INVESTIGATION OF TEACHERS’ PERCEPTIONS REGARDING ADVANCED PLACEMENT COURSE CONTENT FIDELITY AND STUDENT PARTICIPATION IN AP COURSES AND EXAMINATIONS

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Investigation of Teachers' Perceptions Regarding Advanced Placement Course Content Fidelity and Student Participation in AP Courses and Examinations

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ABSTRACT

This qualitative study investigated teachers’ perceptions regarding reasons students enrolled in Advanced Placement (AP) Courses, why students took, or opted out of, the corresponding Advanced Placement Examinations, and whether or not teachers taught the required Advanced Placement Course content with fidelity. Teachers from four public high schools in southeastern Pennsylvania completed the researcher-developed online survey and participated in face-to-face interviews. Results of this study indicated that although students chose Advanced Placement Courses for a variety of reasons, participants perceived their students as being aware of the role that Advanced Placement Courses play in the college admissions process. The perceptions of teachers also revealed that the cost of the Advanced Placement Exam was not a deterrent unless students took three or more Advanced Placement Courses in a given year. Advanced Placement Exam participation rates in the four study sites were found to be 7.6% higher than the College Board’s estimate. Regarding course content fidelity, data analysis indicated that while 100% of the survey participants agreed that the content taught in their classrooms and the content covered on the Advanced Placement Exams were fully aligned, participants still supplemented College Board-approved content or substituted other content in its place. Since Advanced Placement Courses and Exams play a major role in both the college-preparatory process and the college admissions process, these findings may offer direction to high school administrators who wish to increase their Advanced Placement Course enrollments and their Advanced Placement Exam participation rates.
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Chapter One – Introduction

Overview

The College Board’s Advanced Placement (AP) Program experienced growth in the past 50 years (Schneider, 2009). In 2012, 32% of graduating seniors took at least one Advanced Placement Exam, compared to 18% of graduating seniors in 2002 (College Board, 2013g). More than 18,000 secondary schools in over 100 countries (College Board, 2012e) offered at least one of the 34 Advanced Placement Courses (College Board, 2012a). The College Board’s Advanced Placement Program “has earned an enviable position in the world of education” (CEEB, 2001, p. 1) by being “the premier program for advanced placement and credit by examination” (p. 1).

The Advanced Placement Program includes elective, end-of-course Advanced Placement Examinations, given at a cost to the student and administered every year in May. Exams consist of multiple-choice and free-response questions and form a composite score of 1 through 5 (Dodd, Fitzpatrick, De Ayala, & Jennings, 2002, p. 1). Scores can be sent to over 4,000 colleges and universities that consider student Advanced Placement Exam scores “for credit, placement, and/or consideration in the admission process” (College Board, 2012f, p. 9). The scores that the higher education institutions accept and the level of credit that the students receive vary widely by school (Lichten, 2007).

Klopfenstein and Thomas (2010) found that there was a wide variation in the policies of school districts regarding student eligibility to take Advanced Placement Courses and requirements to participate in the non-compulsory Advanced Placement Exams. Some schools required prerequisites for acceptance into Advanced Placement Courses while others had an open enrollment policy; some schools required all Advanced
Placement students to complete Advanced Placement Exams while others had no such requirement (Klopfenstein & Thomas, 2010). Regardless of the high school policies surrounding Advanced Placement, there remained an underrepresentation of minority and low-income students in Advanced Placement Courses (Milewski & Gillie, 2002). Of the 1.7 million seniors who took the Advanced Placement Exams in 2012 (College Board, 2012c), approximately 5% were Black/African Americans, 10% were Hispanic/Latino, and 0.3% were American Indian/Alaska Native (College Board, 2013a). Low-income students comprised 26% of all test-takers in 2012 (College Board, 2013g).

In an effort to help close the “opportunity gap” (College Board, 2013a) for minority and low-income students, incentive programs existed in many states. Some states and/or districts allotted money to partially or fully fund the cost of the Advanced Placement Exams for low-income students, while some even paid students who successfully earned a predetermined exam score (Jackson, 2012; Jeong, 2009).

In 2011, 128,568 teachers taught Advanced Placement classes in almost 13,000 public schools (College Board, 2012f). Content-area experts, including high school teachers and college faculty experienced in the Advanced Placement Program, contributed to the formation of the Advanced Placement Course content and Advanced Placement Examination design, assisted in the grading of the Advanced Placement Exams, and participated in the currently-ongoing restructuring of selected Advanced Placement Courses (Ewing, Huff, & Kaliski, 2010). Volunteers from the 5,400 college faculty involved in the Advanced Placement Program (College Board, 2013a) also assisted in reviewing high school Advanced Placement teachers’ syllabi as part of a nationwide Advanced Placement Audit, which began in 2007 in order to help provide
consistency, set clear guidelines, and give accepting colleges and universities confidence in uniformity (College Board, 2007).

Higher Advanced Placement Exam scores positively related to college outcomes such as resiliency in confronting the ramifications inherent in college courses with demanding content, higher college grade point average (GPA), and improving the chance of graduating within a four-year parameter (Dougherty, Mellor, & Jian, 2006; Hargrove, Godin, & Dodd, 2008; Keng & Dodd, 2008; Mattern, Shaw, & Xiong, 2009; Murphy & Dodd, 2009). While this positive relationship is relevant, the counter-perspective has been provided by critics, who argue that Advanced Placement students’ success could not be attributed to Advanced Placement Course participation alone (Klopfenstein, 2003; Challenge Success, 2013), since those students typically had “personal characteristics that led them to participate in the classes in the first place” (Dougherty et al., 2006, p. 3).

More criticism surrounded the Advanced Placement Program (Geiser & Santelices, 2004; Klopfenstein, 2003; Klopfenstein & Thomas, 2005; NRC, 2002), especially due to its “test-driven nature, for its focus on breadth over depth, and for failing to adapt to changing views about curriculum and teaching” (Schneider, 2009, p. 814).

Need for Study

There were 2.1 million students who completed approximately 3.7 million Advanced Placement Exams in 2012 (College Board, 2012a), but those numbers included only the students who chose to take the optional Advanced Placement Examinations. When one takes into account that 30% to 40% of students completed Advanced Placement Courses but opted out of the Advanced Placement Exams (CEEB, 2001; NRC, 2002), the number of students actually completing Advanced Placement
coursework grew. In researching the effect of Advanced Placement Courses on college outcomes, participation in the classes, not just exam scores, needs to be taken into account (O’Keefe, 2009).

Students who chose to take the Advanced Placement Exams and scored a 3 or higher on them were usually rewarded, while students obtaining a score of a 1 or a 2 on Advanced Placement Exams had “relatively little negative consequence” (Hasci, 2004, p. 1392). Depending on the college or university’s Advanced Placement policies, students who achieved Advanced Placement Exam scores of a 3 or higher might have received, for example, college credit, placement out of an introductory course, or exemption from other courses (NRC, 2002). Even if students chose not to take the Advanced Placement Exam, the high school transcripts that were sent to colleges and universities typically revealed that the student chose to take rigorous, upper-level classes (Challenge Success, 2013). Hertberg-Davis and Callahan’s 2008 survey of 200 students examined reasons why students chose to enroll in Advanced Placement Courses. The researchers noted the following reasons: “improved chances of admission to competitive colleges, skipping introductory courses in college, preparedness for the rigors of college, and preparation for their future careers” (p. 207).

The general body of research discussed the variables associated with student participation and instructional practices in the Advanced Placement Program. Much research was conducted regarding the course content offered in Advanced Placement Courses; however, further research regarding the specifics of the teaching of this content with fidelity added to the body of research. Teachers received course descriptions and required topics from the College Board, but they generally had
flexibility in lesson plan development and teaching methodologies (College Board, 2007; NRC, 2002). One major criticism of Advanced Placement Courses was the lack of in-depth exploration in favor of breadth of numerous topics (Klopfenstein & Thomas, 2005; Missett, Reed, Scot, & Callahan, 2010; NRC, 2002; Schneider, 2009), with many instructors having the perception of anxiety when confronted with time restrictions in order to teach the content included in their syllabi and required by the College Board (Hertberg-Davis & Callahan, 2008; Paek, Ponte, Sigel, Braun, & Powers, 2005). Lectures and multiple-choice tests dominated the teaching methodologies and assessments in Advanced Placement Courses, simply because they were the most effective means of covering and assessing such a large amount of material (Paek et al., 2005). Regardless of the volume of content that teachers needed to cover, they still allotted time at the end of the semester to prepare their students for the Advanced Placement Exams (O'Keefe, 2009).

In order to help create uniformity and consistency and perhaps even course content fidelity, the College Board instituted a required audit of all high school Advanced Placement courses in 2007 (College Board, 2007). In order to label a course as Advanced Placement on a high school transcript, teachers submitted an Advanced Placement Course Audit Form and a course syllabus to be examined and approved by college faculty serving in the capacity of College Board reviewers (College Board, 2007). The audit was not without criticism, however, with opponents questioning the validity of an audit where the only artifact submission was a course syllabus, which the teacher may or may not have faithfully followed (Cech, 2007). Critics also pointed out that while the College
Board “strongly recommends professional development for AP teachers, there are no mandatory prerequisites to teach an AP Course” (Challenge Success, 2013, p. 7).

**Statement of the Problem**

The purpose of this qualitative study was to examine teachers’ perceptions of the reasons that their Advanced Placement students enrolled in Advanced Placement Courses, as well as the reasons that those students chose to take, or not to take, the optional corresponding Advanced Placement Examinations. Teachers’ perceptions of the validity and level of fidelity of teaching the required Advanced Placement Course content were also examined.

Students’ participation in Advanced Placement Courses has become a more prominent factor in the college admissions process by assessing students’ readiness for the academic rigor of college and by comparing the academic credentials of students from different schools (Geiser & Santelices, 2004). The use of Advanced Placement Course participation and Advanced Placement Exam scores in college admissions can be problematic when considering “disparities in availability and access to AP Courses among underrepresented minorities and others from disadvantaged backgrounds” (Geiser & Santelices, 2004, p. 4), thus putting students from lower socioeconomic environments at a disadvantage in the college admissions process. As O’Keefe (2009) articulated in his study of over 3,500 college freshman students, a greater emphasis has to be placed on Advanced Placement participation rather than Advanced Placement Examination scores. Challenge Success (2013) suggested that even when students did not take the Advanced Placement Examination, taking Advanced Placement Courses in high school prepared them for the academic rigor of college courses and allowed them to be more attractive in
the college application process. In the majority of the literature regarding Advanced Placement Courses, data compiled from Advanced Placement Exam scores was used principally to derive these conclusions. The amount of research pertaining to non-test-taking students, including the percentage that would be represented by that group, was quite limited.

Course content fidelity also plays an important role in assessing the accuracy of Advanced Placement Courses and the resulting Advanced Placement Exam scores. There was a limited amount of literature that discussed the value of teaching Advanced Placement Courses with content fidelity. Since the initiation of the Advanced Placement Audit in 2007, there has been no additional review of this concern on the part of the College Board other than the approval of the teachers’ syllabi. This study, therefore, will also seek to enhance the existing body of research by exploring teachers’ perceptions concerning the value or lack thereof of teaching Advanced Placement content with fidelity and to determine how the 2007 Advanced Placement Audit has impacted the teaching of Advanced Placement Courses.

Definition of Terms

The following terms are defined specifically for this research study:

*Advanced Placement Course:* “College-level classes in a wide variety of subjects” taken during high school (College Board, 2013f, para. 1).

*Advanced Placement Course Content:* Includes learning objectives for each topic and “the curricular goals of the subject, and … sample examination questions” (College Board, 2013e, para. 3).
**Advanced Placement Exam:** “Rigorous, multiple-component tests that are administered at high schools each May and provides a standardized measure of what students have learned in the AP classroom” (College Board, 2012b, para. 1).

**College Board:** A non-profit organization that runs the international Advanced Placement Program in over 100 countries, along with other entities that include the SAT, SAT Subject Tests, and PSAT/NMSQT (Preliminary SAT/National Merit Scholarship Qualifying Test) (College Board, 2012e).

**Course Fidelity:** Teaching the content as approved by the College Board without substitution or supplementation; “to use it as it is ‘supposed to be used,’ as intended by the developer” (Fullan, 2001, p. 40).

**Low-SES Students:** Wyatt and Mattern (2011) stated “SES levels are determined by their parents’ income and level of education” (p. 4). For the purpose of this study, low-SES students are defined as students who qualify for free-and-reduced lunches as determined by the Commonwealth of Pennsylvania.

**Weight:** To account for the rigor of Advanced Placement Courses, “schools employ a range of methods to account for such differences when calculating grade point average and the associated rank in class for graduating students” (Sadler & Tai, 2007, p. 5).

**Limitations**

This study was limited to four public high schools in the southeastern portion of the Commonwealth of Pennsylvania that offered Advanced Placement courses. The data were not able to be generalized to all districts due to the study’s small sample of schools in one general geographic location. In addition, the Advanced Placement teachers who
contributed to this study did so on a voluntary basis and may not have been representative of all Advanced Placement teachers in the participating schools.

**Research Questions**

The following research questions guided this study:

1) What are teacher perceptions regarding the reasons that students choose to enroll in Advanced Placement Courses?

2) What are teacher perceptions regarding the reasons that students choose to take, or opt out of, the corresponding Advanced Placement Exam(s)?

3) What are teacher perceptions regarding the teaching of the Advanced Placement Course curriculum content with fidelity?

**Summary**

The growth of the Advanced Placement Program, coupled with the role that Advanced Placement Courses and Exams played in the college admissions process, placed emphasis on the importance of teaching Advanced Placement Course content with fidelity. While the Advanced Placement Course Audit was an attempt to create consistency and give colleges and universities confidence in uniformity of content coverage, it was still possible for teachers to deviate from their submitted syllabi. In addition, further research was necessary to ascertain why the 30% to 40% of students who took Advanced Placement Courses chose not to take the corresponding Advanced Placement Exam. In all, the purpose of this study was to explore teachers’ perceptions regarding student participation in Advanced Placement Courses and Examinations, as well as the value teachers placed on the fidelity of teaching Advanced Placement Course content.
Chapter Two – Literature Review

Introduction

As a primary link between high school- and college-level coursework with numerous benefits to college admissions, Advanced Placement (AP) was the focus of research in regard to the relationship between Advanced Placement Examination scores and consequential college outcomes. Schneider (2009) suggested that the Advanced Placement Program played an important role in high school education and college preparation for over 50 years. Advanced Placement Courses, initially created solely for the advancement of high-achieving students, are scheduling course options both internationally and in thousands of high schools across the United States. This chapter discusses relevant background information and related literature concerning the Advanced Placement Program, including characteristics of Advanced Placement teachers and students, information regarding Advanced Placement Exams, and reviews of the current research.

Advanced Placement

History. In the early 1950s, scholars and educators sought to provide opportunities for the brightest and most gifted students to advance through high school and college at a quicker pace by offering rigorous, college-level high school classes (Schneider, 2009). These classes were originally available only for high-achieving students who received invitations, and “in the spring of 1954, 532 students in the 18 participating schools took 929 placement examinations” (Valentine, 1987, as cited in Schneider, 2009, p. 816). The newly crowned Advanced Placement Program joined the
Scholastic Aptitude Tests (SATs) under the umbrella of the College Board in the 1950s (Lacy, 2010).

While the program was initially utilized only by the best and the brightest, it continued to expand in the following decades. The Advanced Placement Program: Remained much more prevalent in private and suburban schools than in urban ones due to a lack of properly trained teachers in urban school systems, limited classroom space, poor academic preparation, and a lower perception of the ability of the students in those schools. (Schneider, 2009, p. 820)

The inequity continued and became an even larger problem as highly selective universities and colleges expanded Advanced Placement Exam results into the area of college admissions, “reflecting those institutions’ need to make increasingly fine distinctions among growing numbers of applicants” (Geiser & Santelices, 2004, p. 2). In the 1980s and 1990s, a few states began to require that high schools offer Advanced Placement courses, and the federal government began to fund low-income students’ Advanced Placement Exam fees (Lacy, 2010). In the decade between 1990 and 2000 alone, the number of participating high schools increased by 40 percent (Schneider, 2009).

**Advanced Placement Today.** Today, the College Board runs an international Advanced Placement program with courses offered in over 100 countries (College Board, 2012e). While the College Board is a nonprofit organization, net revenues were $53 million in 2009 and $65.6 million in 2010 (Butrymowicz, 2012). The College Board maintains that the earnings are spent “toward new products, services, and advocacy. Last
year, for instance, the College Board spent $54.2 million on fee waivers for low-income students to take its tests” (Butrymowicz, 2012, para. 14).

In the 2011-2012 school year, 18,647 schools (College Board, 2012a) offered at least one of the 34 available Advanced Placement courses. Almost 2.1 million students completed approximately 3.7 million exams in May of 2012 (College Board, 2012a). Those numbers showed an increase over the last ten years, when, in 2002, approximately 900,000 students took more than 1.5 million Advanced Placement exams (Milewski & Gillie, 2002). While the minority population taking part in the Advanced Placement Program has increased, “students from urban, rural, and poor areas are still underrepresented” (CEEB, 2001, p. 3).

One component of the Advanced Placement Program is its elective, end-of-course Advanced Placement Examinations, administered in May, with scores released in July. Exams consist of multiple-choice and free-response questions; the scores from those combined sections “form a composite score that is transformed onto a 1 to 5 scale. The College Board provides the following interpretation of the 1 to 5 scale: 5-extremely well qualified, 4-well qualified, 3-qualified, 2-possibly qualified, 1-no recommendation” (Dodd et al., 2002, p. 1). Content-area experts, including college faculty and experienced Advanced Placement high school teachers, assist in Advanced Placement Course and Advanced Placement Exam development; content-area experts are also utilized for scoring completed Advanced Placement Exams and are trained to apply scoring rubrics to free-response questions to ensure that “rater variability is minimized” (Ewing et al., 2010, p. 92). “Extensive research, test development, and psychometric work are conducted
annually to support and maintain the large and diverse set of AP courses and exams” (Ewing et al., 2010, p. 86).

