non-college-bound graduate of a rural school district expresses similar sentiments when speaking of the college-aligned courses that he took in his senior year. He shared that “high school classes tend to be a little bit, I don’t know how to say it, geared toward a younger group of people, a less mature group of people. And I’m talking about the classes that I took my senior year of high school. They gave me an understanding of what it’s like to have options.” Although this high school graduate was not on his way to college, and in fact now works as a fly-fishing guide, the structure of his rigorous high school courses means something to him still. It was his treatment as a mature adult, not necessarily the course content, that was important to him.

On the flip side of that same coin, the interviewee who had an overall bad experience in her high school senior year, named a lack of independence as something that made it bad. She said that her “[r]equired courses were junk courses. These courses wasted time that could have been applied to more useful courses.” This was a college-bound graduate of an urban school district, who feels that her entire high school experience was wasted because the system put her through the exercise of fulfilling requirements without ever giving her what she needed for the next stage of her life. Although she “took every available AP course,” she feels that anything she accomplished, she accomplished despite the school, not because of it. She revealed that “There wasn’t any opportunity for enrichment. I didn’t have any monitoring. I didn’t have any guidance.”

In speaking to these participants about their senior year programs, the next question they were asked concerned who was in charge of the programs that they found to be useful. Specifically, the question was, “Was a teacher or administrator in charge of

this program in your school?” Universally, the interviewees did not know. One of them said, “I’m not aware of one person that oversaw all of it.” This is typical of what all the respondents had to say. This feeds into the comments of the college-bound female above, who longed for some guidance in her high school career.

Following on this information, participants were asked if they believed that they would have found their programs to be equally useful regardless of who had implemented them. One expressed the opinion that she couldn’t really tell, since she did not know who was in charge of it. The others all answered that they found the program to be useful enough that knowing who was in charge or who was not in charge was immaterial.

The penultimate question was if these high school graduates had any final thing that they wanted me to know about the particular program that they were being asked about. The answers ran the gamut, from one who said there was nothing more he wanted to say, to another who said that her AP courses were a waste of time to her because, “It’s supposed to be an intermediate between high school and college courses, but it’s still very high school.” Another respondent, speaking of his AP courses, said that he wished they had been more varied,” meaning that he wished that there had been more of them. This might be expected, since the answerer was a college-bound male, but his actions, to a certain extent, belie his words, because he followed this wish by sharing that there had been five AP courses offered in his school, and he took two of them. The fourth person stated that she wished everyone had been required to do some community service as she had been.

The final question was an open forum for the participants to relate anything that they wished to share about any of their senior year programs. Surprisingly, every one of

them chose to say something about their senior research project. These comments, too, varied widely, but had in common the fact that they were all complaints. One student complained that her school required her to keep a portfolio of how all of her coursework throughout her high school career related to the career that she researched. She found this to be a waste of time. She said, “Most of that was B.S. You’re looking at a piece of sculpture. How does that really apply to obstetrics, which is the career I researched? How does something in introductory French apply to this?” As before with this respondent, she was made to feel that she was jumping through the hoops, not really gaining anything valuable or useful from the experience.

Two other respondents complained specifically about the project being a graduation requirement. One felt that it was “just another burden” on seniors, who are already very busy. Another said that it did not serve its “real purpose of getting students prepared for college,” but was, instead, “just a list of teachers and requirements that were kind of holding your hand through the whole process.” And the final respondent complained about a lack of support within the school system for students who were trying to complete their projects. Whether college-bound or non-college-bound, there is no respect among these graduates for the senior research project.

CHAPTER V

INTERPRETATION

Introduction

Beginning with the idea that improvements need to be made to the high school senior year, schools and school districts make choices as to the types of programs that they will institute for their seniors, in order to make the year useful and interesting. Lacking a framework, or an instrument upon which to measure the success of senior year programs, how are these schools and school districts expected to make data-driven decisions as to which programs they will institute, and, once instituted, which programs they will continue to fund and administer? Often, administrators and school boards have nothing more to go on than the vague belief that “kids like this program,” or “teachers like that program,” or the knowledge that “our principal thought this was a good idea.” In the rare cases where data has been collected as to the effectiveness of senior year programs, it often takes the form of polling current seniors or of measuring graduation rates before and after the program(s) have been instituted. An increase in graduation rate may be taken as evidence of success.

What, though, is the real purpose of a high school education? Is graduation the only end toward which we strive? Or is our end, rather, to know that we have graduated students who are ready for whatever awaits them beyond the schoolyard walls? The contention of this researcher is that our goal is the latter. It may be good to keep students amused during their senior year, or, better yet, to keep them busy with some seemingly worthwhile endeavors. It is a good thing to graduate more of our students. But if we can

do these things while providing those students with skills and attitudes that are going to serve them well in the years following their graduation, then we will truly have done our jobs.

To find out if high school graduates have been provided with useful skills and with positive attitudes toward education, it should be a straightforward matter to ask them if this is the case. After all, they are the ones who have been living their lives since high school graduation. They are going to college, they are working at jobs and careers, and they have an intimate knowledge of what they have needed over these past few years of work or of post-secondary education. The differences in attitudes between those who went to college after graduation and those who went to work may be a significant one. Similarly, gender differences may crop up, to which we should pay attention. But, ultimately, from a study like this one, we can learn what we are doing well, and what we are not doing so well, in terms of the senior year programs that we offer to our students.

Summary of Findings – Research Question 1

The first research question regards the overall usefulness of senior year programs. To what extent do recent high school graduates of Western Pennsylvania public school districts, up to five years removed from their senior years, feel that programs offered in their final year of high school to make their senior year useful and meaningful had the desired effect? Using the Senior Year Program Survey (SYPS), such graduates answered

that question as it relates to five specific senior year programs, and again on the topic of high school in general.

Senior Research Projects

The general response of graduates regarding senior research projects shows some disagreement between the personal interviews that were conducted and the average response gleaned from the data. In the interviews, it was clearly the case that graduates did not see the senior research project as making a positive contribution to their post-graduation lives. This attitude of indifference, bordering on hostility, manifested itself regardless of the student's post-secondary plans, and regardless of gender.