The Advanced Placement Program is “viewed as a cooperative educational endeavor among high schools, colleges, and universities” (Mattern et al., 2009, p. 1). Periodically, the College Board completes studies of college curriculums in order to gather data “regarding the content knowledge and skills being taught in the comparable introductory courses” (Ewing et al., 2010, p. 95). The resulting data helped define and revise the content and skills that are taught in Advanced Placements Courses and are assessed through the Advanced Placement Exams. The College Board maintains that involvement of college faculty helps to “ensure the strongest possible alignment between AP Courses’ learning objectives and those of comparable college courses” (Ewing et al., 2010, p. 95).

The fee for Advanced Placement Exams given in 2013 was $89 per exam (College Board, 2013h). Students were not limited to the number of Advanced Placement Exams they took each year; students, whether receiving their education in public school, private school, or at home, could have taken Advanced Placement Exams without completing the corresponding Advanced Placement Courses. The College Board offered a reduced fee of $54 for students “who are either enrolled or eligible to participate in the Federal Free or Reduced Price Lunch Program…on all AP Exams that they take in a given year” (College Board, 2013h). As a result of Advanced Placement fee reductions, Wyatt and Mattern (2011) found that there was an “increased presence of low-SES students in AP…doubling from about 75,000 in 2004 to around 150,000 in 2009” (p. 17). Variation existed among Advanced Placement high school policies. Some schools
required Advanced Placement students to take the Advanced Placement Exams with no additional fee assistance, some schools provided assistance with Advanced Placement Exam fees, in addition to the free-and-reduced-lunch fee reduction, and some schools did not require students to take the corresponding Advanced Placement Exams.

Paek, Braun, Ponte, Trapani, and Powers’ 2010 Advanced Placement Biology teacher survey found that 41% of the 1,171 teachers reported that their schools required students to take the Advanced Placement Exam, while 38% of teachers strongly encouraged students to take the Advanced Placement Exam. The researchers concluded that “the most common scenario is that 75% or more of the students in a class take the AP Exam” (p. 73).

**Advanced Placement Teachers.** In 2011, 128,568 teachers taught Advanced Placement classes in nearly 13,000 public schools (College Board, 2012f). Paek et al.’s 2005 survey of Advanced Placement Biology and U.S. History teachers indicated that the majority of teachers were veteran instructors with higher levels of degrees and certifications than other colleagues in their respective schools. A 2010 survey showed that 79% of the 1,171 surveyed Advanced Placement Biology teachers were 36 years of age or older, 93% were Caucasian, and 56% were female (Paek et al., 2010). Those teachers “tended to be veteran teachers, to have a higher level of teaching experience than the average U.S. teacher and a higher level of academic preparation (both in degrees and certification)” (Paek et al., 2010, p. 71). Hertberg-Davis and Callahan (2008) completed a qualitative study consisting of 200 interviews of Advanced Placement and International Baccalaureate (IB) students in 23 schools across seven states. Their study revealed that the majority of students described their teachers as “dedicated, hardworking, skilled, and
knowledgeable” (p. 203), and teachers were able to offer a “high-level challenge” (p. 204). Many Advanced Placement students, however, still agreed that not all teachers were “equally suited to teaching these advanced courses and that the competence of the AP teacher affected the quality and challenge level of the course” (Hertberg-Davis & Callahan, 2008, p. 203).

The College Board published a report by The Commission on the Future of the Advanced Placement Program (CEEB, 2001), which was charged with making recommendations for “providing equitable access to Advanced Placement and maintaining the high quality of Advanced Placement as the Program grows” (CEEB, p. v, 2001), noted that teachers benefitted from the Advanced Placement program. Advanced Placement professional development opportunities “strengthened teachers’ content knowledge and pedagogical skills, and they were energized by the opportunity to teach rigorous college-level courses” (p. 2). Mason’s 2010 survey and interviews of 41 teachers in three districts in northern California indicated that teachers overwhelmingly reported that teaching motivated students who were willing to “go more in depth with the material” was their favorite aspect of teaching Advanced Placement Courses (p. 80). Teachers expressed distaste for the design of the Advanced Placement Exam, including “how and what questions were asked” (p. 64), as well as the additional workload that was required of the Advanced Placement teacher (Mason, 2010).

Klopfenstein (2003), however, argued that as the Advanced Placement Program was experiencing a “rapid growth” (p. 43), more Advanced Placement teachers were not only placed out of their field of study but also lacked professional development support, thus “diminishing the effectiveness of a school’s AP program” (p. 40). Sources (CEEB,
expressed concern regarding the limited number of teachers who were qualified to teach Advanced Placement courses. “Without vigorous recruitment and increased in-service training, there will not be enough qualified teachers to meet AP needs, particularly in underserved areas” (CEEB, 2001, p. 3).

**Student Participation in Advanced Placement.** Nearly 1.7 million seniors, 1.4 million juniors, 427,000 sophomores, 92,000 freshmen, and 5,400 students in eighth grade or below took Advanced Placement Examinations in 2012 (College Board, 2012c). Of those students, approximately 80% took one or two Advanced Placement Examinations, and the other 20% took from three to 18 Advanced Placement Exams (College Board, 2012d). Foust, Hertberg-Davis, and Callahan (2009) surveyed 84 Advanced Placement and International Baccalaureate (IB) students in four study sites located in one state. Surveys indicated that the students experienced “pride in completing more challenging work, similarity and special bonds among participants, better treatment (more respect and responsibility) from teachers, better overall class atmosphere” (p. 289). Their study also uncovered the high level of stress, fatigue, and sleep deprivation that these students deemed necessary in order to create a pathway to a successful future (Foust et al., 2009). A survey of Advanced Placement Biology teachers alone found that 81% of the teachers required between five and 10 hours of Advanced Placement homework each week (Paek et al., 2010).

Sadler (2010b) surveyed 7,491 students in 55 colleges and universities across the United States who were enrolled in first-semester introductory biology, chemistry, and physics courses. Sadler concentrated on the characteristics of the students currently
enrolled in the introductory science courses who had previously been part of regular, honors, or Advanced Placement classes in high school. Sadler (2010b) reported that:

AP students spend more time teaching each other and twice as much time preparing for standardized exams. Quantitative problem-solving is more centralized in honors and AP courses, as are exams with open-ended questions and students having to draw graphs by hand or computer. AP students spend more time on homework, reading the textbooks, and studying outside of class than do honors or regular students. (p. 58)

**Minority and low-income students.** Milewski and Gillie (2002) pointed out that ethnic minority, ELL (English Language Learners), and economically disadvantaged students continued to be underrepresented in the Advanced Placement Program. Of the 1.7 million seniors who took the Advanced Placement Exams in 2012 (College Board, 2012c), 88,198 were Black/African Americans, 169,521 were Hispanic/Latino, and 5,637 were American Indian/Alaska Native (College Board, 2013a). There were 733,416 low-income students taking Advanced Placement Exams in 2012 (College Board, 2013a).

The College Board (2012f) defined “AP potential” as the students who have a 70 percent or greater chance of achieving a score of a 3 or higher on an Advanced Placement exam, based on PSAT/NMSQT data for 2011. “An analysis of nearly 771,000 graduates with AP potential found that nearly 478,000 (62%) did not take a recommended AP subject” (College Board, 2012f, p. 17) because their school did not offer it, they chose not to enroll, or they did not qualify due to other criteria. “Underserved minorities appear to be disproportionately impacted: 74 percent of American Indian/Alaska Native
students, 80 percent of Black/African American students, and 70 percent of Hispanic/Latino students did not take the recommended AP subject” (College Board, 2012f, p. 17).

Advanced Placement Exam fee reduction and cash incentives for certain Advanced Placement Exam scores have been two methods used to attempt to increase the number of minority and low income students participating in the Advanced Placement Program. Jeong (2009) analyzed the data of 4,870 students, found in the nationally representative database *Education Longitudinal Study of 2002*, who took at least one of four different Advanced Placement Exams. While he found that Advanced Placement Exam fee reductions increased the likelihood that Advanced Placement students would choose to take the Advanced Placement Exam, there was little evidence that performance-based incentives, such as receiving cash for high Advanced Placement Exam scores, had an effect on Advanced Placement Course enrollment and Advanced Placement Exam success. The researcher suggested that “fee exemption alone is not sufficient to overcome achievement gaps in AP performance” (p. 363).

Conversely, Jackson (2012) studied data from the Advanced Placement Incentive Program (APIP) in Texas, where students and teachers could be rewarded with financial incentives that were mainly provided by private donors. Incentives that could be earned for good Advanced Placement Exam performance culminated in more low-income and minority students passing Advanced Placement Exams, persisting longer in college, and ultimately earning higher incomes (Jackson, 2012). Challenge Success (2013) noted that one reason for the discrepancy between Jeong (2009) and Jackson (2012) could have been that financial incentives were only one part of the APIP program studied by Jackson.
“APIP also includes teacher training, additional student tutoring, and curriculum changes so that both teachers and students are better prepared for the college-level coursework” (Challenge Success, 2013, p. 8).

Concurring with Jackson’s 2012 study, Linzmeier (2012) used national aggregate data from 1994 through 2009 to find that financial incentives substantially increased Advanced Placement Exam participation and Advanced Placement Exam performance in the general population, but found little evidence that incentives had any effect on college enrollment and graduation rates. The data showed that “cash incentives can increase school, teacher, and student effort, improving course quality and learning” (Linzmeier, 2010, p. 29), but other policies, such as “accountability incentives, guaranteeing minimum credit, K-12/higher education collaboration, national exam fee waivers, state test fee subsidies, mandating AP offerings, equipment and instructional grants, and funds for teacher training” (p. 29), showed that there was little to no effect on Advanced Placement results.

Many minorities and students in lower socio-economic schools did not experience a curriculum that sufficiently prepared them for Advanced Placement courses (Jeong, 2009; Moore & Slate, 2008). Jeong (2009) stressed that since fee exemptions were not enough to help close the achievement gaps, interventions may need to include programs such as “pre-AP courses that help the disadvantaged prepare for AP programs” (p. 363). He also noted that schools’ “lower-quality” Advanced Placement Programs could explain the lower Advanced Placement Exam scores from underprivileged populations.

Challenge Success (2013) summarized that the level of benefit from Advanced Placement Courses for the individual student, whether minority, low-SES, or neither, “depends on
the teacher, the particular course and curriculum, and it depends on the students
and their reasons for taking the courses, their overall workload, and how they handle the
increased demands of a college-level class” (p. 8).

Well-meaning attempts to “expand the AP program to traditionally
underrepresented student populations…can have unintended and negative consequences”
(Kutchner, 2012, p. 90). Using more experienced educators to teach smaller Advanced
Placement Courses can leave regular and lower-level students with less experienced and
less effective teachers, whereas the use of inexperienced teachers in the Advanced
Placement classrooms can negatively impact student success in Advanced Placement
Courses (Kutchner, 2012; Sadler, 2010b). Likewise, when Advanced Placement Courses
are added to a school, thereby removing a number of higher-achieving students from the
general classes and placing them into Advanced Placement Courses, the result could have
“a detrimental effect on the overall intellectual atmosphere at a high school” (Thompson
& Rust, 2007, para. 8). Schools with larger numbers of minority and low-income students
already tended to be plagued by more inexperienced teachers, larger class sizes, and
fewer funds to provide programs such as Advanced Placement courses (Geiser &
Santelices, 2004; O’Keefe, 2009).

Hacsi (2004) wrote that as Advanced Placement Courses are playing a more
prominent role in the college admissions process, students at schools lacking resources
for numerous Advanced Placement Courses are at a disadvantage. Hacsi (2004)
summarized some of the main reasons behind the gap:

AP courses are intended to be small and intensive, and they are therefore
expensive. AP students also need to be at a certain educational level if they are to
have a reasonable opportunity to succeed, which means earlier years of schooling must have been productive. In short, AP classes require a school system with considerable resources. They are, as a result, much more likely to be found at schools in communities of some wealth than in those of working-class or disadvantaged communities. (p. 1396)

**Advanced Placement Course prerequisites.** Some schools require prerequisite courses, grades, or tests prior to admittance into Advanced Placement Courses, or prerequisites, if any, could vary from teacher to teacher (Kutchner, 2012). Paek et al.’s 2010 survey of 1,171 Advanced Placement Biology teachers found that 76% of teachers indicated that prerequisites were part of their schools’ policy; of those prerequisites, 72% of teachers specified that specific course completions were required, and 63% of teachers specified that a minimum grade in prior courses was required (Paek et al., 2010). While some proponents argued that Advanced Placement should be made available to any student who wished to endure the challenge, Klopfenstein (2003) stated that open enrollment is “problematic in that inappropriately placing unfocused, unmotivated, or poorly prepared students in the AP Program demoralizes those students and necessitates a dilution of the curriculum for all students” (p. 42). When schools use limited criteria such as class rank or standardized test scores, opportunities could become reduced for many underprivileged and minority students. Klopfenstein suggested that schools should utilize a variety of standards, including “test scores, transcripts, teacher recommendations, and personal interviews…to assure that students who enter the AP program are both capable and highly motivated” (2003, p. 42).
Miron’s 2008 study focused on an affluent suburban high school where acceptance into Advanced Placement Courses offered by the school was determined by past grades, teacher recommendations, and a demonstration of excellence on a qualifying exam. Pressure from other teachers, parents, students, and community members forced the school to expand student enrollment in Advanced Placement Courses by 20%. Looking at final course grades and Advanced Placement Exam scores, Miron (2008) concluded that “no statistically significant evidence was found that relaxing admission criteria from 2006 to 2007 affected student achievement negatively” (p. 103). The researcher found that Advanced Placement Exam scores actually increased “when controlling for pre-existing differences in students” (p. 103).

In Mason’s 2010 survey and interview of 41 teachers in three districts in northern California, the majority of teachers used specific, pre-set criteria to enroll students in their Advanced Placement classes, including teacher recommendations, grades in previous courses, and overall grade point average (GPA). “The decision to screen or to not screen students was clearly not based upon any existing policy, but was implemented by individual teachers at their own discretion” (Mason, 2010, p. 74). Mason also found that 66% of teachers in the schools with a higher rate of students who qualified for free and reduced lunches reported using teacher recommendations more frequently when compared to 26% of teachers in schools with a lower rate of students who qualified for free and reduced lunches. The method of using teacher recommendations for screening “has been criticized in the past due to the subjective nature of teachers from previous courses in previous school years making a decision on whether a student would be successful in an AP course” (Mason, 2010, p. 73).
**Motivational variables.** The College Board (2012b) stated that benefits to participation in the Advanced Placement Program included opportunities to “earn credit or placement for qualifying AP Exam grades, stand out in the admissions process, earn academic scholarships and awards from colleges and universities, experience a college-level exam, and be prepared for college-level course work” (para. 2). Just over 4,000 colleges and universities participated in the Advanced Placement Program in 2012 (College Board, 2012a), which meant that those institutions considered students’ Advanced Placement Exam scores “for credit, placement, and/or consideration in the admission process” (College Board, 2012f, p. 9). While Advanced Placement Exam scores were not typically included on high school transcripts, students could choose whether or not to share Advanced Placement Exam scores with prospective colleges and universities. Depending on the institutions’ Advanced Placement policies, which could vary greatly, students could reduce their time to degree completion, receive exemption from required courses, be placed into upper-level courses, and/or receive college credits for qualifying scores (NRC, 2002). At the other end of the spectrum, some institutions only awarded credit for courses not included in students’ choice of major, awarded credit after a student successfully completed a higher-level course in the same subject, or did not award any credit or placement, regardless of the score (NRC, 2002). While the College Board’s website stated that “over 90 percent of the nation’s colleges and universities have an AP policy granting incoming students credit, placement, or both, for qualifying AP Exam grades” (College Board, 2013i), Lichten (2007) found that only 30% of colleges and universities accepted Advanced Placement Exam scores of 3 for advanced placement, while 89% accepted a 4, and 95% accepted a 5. “Only 49 percent of AP test
takers receive college credit, even though two-thirds of them are qualified for college credit according to the College Board” (NRC, 2002, p. 60-61). Ivy League school Dartmouth College recently changed its Advanced Placement policy, beginning for freshmen entering in 2014; the school will no longer award credits for high Advanced Placement Exam scores, a policy change that had been debated for the past decade (Lee, 2013). While the College Board maintained that Advanced Placement Courses were at college-level standards with research supporting such claims, Dartmouth’s press release stated that the research was “neither peer-reviewed research nor undertaken to be a general statement about the value of AP courses, and should not be characterized as such” (Lee, 2013, para. 10).