When filling out the SYPS, though, the responses to one of the statements about the senior research project showed a slight bias in favor of the project and its general usefulness. Recall that the Likert scale that was used to respond to these statements was a scale of 1 to 5, where 1 meant "does not describe me at all," and 5 meant "describes me perfectly." For the first statement, which asked if completion of the senior research project expanded students' knowledge of the subject that they researched, the mean response was 3.65, which is within the high agreement range established in Table 2, above.

This high score would seem to indicate that students did learn a lot about the particular topic that they researched. The fact that there was no significant difference between CB and NCB responses, nor between male and female, indicates that this holds true across the board, for all students. If one of the goals of the senior research project is

to have students learn a lot about one particular topic, this would make it appear to be a success.

Unfortunately, learning about one topic is not the purpose of the senior research project. The real purposes of the project are embodied in the other two statements. The second statement said that the project made participants want to learn more, and the third one said that the participants learned research techniques that they've used frequently since graduation. Surely, if we are preparing students for the world beyond high school, then these are the real goals: that students should develop an interest in learning more, with some usable research techniques at their disposal. These statements, though, earned very neutral responses of 3.10 and 2.84, respectively, indicating that these goals were not achieved.

Internships/Externships

Although a relatively small number of students completed an internship during their senior year of high school, the question of its effectiveness yields a mixed result similar to that reported above for the senior research project. The first statement declares that the internship was instrumental in helping the student to learn about the world of work. A response of 3.86 was given for this statement, which is in the high agreement range. The next two statements, however, did not fare as well.

The second and third statements declared that the students' internships helped them to decide what to do for a living, and improved their perception of their teachers and/or employers. On these two statements, the respondents were identically neutral, giving average responses of 3.07 to both. This would indicate that students did not feel

strongly one way or the other about their internships, but the raw data tells a different story. The average came out very close to 3 because most respondents either gave high marks of 4 or 5, or low marks of 1 or 2. Very few actual answers of 3 were recorded. What this indicates is that people either loved their internships and found them very useful, or hated their internships and found them very useless. Whether this dichotomy played itself out along gender lines, or divided itself between the CB and NCB graduates will be discussed below.

As an overall program for the student population at large, the only conclusion one can draw is that internship programs are not overwhelming in their success. They succeed in a limited sense of exposing students to the world of work, but in terms of helping them to choose a career, there is no hard evidence that they do. Neither is there evidence that students come out of such programs with a better understanding or appreciation of the authority figures in their lives, whether teachers or work supervisors.

College-Aligned Courses

There are several reasons a school might offer courses that are strictly aligned with related courses at a local college or university. These reasons align with the reason that offering such courses is one of the Triple A recommendations of the National Commission on the High School Senior Year (NCHSSY). The transition from high school to college is a tough one. Differences in expectations, autonomy, and difficulty of work combine to assure that many students do not succeed in their post-secondary education. These courses, then, offered in high school as a sort of a prerequisite “part

two” at the next level, help to ease students into their college work in such a way that the transition is not as crippling.

The first statement, therefore, to which participants were asked to respond, dealt with this very expectation. Did these college-aligned courses help graduates to succeed in their first year beyond high school? The answer, according to SYPS results, is yes. The overall average response to this statement was 3.56, which is in the high agreement range. So, if our hope was that the transition from high school to the world beyond would be eased by the completion of courses that align closely with courses at a local college or university, then the program has fulfilled its purpose.

The next two statements probe to see if that advantage carried on. The next one stated that the college-aligned courses helped students to succeed *beyond* their first year in college. Here, results were more muted, with the overall average response being 2.96, solidly in the neutral range. We would, of course, like to think that the benefit of such courses would carry through all years of a student’s post-graduation life, but this was never the program’s intention to begin with. So the fact that it does not appear to be the case does not necessarily translate into program failure.

Similarly for the third statement about college-aligned courses, which posits that these courses helped students to decide whether or not they would continue their educational career beyond high school. This result was even lower than the one immediately above. The overall average response was 2.40, which is in the range of low agreement. In all probability, it is to be expected that, before they are in the midst of their senior year courses, students have already made up their minds about whether they

are going to pursue post-secondary education. Therefore, it is easy to believe that these college-aligned courses had little, if any, effect on that decision.

Overall, it seems that the main purpose of college-aligned courses is fulfilled when students report that they make a positive difference in their first year after high school. Is it necessary for them to have helped in the years beyond that? Not in this researcher's opinion. Nor should a school district necessarily stop offering such courses just because they did not help students to decide on post-secondary plans. The transition from high school to college has been eased, and as students succeed, so must we consider that this program has shown some measure of success.

Rigorous Courses

Again, as one of the Triple A recommendations of the NCHSSY, offering more, and more rigorous alternatives should have benefits for students during their senior year and beyond. Many schools offer such courses in several forms. Some have Advanced Placement (AP) courses in one or more subjects. College-in-High-School (CHS) is the name of another popular program designed to bring rigorous course offerings to high school students. The difference between these courses and the college-aligned courses in the previous section is that these courses can result in students earning college credit for their work. Rather than being high school courses that lead into college courses, these are actual college courses, offered to high school students.

It is surmised that completing college-level courses in high school will give students a deeper understanding of those particular subjects in which the courses are offered, and will give them some insight into the value of hard work. This is a taste of

what college-level work will be like. It will be difficult, and it will be rigorous, but it will also be interesting and useful. Is this what graduates, three to five years removed from high school, thought of their experiences with AP and CHS courses?

The first statement to which participants were asked to respond said that these courses allowed them to learn a subject more deeply than they would have learned it in their regular courses. The positive response was resounding, with the overall average being 4.07, well into the range of high agreement. Clearly, this goal of offering rigorous courses was achieved.

The second statement declared that working hard in AP and CHS courses inspired students to work hard in their other courses. In this, the program did not fare as well. The overall average response was 3.07, solidly in the neutral range. The hope, then, that the hard work required in rigorous courses would carry over into regular courses appears to have gone unrealized.

The third statement concerning AP and CHS courses said that completing these courses helped students to learn studying techniques that they have used frequently since then. Again, a neutral response was collected, with the average being 3.40. So the usefulness of rigorous courses appears to lie completely in its ability to help students learn a subject more deeply. Transfer of the necessary work ethic to other courses, and the act of learning new and useful study techniques are not reported as having happened.

Community Service

In recognition of the fact that much of what we teach in high school goes beyond textbook knowledge, a section of the SYPS refers to the possibility that students

completed some community service during their senior year. The reasons that this might be a good thing for students are several. Aside from the good that students will do when they participate in community service activities, it is hoped that they will develop attitudes of service toward their community, see the value of good citizenship and, ultimately, want to continue to do good for others.

The first statement, then, was that performing community service made a lasting difference in the way the student thought about the world, the community, and other people. This goal was achieved, with 3.58, being the average response. This is in the range of high agreement, so students report that lasting changes were made to the way they thought about these things.

For the second statement about community service, graduates put forward another high agreement score of 3.67. They were responding, in this statement, to the claim that their experience made them want to continue to do community service. The third statement declared that participants in community service had learned the value of being a good citizen. Again, high agreement was achieved with an average response of 4.07.

For the first time in this study, high agreement has been reported for all of the goals posited for one of the high school senior year programs. This bodes well for community service, that among all respondents to the SYPS, the overall feeling was that, in every category, this is a program that has fulfilled the mission that we, as educators, might have hoped that it would. Graduates, even though a few years have elapsed since they completed their senior year community service, have good memories of it and still report that it had a positive impact on their lives.

Overall Satisfaction with High School

A rather contradictory result was obtained with the statements concerning overall satisfaction with participants' high school experience. This was meant to be a culminating overview of how these comparatively recent high school graduates looked back upon their high school experiences. Among the now-requisite three statements about high school, two specific goals of a high school education were named in the first two statements, while the third simply stated that the participant had an overall positive high school experience.

The average response to the first two statements was solidly in the neutral range. The first stated that the high school senior year gave the student the opportunity to develop into a socially responsible adult. Responses from all participants averaged 3.36, which indicates neutral agreement. The second stated that the high school senior year provided the student with skills that help him/her to cope with his/her life and responsibilities. This, too, inspired a neutral average response of 3.05.

When we turn to the third statement however, which said that the high school senior year was an overall positive experience, the participants responded with an average of 3.83, which indicates high agreement. Despite not necessarily feeling that their senior year helped them to grow into a socially responsible adult, and despite responding in a neutral way to the idea that their senior year gave them the skills to cope with their lives and responsibilities, they still agreed highly with the statement that their senior year was an overall positive experience. There are a few interpretations that one can make about this result.

The first and seemingly most obvious explanation is that a high school graduate's interpretation of a positive experience does not depend upon the previously stated goals. They apparently felt that their senior year was positive despite being more neutral on the idea that it helped them in the stated ways. A second interpretation is that in our culture, where individuality and self-reliance are heavily prized, high school graduates are loath to admit that their senior year experience had much to do with making them into the socially responsible adults that they are, possessing the skills to cope with their lives and responsibilities. Some will admit it, and some will not, resulting in the neutral overall response. Meanwhile, let us admit that there is a lot more than these two things involved in high school, particularly the senior year. All of these other things contribute to the overall positive experience that more of the graduates agree that they enjoyed. It will be interesting to see, in the analysis of the next two research questions below, if there is any division of these responses among college-bound and non-college-bound students, or between male and female graduates.

Summary of Findings – Research Question 2

The second research question asks if there are significant differences in the perceptions of the senior year as experienced by college bound (CB) students versus non-college-bound (NCB). In all, eighteen means comparisons were performed between CB and NCB participants. As described above, the designations of CB and NCB were applied to respondents as each SYPS was tabulated. Participants were asked what their primary occupation had been since high school graduation. If a respondent indicated that he/she had been attending college, then their responses were recorded as CB.

Conversely, if a job or profession was reported, then this graduate's answers were recorded as NCB.

It is possible that this scheme of identifying participants as college-bound or non-college-bound could have resulted in an occasional error. Because some of the survey respondents had been out of high school for four or five years, there may have been college graduates among them who listed their current occupation as their "primary occupation since leaving high school," as requested in the SYPS. In all cases where an occupation other than "college student" was listed, the researcher made a judgment as to whether the occupation would have required a college degree, and thus the designation of CB should be applied. For example, if a graduate claimed an occupation of teacher, or electrical engineer, then that person was listed as CB. If the primary occupation listed was something that did not require a college degree, waitress for example, then the person was listed as NCB.

In all, eighteen means comparisons were performed to find if there were significant differences between the CB and NCB responses. Six categories of senior year programs were explored: senior research project, internship/externship, rigorous courses, AP/college courses, community service, and overall satisfaction with the senior year. Each of these was followed by three statements concerning the program's usefulness in the students' lives since graduation. Among these eighteen possibilities for agreement or significant disagreement, five or six showed significant differences in their answers. Judging strictly by the results of the independent samples t-test, there were six areas of significant difference. Using the results of the Mann-Whitney U, there were only five.

The researcher will report on all six that were indicated by the t-test, reporting the disagreement of the Mann-Whitney on the one that is in contention.

It should again be noted that the significance reported for these six means comparisons were measured at the .05 level, two-tailed. Based upon the number of independent-samples t-tests that were conducted, it is possible that this level of significance is not definitive. Type I error could have been introduced into the study by this comparatively low alpha level. None of the differences that are considered to be significant in this study would have been considered to be significant at a more stringent alpha level, like .01 or .001.