The College Board’s “8th Annual Report to the Nation” (2012f) compiled data from public schools in the United States. The report stated that in 2011, 616,412 public school students in nearly 13,000 public schools reported Advanced Placement Exam scores to 3,293 colleges and universities. A score of three or higher on Advanced Placement Exams was achieved by 540,619 out of 903,630 graduating seniors in public schools who took at least one Advanced Placement Exam in 2011 (College Board, 2012f). With 3.2 million diplomas handed out to graduating seniors in the 2011-2012 school year (USCB, 2011), approximately 28% of graduating seniors took at least one Advanced Placement Exam. The number of students who took Advanced Placement Courses, however, was larger than 28% when one took into account the reported 30% to 40% of students taking Advanced Placement Courses but electing not to participate in the Advanced Placement Exams (CEEB, 2001; NRC, 2002). In order to help motivate all
Advanced Placement students to take the Advanced Placement Exam, the College Board (2012b) suggested the following:

Administrators should take steps to ensure that all of their students in AP courses take the end-of-course AP Exam. Incentives to take AP Exams can include:

waiving the final course exam if the student takes the AP Exam, paying the exam fees for the student, not applying additional grade weight, or listing the course as “Honors” rather than “AP,” if the student elects not to take the AP Exam. (para. 8)

Tabulations from numerous studies indicated positive results when comparing Advanced Placement participation and Advanced Placement Exam scores to various college outcomes (Dougherty et al., 2006; Hargrove et al., 2008; Keng & Dodd, 2008; Mattern et al. 2009; Murphy & Dodd, 2009; Scott, Tolson, & Lee, 2010; Wyatt & Mattern, 2011) and to relationships with college courses and majors (Bleske-Rechek, Lubinski, & Benbow, 2004; Mattern, Shaw, & Ewing, 2011; Morgan & Klaric, 2007; Morgan & Maneckshana, 2000; Patterson, Packman & Kobrin, 2011). Ewing et al. (2010) conducted a review of the validity of Advanced Placement Exam scores and scoring procedures, suggesting that colleges and universities “can be confident in the reliability and validity of Advanced Placement exam scores when using them to make credit and placement decisions” (p. 103). Ewing et al. (2010) noted that studies did not attempt to prove that taking an Advanced Placement Course caused a student to succeed in college, but “instead, the studies were designed to investigate whether AP exam scores were valid indicators of a student’s readiness for placement into a course beyond the introductory course” (p. 95).
College outcomes. Mattern et al. (2009) analyzed data from the SAT Validity Study database that included students from 99 institutions. The researchers surmised that Advanced Placement students who performed higher on various Advanced Placement Exams also tended to have “higher FYGPAs (First Year Grade Point Average), higher second-year retention rates, and attendance at more selective institutions” (p. 12). Likewise, the first-semester college performance of students with Advanced Placement credit remained significantly higher, regardless of gender or ethnicity, when over 9,000 students with similar SAT scores and high school rankings were compared (Scott et al., 2010). Furthermore, Dougherty et al. (2006), following a cohort of over 67,000 students in Texas from eighth grade through five years after high school graduation, found that student participation in both Advanced Placement Courses and also Advanced Placement Exams resulted in higher college graduation rates. Students who earned a 3 or higher on at least one Advanced Placement Exam were more likely to graduate from college within five years, when compared to other groups. The researchers were able to show that a high school’s college preparation success level was best indicated by the percentage of students who completed an Advanced Placement course and passed an Advanced Placement Exam. Dougherty et al. (2006) recommended that the significance of Advanced Placement Exam results would indicate that districts need “to pay close attention not only to the quality of teaching in Advanced Placement courses but also to improving the academic preparation of students prior to their enrollment in those courses” (Dougherty et al., 2006, p. 2).

Similarly to Dougherty et al. (2006), Hargrove et al. (2008) looked at college outcomes for five years of graduating seniors in Texas who took both an Advanced
Placement Course and the corresponding Advanced Placement Exam. The researchers compared those seniors to other groups of students who took only the Advanced Placement Course or who were not involved in the Advanced Placement Program. Hargrove et al.’s comparisons provided “strong support for AP Program benefits over non-AP experiences for students and their subsequent college GPA, credits earned, and graduation performance” (p. 47), with those benefits being most pronounced in the group that participated in both the Advanced Placement Course and the corresponding Advanced Placement Exam.

Wyatt and Mattern (2011), analyzing data from more than 130,000 high school students, recognized the benefit to low-SES students who took Advanced Placement classes, even if they scored a 1 or a 2 on the exam. The researchers showed that those students were more likely to have “higher four-year enrollment rates, FYGPA, and retention rates. In sum, these students appeared to benefit from their AP experience even though during high school they failed to perform at a level widely considered adequate for college-level work” (p. 18). Wyatt and Mattern’s data analysis indicated higher college retention rates, higher first-year grade point averages, and higher attendance rates at four-year colleges and universities when compared to comparable non-Advanced Placement-completing peers, even when data were disaggregated by demographic and academic variables.

Keng and Dodd (2008) analyzed data from approximately 24,000 students entering the University of Texas at Austin during 1998 through 2001. Their study reinforced beliefs that the students entering college with Advanced Placement credit outperformed students without Advanced Placement credit upon examination of “first-
year credit hours and GPA, subject or subject credit hours and GPA, overall college credit hours and GPA, and sequent course grade” (p. 1). Similarly, Kutchner (2012) investigated Advanced Placement Exam results, to see if “AP creates advantages for these students over and above other advantages that these students already possess” (Kutchner, 2012, p. 55). Four years of data from over 16,000 Temple University freshmen indicated that as Advanced Placement Exam scores decreased, so did the students’ GPA. The researcher noted that when factors such as SAT scores, high school GPA, family income, and parents’ educational level were used as covariates, the “relationship drastically decreases” and “there was no longer a significant effect for the group” (Kutchner, 2012, p. 76). Kutchner found that high school students who received an Advanced Placement Exam score of 1 had lower college outcomes than the students with no Advanced Placement coursework, which disagreed with Wyatt and Mattern’s 2011 findings. Lastly, O’Keefe (2009) studied over 3,500 college freshmen students, grouped by Advanced Placement only, dual credit only, both Advanced Placement and dual credit, or neither; in terms of higher rates of graduation, the results implied that “AP contributes more heavily to four-year graduation rates than dual credit and certainly more than no participation” (p. 33).

Future course selections and majors. Numerous studies found relationships between the completion of Advanced Placement courses and Advanced Placement Exams to college courses and majors chosen by students (Dodd et al., 2002; Mattern et al., 2011; Morgan & Klaric, 2007; Morgan & Maneckshana, 2000; Patterson et al., 2011). Morgan and Maneckshana (2000) compiled and analyzed data regarding students from 21 colleges and universities and found that after taking a specific Advanced Placement
Exam, “the majority of students continued in their pursuit of knowledge in the subject area of the examinations” (p. 6). The thousands of students who took the Advanced Placement Exams were more likely to take courses in the same subject area as their Advanced Placement Exam, graduate with a major or minor in the corresponding disciplines, have a GPA above a 3.00, and graduate in four years (Morgan & Maneckshana, 2000). Mattern et al. (2011), using data from almost 40,000 students in 15 different majors at 39 institutions, also found a relationship between certain Advanced Placement participation and students’ subsequent majors in a related field. “These results provide support for the AP program as a medium by which to expose students to advanced academic material in various content areas, potentially confirming or sparking interest in particular career paths” (Mattern et al., 2011, p. 28). Mattern et al. (2011) determined that students who had not completed any Advanced Placement Exams were more likely to have an undeclared major by their third year of college. Lastly, after looking at almost 4,000 gifted individuals’ data gathered over the course of 30 years, Bleske-Rechek et al. (2004) concluded that “students who participated in the AP program were more likely to earn an advanced degree, even after controlling for mathematical reasoning ability” (p. 219).

Patterson et al.’s 2011 study analyzed College Board-gathered data from 195,099 enrolling freshmen at 110 universities in the fall of 2006. Their data demonstrated that in seven out of nine Advanced Placement subjects, the higher the score the student received on the Advanced Placement Exam in a certain subject area, the higher the subject area grade point average in the first year of college was likely to be. More than 72,000 Advanced Placement students from 27 institutions who were studied by Morgan and
Klaric (2007) also graduated in less time than non-Advanced Placement counterparts and completed more courses in the subject area of the Advanced Placement Exam. Some colleges allowed students with certain Advanced Placement Exam scores to test out of introductory courses; Morgan and Klaric (2007) found that “students with AP grades of 3 or better had higher grade point averages in intermediate college courses than did the non-AP students who first took an introductory course” (p. 9).

Dodd et al. (2002), who analyzed thousands of students entering their freshmen year at the University of Texas at Austin from 1996-1999, revealed that students who earned college credit as a result of Advanced Placement Exam scores earned equal to or higher grades in subsequent courses and took as many or more credit hours in the subject area as the other groups. Thompson and Rust (2007) completed a limited, smaller study, with only students labeled as high-achieving in regards to GPA and honors college members. Of the 41 students who completed questionnaires, 29 of them had Advanced Placement Course experience and 12 had no Advanced Placement Course experience. While the researchers predicted that the Advanced Placement students would have higher college GPAs than non-Advanced Placement students, their resulting data did not support that hypothesis (Thompson & Rust, 2007).

Because funding was readily available for STEM (science, technology, engineering, and mathematics) courses (Sadler, 2010a), there was an abundance of research in terms of college majors and outcomes (Robinson, 2003; Schwartz, Sadler, Sonnert, & Tai, 2009; Shaw & Barbuti, 2010; Tai et al., 2010). Robinson (2003) analyzed data from approximately 58,000 students in eight diverse high schools located in one school district. When the researcher focused on students who had taken Advanced
Placement Calculus and Advanced Placement science classes, he found that those students were more likely to major in STEM fields in college than students who did not take Advanced Placement courses in those subjects. Similarly, Shaw and Barbuti (2010) utilized a national SAT Validity Database that used college-submitted data regarding student performance. Their study analyzed data from 54,336 students at 39 colleges and universities who entered college in the fall of 2006 and were in their third year of study. Shaw and Barbuti concentrated on students who had taken Advanced Placement Exams in STEM-related fields. The researchers found that students who took one or more Advanced Placement STEM exams were more likely to persist in a STEM major in college by the beginning of their third year.

Likewise, Tai et al. (2010) also examined whether students who completed Advanced Placement math and science exams were more likely to choose a STEM-related major in college. They found “a strong positive effect associated with AP Program participation in mathematics and science” (p. 114); students who took Advanced Placement Calculus exams were four times more likely to major in engineering or physical sciences, and students who took Advanced Placement Biology, Chemistry, or Physics exams were more than twice as likely to major in the life sciences (Tai et al., 2010). Tai et al.’s results showed that students who took rigorous science and math courses in high school, such as Advanced Placement Courses, were more likely to major in a STEM-related field in college. “Increasing access and encouraging participation in AP Exams in the math and sciences could potentially help the U.S. keep and perhaps increase its competitive position globally” (Mattern et al., 2011, p. 29).
Sadler and Tai’s (2007) study used data from 7,613 college students who were enrolled in introductory science courses at 55 different colleges and universities. When the researchers focused on students who had received an Advanced Placement Exam score high enough to place out of introductory college science courses but opted to take the college course anyway, they found that, even with a clear advantage of taking both the Advanced Placement science course and the corresponding introductory college science course, “their performance is by no means indicative of the benefit many would have us believe Advanced Placement courses would impart to high school students who take them” (p. 16). Many of the students in Sadler and Tai’s study indicated that “while AP is a good preparation for college science, many also feel they benefited from taking the actual college science course” (p. 17).

**Advanced Placement Course Content Fidelity.**

*Content fidelity.* Fidelity of implementation had been well-defined in the health field industry, but fidelity appeared to have been “relatively neglected” (O’Donnell, 2008, p. 51) in the K-12 curriculum sector. Challenges remained in determining course fidelity, due to two reasons, (a) there have been multiple tools and strategies used, since they were typically developed on an as-needed basis, and (b) numerous and ambiguous definitions have existed in the field (Century, Freeman, & Rudnick, 2008). O’Donnell (2008) also mentioned that “a universal fidelity instrument may not be possible because fidelity measures need to be designed with a specific program theory or type of program in mind” (p. 54).

“Assessing fidelity of implementation is becoming increasingly important in education research” (Kopp, Hulleman, Harackiewicz, & Rozek, 2012, p. 1). An
assessment of school-based prevention programs in 4,700 schools across the
country found that only 7.8% of the programs were considered research-based, and less
than half of those programs met “fidelity standards” (USDoE, 2011, p. xxi). Dunsenbury,
Brannigan, Falco, and Hansen’s 2003 review of over 70 pieces of literature on fidelity of
implementation from the previous 25 years found that the majority of teachers failed to
cover all parts of a given curriculum and were more likely to cover even less as more
time passed. With school-wide initiatives and/or interventions, “it is critical to know
whether it is being implemented as designed, so that if the intervention is initially
unsuccessful, schools can take appropriate measures to remedy the deficiency rather than
abandoning the entire reform” (Johnson, Mellard, Fuchs, & McKnight, 2006, p. 42).
Checks for fidelity could involve teacher self-reports, lesson videotaping, frequent
administrative observations, and the completion of teacher questionnaires (Johnson et al.,
2006). O’Donnell (2008) mentioned that “although there may be general fidelity to the
implementation of the structures and routines of a whole-school program throughout a
school, individual teachers may adapt materials and routines for their particular needs in
the classroom” (p. 52).

Durlak and Dupre’s 2008 review of 500 studies focusing on the implementation
of programs found that the level of fidelity of implementation had influenced outcomes.
Adaptations occurred when changes were made to the original, prescribed curriculum or
intervention, including substitutions, additions, and modifications (Durlak & Dupre,
2008). They found that “fidelity and adaptation frequently co-occur and each can be
important to outcomes” (Durlak & Dupre, 2008, p. 341). Ringwalt et al. (2003) described
at least some adaptation in program implementation as “inevitable” (p. 376). Ringwalt et
al. (2003), studying 1,674 middle school-level substance abuse prevention teachers from across the nation, found that 78.2% of the teachers reported that they used a curriculum guide “at least to some extent” (p. 385). Of the remaining teachers, only 15% confirmed that they followed the provided curriculum guides closely (Ringwalt et al., 2003). Ringwalt et al. (2003) indicated that “the more discretion teachers perceive they have, the less likely they are to follow the curricula guides closely” (p. 386).

 Teachers receive course descriptions from the College Board, but are generally able to have flexibility in lesson plan development and teaching methodologies (NRC, 2002).

**Advanced Placement Course audit.** In 2007, the College Board instituted a required audit of all Advanced Placement Courses to help provide consistency, set clear guidelines, and give accepting colleges and universities confidence in uniformity (College Board, 2007). Cech (2007) also noted that this new requirement was announced “amid concerns about whether the program’s rapid growth had diluted its quality” (para. 3). The official Advanced Placement Course Audit was created as a means to provide administrators and Advanced Placement teachers with well-defined guidelines, curricular and resource requirements for Advanced Placement Courses (College Board, 2013d), as well as to “give colleges and universities confidence that AP Courses are designed to meet the same clearly articulated college-level criteria across high schools” (College Board, 2013d, para. 1).

Beginning in January of 2007, teachers were required to submit an Advanced Placement Course Audit form and a course syllabus for every Advanced Placement Course a high school wanted to offer (College Board, 2013d). College professors then reviewed teachers’ syllabi according to a list of criteria that was available to teachers...
prior to syllabi submission. Of all of the approved syllabi, two-thirds were approved immediately, and the other one-third required teachers to make at least one more resubmission for approval in order to label their courses as Advanced Placement (Cech, 2007). As a consequence of this worldwide audit, the total number of schools that offered at least one Advanced Placement Course dropped almost 13% that year, following decades of steady growth (Cech, 2007).

In a press release regarding the Advanced Placement Course Audit, the College Board stated that the audit “served the purpose of raising understanding of their courses among higher education faculty, but was otherwise ‘just a relatively painless hoop to jump through’” (College Board, 2007, para. 13). In the same press release, the College Board declared that 84% of the participating Advanced Placement teachers believed that “the goal of ensuring consistency in labeling courses ‘AP’ was appropriate” (para. 13) and that 67% thought that the audit “provided them with a valuable opportunity to reflect upon their course and its relationship to colleges’ expectations” (para. 13).

Critics of the Advanced Placement Program’s audit noted that an audit based exclusively on a course syllabus barely scratched the surface and did not address the teachers’ preparation, pedagogy, implementation, Advanced Placement-related professional development, or background (Cech, 2007). Although the College Board recognized that while educational background and professional development for a teacher can “greatly improve the quality of his or her teaching” (College Board, 2010, para. 12), there were “no formal requirements that a teacher must satisfy to teach an AP course” (College Board, 2010, para. 12). Philip M. Sadler, a researcher from Harvard University, “compared the College Board’s method of auditing courses to an audit of doctors that
only took into account what equipment they had” (Cech, 2007, para. 31).

Sadler (2010c) noted, “AP experience is not uniform, even within a single subject. College Board audits notwithstanding, the quality of AP courses differ tremendously by high school and even by teacher” (p. 265).

**Advanced Placement Course restructuring.** Numerous studies (Klopfenstein & Thomas, 2005; Missett et al., 2010; NRC, 2002; Schneider, 2009) critiqued Advanced Placement Courses as lacking an in-depth exploration of material; students had to learn massive amounts of material in an attempt to excel at the corresponding Advanced Placement Exam, which also favored breadth over depth. The breadth vs. depth criticism of Advanced Placement was reinforced through a 2005 teacher survey where teachers stated that the “most critical training need is how to cover the course content in the time available, which is consistent with our finding that teachers’ biggest concern is content coverage” (Paek et al., 2005, p. 18). The same teachers also reported that lecture was the most common instructional method and that multiple-choice tests were the main type of assessment, mainly because lecture and multiple-choice tests were the most effective means of covering and assessing such a large amount of material. Hertberg-Davis and Callahan’s 2008 survey of over 200 Advanced Placement and International Baccalaureate (IB) students in 23 schools across seven states resulted in students noting that the curriculum “often felt rushed and overwhelming due to the hurry to cover a great deal of content in time for the exams” (p. 202-203). The National Resource Council’s (NRC) 2002 report was the result of a two-year study that focused on Advanced Placement and International Baccalaureate’s math and science programs in high schools in the United States. The study was also critical of the teaching methods reinforced in preparation for
the exams. Teachers viewed the overloading of some Advanced Placement courses to be a negative aspect because:

(1) AP seems to be promoting a rather shallow view of the subject matters being studied, (2) AP seems to promote teaching and learning strategies that do not align well with current visions of effective teaching and learning, and (3) AP places unrealistic expectations and workloads on teachers and students, possibly leading to burnout. (Paek et al., 2005, p. 20)

Paek et al.’s 2010 study concurred with Paek et al.’s (2005) prior research. While teachers would have preferred to use effective strategies for learning such as “more project-based instruction, implementing more complicated assessments such as portfolios, or giving more detailed feedback as a strategy to improve student learning” (Paek et al., 2010, p. 74), they knew that the amount of material covered on the Advanced Placement Exams prevented them from using their preferred methods of teaching.

The breadth versus depth issue in Advanced Placement curriculums, especially in science with its additional lab component, had been addressed in recent years, prompted in part by the NRC’s critical 2002 study (Koebler, 2011). The 2012-2013 school year was the first to include an overhaul of the Advanced Placement Biology curriculum. Advanced Placement Chemistry curriculum changes will be implemented during the 2013-2014 school year, wherein Advanced Placement Physics B will become Advanced Placement Physics 1: Algebra-Based and Advanced Placement Physics 2: Algebra-Based, to be offered during the 2014-2015 school year. The new science curriculums include fewer, more in-depth topics and the addition of inquiry-based labs that will require students to play a more active role in hypothesis and lab development, as opposed to prior
“cookbook” labs where students followed a list of directions (Koebler, 2011).

According to Ewing et al. (2010), the detailed process used by the College Board to revise the Advanced Placement science courses and exams:

Makes available an unprecedented amount of detailed curricular materials about the expected learning outcomes for each course, provides tighter alignment between what is taught in the course and assessed on the exam, and further strengthens the validation argument for AP exam scores. (p. 103)

A 2008 study by Schwartz et al. that surveyed 8,310 students in introductory biology, chemistry, or physics courses in 55 colleges and universities across the United States, reinforced the need for the College Board to revamp science classes to include greater depth of content. They found that when high school students learned at least one topic more in-depth, over the course of a month or longer, they received higher grades in college science classes. Students who received more breadth covering all topics had no advantage in chemistry or physics and had a clear disadvantage in biology (Schwartz et al., 2009). Redesigned Advanced Placement Exams were able to provide “multiple choice (MC) questions that measure more complex scientific reasoning practices, which traditionally have been assessed only by free response (FR) questions” (Ewing et al., 2010, p. 86-87).

Other non-laboratory Advanced Placement Courses have also been revised, and each of the following was or will be implemented in the years named: Advanced Placement French Language and Culture and Advanced Placement German Language and Culture in 2011-2012, Advanced Placement Spanish Language and Culture in 2013-2014, and Advanced Placement U.S. History in 2014-2015 (College Board, 2013b). The
College Board (2013c) maintains that these curricular changes will help students “become reflective, independent, lifelong thinkers and learners. The courses align with similar college courses, reflect rigorous standards, and mesh content with the thinking skills colleges look for in an applicant” (para. 3). Teachers of the revised Advanced Placement Courses have two years to adjust and resubmit their syllabi for the Advanced Placement Course Audit. “During this time, AP provides many supports to help teachers understand, plan, and implement the new course” (College Board, 2013b).

**Criticisms of Advanced Placement.** Along with the critique of the Advanced Placement Program regarding its focus on breadth over depth, Advanced Placement is also criticized for its “test-driven nature…and for failing to adapt to changing views about curriculum and teaching” (Schneider, 2009, p. 814). In addition, the curriculum and instructional methods used in Advanced Placement courses are more “one-size-fits-all” (Hertberg-Davis & Callahan, 2008, p. 205). This approach “offers minimal differentiation for individual learning styles, provides little opportunity for creativity, and, thus, is not always a good match for atypical advanced learners” (Missett et al., 2010, p. 13). The National Research Council’s 2002 assessment of the Advanced Placement and International Baccalaureate (IB) programs also agreed that Advance Placement Courses and Exams did not account for learner differences. The test-driven nature and lack of depth also failed to offer authentic learning experiences (Missett et al., 2010, p. 13). Challenge Success (2013) summarized the criticisms of the Advanced Placement Program: “some worry that it has been oversold, distorted, and that real collateral damage is being wrought, straining schools, rewarding rigid, superficial memorization, and discouraging true intellectual curiosity in students” (p. 2). Hacsi (2004) pointed out that
“AP tests are a prime example of testing affecting curricula” (p. 1398), saying that Advanced Placement tests were developed “hand in hand” (p. 1395) with the curriculum. Advanced Placement Exams were like the “College Board exams on steroids…AP courses would teach the material that the AP tests would examine. They represented, if reluctantly on the part of some of their designers, a very specific intrusion into the way secondary schools taught” (Hacsi, 2004, p. 1395).

Klopfenstein (2003) and the National Research Council (2002) also warned high schools against using narrow criteria to allow students into Advanced Placement courses and using Advanced Placement Exam scores as a means of assessing the Advanced Placement program, Advanced Placement teachers, or even the high school or district. While the number of schools offering Advanced Placement courses and the number of students taking Advanced Placement Exams continued to increase, schools located in poor and rural communities struggled to keep their students competitive (Schneider, 2009). While some communities still strived to offer Advanced Placement courses, many of the nations’ top high schools dropped Advanced Placement classes in favor of non-Advanced Placement rigorous advanced courses, developed in-house, that allow for more depth, differentiation, inquiry, and authentic learning experiences (Schneider, 2009).

Blum (2009) was critical of Advanced Placement preparation, explaining that it diminished a liberal arts education by potentially allowing students to place out of college classes in subjects outside of students’ major fields of study. He stated:

Most approached their AP courses as merely another tedious hurdle to be overcome in gaining admission to selective colleges and universities. Students’ candid remarks over many years have only reinforced my conclusion that AP
participation, for many, is primarily an exercise in memorization and exam passing—the antithesis of genuine liberal learning. (Blum, 2009, p. 25)

**Issues with Advanced Placement growth.** “As more college and university applicants submitted transcripts filled with AP courses, the credential value of AP was weakened and it became less influential in post-secondary admissions, at least among highly selective schools” (Schneider, 2009, p. 814). Lichten (2000) also questioned whether the rigor of Advanced Placement had been compromised as the Advanced Placement Program continued to grow. As the program expanded, there was a greater need for college and university faculty to be involved in the Advanced Placement Program for “validation studies, examination development, and reading and scoring examinations” (CEEB, 2001, p. 3). Schools and districts were needed to account for more courses, examinations, and qualified teachers to meet the Advanced Placement demand. Lastly, in line with Schneider’s (2009) and Lichten’s (2000) criticisms, some colleges and universities “are increasingly reluctant to grant large numbers of college credits to incoming AP students and have questioned whether the value of AP Examination grades have been maintained as the AP Program has become larger and more diverse” (CEEB, 2001, p. 3).

As the Advanced Placement Program continued to expand, more students were entering colleges and universities with potential Advanced Placement units that, depending on the schools’ policies, could have been used for exemption from introductory courses (Eykamp, 2006). Eykamp’s 2006 study examined data from 15,667 students in eight undergraduate campuses “to see what effect AP units have on time to degree, course load, and propensity to double a student’s major” (p. 84). While one
would expect to see students use qualifying Advanced Placement Exam scores
to bypass introductory courses, take on a double major, or complete college in under four
years, Eykamp found that “despite the rapid growth in AP units, there has not been a
corresponding rapid reduction in time-to-degree completion” (Eykamp, 2006, p. 84). In
fact, “students who used AP units to graduate had lighter course loads than did students
who did not use AP units” (Eykamp, 2006, p. 95), and they were even less likely to
graduate with double majors.

**Issues with Advanced Placement in college admission.** The College Board
recommended that institutions consider student Advanced Placement Exam scores “for
credit, placement, and/or consideration in the admission process” (College Board, 2012f,
p. 9), and Advanced Placement Exam scores were “playing an increasingly prominent
role in college admission decisions” (Hacsi, 2004, p. 1394). Numerous studies (NRC,
2002; CEEB, 2001; Geiser & Santelices, 2004), including the College Board itself,
however, did not recommend using Advanced Placement Exam scores for college
admission criteria. Advanced Placement Exam scores are released in July, making those
scores unusable in the admissions process for college-bound seniors. While some
admission counselors considered sophomore and junior year Advanced Placement Exam
scores as admissions criteria, most sought out evidence that the student took more
rigorous courses offered by the high school (NRC, 2002). It should be noted that
Advanced Placement Exam scores are not included on most high school transcripts; only
the grade for the completed Advanced Placement Course is included. Students can opt for
Advanced Placement Exam scores to be sent to chosen colleges and universities. High
school grade point averages (GPAs) can also be factored into college admission, and
these can vary from district to district. Some districts generate GPAs based on
the weight given to Advanced Placement and honors courses. Along those lines, high
schools may consider a B earned in an Advanced Placement class factored as an A in
calculation of the GPA, thus allowing students to achieve above a 4.0 GPA (Sadler &
Tai, 2007). Sadler and Tai’s (2007) study recommended adding weight to students’ GPAs
to equal one extra point for Advanced Placement courses and .5 for honors courses.

While Geisers’ and Santelices’ 2004 four-year study of over 81,000 college
freshmen revealed that success on Advanced Placement Exams is a valid indicator of
college outcomes, they found that “the number of AP and other honors-level courses
taken in high school bears little or no relationship to students’ later performances in
college” (p. 19). Geiser and Santelices listed additional problems that arose when one
used Advanced Placement and honors course completion as a college admissions
criterion. These complications included the following: (a) some students did not have
access to as many Advanced Placement courses in their high schools as others, (b)
numerous students took the Advanced Placement course without taking the Advanced
Placement Exam, (c) many schools factored extra-credit into students’ GPAs for taking
Advanced Placement courses, thus increasing grade point averages, and (d) research
regarding the “predictive validity of AP coursework per se” (p. 5) was lacking. Hacsi
who take them; conversely, students who attend schools that offer little or nothing in the
way of AP courses are at a distinct disadvantage in the college admissions process”
(Hacsi, 2004, p. 1396).
**Issues with Advanced Placement in research.** Klopfenstein (2003) and Klopfenstein and Thomas (2005) discussed the flaws involved with using Advanced Placement Exam scores for research studies. The differences of students’ academic backgrounds prior to Advanced Placement courses contributed to flawed relationships between Advanced Placement Exam scores and Advanced Placement Program quality (Klopfenstein, 2003), as Dougherty et al. (2006) explained:

> Success in college may be due not to the AP classes themselves, but to the personal characteristics that led them to participate in the classes in the first place—better academic preparation, stronger motivation, better family advantages, and so on. (p. 3)

Klopfenstein and Thomas (2005) used the *Texas Schools Microdata Panel* to look at data from over 28,000 graduates of Texas high schools who attended 31 different Texas public universities in 1999. The researchers argued that College Board research was “fundamentally flawed because it fails to account for the nature of the typical AP student, who is particularly bright and motivated and likely to experience positive college outcomes even in the absence of AP experience” (p. 2). Klopfenstein and Thomas, looking at all rigorous courses that high schools offered, not just Advanced Placement Courses, discovered that “after controlling for the balance of a student’s high school curriculum, family, and school characteristics” (p. 1), Advanced Placement students were not necessarily more likely to have higher first semester GPAs or to return for sophomore year, when compared to students who took comparable non-Advanced Placement rigorous classes. The authors attributed those results to Advanced Placement Program’s rapid expansion over the previous two decades. Klopfenstein and Thomas (2005) noted:
While a rigorous high school curriculum clearly impacts the likelihood of early success in college, AP courses are not a necessary component of a rigorous curriculum. AP experience may serve as a signal of high ability and motivation, but it does not by itself indicate superior academic readiness. (p. 14)

Numerous studies including Dodd et al. (2002), Dougherty et al. (2006), and Hargrove et al. (2008) reported that students who completed both the Advanced Placement course and the corresponding Advanced Placement Exam showed equal to or better college grades, college graduation rate, and credits earned when compared to other student groups who did not complete the Advanced Placement Exams. Little data existed, however, regarding the estimated 34% of students who took Advanced Placement Courses but opted not to take the corresponding Advanced Placement Exams (CEEB, 2001), and thus were not included in most studies. “It is imperative that researchers examine AP participation (as opposed to exam scores) as a variable of college readiness” (O’Keefe, 2009, p. 19).

Summary

Since the early 1950s, the College Board’s Advanced Placement Program has grown and now plays a major role in both the college-preparatory process and also in the college admissions process. There remains a push to increase the number of Advanced Placement Courses in high schools, especially those with high numbers of minority and low-SES students, even though numerous criticisms exist concerning the Advanced Placement Program. Steps to ensure Advanced Placement Course content fidelity have been taken in the form of the Advanced Placement Course Audit, but research is absent regarding the level of fidelity to course content reported by teachers. In addition, studies
that focused on the percentage of students who took Advanced Placement Courses but opted out of the corresponding Advanced Placement Exams were practically nonexistent. Chapter Three will outline the methods and procedures used to discover teachers’ levels of Advanced Placement Course content fidelity, as well as their perceptions regarding the reasons students enrolled in Advanced Placement Courses and why the same students then chose to take or opt out of the corresponding Advanced Placement Exam.
Chapter Three – Methods and Procedures

Introduction

The purpose of this study was to examine teachers’ perceptions of the reasons that their Advanced Placement (AP) students enrolled in Advanced Placement Courses and the reasons that those students chose to take, or not to take, the optional corresponding Advanced Placement Examinations. Teachers’ perceptions of the validity and level of fidelity of teaching the required Advanced Placement Course content were also examined. Teachers of Advanced Placement Courses, which could have encompassed up to 34 different courses (Appendix A), were surveyed and interviewed regarding their perceptions of the different reasons that students decided to take Advanced Placement Courses and Exams. Teachers’ levels of value in the fidelity of teaching Advanced Placement Course content were also addressed in survey and interview questions.

Schools’ Advanced Placement Course enrollment numbers and Advanced Placement Exam numbers were obtained from building principals to assist in triangulating the data.

Participants

The subjects of this study were high school Advanced Placement teachers located in four school districts in southeastern Pennsylvania. Permission was granted by the districts’ superintendents and high school principals to access the participants and the schools’ Advanced Placement Exam data. Out of the 70 total Advanced Placement teachers in the four high schools, 26 teachers completed the online survey and eight teachers completed face-to-face interviews. Half of the survey participants (50.0%) had been in the field of education for more than 16 years. Participants’ teaching experience ranged from the first year teaching a specific Advanced Placement Course to a 30-year
Advanced Placement veteran. Out of the 26 participating Advanced Placement
teachers, five of them taught two different Advanced Placement Courses during the 2012-
2013 school year.

**Settings**

This study took place in four different public high schools located in southeastern
Pennsylvania. Each of the four high schools had between 1,000 and 1,700 students and
between 69 and 113 teachers. Three of the four high schools included students in grades 9
through 12; the other high school, High School A, included students in grades 10 through
12. Table 3.1 describes the demographics of the four high schools and is located at the
end of this section.

Study Site A was a comprehensive high school housing grades 10 through 12,
located in a county in southeastern Pennsylvania. It was considered “suburb-small” which
was defined as a “territory outside a principal city and inside an urbanized area with
population less than 100,000” (PDE, 2013, para. 4). Building administrators at the high
school included one principal and three assistant principals, one for each of the three
grade levels in the building. During the 2012-2013 school year, this site had a population
of 1,682 full-time students and 113 teachers, with 18 different Advanced Placement
Course offerings taught by 14 teachers. Taking part in the Advanced Placement Program
were 309 of the 1,682 students in grades 10 though 12. Since students could take multiple
Advanced Placement Courses simultaneously, the total enrollment number for these
courses was 578, with 519 Advanced Placement Exams administered in May of 2013.

Study Site B included grades 9 through 12 in a “suburb-large” area, defined as a
“territory outside a principal city and inside an urbanized area with population of 250,000
or more” (PDE, 2013, para. 4). This high school in southeastern Pennsylvania was led by one principal and two assistant principals and included 93 teachers. A total of 26 Advanced Placement Courses were offered and taught by 25 Advanced Placement teachers. Of the 1,235 students enrolled in the high school, 470 of those students participated in the Advanced Placement Program. Some students enrolled in multiple Advanced Placement Courses, resulting in a total of 961 participants in the 26 Advanced Placement Courses; those students took a total of 685 Advanced Placement Exams during the 2012-2013 school year.

Study Site C had a population of 1,055 students in grades 9 through 12. It was located in southeastern Pennsylvania and was also categorized as “suburb-large” (PDE, 2013). The building administration included one principal and two assistant principals. Ten of the 69 teachers at this high school taught 16 different Advanced Placement Courses during the 2012-2013 school year. A total of 150 students participated in the Advanced Placement Program and accounted for 316 enrollments in the 16 Advanced Placement Courses. There were 246 Advanced Placement Exams administered in this high school in May of 2013.

Study Site D was a comprehensive high school located in southeastern Pennsylvania that housed grades 9 through 12. It was considered “rural: fringe” which was defined as a “census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster” (PDE, 2013, para. 4). Building administrators included one principal and two assistant principals. Of the 104 teachers in the high school, 21 teachers taught 23 Advanced Placement Courses during the 2012-2013 school year. Advanced Placement
participants numbered 306 out of 1,513 students in the high school. The 23 Advanced Placement Courses had a total of 730 enrollments, and 405 Advanced Placement Exams were administered in May of the 2012-2013 school year.

Table 3.1

*Participating High School Demographics in the 2012-2013 School Year*

<table>
<thead>
<tr>
<th>Identifier</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<td>Suburb: Large</td>
<td>Suburb: Large</td>
<td>Rural: Fringe</td>
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<td>1055</td>
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</tr>
<tr>
<td>Number of AP Teachers</td>
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<td>25</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Number of AP Courses Offered</td>
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<td>26</td>
<td>16</td>
<td>23</td>
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<tr>
<td>Total Number of Students Enrolled in AP Courses</td>
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<td>961</td>
<td>316</td>
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<tr>
<td>Number of AP Exams Administered</td>
<td>519</td>
<td>685</td>
<td>246</td>
<td>405</td>
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</tbody>
</table>

* Students may be enrolled in multiple Advanced Placement Courses

**Instruments**

There were multiple types of instruments used to compile data for this study. Those instruments included a researcher-developed and panel of experienced educators-approved online survey facilitated through SurveyGizmo (Appendix B) and interview questions asked in a face-to-face format (Appendix C). School administrators were asked to submit Advanced Placement course enrollment numbers, Advanced Placement Exam
numbers, and summary sheets from the 2012-2013 school year for each
Advanced Placement subject offered at his or her school.

The researcher-created survey included Likert-scale questions that allowed for the
following responses: strongly agree, agree, disagree, strongly disagree. The survey also
included open-ended questions and questions in which the participants were asked to
check all answers that applied. The survey, which included a total of 29 questions, took
approximately 20 minutes to complete. The final version of the survey, which included
the teacher consent form, is found in Appendix B. Five interview questions were also
developed by the researcher and approved by a panel of experienced educators. The
interviews were conducted by the researcher and each took approximately 20 to 30
minutes. All interviews were carried out in a face-to-face format.