Senior Research Project

Two of the areas of significant disagreement were recorded in this area. The second statement, which said that the senior research project made participants want to learn more about their topic, was one such area. Interestingly, both groups answered in the neutral range of responses, but, within that spectrum, they were far enough at opposite ends that there is a significant difference in their responses. The CB students felt much more strongly that they wanted to learn more about their topic after having completed a senior research project. So, although their overall attitude toward this senior year program is rather blasé, the CB students, more so than the NCB, admit to having had their curiosity aroused. For a college-bound student, this is a good thing to have had happen, and this result should not be ignored.

A similar result came about with the third statement regarding the senior research project. This was the statement that spoke to the idea that the student may have learned

research techniques that he or she still uses. Again, both the CB and NCB groups answered within the neutral range, but far enough from one another that the CB group was significantly higher on the scale. Perhaps this is not a surprising result that, more so than the NCB group, there was something about being a college student that caused college-bound respondents to say that they learned research techniques that they have used often since high school graduation. Although our intuition tells us that this should be the case, it is reaffirming to see that it actually did play out that way in the quantitative survey results.

In two of the three cases, then, regarding the senior research project, despite having answered in a neutral way concerning the usefulness of this program, college-bound graduates did find it to be significantly more useful than their non-college-bound brethren. This will be fodder for some useful discussion in the later section on the possible applications of these findings and implications for further research.

Internship/Externship

This section, like the senior research project above, yielded two out of three significant differences in results. In this case, the first two statements held the strong disagreements. The first of these statements said that the students' internship experience helped them to learn about the world of work. It is interesting to note that overall response to this statement was 3.86, in the high agreement range. However, when broken down into CB and NCB, the average responses are 4.17 and 2.50, respectively. The first of these is high into the range of high agreement, while the second shows neutral agreement, and the difference is significant.

As with the research techniques above, which were more highly prized by the CB graduates, learning about the world of work was more significant than it was to the NCB group. This result could be interpreted to mean that the NCB graduates, having been in the workforce full time for all of their time since graduation, the internship meant little to them in terms of learning the world that they live every day. CB graduates, on the other hand, probably work part time, if at all, while going to college, and therefore see the internship as a more important step in their tutelage into the working world.

The second statement concerning internships may or may not have produced a significant result. This statement claimed that the internship helped the student to choose a career. The t-test tells us that, yes, the CB group's average response of 3.33, showing neutral agreement, is significantly higher than the NCB average response of 1.79, in the low agreement range. The Mann-Whitney, though, says that the difference is not significant.

If the difference is not significant, then there is no more to say about it. If, however, it is significant, then one is left to speculate as to why this is the case. Why would college-bound students, to a greater extent than non-college-bound, have felt that their internship experience helped them to choose a career? Several reasons come to mind. For example, many non-college-bound students attend a Career and Technical Center (CTC) during high school, often beginning in the tenth grade. If these students follow a career path that relates to the area of study that they chose at the CTC, then they would have no reason to attribute their career choice to an internship completed during their senior year.

Another possible explanation for the discrepancy between CB and NCB graduates could relate to the idea of having chosen a career as opposed to taking whatever work is available upon graduation. Unfortunately, many NCB students leave high school with no real plan as to what they are going to do next, and work at jobs that they happen to find, rather than at a career. A listing of the jobs that these students claimed for themselves when answering the SYPS included such occupations as secretary, clerk, activities aide, and server. While these are good, honest jobs, they do not necessarily represent the type of career that one might choose as a result of having completed an internship. Internships are not generally offered in such occupations. Internships are generally offered in the realm of more professional vocations, like teaching, nursing, banking, or any of a number of other long-term careers.

Yet a third explanation for this significant difference would be that some NCB graduates may have gone directly into the military, or into a family business. The decision to do so would probably have been made regardless of the completion of an internship during the senior year of high school. Therefore, for any or all of the reasons named in these paragraphs, NCB students would have given low agreement to a statement that claimed that their senior year internship helped them to choose their career. CB students, on the other hand, most likely saw a wider world of possibilities before them, not necessarily constrained by a need to make a living or by parental expectation to contribute to the family financially. Their internship experience may have then played a larger role in helping them to choose their career. It is important to remember, though, that even though their answers were significantly higher, on average, than the NCB group, their overall response was still, at 3.33 in the neutral range, so it is important not

to overplay the importance of this factor in their decision-making, since they, themselves, do not make too much of it.

Rigorous Courses

When it comes to taking Advanced Placement (AP) or College in High School (CHS) courses, there was one area of significant difference in the answers of the college-bound students and the non-college-bound. Of the three statements concerning AP and CHS courses, only the third one showed a significant difference. This statement made the claim that students in these courses learned study techniques that they have used frequently since graduation. It is, perhaps, not surprising that there is a large difference in the number of CB students who completed these rigorous courses as opposed to NCB students. CB students who completed these rigorous courses numbered 49, while only 8 NCB students availed themselves of them. The CB students' average response to this statement was in the high agreement range, at 3.57, while the NCB students showed low agreement at 2.38.

Interestingly, the overall response to this statement was in the neutral range. Only when broken down between CB and NCB do we see that there is a population of students for whom this aspect of AP and CHS courses has been useful. When looking only at what these courses do for the student population at large, there does not seem to be much to recommend them except the opportunity to learn a subject more deeply. However, the population of students who pursue post-secondary education report that there is something more to be gained from their AP and CHS courses. This is an important result to keep in mind when deciding which senior year programs to institute, to keep, or to

scrap. Even if school officials felt that the general population of students was not gaining what one hoped that they would gain from their participation in AP and CHS courses, would these courses not be worth keeping if, indeed, college-bound students found them to be more relevant in their post-graduation years?

Overall Satisfaction with High School

As with the rigorous courses above, there was one statement in this grouping that engendered significant disagreement between the CB and NCB populations. This was the second of the three statements concerning respondents' overall satisfaction with their senior year of high school. The statement said that the senior year had given students the means to cope with their lives and responsibilities.

The CB respondents answered this statement with an average response of 3.17. This is in the neutral range of responses, as is the NCB response of 2.63. The answers are far enough from each other, though, that there is a significant difference between the two. Again, one is left to speculate as to why college-bound students may have felt, to a more significant extent than their non-college-bound classmates, that their senior year provided this service to them.

In this case, we may not need to look farther than the interviews that were conducted with the various combinations of students in the qualitative portion of this study. When the CB students talked about their high school senior years, their comments were more directed at the way their high school education did or did not prepare them for college-level work. One of them, while finding fault with her AP courses, said, "It's supposed to be an intermediate between high school and college courses, but it's still

very high school.” This student had attended an urban high school where she felt that, overall, college-bound students were left to fend for themselves. This student expected to carry over some benefit from high school into her college responsibilities beyond and was disappointed in the fulfillment of that expectation.

The other college-bound student who was interviewed had similar expectations, but had a more positive memory. He was a graduate of a suburban school district, and felt that he did take some of these abilities to cope with his life and responsibilities into college with him from his high school senior year. He says, in regard to his AP courses, that “... they granted students more independence. There was less of the teacher holding your hand and more of them putting the responsibility on you.” The word responsibility is right there in his answer. Did NCB graduates see their high school experience in these terms?

An NCB graduate of the same suburban school district as the male respondent above does not give the same glowing report in terms of whether her school district gave her the tools to deal with her life and responsibilities. In two different areas of her interview, she talks about how most of the help and guidance that she got in her senior year came from places other than the school district. At one time, she talked about the teacher who was nominally in charge of her community service experiences. When asked if this person was helpful she replied, “Not really. I got a lot of help outside the classroom. She just told us when things were due. She did help. But personally, I got a lot of help from my friends, my boyfriend, my parents.”

Later in the interview, when talking about her senior research project, this same student was given the opportunity to say anything that she wanted to say about the

project, and what she chose to say was, “I got a lot of help outside the classroom. I think it would have helped if we had had more support within the school. The guidance counselor was helpful a little bit. And at my district there is a volume of kids and it’s hard to help everyone at once, so it would have been helpful to have an extra teacher just to deal with this.”

Seeing as how this was a recurring theme for this student, it is understandable that she would not attribute any of her coping skills to her high school. In her mind, and perhaps in actuality, the school did little to provide her with these skills, with friends and family helping to fill that gap. The other NCB student was equally doubtful about the efficacy of the high school in imbuing him with the skills that he needed to cope with his life and responsibilities. His issues mainly had to do with his senior research project, which he felt should not have been required because, to him, it did not apply to those who were not going to college. In other words, the biggest thing that was required of him during his senior year was something that he saw as not being applicable to his situation. He said, “I think it was geared more toward someone who was going to college, so those who weren’t didn’t take it seriously. It was a big burden to some of my classmates. ‘I’ve already got my mind set on doing something and I’m gonna make money doing it.’”

Given these differing perceptions of how their high school senior year treated those who were going to college and those who were not, perhaps it should not be surprising that we find this significant difference in these students’ attitudes about whether or not their senior year provided them with coping skills to deal with their lives and responsibilities. As with the statements above, though, about study techniques and wanting to learn more about a research project, it is also the case here that the

significantly higher average response is still in the neutral range. So, although CB students felt it more strongly to be true that their high school senior year provided them with the necessary coping skills, even they are not strong in their agreement. They are just significantly higher in their overall neutral response.

Summary of Findings – Research Question 3

The third research question asked if there would be significant gender differences in the perceptions of these senior year programs. The short answer to this question is no. According to the independent samples t-tests that were run on these eighteen dimensions showed no significant differences between male responses and female responses. While this researcher did not go into this project with any preconceived notions as to what the results might be, it was surprising to see that there were absolutely no areas in which the male respondents disagreed with the female respondents.

The Mann-Whitney U, however, gives a very slightly different result. The Mann-Whitney delivers one statement in which the male response is significantly different from the female response. This occurs in the category of community service, on the statement that claims that students who completed community service projects learned to value good citizenship. The Mann-Whitney tells us that there is a significant difference between the male average response of 4.25 and the female average response of 3.72. Both of these, it should be pointed out, are in the range of high agreement.

To what can we attribute this discrepancy between male and female responses on this particular statement? Although both groups agreed highly with the statement that their community service experience caused them to value good citizenship, the males

agreed to a significantly higher degree than did the females. Can it be that male adolescents are simply slower in general to see the value of good citizenship, and so more of them were brought to this awakening by their community service projects? This is a possibility that seems to be supported by the work of Allen and Stoltenberg (1995). It is also possible that female respondents are more loath to report that they required this concrete awakening to citizenship issues, although this is belied by the fact that they did, in fact, agree with it in high numbers. In the end, we must consign this question to the category of those results that may require further study and research.

Limitations of Study

Several study limitations were pointed out in chapter three, but others have surfaced that should be brought forward at this time. Although every effort was made to provide the SYPS to a balanced and unbiased population, there are certain questions about its distribution that arise. The first of these is the fact that the researcher is an administrator working in one of the school districts involved in the study. This rural school district, among the three school district graduates that were surveyed, had the highest percentage return rate. Whether we consider the percentage that were returned versus all surveys that were mailed (19.3) or the percentage that were returned versus all surveys that were actually delivered to the intended recipients (24.4), the Avella Area School District provided the highest rate of return. The reader is referred to Table 3: Return Rates of Surveys by School District. Can this return rate be attributed to the fact that the researcher was at one time the high school principal in that district and currently serves as its superintendent?

Because the surveys were mailed out in 2008; and the object was to survey students who had been out of high school for three, four, or five years; surveys were mailed to members of the class of 2003, 2004, and 2005. The researcher did not begin to work in the Avella Area School District until November 22 of 2004. Therefore, he never had any contact with the students who graduated in June of 2003 and 2004. The students who graduated in 2005 only knew him as their high school principal for the last six months of their senior year. It seems unlikely that these 2005 graduates might have skewed the results by responding in greater numbers because they knew the researcher. Still, the researcher's association with this school district must be pointed out.