Current research provided the basis for survey and interview question
development. The following survey questions were directly related to research question
number one: 7, 12, 15, 21, 24, and 26. Open-ended survey question number 32 and
interview question number five also addressed research question number one. Research
question number two was addressed in survey questions 8, 9, 13, 16, 19, 23, and 29, in
open-ended survey question number 31, and in interview question number two. Survey
questions 10, 11, 14, 17, 18, 20, 22, 25, 27, and 28, open-ended survey question number
30, and interview questions one, three, and four addressed research question number
three. Teacher demographics, Advanced Placement-related professional development
activities, the schools’ master schedule formats, and the districts’ Advanced Placement
policies were addressed in questions one through six of the survey.
Advanced Placement Exam scores were also collected from each of the sites for the 2012-2013 school year. The number of students completing each Advanced Placement class, the number of students taking the corresponding Advanced Placement Exam, and the summary results were compiled.

Reliability

Reliability, which is “based on the assumption that there is a single reality and that studying it repeatedly will yield the same results” (Merriam, 1998, p. 205), was verified through the use of triangulation. Merriam (1998) defined triangulation as “using multiple investigators, multiple sources of data, or multiple methods to confirm the emerging findings” (p. 204). This study used triangulation of multiple data sources including Likert-scale survey questions, open-ended survey questions, teacher interviews, and archival data. The interviewees reviewed a summary of their responses, thus ensuring that their responses were transcribed accurately.

Validity

To examine the validity of research, Creswell (1998) asked, “How do we know that the qualitative study is believable, accurate, and ‘right’?” (p. 193). Validity was established through the use of a group of professional educators who assisted in aligning survey and interview questions to answer the research questions, offer feedback, and make recommendations for potential modifications.

Specifically, a group of five experienced educators with doctorates in Educational Leadership (Appendix D), who did not participate in this study, reviewed and approved the researcher-created survey and interview questions in order to contribute to the validity of the study. Panel members ranked individual survey and interview questions as one of
the following: 3 (the question was designed to adequately elicit the necessary information to answer the research questions), 2 (the question was designed to adequately elicit the necessary information to answer the research questions if a modification was made), and 1 (the question was not designed to adequately elicit the necessary information to answer the research questions, and numerous modifications were required). Adjustments were made to the interview and survey questions as necessary until all questions were ranked a score of 3 by each experienced educator panel member.

**Design of the Study**

This was a qualitative study, which Creswell (1994) described as “an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting” (Creswell, 1994, p. 1-2). Multiple methods of data collection were utilized in order to achieve triangulation: a survey placed on SurveyGizmo with Likert-scale questions and open-ended questions, and interview questions. The survey and interview questions were reviewed by a panel of experienced educators and were either approved for implementation or were modified prior to implementation.

**Procedure**

A formal letter requesting permission to conduct the qualitative study (Appendix E) was sent to the superintendents of four school districts located in southeastern Pennsylvania. After permission was granted by participating superintendents, the information was provided to Immaculata University’s Research Ethics Review Board (RERB) for approval (Appendix F). The researcher-developed survey and interview
questions were reviewed by a panel of experienced educators. Each high school administrator at every participating site was then sent a letter (Appendix G), which included the request for approval to participate in the study and a request for the high school’s Advanced Placement Exam scores from the 2012-2013 school year. Once written approval was secured from the principals, the researcher met with each principal to answer any questions, clarify information regarding the study, and deliver a packet of information to be placed in each Advanced Placement teacher’s mailbox by the principal or his or her designee. The packet included the Teacher Letter of Recruitment (Appendix H), the Teacher Informed Consent Form for Survey (Appendix I), and the Teacher Informed Consent Form for Interview (Appendix J). If the teachers receiving the information packet taught an Advanced Placement Course during the 2012-2013 school year and agreed to participate in the online survey that was described in the Teacher Letter of Recruitment, they were directed to follow the URL address to the confidential and anonymous SurveyGizmo site in order to complete the survey (Appendix B). Upon opening the survey, participants were initially presented with the Teacher Informed Consent Form for Survey and were asked to indicate “Yes,” which then allowed them to access the teacher survey questions. If the participants were willing to consent to an interview, they were directed to follow a separate URL address, which led them to the confidential and anonymous Teacher Informed Consent Form for Interview pages. By checking “Yes,” participants agreed to the terms in the consent form, which then allowed them to access the request for contact information needed to schedule a face-to-face interview. The separation of individual teacher responses to the survey and the consent to
participate in an interview form preserved the confidentiality of survey responses and maintained survey participant anonymity.

Two days after the information packets were distributed to the Advanced Placement teachers in each participating school, the potential participants also received the initial information through electronic mail, which included PDF documents of the information provided in the packet. The email was disseminated to all Advanced Placement teachers through the high school principal or a designee appointed by the high school principal.

Two Advanced Placement teachers from each school consented to take part in the interview process, for a total of eight interviews. The researcher contacted the participants to schedule a face-to-face interview at a mutually agreed upon time and place convenient for the participant. The interview was conducted utilizing the Teacher Interview Questions (Appendix C) and took approximately 20 to 30 minutes to complete. The researcher recorded participant interview responses utilizing hand-written notes. These interview notes were summarized by the researcher and a copy of this summary was sent to each participant within one week of the completion of the interview. Each participant had the opportunity to review the summary and provide comments as to its accuracy prior to the researcher’s analysis of this data.

Data Analysis

Information gathered from surveys and interviews was compiled and then grouped according to themes and patterns prior to it being analyzed by the researcher. Triangulation occurred through the use of multiple data sources, including the Likert-scale survey questions, open-ended survey questions, and interview questions. Principal-
reported Advanced Placement Course enrollment numbers, participation rates for Advanced Placement Examinations, and summary scores were also examined to look for themes and trends.

**Summary**

This study examined teacher perceptions of student motives for taking Advanced Placement Courses and Exams, as well as the level of Advanced Placement Course content fidelity reported by each teacher. A total of 26 Advanced Placement teachers from four high schools in southeastern Pennsylvania participated in the survey portion of this qualitative study, which included demographic survey questions, Likert-scale survey questions, and open-ended survey questions. Eight Advanced Placement teachers participated in face-to-face interviews. Data were analyzed from surveys, interviews, and principal-reported Advanced Placement Exam scores from the 2012-2013 school year. Chapter Four will discuss the results of the data analysis.
Chapter Four – Results

Introduction

The purpose of this study was to examine teachers’ perceptions of the reasons their Advanced Placement (AP) students enrolled in Advanced Placement Courses, and the reasons those students chose to take, or opt out of, the corresponding Advanced Placement Examinations. Teachers’ perceptions of their fidelity in teaching the required Advanced Placement Course content were also examined. A researcher-generated and panel of experienced educators-approved survey and interview questions were used to collect data. Survey results were compiled and responses from the open-ended survey questions and the interview questions were categorized by themes and patterns. The survey and interview questions were specifically developed to elicit responses to each of the three research questions.

The first six questions on the survey were developed to obtain specific demographic information about each of the participants, and how the Advanced Placement Courses were structured in the master schedule at each of their respective schools. Those questions included three demographic questions, which delved into participants’ overall teaching experiences and their experience in teaching Advanced Placement Courses, one professional development question which elicited their specific Advanced Placement training and how it was funded, one question designed to determine how Advanced Placement Courses were scheduled in each of the study sites, and one question designed to determine if the study sites had specific school board policy complementing participation in Advanced Placement Courses and the corresponding Advanced Placement Exam. Twenty-three Likert-scale questions followed, which
included the following options: strongly agree, agree, disagree, and strongly disagree. The online survey concluded with three open-ended questions, with each question specific to one of the three research questions. Twenty-six participants (N=26) completed the total of 29 survey statements, and 24 of those 26 also responded to the three open-ended questions. Two of the survey participants chose to provide no responses to the open-ended questions. Answers to the survey statements are reported in the “Survey” section under “Compilation of Data” and grouped by research question. Responses to the open-ended survey questions are reported in the “Open-Ended Questions” section under “Compilation of Data” and also grouped by research question.

Five interview questions were designed by the researcher and approved by a panel of experienced educators. Eight participants (N=8) completed the interview portion of the study, specifically, two participants from each of the four study sites. The participants from study site A were coded as IA1 and IA2, the participants from study site B were coded as IB1 and IB2. Similarly, participants from the other two sites were coded IC1, IC2, ID1, and ID2. Answers to the interview questions were grouped by themes and patterns and are reported in the “Interview” section under “Compilation of Data” and grouped by research question.

Lastly, archival data for the 2012-2013 school year were obtained from the four study sites, including Advanced Placement Course enrollment numbers, Advanced Placement Examination scores, and overall participation numbers. The data are reported in the “School Data” section under “Compilation of Data” and in the “Research Question Two” section.
Compilation of Data

**Demographics and Policies.** Table 4.1 illustrates data collected from the first demographic question on the online survey. The question asked participants to indicate the number of years they had accumulated in education at the close of the 2012-2013 school year. Two participants (7.7%) indicated that they had one to three years of experience, and three participants (11.5%) indicated they had four through 10 years of experience. Eight of the 26 participants (30.8%) had between 11 and 15 years of experience, while 13 participants (50.0%) reported that they had 16 or more years in the field of education.

Table 4.1

*Years of Experience in the Education Profession*

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 3</td>
<td>2 (7.7%)</td>
</tr>
<tr>
<td>4 to 10</td>
<td>3 (11.5%)</td>
</tr>
<tr>
<td>11 to 15</td>
<td>8 (30.8%)</td>
</tr>
<tr>
<td>16+</td>
<td>13 (50.0%)</td>
</tr>
</tbody>
</table>

*Note:* Participant Response (N=26).

Question number two on the survey asked participants to list the Advanced Placement Courses they taught during the 2012-2013 school year. Of the 29 Advanced Placement Courses offered in at least one of the four study sites, 24 Advanced Placement Courses were being taught at that time by the pool of participants. Each of the following courses was taught by one participant from one of the four study sites: Calculus AB, Calculus BC, English Language and Composition, English Literature and Composition, Environmental Science, German Language and Culture, Government and Politics: Comparative, Macroeconomics, Microeconomics, Music Theory, Physics B, Physics C:
Electricity and Magnetism, Physics C: Mechanics, Psychology, Studio Art: 2D Design, and World History. Biology, Chemistry, French Language and Culture, Government and Politics: United States, Latin, Statistics, Studio Art: 3D Design, and Studio Art: Drawing were taught by two participants from the four study sites. Five of the 26 participants taught more than one Advanced Placement Course during the 2012-2013 year: Drawing and 3D Design, Physics B and Physics C, American Government and Macroeconomics, World History and Microeconomics, and Drawing and 3D Design. The participant who indicated AP Physics C taught both Physics C: Mechanics, and Physics C: Electricity and Magnetism within the same course. Table 4.2, following the narrative, depicts those Advanced Placement Courses taught by each of the participants in this study.

The third survey question focused on the number of years participants spent teaching their respective Advanced Placement Courses. Six of the Advanced Placement Courses represented were taught by participants who were teaching that specific Advanced Placement Course for the first time. Three of the Advanced Placement Courses represented were taught by participants in their second year of teaching that specific Advanced Placement Course. Four Advanced Placement Courses were taught by participants in their third year of teaching that specific Advanced Placement Course. Four Advanced Placement Courses were taught by participants in their fourth or fifth year of teaching that specific Advanced Placement Course. Eleven Advanced Placement Courses were taught by participants in their sixth through tenth year of teaching those specific Advanced Placement Courses. One participant was teaching AP Biology for his or her 11th year, one participant was teaching French Language and Culture for his or her 23rd
year, and one participant was teaching Chemistry for his or her 30th year.

Table 4.2 includes a column listing years of experience teaching the specific Advanced Placement Courses that are represented by study participants.

Table 4.2

AP Courses Represented and the Number of Years Taught by Study Participants

<table>
<thead>
<tr>
<th>Advanced Placement Course</th>
<th>Number of Teachers</th>
<th>AP Years Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>2</td>
<td>9 and 11</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry</td>
<td>2</td>
<td>2 and 30</td>
</tr>
<tr>
<td>English Language and Composition</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>English Literature and Composition</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>French Language and Culture</td>
<td>2</td>
<td>8 and 23</td>
</tr>
<tr>
<td>German Language and Culture</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Government and Politics: Comparative</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Government and Politics: United States</td>
<td>2</td>
<td>4 and 8</td>
</tr>
<tr>
<td>Latin</td>
<td>2</td>
<td>9 and 10</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Music Theory</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Physics B</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Physics C: Electricity and Magnetism</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Psychology</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Statistics</td>
<td>2</td>
<td>1 and 8</td>
</tr>
<tr>
<td>Studio Art: 2D design</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Studio Art: 3D design</td>
<td>2</td>
<td>9 and 9</td>
</tr>
<tr>
<td>Studio Art: Drawing</td>
<td>2</td>
<td>7 and 8</td>
</tr>
<tr>
<td>World History</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Participant Response (N=26). Some participants taught more than one AP Course.

Survey question number four, represented on Table 4.3 and Table 4.4, focused on Advanced Placement-related professional development. Participants were asked to check all of the options that applied to their professional development experiences. Two of the 26 participants (7.7%) had not participated in any Advanced Placement professional
development opportunities. The other 24 participants (92.3%) participated in Advanced Placement Summer Institutes. Twelve participants (46.2%) participated in other Advanced Placement Workshops while five (19.2%) participated in online Advanced Placement professional development. Six of the 26 participants (23.1%) considered themselves to be active members of the Advanced Placement community, and none (0%) had been trained as Advanced Placement Readers. Attendance at Advanced Placement professional development programs was fully funded for 14 participants (53.9%) and partially funded for six participants (23.1%). One participant (3.8%) received no funding and personally covered the cost of his or her Advanced Placement professional development. Three of the participants (11.5%) participated in multiple professional development opportunities where the level of funding from the school districts varied.

Table 4.3

<table>
<thead>
<tr>
<th>Summer Institute</th>
<th>Workshops</th>
<th>Online Seminars</th>
<th>Discussion Groups</th>
<th>AP Reader</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 (92.3%)</td>
<td>12 (46.2%)</td>
<td>5 (19.2%)</td>
<td>6 (23.1%)</td>
<td>0 (0.0%)</td>
<td>2 (7.7%)</td>
</tr>
</tbody>
</table>

*Note:* Participant Response (N=26). Participants were able to check more than one option.

Table 4.4

<table>
<thead>
<tr>
<th>Full</th>
<th>Partial</th>
<th>No funding</th>
<th>Differentiated and varied</th>
<th>Did Not Participate</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 (53.9%)</td>
<td>6 (23.1%)</td>
<td>1 (3.8%)</td>
<td>3 (11.5%)</td>
<td>2 (7.7%)</td>
</tr>
</tbody>
</table>

*Note:* Participant Response (N=26). Participants were able to check more than one option.
Survey question number five inquired about the various credit options offered at the four different study sites, as shown below in Table 4.5. Sixteen participants (61.5%) taught Advanced Placement Courses that were worth one full high school-level credit, whereas three participants (11.5%) taught Advanced Placement Courses that were worth one-half of a high school credit. Three participants (11.5%) stated “Other” as an option. In tabulating the credit options, it became evident that four participants did not specify the particular credit options for their Advanced Placement Courses.

Table 4.5

*Credit Options of AP Courses Taught by Participants*

<table>
<thead>
<tr>
<th></th>
<th>One</th>
<th>One-half</th>
<th>Other</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16 (61.5%)</td>
<td>3 (11.5%)</td>
<td>3 (11.5%)</td>
<td>4 (15.5%)</td>
</tr>
</tbody>
</table>

*Note:* Participant Response (N=26).

Participants were asked how Advanced Placement Courses were scheduled in their schools in survey question number five. Twenty-two of the 26 participants (84.6%) taught Advanced Placement Courses that were year-long courses, approximately 45 minutes in length. One of the participants (3.9%) taught a year-long course that was approximately 90 minutes in length. Three participants (11.5%) taught semester-long courses that were approximately 45 minutes in length. There were no semester courses that were approximately 90 minutes in length. Table 4.6 depicts the options that participants were given regarding scheduling of Advanced Placement Courses.
Table 4.6

*Scheduling Options of AP Courses Taught by Participants*

<table>
<thead>
<tr>
<th>Semester Course</th>
<th>Year Long Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 minutes</td>
<td>45 minutes</td>
</tr>
<tr>
<td>90 minutes</td>
<td>90 minutes</td>
</tr>
<tr>
<td>3 (11.5%)</td>
<td>22 (84.6%)</td>
</tr>
<tr>
<td>0 (0.0%)</td>
<td>1 (3.9%)</td>
</tr>
</tbody>
</table>

*Note:* Participant Response (N=26).

Survey statements regarding participants’ school district policies addressing how the Advanced Placement Program was administered in their schools were included in survey question number six. The survey statements as well as the corresponding number of participant responses are depicted in Table 4.7. Twenty-one participants (80.8%) indicated that their school district specified that students successfully complete prerequisites prior to their enrollment in an Advanced Placement Course. One participant (3.8%) noted that any student, regardless of previous academic history, could enroll in an Advanced Placement Course, commonly referred to as open enrollment. Ten participants (38.5%) revealed that their specific course had enrollment prerequisites, even though other Advanced Placement Courses in their district may have had no prerequisites. Six participants (23.1%) noted that their school had open enrollment for some, not all, Advanced Placement Courses.

Table 4.7

*Prerequisites and Enrollment Status for Participants’ Advanced Placement Courses*

<table>
<thead>
<tr>
<th>School Prerequisites</th>
<th>Course Prerequisites</th>
<th>Open</th>
<th>Partially-Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 (80.8%)</td>
<td>10 (38.5%)</td>
<td>1 (3.8%)</td>
<td>6 (23.1%)</td>
</tr>
</tbody>
</table>

*Note:* Participant Response (N=26). Participants were able to check more than one option.
When asked if the school added weight to a student’s GPA upon completion of the Advanced Placement Course, regardless of whether or not the student took the Advanced Placement Exam, 25 of the 26 participants (96.2%) responded yes. No participants agreed with the following two statements: my school adds weight only if the student has completed the Advanced Placement Exam, and my school does not add weight upon completion of the course. One participant chose not to respond. The results are indicated below in Table 4.8.