A second possible limitation of the study lies in the difficulty of obtaining a base of high school graduates to survey. Finding school districts that were willing to give up directory information on their graduates was difficult, as was getting those graduates to respond. The low response rates reported from all three of the school districts that were used is evidence that this difficulty reached across lines of class and geography. A larger body of participants could possibly have made for some different results.

Finally, another limitation imposed by the choice of participants lies in the relatively small number of years that these graduates were out of high school. Recall that they have been out of high school for only three, four, or five years. Although the reasons for choosing these numbers is articulated in the section above on the study's significance, they may still not have been optimum. Might high school graduates with the perspective of ten, or fifteen, or twenty intervening years have had even more insight to share? Perhaps so, although if finding graduates of particular school districts after five

years' time was difficult, the difficulty of finding them after a longer period would be even more exaggerated.

Implications for Future Research

There are several areas of further research that are suggested by the results of this study. A new study could be constructed to examine these same research questions for a wider population. This study was carried out for only three school districts in Western Pennsylvania, but would the results hold for a population that encompasses more of the state of Pennsylvania? There are more crime-ridden and poverty-plagued urban areas than the city of Washington, PA; there are smaller rural school districts than the Avella Area School District, and there are larger and richer suburban school districts than the Seneca Valley School District. While these three are fairly representative of these types, a wider selection from the state at large might yield different results.

A further study could be designed that would include differences in response based upon race as a research question. This study was concerned with the differences that college attendance and gender differences might engender, but race could also play a part in which senior year programs a school district might consider instituting or keeping.

Another possibility for future research lies in using school districts that do not have a direct connection with the researcher. This application could be achieved either in a direct replication of this study, or in combination with one of the suggestions above. Although we may convince ourselves that this personal connection between the researcher and the Avella Area School District did not have any influence on the study

results, it was reported as a limitation and so it is something that could be overcome in another study.

Yet another interesting study would be to contact these same participants after a gap of ten years have elapsed. Might their opinions concerning the usefulness of their senior year programs have mellowed, sharpened, or dissipated with temporal distance? The perspective of years allows the wisdom of age to enter the picture. Newfound, formerly unforeseen, advantages of their senior year programs may have evidenced themselves in the years between the first survey and the second.

Finally, there is the question of the survey being used. A new and interesting study could follow this one, in which all of the data is qualitative. A relatively small number of graduates were interviewed for this study, and even their responses were rich and varied, while showing certain similarities. A study in which every participant is interviewed might yield some interesting results indeed, as each graduate tells the story of his or her high school career.

Application of Findings

There are numerous applications of the results of this study to administrators and/or school boards. The neutrality of so many responses in the SYPS, for example, may lead school administrators to conclude that the programs that are being offered to high school seniors are not having the desired effects. This, in turn, calls into question the very existence of these programs. If a school district, for example, finds that senior research projects are neutrally perceived by all students, and that this neutrality of opinion with regard to their usefulness in post-graduate lives carries through regardless of

college attendance or gender, then why continue such a program? At the moment, it happens to be the case that a culminating project is required in the state of Pennsylvania, but with changing administrations and Secretaries of Education, this requirement could one day be lifted. At that time, it would behoove school districts to consider applying their scarce resources elsewhere, or revamping the program, if it is not achieving the desired results, as appears to be the case.

The need for more guidance during the high school career has been made manifest in several ways during the course of this study. Not only was it pointed out by the researcher in Chapter I, but it appeared as an area of concern in three of the four interviews that were conducted in the qualitative portion of the data collection and analysis. In two cases guidance was mentioned as something that was lacking in the participants' school districts, and in the third case the interviewee wanted to point out how helpful his guidance counselor had been and how much that guidance had meant to him. Interestingly, these three respondents attended three different school districts, so the importance of a guidance component clearly crosses the cultural lines established by these three different types of districts.

The community service aspect of this study was so clearly positive that it begs to be instituted as a requirement in the high school senior year. Not only did every category of statement with regard to the completion of community service elicit responses in the high agreement range, but this high agreement carried across through most of the sub-groups. If school districts are looking for a senior year requirement that fulfills all of its expectations, a requirement to complete community service would appear to be an ideal candidate.

Finally, as implied above, education administrators at the state level should re-examine the way in which the requirement of a senior culminating project is carried out in school districts. With the state providing only bare-bones guidelines, the projects are guaranteed to be administered very differently in different school districts. With more of a mandate concerning their structure would come more consistency in the projects from district to district, and, possibly, more satisfaction with it among students. In responding to the SYPS, even when college-bound graduates gave significantly higher responses with regard to certain aspects of the project, their answers were still in the neutral range. Even more intriguing is the fact that all four of the graduates who were interviewed, when given the opportunity to talk about any senior year program they wanted, chose to talk about their senior research project. Three of the four did so with the specific intention of complaining about it and questioning its relevance. School districts put a lot of time, money, and manpower into the administration of the senior project. With a little more guidance from the state, it could be transformed into something that students will find to be more useful and relevant.

Overall, this study has brought to our attention what it is that students who have been through our K-12 system think of some of the programs that we put into place during their senior years. Some of these, like community service projects, have proven to be popular and useful among those who completed them. Other programs have fared less well. It is in everyone's best interest that we, as the people charged with guiding our respective educational institutions, pay attention to these opinions as we carry out the educational mission of our schools and school districts.

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APPENDICES

Appendix 1
Senior Year Program Survey

Thank you for participating in this survey. Your answers will be valuable in efforts to make improvements to the high school senior year. Please read each item carefully and consider your answers as they relate to your own high school senior year experience.

Please provide the following information. It will not be used to identify you in any way.

1. What is your gender? *Male* *Female*

2. In what year did you graduate from high school? _____

3. Please provide the name of the school district you attended at the time of your high school graduation:

4. What has been your primary occupation since leaving high school?

Instructions for the remainder of the survey: You will be asked questions about items that are considered to be the best ideas to improve the high school senior year. Please answer each question with your own senior year in mind. The questions either require an answer of “yes” or “no,” or you will answer using a scale of 1 to 5, where **1 means “does not describe me at all” and 5 means “describes me perfectly.”**

Please proceed to the next page

- A. A *senior research project* is an undertaking in which students perform scholarly research on a topic of their choice. Often, part of the project involves making a presentation to faculty and/or student committees. Was a senior research project required as part of your senior year experience?

Yes **No**

- A - 1: Did you, yourself, complete a senior research project?

Yes **No**

If such a project was available to you, but you did not complete one, please briefly explain why you did not:

If you answered No to question A-1, then proceed to the next page.

If you answered Yes to question A - 1, then using the scale of 1 to 5 defined below, please react to the following statements:

- A - 2: Completion of my senior research project expanded my knowledge of the topic that I researched.

1 **2** **3** **4** **5**

- A - 3: Completion of my senior research project made me want to learn more about the topic that I researched.

1 **2** **3** **4** **5**

- A - 4: Completion of my senior research project caused me to learn research techniques that I have used frequently since then.

1 **2** **3** **4** **5**

1 means “does not describe me at all” and 5 means “describes me perfectly.”

Please proceed to the next page

- B: An *internship or externship* allows students to work with a partner from the world of business to gain experience in a particular field or type of workplace. These endeavors usually involve the production of some artifact (for example, a business report or PowerPoint presentation), and may also include an exhibition to the high school faculty of what was learned. Was an internship or externship required as part of your senior year experience?

Yes No

- B - 1: Did you, yourself, complete an internship or externship?

Yes No

If internships and externships were available to you, but you did not complete one, please briefly explain why you did not:

If you answered no to question B-1, then proceed to the next page.

If you answered yes to question B - 1, then using the scale of 1 to 5 defined below, please react to the following statements:

- B - 2: Completion of my internship/externship was instrumental in helping me to learn about the world of work.

1 2 3 4 5

- B - 3: Completion of my internship/externship helped me to decide what I wanted to do for a living when I finished my education.

1 2 3 4 5

- B - 4: Completion of my internship/externship improved my perception of my teachers at school and/or my employer.

1 2 3 4 5

1 means “does not describe me at all” and 5 means “describes me perfectly.”

Please proceed to the next page

- C: In order to provide seniors with a more successful transition to college, some high schools work with a local college or university to *align* senior year high school courses with freshman year college courses. *These are not AP or College-in-High-School courses and they do not award college credit.* These are regular high school courses. They serve, though, as an introduction and background to a course that one might take the very next year in college. Non-college-bound students also take these courses as part of the regular high school curriculum. Were courses available to you in your senior year that were closely aligned with college courses? If you don't know whether or not such courses were available to you, then please check No.

Yes No

- C - 1: Did you, yourself, take any courses that were closely aligned with a first-year course at a local college or university?

Yes No

If such courses were available to you, but you did not take them, then please briefly explain why you did not:

If you answered No to question C-1, then proceed to the next page.

If you answered Yes to question C - 1, then using the scale of 1 to 5 defined below, please react to the following statements:

- C - 2: My college-aligned courses helped me to succeed *in* my first year after my high school graduation.

1 2 3 4 5

- C - 3: My college-aligned courses helped me to succeed *beyond* my first year after my high school graduation.

1 2 3 4 5

- C - 4: My college-aligned courses helped me to choose whether or not I would continue my education after high school.

1 2 3 4 5

1 means “does not describe me at all” and 5 means “describes me perfectly.”

Please proceed to the next page

D: Some high schools offer special courses that are equivalent to college courses. They are more *rigorous and challenging* than the normal high school curriculum. They usually have a special name, like Advanced Placement (AP), or College-in-High-School courses. The high school offers these courses so that students get used to working hard and can see the benefit of applying themselves. Also, for those who are going on to college, these courses offer a small taste of what college work will be like. Were any of these course options available to you in your high school senior year?

Yes No

D - 1: Did you, yourself, take any courses like AP or College-in-High-School courses in your high school senior year?

Yes No

If such courses were available to you, but you did not take them, then please briefly explain why you did not:

If you answered No to question D-1, then proceed to the next page.

If you answered Yes to question D-1, then using the scale of 1 to 5 defined below, please react to the following statements:

D – 2: My AP/College courses helped me to learn a subject more deeply than I would have learned it in my regular courses.

1 2 3 4 5

D – 3: Working hard in my AP/College courses inspired me to work hard in all of my other courses.

1 2 3 4 5

D – 4: Completion of my AP/College courses helped me to learn studying techniques that I have used frequently since then.

1 2 3 4 5

1 means “does not describe me at all” and 5 means “describes me perfectly.”

Please proceed to the next page

E: Some high schools include a certain amount of community service as a graduation requirement. It is not only the job of schools to educate children in academic subjects, but also to educate children to be good citizens and productive members of society. Many people believe that completing community service helps to instill values that we need in our citizens. Was a community service project required during your senior year of high school?

Yes *No*

E - 1: Did you complete any community service during your senior year?

Yes *No*

If such community service projects were available to you, but you did not complete any, please briefly explain why you did not:

If you answered no to question E-1, then proceed to the next page.

If you answered yes to question E - 1, then using the scale of 1 to 5 defined below, please react to the following statements:

E – 2: My community service project made a lasting change in the way I think about the world, other people, and my community.

1 *2* *3* *4* *5*

E – 3: Completion of a community service project made me want to continue performing community service.

1 *2* *3* *4* *5*

E – 4: Performing community service taught me the value of being a good citizen.

1 *2* *3* *4* *5*

1 means “does not describe me at all” and 5 means “describes me perfectly.”

Please proceed to the next page

F: The senior year of high school is meant to be a helpful transition into the adult life of a student. Students take various paths upon high school graduation (college, career, military service, etc). School districts try to provide learning opportunities so that graduates can be successful in any of these different areas. Thinking about your own senior year, please react to the following statements using the scale of 1 to 5 defined below.