Table 4.8

<table>
<thead>
<tr>
<th>School Policy Regarding Weight Added to GPA for Advanced Placement Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight added, regardless of AP Exam completion</td>
</tr>
<tr>
<td>25 (96.2%)</td>
</tr>
</tbody>
</table>

*Note: Participant Response (N=26).*

Survey question number six also addressed policies regarding the Advanced Placement Exams, shown below in Table 4.9. No schools in this study required students to complete the Advanced Placement Exam. Twenty-three of the participants (88.5%) responded positively when asked if the school had no requirements for completing the Advanced Placement Exam. Eight of the 26 participants (30.8%) responded that their school offered an incentive to students to complete the Advanced Placement Exam, such as excusal from the course’s final exam. No schools paid the entire Advanced Placement Exam fee, but one participant (3.9%) stated that his or her school partially contributed to Advanced Placement Exam fees in addition to the reduced rate for free-and-reduced lunch students.
Table 4.9

Policies Regarding the Advanced Placement Examinations

<table>
<thead>
<tr>
<th>Requires AP Exam Completion</th>
<th>Does not require AP Exam Completion</th>
<th>Incentives for AP Exam Completion</th>
<th>Pays entire AP Exam fee</th>
<th>Partially contributes to AP Exam fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (0.0%)</td>
<td>23 (88.5%)</td>
<td>8 (30.8%)</td>
<td>0 (0.0%)</td>
<td>1 (3.8%)</td>
</tr>
</tbody>
</table>

Note. Participant Responses (N=26). Participants were able to check more than one option.

The remainder of the data compiled through survey question number six is depicted below in Table 4.10 and also reported in the following narrative. Of the 26 participants who responded to the prompts regarding their receiving of any additional compensation, 25 participants indicated that no compensation was given for their students’ exam scores. One participant noted that his or her school offered non-financial compensation to Advanced Placement teachers that could potentially be in the form of additional classroom supplies and teaching materials, supplemental conference and workshop attendance, and/or smaller class sizes in an Advanced Placement Course.

Table 4.10

Compensation Available for Advanced Placement Teachers

<table>
<thead>
<tr>
<th>Financial Compensation based on AP Exam Scores</th>
<th>Non-Financial Compensation for AP Exam Scores</th>
<th>Non-Financial Compensation for Teaching AP Courses</th>
<th>No Compensation Given</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>1 (3.8%)</td>
<td>25 (96.2%)</td>
</tr>
</tbody>
</table>

Note: Participant Response (N=26).
Research Question One. What are teacher perceptions regarding the reasons that students choose to enroll in Advanced Placement Courses?

*Surveys.* Survey statements number 7, 12, 15, 21, 24, and 26 were designed to elicit answers for research question number one. Table 4.11 illustrates the individual survey statements and responses.

In survey statement number seven, participants were asked if students enrolled in Advanced Placement courses because additional weight was given in calculating their grade point average (GPA). Seven participants (26.9%) strongly agreed with the statement while 13 (50.0%) agreed, and six (23.1%) disagreed. None of the participants strongly disagreed with the statement.

Survey statement number 12 asked participants if they thought that students chose to take their Advanced Placement course in preparation for future careers. In responding to this statement, 11 participants (42.3%) strongly agreed and 13 participants (50.0%) agreed. Two participants (7.7%) chose to disagree with this statement, while no participants (0%) strongly disagreed.

Participants were asked to respond to survey statement number 15 which inquired as to whether or not students signed up for Advanced Placement courses in order to increase their chances of gaining college admission. Of the participants’ responses, 12 (46.2%) strongly agreed and 11 (42.4%) agreed. One (3.8%) disagreed and one (3.8%) strongly disagreed. One participant (3.8%) did not respond to this statement.

Asking participants whether or not they thought students took their Advanced Placement Course for exemption from a college entry-level course was addressed in survey statement number 21. Seven of the participants (26.9%) strongly agreed while 16
of the participants (61.6%) agreed. Two of the 26 participants (7.7%) disagreed and one (3.8%) strongly disagreed.

Whether or not students chose Advanced Placement Courses as preparation for future academic rigor was asked of participants in survey statement number 24. The participants answered in the following manner: 12 (46.2%) strongly agreed, 11 (42.3%) agreed, and 2 (7.7%) disagreed. No participants strongly disagreed with the statement. One participant (3.8%) did not give a response to this statement.

In survey statement number 26, participants were asked if students enrolled in their Advanced Placement Courses because of the academic challenge. Of the participant responses, seven (26.9%) strongly agreed, 18 (69.3%) agreed, and one (3.8%) disagreed. No participants chose to strongly disagree with that statement.

Table 4.11

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Students take my AP Course(s) because the weight affects their GPA.</td>
<td>7 (26.9%)</td>
<td>13 (50.0%)</td>
<td>6 (23.1%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>12. Students take my AP Course(s) to help prepare for future careers.</td>
<td>11 (42.3%)</td>
<td>13 (50.0%)</td>
<td>2 (7.7%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>15. Students take my AP Course(s) to increase their chance of gaining college admission.</td>
<td>12 (46.2%)</td>
<td>11 (42.4%)</td>
<td>1 (3.8%)</td>
<td>1 (3.8%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>21. Students take my AP Course(s) to gain exemption from entry-level college courses.</td>
<td>7 (26.9%)</td>
<td>16 (61.6%)</td>
<td>2 (7.7%)</td>
<td>1 (3.8%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>24. Students take my AP Course(s) to help prepare for college rigor.</td>
<td>12 (46.2%)</td>
<td>11 (42.3%)</td>
<td>2 (7.7%)</td>
<td>0 (0.0%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>26. Students take my AP Course(s) for the academic challenge.</td>
<td>7 (26.9%)</td>
<td>18 (69.3%)</td>
<td>1 (3.8%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
</tbody>
</table>

*Note: Participant Response (N=26).*
**Open-ended Survey Questions.** Open-ended question number 31 asked what teachers or schools could do to increase Advanced Placement Course participation in the participants’ specific courses. Two of the 26 participants (7.6%) chose not to respond to this open-ended question and 24 participants provided at least one response. The following is a description of the responses that emerged.

Three of the participants (11.5%) stated that they were satisfied with Advanced Placement Course participation. Four of the 26 participants (15.4%) mentioned that offering funds to help cover the cost of the Advanced Placement Exam or offering other incentives to complete the Advanced Placement Exam would help to increase Advanced Placement Course enrollment. Four more participants (15.4%) recognized promotion as a tool to increase Advanced Placement Course participation, either on an individual basis or to groups of students in other classes. One participant mentioned, “Explaining the importance of experiencing college-level material before entering college. I think most students also do not understand how expensive college is, and getting college credit through AP Courses can help with some financial problems.” Another participant noted, “Students are encouraged to take both honors-level as well as AP courses regularly by members of administration, guidance counselors, teachers, and parents who desire their children to strive for more challenging courses.”

Two participants (7.7%) recommended increasing the rigor of the courses leading up to Advanced Placement Course offerings in order to better prepare students for Advanced Placement Courses. Making their Advanced Placement Course a required part of the high school curriculum, instead of being counted only as an elective, was another suggestion given by two of the Advanced Placement participants (7.7%). One participant
mentioned that the option of dual enrollment has had a positive effect on students’ Advanced Placement Course participation. Lastly, another participant noted that the additional Advanced Placement Course offerings have enticed “true AP-level students” away from his or her specific Advanced Placement Course. Two participants (7.7%) responded that they did not know how to increase participation in their Advanced Placement Courses.

*Interviews.* Interview question number five asked participants to give the most important reason or reasons that students consider when choosing to enroll in the participants’ Advanced Placement Courses. Seven of the eight interviewees (87.5%) stated that students signed up for their Advanced Placement Courses because of interest in the topic or interest in a future related career. Five of the eight participants (62.5%) specified that students enrolled in their courses because they liked the participant as a teacher. Four participants (50.0%) indicated that students enrolled in order to be able to add weight to their grade point average (GPA) or to “boost” their transcripts.

Additional reasons why students selected specific Advanced Placement Courses were provided. One participant explained that students chose his or her Advanced Placement Course as a means to avoid other classes. The intent behind this response as provided by the participant was not necessarily a negative option, but rather some of the students saw they were able to expand on their subject selections and broaden their horizons, instead of taking an upper-level course in a subject they had already completed. Secondly, students chose Advanced Placement Courses in order to remain in challenging classes with their like-minded peers and also to remain in a classroom environment where there were few to no behavioral and classroom management issues. Another participant
indicated that students realized a certain notoriety was associated with being enrolled in Advanced Placement Courses, especially in an Advanced Placement Chemistry Course with the reputation of being the most difficult course in the school’s Advanced Placement Program. This participant acknowledged that there was a sense of prestige among students in knowing they were looked upon as quality students because of their enrollment in multiple and difficult Advanced Placement Courses.

**Research Question Two. What are teacher perceptions regarding the reasons that students choose to take, or opt out of, the corresponding Advanced Placement Exam(s)?**

**Surveys.** The following statements on the survey were designed to elicit responses to research question number two: 8, 9, 13, 16, 19, 23, and 29. Table 4.12 displays the individual statements and the resulting outcomes.

When asked in survey statement number eight whether or not the participants knew why students chose to take or opt out of the Advanced Placement Exam, 11 (42.3%) of the participants strongly agreed and 13 (50.0%) agreed with the statement. Two (7.7%) disagreed with the statement while none strongly disagreed.

Survey statement number nine asked participants to provide their perspective on whether students in their Advanced Placement Course had acquired enough content knowledge to be prepared to take the Advanced Placement Exam. Nineteen of the 26 participants (73.1%) replied that they strongly agreed, while six (23.1%) responded that they agreed. No participants (0.0%) disagreed, but one participant (3.8%) strongly disagreed.
Participants were asked in survey statement number 13 if students chose not to participate in the Advanced Placement Exam because they felt that they were not prepared to score well. The participants answered in the following manner: two participants (7.7%) strongly agreed, seven participants (26.9%) agreed, 14 participants (53.9%) disagreed, and three participants (11.5%) strongly disagreed.

In survey statement number 16, participants provided perspective on whether or not financial incentives for Advanced Placement Scores of 3 and above would increase Advanced Placement Exam participation. Of the responses, five participants (19.2%) strongly agreed, 12 participants (46.2%) agreed, and nine participants (34.6%) disagreed. No participants strongly disagreed.

Whether or not students took the Advanced Placement Exam in hopes of achieving a score enabling them to receive college credit was asked of participants in survey statement number 19. Fifteen participants (57.7%) strongly agreed while 11 participants (42.3%) agreed. No participants disagreed or strongly disagreed.

Participants were asked to respond to survey statement number 23 regarding whether or not they agreed that students chose not to participate in the Advanced Placement Exam because of the financial obligation. The participants answered in the following manner: one participant (3.8%) strongly agreed, three participants (11.5%) agreed, 13 participants (50.0%) disagreed, and eight participants (30.8%) strongly disagreed. One participant (3.8%) did not respond to this survey statement.

When asked in survey statement number 29 whether or not students chose to take the Advanced Placement Exam as a means of preparation for college-level exams, no
participants (0.0%) strongly agreed. Seventeen participants (65.4%) agreed, nine participants (34.6%) disagreed. No participants strongly disagreed with that statement.

Table 4.12
Participants' Survey Responses to Statements Pertaining to Research Question Two

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. I know the reasons why my students choose to take, or opt out of, the AP Examination.</td>
<td>11 (42.3%)</td>
<td>13 (50.0%)</td>
<td>2 (7.7%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>9. Students in my class have the required content knowledge to take the Advanced Placement Examination after completion of the AP Course.</td>
<td>19 (73.1%)</td>
<td>6 (23.1%)</td>
<td>0 (0.0%)</td>
<td>1 (3.8%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>13. Students who choose not to participate in the AP Exam make that choice because they do not feel prepared to score well.</td>
<td>2 (7.7%)</td>
<td>7 (26.9%)</td>
<td>14 (53.9%)</td>
<td>3 (11.5%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>16. AP Exam participation in my school would increase if financial incentives were provided to students who receive a score of 3 or above.</td>
<td>5 (19.2%)</td>
<td>12 (46.2%)</td>
<td>9 (34.6%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>19. My students take the AP Exam with the goal of achieving a score high enough to gain college credit.</td>
<td>15 (57.7%)</td>
<td>11 (42.3%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>23. Students who do not participate in the AP Exam make that choice because they are unable to pay the fee for the AP Exam.</td>
<td>1 (3.8%)</td>
<td>3 (11.6%)</td>
<td>13 (50.0%)</td>
<td>8 (30.8%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>29. Students participate in the AP Exam for the experience of taking a college-level exam.</td>
<td>0 (0.0%)</td>
<td>17 (65.4%)</td>
<td>9 (34.6%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
</tr>
</tbody>
</table>

*Note: Participant Response (N=26).*
**Open-ended Survey Questions.** Question number 32 in the open-ended survey section asked participants to suggest ways to increase Advanced Placement Exam participation. Two of the 26 participants (7.8%) did not complete question number 32, and 24 participants provided at least one response. Those responses included the following themes: assisting with exam cost, offering incentives, using encouragement, and focusing on the potential for college credit.

Of the 26 participants, five (19.2%) suggested that the schools assist with the cost of the Advanced Placement Exam either partially or fully. Four participants (15.4%) recommended offering incentives to students to complete the Advanced Placement Exam, such as exemptions from the regular course final exam. Three participants (11.5%) mentioned speaking to students and encouraging them to take the exam, with one of those participants specifying that teachers should “strongly recommend that qualified students” take the Advanced Placement Exam. Three more participants (11.5%) made direct references to the Advanced Placement Exam and the resulting college credit, with one participant commenting that college admissions might be on the minds of juniors, resulting in larger numbers of them taking the exams. One participant mentioned the option of offering weight to students’ grade point averages only if the students took the Advanced Placement Exams, as an incentive for students to take the Advanced Placement Exams.

**Interviews.** Interview question two focused on reasons why students chose not to participate in the optional Advanced Placement Exam. Five of eight participants indicated that their students did not perceive themselves as being competent enough to do well on
the Advanced Placement Exam, whether they were already struggling in the
course or unsure of their ability to score at least a three on the exam.

One participant mentioned the cost of the Advanced Placement Exam as a
deterrent, while another participant did not think it was the cost. There were three
participants, however, who specifically discussed the cost of the Advanced Placement
Exam as a factor only for those students who took multiple Advanced Placement
Courses, and who could not afford to take exams for all of those courses.

More kids are taking multiple AP classes, which leads to them taking fewer AP
Exams. The College Board wants certain standards met to deem a school as
distinguished. They also want more kids exposed to AP, plus they want them to
take more tests. Technically, the kids can’t do both. They can’t take four to five
exams. (ID1)

Two participants mentioned that some students chose to opt out of the Advanced
Placement Exam because they knew they would not be able to use their score for college
credit, whether they would be going to a technical school or a school that only accepted a
5, or would be enrolling in a program or department that would not accept a score in a
specific Advanced Placement Course. Two more participants said that those students who
were only taking the class as a transcript-builder or for the grade weight also opted out of
Advanced Placement Exam. One other participant noted the fact that his Advanced
Placement Course could also count as dual enrollment for a local community college and
thus directly impacted his Advanced Placement Exam participation rate because students
could obtain college credit without having to take the Advanced Placement Exam.
IC2 said that for him, specifically, “The option of community college credits at a reduced rate affects the number of kids taking the AP Exam.”

Research Question Three. What are teacher perceptions regarding the teaching of the Advanced Placement Course curriculum content with fidelity?

Surveys. The following statements on the survey were designed to elicit responses to research question number three: 10, 11, 14, 17, 18, 20, 22, 25, 27, and 28. The results of these survey statements are indicated in Table 4.13.

Survey statement 10 inquired as to whether or not teachers had replaced required Advanced Placement content with content of their own. Of the participant responses, two participants (7.7%) strongly agreed, seven participants (26.9%) agreed, nine participants (34.6%) disagreed, and eight participants (30.8%) strongly disagreed.

Participants were asked in survey statement number 11 if students had to learn some of the required course content outside of traditional class time. In responding to this statement, five participants (19.2%) strongly agreed and 11 (42.4%) agreed, while five (19.2%) disagreed and five (19.2%) strongly disagreed.

Whether or not an appropriate amount of time was scheduled to cover the required Advanced Placement Course content was asked of participants in survey statement 14. The participants answered in the following manner: 13 (50.0%) strongly agreed, 10 (38.5%) agreed, two (7.7%) disagreed, and one (3.8%) strongly disagreed.

In survey statement number 17, participants were asked if the questions on the corresponding examination were fully aligned to the material taught over the course of the school year. Sixteen participants (61.5%) strongly agreed, 10 participants (38.5%) agreed, and no participants (0.0%) disagreed or strongly disagreed.
Participants were asked to respond to survey statement number 18, which inquired as to whether or not teachers supplemented Advanced Placement content with their own additional content. Of the participant responses, eight (30.8%) strongly agreed, 15 (57.7%) agreed, and three (11.5%) disagreed. No participants (0.0%) strongly disagreed.

Participants were asked about their use of College Board-designed enrichment activities following Advanced Placement Exam administration in statement number 20. In response, eight participants (30.8%) strongly agreed, 14 participants (53.8%) agreed, four participants (15.4%) disagreed, and no participants (0.0%) strongly disagreed.

Participants were asked in survey statement number 22 to provide their view on prioritizing content in order of importance to ensure that the most important topics were covered prior to the Advanced Placement Exam. The participants answered in the following manner: 16 (61.5%) strongly agreed, eight (30.8%) agreed, two (7.7%) disagreed, and no participants (0.0%) strongly disagreed.

In survey statement number 25, participants were asked about the importance of teaching Advanced Placement Courses exactly as prescribed by the College Board. Four participants (15.4%) strongly agreed and 14 participants (53.8%) agreed. Eight participants (30.8%) disagreed while no participants (0.0%) strongly disagreed.

When asked in survey statement number 27 if their school had not allotted the amount of time needed to teach all of the Advanced Placement Course content, one participant (3.8%) strongly agreed and four participants (15.5%) agreed. Seven participants (26.9%) disagreed and 13 participants (50%) strongly disagreed. One participant (3.8%) did not respond to survey statement number 27.
Survey statement number 28 asked participants if they provided students with enrichment activities after the administration of the Advanced Placement Exam that were complimentary to the Advanced Placement Curriculum, yet not endorsed by the College Board. The participants answered in the following manner: three (11.5%) strongly agreed, 14 (53.8%) agreed, six (23.2%) disagreed, and 2 (7.7%) strongly disagreed. One participant (3.8%) did not respond to this statement.

Table 4.13

Participants' Responses to Survey Statements Pertaining to Research Question Number Three

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. I have on occasion replaced parts of AP-prescribed content with my own content that I believe is more important for students to know.</td>
<td>2 (7.7%)</td>
<td>7 (26.9%)</td>
<td>9 (34.6%)</td>
<td>8 (30.8%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>11. I expect my students to learn some of the required course content on their own, receiving no direct instruction on the material.</td>
<td>5 (19.2%)</td>
<td>11 (42.4%)</td>
<td>5 (19.2%)</td>
<td>5 (19.2%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>14. My school has allocated the appropriate amount of time to completely teach the required AP Course curriculum.</td>
<td>13 (50.0%)</td>
<td>10 (38.5%)</td>
<td>2 (7.7%)</td>
<td>1 (3.8%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>17. The questions asked on the AP Examinations are fully aligned to the content that is taught in my class.</td>
<td>16 (61.5%)</td>
<td>10 (38.5%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>18. I supplement AP-prescribed content with additional content that I believe is important for students to know.</td>
<td>8 (30.8%)</td>
<td>15 (57.7%)</td>
<td>3 (11.5%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>20. After the AP Exam is administered, I provide enrichment activities consistent with the Advanced Placement curriculum, as designed by the College Board.</td>
<td>8 (30.8%)</td>
<td>14 (53.8%)</td>
<td>4 (15.4%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>22. I place an order of importance on the required AP Course content to ensure the most important topics are covered prior to the Exam.</td>
<td>16 (61.5%)</td>
<td>8 (30.8%)</td>
<td>2 (7.7%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>25. It is important to teach the content of an AP Course exactly the way it is prescribed by the College Board.</td>
<td>4 (15.4%)</td>
<td>14 (53.8%)</td>
<td>8 (30.8%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>27. My school has not allocated the appropriate amount of time to completely teach the required AP Course curriculum.</td>
<td>1 (3.8%)</td>
<td>4 (15.5%)</td>
<td>7 (26.9%)</td>
<td>13 (50.0%)</td>
<td>1 (3.8%)</td>
</tr>
<tr>
<td>28. After the AP Exam is administered, I provide students with enrichment activities that I have determined are complimentary to the AP Curriculum, yet not endorsed by the College Board.</td>
<td>3 (11.5%)</td>
<td>14 (53.8%)</td>
<td>6 (23.2%)</td>
<td>2 (7.7%)</td>
<td>1 (3.8%)</td>
</tr>
</tbody>
</table>

Note: Participant Response (N=26).
Open-ended Survey Questions. Open-ended survey question number 30 asked participants about the potential limitations to teaching all of the required Advanced Placement Course content. Two of the 26 participants did not respond to this question. Multiple participants provided numerous suggestions to the limitations of fully teaching the required course content. The following themes emerged: time in the school schedule, student background knowledge, student ability, student work ethic, and the amount of time needed for review. The following results from the open-ended survey questions indicated a variety of reasons that might inhibit participants from teaching all of the required course content: school delays and cancellations due to weather, school-wide assemblies, teacher in-service days, scheduled half days, time dedicated to participating in the Keystone Exams or other standardized testing, field trips, student absences, the amount of time needed to review material prior to taking the Advanced Placement Exam, and the timing of the Advanced Placement Exams, specifically, that the Exams are given in early May with up to four weeks of school remaining after the Advanced Placement Exam is administered.

Four participants (15.4%) mentioned student ability, two participants (7.7%) noted the amount of background knowledge that students brought with them to the course, and two more participants (7.7%) recognized that the work ethic of the students enrolled in the course could affect being able to teach all of the required Advanced Placement Course content. Lastly, two participants (7.7%) indicated that the amount of time needed to review for the Advanced Placement Exam influenced the amount of Advanced Placement Course content to be covered.
Interviews. Interview questions numbers one, three, and four addressed research question number three. Interview question number one asked how teaching an Advanced Placement Course differed from teaching a regular course. Six of the eight interviewees stressed that one of the main differences was the need to prepare students for the Advanced Placement Exam. IA2, who taught an Advanced Placement math course, stated, “There is a strategy for passing the exam and not just knowing the material. My students could know all of the material covered on the exam, but still not pass it because they didn’t show how to solve the problems the right way.” ID1 said, “In regular multiple choice tests, there are maybe two good options for students to choose between. In the AP Exam multiple choice section, there are often three or four options that could all be correct, and students have to be able to choose the best and most correct answer.” Three participants mentioned that there was more preparation required on the part of the Advanced Placement teacher, which included having to set up labs, staying current with world events, or taking an additional graduate class in order to be more comfortable with the material. Three more participants stated the depth and rigor of Advanced Placement Course curriculum was another difference when compared to a regular education class. Lastly, three participants discussed the amount of material that had to be taught in their Advanced Placement Course in order to prepare students for the Advanced Placement Exam. One participant, IB2, mentioned how quickly they were forced to move through the curriculum.

Interview question number three asked participants how the Advanced Placement Audit impacted their teaching. Five of the eight participants simply stated that the audit had no impact. Three participants found the process of constructing a syllabus useful in
order to structure their course. IA1 expressed, “Constructing a syllabus to fulfill audit requirements assisted me in figuring out where to start.” Three of the five participants on which the audit had no impact, complained about the audit process, wondering why the College Board did not just provide a syllabus for all Advanced Placement teachers to follow for their specific courses. IC2 reported, “I believe the audit is just paperwork and bureaucracy.” One of the participants who found the process of constructing a syllabus to be useful as she prepared to teach her Advanced Placement Course for the first year was initially unaware of the Advanced Placement Audit, assuming that the College Board had always required the submission of a syllabus upon teaching an Advanced Placement Course.

Interview question number four asked what participants did with their students at the end of the school year after the Advanced Placement Exam was administered. All of the participants' students completed a project-based and/or group-based activity requiring higher-level thinking skills, as teachers felt it was essential for students to recall and apply the material they had learned throughout the class. IC2 expressed, “After so many lectures all year long, it’s nice to have something student-centered.” Two of the eight participants mentioned including a definite break for the students in that time, as well. All eight of the participants stated the audit had no impact on their decision of how to spend the remaining class time after the Advanced Placement Exam administration. Specific examples of projects completed in May included: sheep heart dissection in a biology class, completion of a study to practice gathering and analyzing data in a statistics class, cooking labs in a chemistry class, writing a sonata in a music theory class, and breaking down historical documentaries for accuracy of scenes in a United States History class.
**Archival Data.** Data were obtained from members of the building administration at each of the four study sites and included Advanced Placement Course enrollment numbers and Advanced Placement Exam participation numbers from the 2012-2013 school year. Course enrollment numbers and Advanced Placement Exam participation numbers were then used to find the Advanced Placement Exam participation rates. Tables 4.14 through 4.17 show the course enrollment numbers, Advanced Placement Exam numbers, and Advanced Placement Exam participation rates for each of the four study sites. There were students who took more than one Advanced Placement Course during the 2012-2013 school year. Therefore, the sums of the “Course Enrollment” columns in Tables 4.14 through 4.17, which included the same Advanced Placement students multiple times, were different than the true N, the total number of students enrolled in Advanced Placement Courses, for each school. The fact that students were able to take any Advanced Placement Exams, regardless of whether or not they completed the Advanced Placement Course was noteworthy.

Study Site A had a total of 309 students enrolled in 18 Advanced Placement Courses. While other study sites had Advanced Placement Courses that also counted as dual enrollment courses, Study Site A kept those courses separate. Students who participated in Advanced Placement Exams at Study Site A were automatically exempt from the course final exam. The following 11 Advanced Placement Courses in Study Site A showed a 90.0% or above Advanced Placement Exam participation rate: Chemistry (100.0%), Macroeconomics (100.0%), Physics B (100.0%), Psychology (100.0%), United States History (97.8%), English Language and Composition (95.6%), Environmental Science (94.7%), Biology (94.1%), English Literature and Composition
(93.8%), Calculus AB ((93.5%), and Calculus BC (91.3%). Microeconomics, Physics B, and Psychology had only one student enrolled in each of those Advanced Placement Courses, and each of those students also opted to take the Advanced Placement Exam, resulting in 100% participation rates. Five of the remaining seven Advanced Placement Courses offered at Study Site A had Advanced Placement Exam participation rates of 81.3% to 88.0%: Microeconomics (88.0%), Statistics (87.5%), European History (87.5%), Studio Art: 2D Design (83.3%), and Physics C: Mechanics (81.3%). The two remaining courses with Advanced Placement participation rates below 80% were Computer Science A (77.8%) and Music Theory (27.3%). The Advanced Placement Courses offered at Study Site A are represented in Table 4.14.

<table>
<thead>
<tr>
<th>Advanced Placement Course</th>
<th>Course Enrollment</th>
<th>AP Exam Participation</th>
<th>Percentage of AP Exam Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>34</td>
<td>32</td>
<td>94.1%</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>62</td>
<td>58</td>
<td>93.5%</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>23</td>
<td>21</td>
<td>91.3%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>22</td>
<td>22</td>
<td>100.0%</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>9</td>
<td>7</td>
<td>77.8%</td>
</tr>
<tr>
<td>English Language and Composition</td>
<td>45</td>
<td>43</td>
<td>95.6%</td>
</tr>
<tr>
<td>English Literature and Composition</td>
<td>48</td>
<td>45</td>
<td>93.8%</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>19</td>
<td>18</td>
<td>94.7%</td>
</tr>
<tr>
<td>European History</td>
<td>24</td>
<td>21</td>
<td>87.5%</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>117</td>
<td>103</td>
<td>88.0%</td>
</tr>
<tr>
<td>Music Theory</td>
<td>11</td>
<td>3</td>
<td>27.3%</td>
</tr>
<tr>
<td>Physics B</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>32</td>
<td>26</td>
<td>81.3%</td>
</tr>
<tr>
<td>Psychology</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Statistics</td>
<td>72</td>
<td>63</td>
<td>87.5%</td>
</tr>
<tr>
<td>Studio Art: 2D design</td>
<td>12</td>
<td>10</td>
<td>83.3%</td>
</tr>
<tr>
<td>United States History</td>
<td>45</td>
<td>44</td>
<td>97.8%</td>
</tr>
</tbody>
</table>

*Note: (N= 309)*
Study Site B, shown in table 4.15, had a total of 470 students enrolled in 26 Advanced Placement Courses during the 2012-2013 school year. While two of the other sites used in this study had Advanced Placement Courses that also counted as dual enrollment courses, Study Site B no longer offered a dual enrollment option to its students. There was an incentive to completing the Advanced Placement Exam at Study Site B. Students who participated in Advanced Placement Exams who had also achieved a specific grade in the Advanced Placement Course in which they were enrolled were subsequently exempt from the course’s final examination. The following six Advanced Placement Courses in Study Site B showed a 90.0% or above Advanced Placement Examination participation rate: Chemistry (100.0%), World History (100%), Human Geography (98.3%), United States History (97.0%), English Language and Composition (93.8%), and Calculus AB (93.0%). The Advanced Placement World History Course had only one student officially enrolled in the course, and he or she also chose to participate in the Advanced Placement Examination for this course, which technically denoted a 100.0% participation rate. Six more courses had an Advanced Placement Exam participation rate ranging from 80.8% to 89.1%: Biology (89.1%), Calculus BC (88.9%), European History (87.8%), Spanish Language and Culture (85.7%), English Literature and Composition (85.3%), and Psychology (80.8%). The following four courses had an Advanced Placement Exam participation rate of 70.0% to 76.0%: French Language and Culture (76.0%), Music Theory (75.0%), Environmental Science (72.4%), and Computer Science A (70.0%). Five more Advanced Placement Courses had participation rates between 50.0% and 62.5%: German Language and Culture (62.5%), Statistics (66.7%), Latin (58.3%), Physics C: Mechanics (56.4%), and Physics C: Electricity and Magnetism
(50.0%). Five courses had participation rates below 50.0%: Macroeconomics (45.9%), Studio Art: 3D Design (42.9%), Studio Art: Drawing (33.3%), Microeconomics (33.3%), and Government and Politics: United States (17.5%).

Table 4.15

Course Enrollment and AP Exam Participation for Study Site B

<table>
<thead>
<tr>
<th>Advanced Placement Course</th>
<th>Course Enrollment</th>
<th>AP Exam Participation</th>
<th>% of AP Exam Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>46</td>
<td>41</td>
<td>89.1%</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>71</td>
<td>66</td>
<td>93.0%</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>27</td>
<td>24</td>
<td>88.9%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>9</td>
<td>9</td>
<td>100.0%</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>20</td>
<td>14</td>
<td>70.0%</td>
</tr>
<tr>
<td>English Language and Composition</td>
<td>32</td>
<td>30</td>
<td>93.8%</td>
</tr>
<tr>
<td>English Literature and Composition</td>
<td>34</td>
<td>29</td>
<td>85.3%</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>29</td>
<td>21</td>
<td>72.4%</td>
</tr>
<tr>
<td>European History</td>
<td>74</td>
<td>65</td>
<td>87.8%</td>
</tr>
<tr>
<td>French Language and Culture</td>
<td>25</td>
<td>19</td>
<td>76.0%</td>
</tr>
<tr>
<td>German Language and Culture</td>
<td>8</td>
<td>5</td>
<td>62.5%</td>
</tr>
<tr>
<td>Government and Politics: United States</td>
<td>97</td>
<td>17</td>
<td>17.5%</td>
</tr>
<tr>
<td>Human Geography</td>
<td>60</td>
<td>59</td>
<td>98.3%</td>
</tr>
<tr>
<td>Latin</td>
<td>12</td>
<td>7</td>
<td>58.3%</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>98</td>
<td>45</td>
<td>45.9%</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>15</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td>Music Theory</td>
<td>4</td>
<td>3</td>
<td>75.0%</td>
</tr>
<tr>
<td>Physics C: Electricity and Magnetism</td>
<td>22</td>
<td>11</td>
<td>50.0%</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>39</td>
<td>22</td>
<td>56.4%</td>
</tr>
<tr>
<td>Psychology</td>
<td>99</td>
<td>80</td>
<td>80.8%</td>
</tr>
<tr>
<td>Spanish Language and Culture</td>
<td>14</td>
<td>12</td>
<td>85.7%</td>
</tr>
<tr>
<td>Statistics</td>
<td>45</td>
<td>30</td>
<td>66.7%</td>
</tr>
<tr>
<td>Studio Art: 3D design</td>
<td>7</td>
<td>3</td>
<td>42.9%</td>
</tr>
<tr>
<td>Studio Art: Drawing</td>
<td>6</td>
<td>2</td>
<td>33.3%</td>
</tr>
<tr>
<td>United States History</td>
<td>67</td>
<td>65</td>
<td>97.0%</td>
</tr>
<tr>
<td>World History</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Note: (N= 470)

Table 4.16 shows the enrollment for each course offered, the number of students participating in the Advanced Placement Examinations, and the Advanced Placement
Exam participation rate for Study Site C. At this site, there were 150 students enrolled in 15 Advanced Placement Courses during the 2012-2013 school year. Students who were enrolled in this site’s Advanced Placement United States History course were also eligible for the dual enrollment initiative coordinated with the local community college. Those students received college credit if they achieved a grade of C or higher in the course. The following 10 Advanced Placement Courses had an examination participation rate above 80.0%: English Language and Composition (100.0%), European History (100.0%), Macroeconomics (100.0%), Microeconomics (100.0%), Biology (92.6%), Chemistry (90.5%), Calculus AB (89.2%), Government and Politics: United States (86.5%), Calculus BC (83.3%), and Physics B (83.3%). English Literature and Composition had a participation rate of 70.4% and Psychology had a rate of 68.5%, while Statistics had a rate of 64.9%. United States History, the one course that offered dual enrollment credit for students who achieved a C or higher, had the lowest participation rate of 26.9%. The following Advanced Placement Courses were offered at this site, but only one student was enrolled in each of them: English Language and Composition, European History, Macroeconomics, and Microeconomics. These four Advanced Placement courses were offered in an online format and the students also completed the Advanced Placement Exams for the courses, which accounted for the 100.0% participation rates. In addition, since the College Board allowed students to take Advanced Placement Exams without completing the accompanying Advanced Placement Courses, eight students who were enrolled in Physics B prepared for and completed the Advanced Placement Exam for Physics C: Mechanics.
Table 4.16

Course Enrollment and AP Exam Participation for Study Site C

<table>
<thead>
<tr>
<th>Advanced Placement Course</th>
<th>Course Enrollment</th>
<th>AP Exam Participation</th>
<th>Percentage of AP Exam Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>27</td>
<td>25</td>
<td>92.6%</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>37</td>
<td>33</td>
<td>89.2%</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>12</td>
<td>10</td>
<td>83.3%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>21</td>
<td>19</td>
<td>90.5%</td>
</tr>
<tr>
<td>English Language and Composition</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>English Literature and Composition</td>
<td>27</td>
<td>19</td>
<td>70.4%</td>
</tr>
<tr>
<td>European History</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Government and Politics: United States</td>
<td>37</td>
<td>32</td>
<td>86.5%</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>1</td>
<td>1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Physics B</td>
<td>18</td>
<td>15</td>
<td>83.3%</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>0</td>
<td>8</td>
<td>80%</td>
</tr>
<tr>
<td>Psychology</td>
<td>54</td>
<td>37</td>
<td>68.5%</td>
</tr>
<tr>
<td>Statistics</td>
<td>57</td>
<td>37</td>
<td>64.9%</td>
</tr>
<tr>
<td>United States History</td>
<td>26</td>
<td>7</td>
<td>26.9%</td>
</tr>
</tbody>
</table>

Note: (N = 150) *Complies with College Board regulations; students may take Advanced Placement Exams without enrolling in the specific Advanced Placement Course.