F - 1: My high school senior year provided me with opportunities to develop into a socially responsible adult.

1 2 3 4 5

F - 2: My high school senior year provided me with skills that help me to cope with my life and responsibilities.

1 2 3 4 5

F - 3: My high school senior year was an overall positive experience.

1 2 3 4 5

1 means “does not describe me at all” and 5 means “describes me perfectly.”

Please proceed to the next page

Would you be willing to participate in a follow-up interview that might result from this research? If so, then please provide the following information so that you can be contacted:

Name: _____

Telephone Number: _____

To all respondents, thank you for taking part in this research project. Your participation in this survey is a vital part of my research into the operation of high schools in general, and the senior year in particular. Thank you again for your participation!

Appendix 2

Structured Interview Questions

- I. Verification of Survey Information
 - a. Please verify the following information:
 - i. Gender
 - ii. Year of high school graduation
 - b. If any answers given during the interview do not match those given on the survey form, then change the answers so that the answers given during the interview take precedence.
 - c. When everything matches, or has been verified, then proceed.

- II. Areas of Conflict or Agreement
 - a. Based on your activities since high school, it is interesting that you give a [high/low] rating to question [A-F] about [name of program].
 - b. Why did you find this program to be particularly [useful/useless]?
 - i. If it was useful, what made it so?
 - ii. If it was useless, was there something that could have been done to make it more useful?
 - c. Do you know who was in charge of this program in your school?
 - i. If yes,
 - 1. Who?
 - 2. Would you say that this person had anything to do with the success or failure of this program?

3. Would you say that the reform would have been useful to you regardless of who was implementing it?

ii. If no,

1. Would the guidance of a teacher or administrator have added positively to your perception of this program?

2. Is there anything that might have made you think more positively of this program?

III. Last Comments

a. Is there anything more that you would like me to know about [name of program]?

b. Is there anything that you would like me to know about any of the other senior year programs that you might have encountered in high school?

c. Thinking of your senior year in general, is there anything you might have done to change it if you had been given a chance?

Appendix 3

July, 2008

Wayde Killmeyer
101 Dillon Dr.
Pittsburgh, PA 15243

Dear Sir or Madam:

Thank you very much for this opportunity to present you with the enclosed survey. My name is Wayde Killmeyer, and I am the superintendent of the Avella Area School District. I am also a doctoral student in the Interdisciplinary Doctoral Program for Educational Leaders at Duquesne University. Your name and address were furnished to me by a key administrator in the school district from which you graduated. The enclosed survey is part of my dissertation study. With it, I hope to gain insights into the practices that are being used to improve the senior year of high school. A further part of the study is to find whether those practices have been useful to you as a high school graduate.

The benefit of filling out this survey is that you may provide information that will be valuable in improving the senior year experience for future generations of high school students. The purpose of the study is to gather your opinions of the value of programs that high schools offer in the senior year. If you choose to participate in this study by filling out and returning this survey, your confidentiality will be maintained. The data collected from this survey will only be reported in aggregate or by naming your school district and year of graduation. If your answers are used in the study, you will never be quoted by name. Completed surveys will be kept in a locked cabinet and disposed of within one year of the completion of the study.

Please take the time to fill out and return this survey before August 15, 2008. Although it looks long, it should take no more than ten minutes of your time. Your participation will be a valuable part of my research into ways in which we can improve the high school senior year. A stamped, addressed envelope is enclosed for your convenience in returning it. Also please give serious consideration to participating in a follow-up interview that I am conducting when the surveys have been returned. Your invitation to participate appears on the last page of the survey.

Thank you for your participation. I appreciate it, both for my own research, and for the good that it might do in the long-term improvement in education.

Sincerely,

Wayde Killmeyer, Superintendent
Avella Area School District

Appendix 4

Consent Form: Telephone Interview

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

- Title:** High School Graduates Report on Reform Efforts in Their High School Senior Year
- Investigator:** Wayde Killmeyer; 724-356-2218, 412-805-1348
- Advisor:** This study is being completed in partial fulfillment of a Doctorate in Education degree from Duquesne University. Dr. Jean Higgins, Dissertation Committee Chair
- Source of Support:** This research is not funded
- Purpose:** This study will seek to elicit the opinions of recent high school graduates on the value of programs that may have been instituted in their senior year to make that senior year more useful to students in, and beyond, their last year of high school.
- Your Participation:** You are being asked to participate in a telephone interview so that you can give longer and more detailed answers to some questions about your high school senior year. The interview will be tape-recorded and transcripts will be made from that recording.
- Risks and Benefits:** There are no known risks beyond those of everyday life based on your participation in this telephone interview. A potential benefit from your participation is the possibility of an improved senior year experience for upcoming high school seniors.
- Compensation:** You will not be compensated for participating in this telephone interview.
- Confidentiality:** The information that is gained from your participation in this telephone interview will be used to add depth and support to the data collected on the Senior Year Program Survey that you have also been asked to complete. Direct quotes that may be used from telephone interviews will be identified only by year of graduation and school district. No individual names will be used in the reporting of information from this telephone interview.

Right to Withdraw: You may withdraw from the study at any time and may choose to withdraw comments that you have made prior to your withdrawal from the telephone interview. If you wish to withdraw from participation in the telephone interview, or to withdraw comments that you have made, simply notify the investigator at any time.

Summary of Results: Telephone interview participants will be provided with a summary of the results if they so desire.

Voluntary Consent: I have read the above statements and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent at any time, for any reason. On these terms, I certify that I am willing to participate in this research project.

I understand that should I have any further questions about my participation in this study, I may call Dr. Paul Richer, Chair of the Duquesne University Institutional Review Board (412-396-6326).

Please feel free to contact me if you have any questions about this study or your participation in it. I can be reached at 412-805-1348, or via email at killmeyerw @avella.k12.pa.us.

Signatures: Both the researcher and subject should sign, and each should hold a copy with original signatures.

Participant's Signature

Date

Researcher's Signature

Date