Course enrollment numbers, Advanced Placement Exam participation numbers, and Advanced Placement Exam participation rates for Study Site D are shown in Table 4.17. During the 2012-2013 school year, 209 students participated in 23 Advanced Placement Courses. The courses with the highest Advanced Placement Exam participation rates were Studio Art: 2D Design (100%) and Macroeconomics (92.3%). There were four Advanced Placement Courses that had exam participation rates between 76.3% and 84.9%: United States History (84.9%), Psychology (81.3%), Microeconomics (76.9%), and English Language and Composition (76.3%). Six Advanced Placement Courses showed Advanced Placement Exam participation rates within the range of 60.7% to 69.2%: Government and Politics: United States (69.2%), Calculus BC (68.2%), Government and Politics: Comparative (64.4%), Chemistry (64.3%), Calculus AB (62.5%), and Environmental Science (60.7%). Four Advanced Placement Courses had
exam participation rates between 40.0% and 48.0%: English Literature and Composition (48.0%), European History (47.8%), Music Theory (45.5%), and Biology (40.0%). The remaining seven courses had Advanced Placement Exam participation rates below 40.0%: Physics C: Electivity and Magnetism (38.9%), Physics C: Mechanics (38.9%), Statistics (35.0%), Spanish Language and Culture (25.0%), Physics B (17.6%), French Language and Culture (7.7%), and Latin (0.0%). The following four Advanced Placement Courses gave students the option of dual enrollment: Calculus AB (62.5%), French Language and Culture (7.7%), Spanish Language and Culture (25.0%), and Statistics (35.0%).

Table 4.17

<table>
<thead>
<tr>
<th>Advanced Placement Course</th>
<th>Course Enrollment</th>
<th>AP Exam Participation</th>
<th>Percentage of AP Exam Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>40</td>
<td>16</td>
<td>40.0%</td>
</tr>
<tr>
<td>Calculus AB</td>
<td>64</td>
<td>40</td>
<td>62.5%</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>22</td>
<td>15</td>
<td>68.2%</td>
</tr>
<tr>
<td>Chemistry</td>
<td>14</td>
<td>9</td>
<td>64.3%</td>
</tr>
<tr>
<td>English Language and Composition</td>
<td>76</td>
<td>58</td>
<td>76.3%</td>
</tr>
<tr>
<td>English Literature and Composition</td>
<td>75</td>
<td>36</td>
<td>48.0%</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>28</td>
<td>17</td>
<td>60.7%</td>
</tr>
<tr>
<td>European History</td>
<td>23</td>
<td>11</td>
<td>47.8%</td>
</tr>
<tr>
<td>French Language and Culture</td>
<td>13</td>
<td>1</td>
<td>7.7%</td>
</tr>
<tr>
<td>Government and Politics: Comparative</td>
<td>59</td>
<td>38</td>
<td>64.4%</td>
</tr>
<tr>
<td>Government and Politics: United States</td>
<td>26</td>
<td>18</td>
<td>69.2%</td>
</tr>
<tr>
<td>Latin</td>
<td>7</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>13</td>
<td>12</td>
<td>92.3%</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>13</td>
<td>10</td>
<td>76.9%</td>
</tr>
<tr>
<td>Music Theory</td>
<td>11</td>
<td>5</td>
<td>45.5%</td>
</tr>
<tr>
<td>Physics B</td>
<td>17</td>
<td>3</td>
<td>17.6%</td>
</tr>
<tr>
<td>Physics C: Electricity and Magnetism</td>
<td>18</td>
<td>7</td>
<td>38.9%</td>
</tr>
<tr>
<td>Physics C: Mechanics</td>
<td>18</td>
<td>7</td>
<td>38.9%</td>
</tr>
<tr>
<td>Psychology</td>
<td>16</td>
<td>13</td>
<td>81.3%</td>
</tr>
<tr>
<td>Spanish Language and Culture</td>
<td>20</td>
<td>5</td>
<td>25.0%</td>
</tr>
<tr>
<td>Statistics</td>
<td>100</td>
<td>35</td>
<td>35.0%</td>
</tr>
<tr>
<td>Studio Art: 2D design</td>
<td>4</td>
<td>4</td>
<td>100.0%</td>
</tr>
<tr>
<td>United States History</td>
<td>53</td>
<td>45</td>
<td>84.9%</td>
</tr>
</tbody>
</table>

*Note: (N = 306)*
Summary

The data presented in this study were collected from participants in four study sites in southeastern Pennsylvania. Twenty-six Advanced Placement teachers completed a researcher-developed survey and eight Advanced Placement teachers participated in face-to-face interviews. Advanced Placement Course enrollment numbers and Advanced Placement Exam numbers were obtained from building principals. The resulting data were examined and categorized by the three research questions that guided this study. Chapter Five will discuss the analysis of the data that was presented in Chapter Four.
Chapter Five – Discussion

Summary of the Study

This study was designed to examine teachers’ perceptions of the reasons why Advanced Placement students enrolled in Advanced Placement Courses and the reasons that students chose to take, or not to take, the optional corresponding Advanced Placement Examinations. Teachers’ perceptions of the validity and level of fidelity of teaching the required Advanced Placement Course content were also examined.

Twenty-six Advanced Placement teachers in four high schools in southeastern Pennsylvania participated in the online survey that included six demographic questions, 23 Likert-scale questions, and three open-ended survey questions (Appendix B). Eight Advanced Placement teachers, two from each of the four study sites, consented to face-to-face interviews (Appendix C). There were 34 College Board Advanced Placement Courses (Appendix A) during the 2012-2013 school year; the four study sites offered a combined total of 29 of those Advanced Placement Courses. Participants in this study taught 24 of the 29 Advanced Placement Courses. Five Advanced Placement Courses offered in at least one of the four study sites had no representation among the participants: AP Computer Science, AP European History, AP Human Geography, AP Spanish Language and Culture, and AP United States History.

Survey responses were grouped by research question and analyzed. Open-ended survey responses were compiled by research question and organized into themes. Interview responses were recorded in hand-written note form, typed and summarized, and sent to each participant for his or her approval to ensure that each response was
transcribed accurately. Information obtained from the interview sessions was coded, categorized by research question, and analyzed.

**Summary of the Results**

Twenty-one of the 26 participants (80.8%) in this study had more than ten years of experience in the field of education. A compilation of data showed that while the teachers who participated in this study tended to be the more experienced teachers, only five of the 26 teachers (19.2%) had more than 10 years of experience teaching Advanced Placement Courses. Thirteen of the 24 Advanced Placement Courses (54.2%) represented by a participant in this study were being taught by teachers in their first, second, or third year of teaching an Advanced Placement Course, which led the researcher to surmise that Advanced Placement Courses were assigned to more experienced teachers with higher levels of seniority, whereas more inexperienced teachers were not selected to teach the Advanced Placement Courses.

Two of the 26 participants stated that they had not participated in an Advanced Placement Summer Institute or any other Advanced Placement professional development opportunity. When the researcher contacted building administrators through electronic mail to inquire about this information, it was found that none of the building administrators at the four participating schools were aware that Advanced Placement teachers in their schools lacked the Advanced Placement Summer Institute professional development. One principal mentioned that it might have been possible for a teacher to teach an Advanced Placement Course without participating in the Summer Institute if he or she had already been an established Advanced Placement teacher upon the administrator’s arrival at the school. While participation in a Summer Institute or other
professional development is strongly recommended by the College Board, especially for Advanced Placement teachers without experience teaching these courses, it is not an established requirement for selection to this position. It should also be noted that only 14 of the 26 participants had received full funding for their Advanced Placement professional development. Ten participants had to partially fund or fully fund at least some of their Advanced Placement professional development opportunity, while the remaining two did not participate in any Advanced Placement professional development. It may be reasonable to surmise, therefore, that a lack of funding may have contributed to the absence of the recommended Advanced Placement teacher training.

The master schedule formats at the participating study sites could have had an impact on participants’ perceptions. When asked about different scheduling options for their Advanced Placement Courses, the majority of participants (84.6%) taught a daily, 45-minute single period, for the entire year, while three participants (11.5%) taught a 45-minute single period, every day, for only one half of the year. One teacher reported teaching Advanced Placement Biology, a lab-based course, for 90 minutes every day of the school year. No participants reported teaching a semester-long course that was 90 minutes in length, which is indicative of block scheduling. In block scheduling, a class offered in the first semester would end approximately three and one half months prior to the Advanced Placement Exam administration in May. A class offered in the second semester, however, would be scheduled in a manner that would result in an approximate deficit of four to six weeks of class time available to cover the required course content due to the exam administration occurring at the beginning of May.
Research Question One. What are teacher perceptions regarding the reasons that students choose to enroll in Advanced Placement Courses? Study participants agreed or strongly agreed with all six of the following reasons provided as to why students enrolled in their Advanced Placement Courses: for the academic challenge (96.2%), to prepare for future careers (92.3%), to increase their chances of gaining college admission (88.5%), to prepare for college-level rigor (88.5%), to gain exemption from entry-level college courses (88.5%), and to add weight to their grade point average (76.9%). There were no reasons with which the majority of participants disagreed or strongly disagreed. Participants provided two reasons for enrollment which appeared in survey and interview responses: interest in the topic and/or future related career (seven of the eight interviews) and the addition of “weight” to students’ grade point average (GPA) and/or the presence of Advanced Placement Courses on their transcripts (four of the eight interviews). Interview responses added more insight as to the reasons students enrolled in Advanced Placement Courses. The participants’ additional reasons for enrollment included the following: affinity for the teacher (62.5%), avoidance of other classes (12.5%), desire to remain in upper-level classes with their peers (12.5%), and prestige of taking a difficult course (12.5%).

Participants agreed or strongly agreed with the following reasons for Advanced Placement Course enrollment that pertained to the college admissions process: to increase their chances of gaining college admission (88.5%), to gain exemption from entry-level college courses (88.5%), and to add weight to their GPA (76.9%). Interview responses also provided additional reinforcement that students were enrolled in Advanced Placement Courses to add weight to their GPA and to have Advanced Placement Courses
appear on their transcripts for the college admissions process. This data indicated that teacher perceptions reflected student recognition that colleges were looking for the presence of Advanced Placement Courses on transcripts as a discriminator among students. While the intent of Advanced Placement was not to be a major influence in the college admissions process (CEEB, 2001), the existence of the Advanced Placement Course Audit made it possible to create a database listing all of the high schools involved in the Advanced Placement Program and the approved Advanced Placement Courses. College admissions counselors could access the database to assess the difficulty level of a candidate’s class schedule versus the Advanced Placement Course options in the candidate’s high school.

One of the open-ended responses indicated diminishing interest in the participant’s Advanced Placement Course due to the increasing number of Advanced Placement Course offerings. An analysis of available data indicated the following Advanced Placement Exam participation rates for that course, which was offered at all four study sites: 87.5% in Study Site A, 66.7% in Study Site B, 64.9% in Study Site C, and 35.0% in Study Site D. It is reasonable to suggest that if this participant was a teacher at Study Site D, the teacher’s conclusion may not have been representative of why students were not enrolling in that particular Advanced Placement Course.

**Research Question Two. What are teacher perceptions regarding the reasons that students choose to take, or opt out of, the corresponding Advanced Placement Exam(s)?** An analysis of the data revealed that the most frequently offered perceptions regarding the reasons students took Advanced Placement Examinations were to gain college credit through the successful completion of the examination and to gain the
experience of taking college-level examinations. This was evidenced through survey responses that indicated that 100% of the participants either strongly agreed or agreed with the college credit finding and 65.4% of the respondents noted the importance of taking a more rigorous exam. Further analysis suggested participants perceived that students did not take Advanced Placement Examinations due to students’ lack of confidence to pass the exam (34.6%) and that some students found the cost of the exam to be prohibitive (15.4%).

Six of eight interviewee responses confirmed survey response data regarding confidence in the content needed to pass the exam as the reason students chose not to participate. In data compiled from interviews, two additional reasons were noted as to why students took the course but did not participate in the examination portion: an opportunity to show strength of schedule on their transcripts and an opportunity to build their high school grade point average because of the “weight” factor of Advanced Placement courses.

The 15.4% of participants who suggested that the cost was a factor when choosing whether to take the Advanced Placement Exams was consistent in both the Likert-scale survey and interview responses. As a remedy, five participants (19.2%) suggested in the open-ended survey responses that schools could partially or fully fund the cost of the Advanced Placement Exam in order to increase exam participation. In three of the eight interviews (37.5%), participants noted that the financial aspect of the Advanced Placement Exams became an issue only when students were taking three or more Advanced Placement Courses in a given school year. These participants suggested that
students did not want to pay for three or more exams, nor did they want to take on the challenge of three or more exams during the test administration period in May.

Although 34.6% of the participants suggested that students chose not to take the Advanced Placement Exam because they did not think that they would score well, it is worthy to note that 96.2% of the survey responses indicated that participants agreed or strongly agreed that their students had the required content knowledge to take the Advanced Placement Exam after completion of their Advanced Placement Course. It was evident that while the majority of participants believed that their students were fully prepared to successfully complete the Advanced Placement Exam, participants perceived that the students did not feel that same level of preparedness.

**Research Question Three. What are teacher perceptions regarding the teaching of the AP Course curriculum content with fidelity?** The third research question was developed to elicit information regarding the participants’ fidelity in teaching their Advanced Placement Courses as they were intended by the College Board. Online survey data revealed that all 26 participants agreed that the questions on the Advanced Placement Examinations and the content taught in their classrooms were fully aligned. Additional online survey data, however, showed that only 69.2% of participants agreed that it was important to teach the content of an Advanced Placement Course as prescribed by the College Board. Moreover, 34.6% of the online survey participants admitted that they had replaced parts of Advanced Placement-prescribed content with their own content that they believed was more important. This contradicts the College Board requirement that Advanced Placement Courses be taught according to the teachers’
syllabi that were aligned to the Advanced Placement Course content and approved as part of the Advanced Placement Course Audit. Of the 26 survey participants, 88.5% also admitted to supplementing prescribed Advanced Placement Course content with additional content.

Analysis of data from online survey question number 14 indicated that 88.5% of the participants believed their schools had allocated the appropriate amount of time to teach the total Advanced Placement Course curriculum. Some participants (61.6%) further indicated that they still expected their students to learn some of the required course content on their own, receiving no direct instruction on the material. It is reasonable for the researcher to speculate as to whether the self-directed learning enabled teachers to incorporate the supplemental material mentioned above and drew into question whether or not students actually had the requisite content knowledge to successfully complete the Advanced Placement Examinations.

Data collected from the online survey questions corresponded with the interview results regarding how the remaining weeks of class were spent after the Advanced Placement Exam was administered in the beginning of May. Many of the 26 online survey participants either provided enrichment activities consistent with the Advanced Placement Curriculum as designed by the College Board (84.6%) or provided enrichment activities that he or she determined to be complimentary to the Advanced Placement Curriculum, although not endorsed by the College Board (65.4%). The eight interviewees revealed that the Advanced Placement Course Audit’s requirements had no impact on their decision regarding how to spend the remaining class time after the administration of
the exam. All interview participants indicated that they preferred to create activities or projects that were student-centered and project-based, since time for such activities was not available prior to the administration of the Advanced Placement Exam.

When asked during the interviews about the impact that the Advanced Placement Exam Course Audit had made on their instruction, participants’ answers varied primarily based on whether they had been teaching an Advanced Placement Course prior to, or after, the implementation of the Advanced Placement Audit. Analysis of the data revealed that five of the six interviewees who had been teaching their Advanced Placement Course prior to the implementation of the audit viewed the requirement regarding construction of the course syllabus in a negative manner. These teachers were more likely to view the audit requirement as “paperwork and bureaucracy” (IC2), as exemplified by IC2’s response. Conversely, the two less experienced participants of the eight interviewees, who began teaching Advanced Placement Courses after the audit in 2007, found the College Board’s process of creating a syllabus to be helpful.

**Archival data.** In the sites used for this study, 73.6% of students who were enrolled in Advanced Placement Courses also chose to take the corresponding Advanced Placement Exam. The percentage of students who chose to take the Advanced Placement Exam, however, varied among the four schools. Study Site A, where students who completed the Advanced Placement Exam were exempt from the course final exam, had a participation rate of 89.8%. Study Site B’s participation rate was 71.3%, and if the students completed the Advanced Placement Exam and also met a certain grade requirement in the course, they were exempt from the course final exam. Study Site C’s
participation rate was 77.8%, and Study Site D’s participation rate was 55.5%; there were no incentives given for completion of the Advanced Placement Exam at either site. Study Sites C and D, however, did potentially have their Advanced Placement Exam participation rates impacted by the existence of dual enrollment courses, as stated by an IC2: “For me specifically, the option of community college credits at a reduced rate affects the number of kids taking the AP Exam.”

In Study Site D, the school with the lowest Advanced Placement Exam participation rate, the researcher surmised that numerous dual enrollment courses played a role in Advanced Placement Exam participation. Students in dual enrollment classes had the opportunity to obtain college credit through a local community college instead of attempting to gain credit through the achievement of a qualifying score on the Advanced Placement Exam. Three of the five Advanced Placement Courses with the lowest exam participation numbers (Statistics at 35.0%, Spanish Language and Culture at 25.0%, and French Language and Culture at 7.7%) at Study Site D were also dual enrollment courses, where students could opt for college credit through the achievement of a grade of “C” or better. Study Site C also offered one dual enrollment class/Advanced Placement Course; only seven of the 26 students in Advanced Placement United States History (26.8%) took the corresponding Advanced Placement Exam, which was the lowest Advanced Placement Exam participation rate in that school. Therefore, it is reasonable to surmise that dual enrollment, when paired with Advanced Placement Courses, could have a direct and potentially detrimental impact on student participation in Advanced Placement Exams.
Limitations

One limitation of this study was the limited sample size that resulted from the online survey; only 26 of the 70 Advanced Placement teachers in the four study sites responded to the survey. In addition, the 2012-2013 Advanced Placement Exam scores were self-reported by building administrators and only contained one year’s worth of Advanced Placement Exam data. The received Advanced Placement Exam scores did not contain data from the students who completed the Advanced Placement Courses but opted out of the corresponding Advanced Placement Exams. Another unforeseen limitation was the difference in policies among the four study sites. Study Site A allowed students who took the Advanced Placement Exams to be automatically exempt from the course final, thus resulting in Study Site A’s average Advanced Placement Examination participation rate being higher than the other three schools. Another school, Study Site B, allowed students to be exempt from the course final exam if they took the Advanced Placement Exam and if they had achieved a certain grade in the same Advanced Placement Course. Lastly, Study Site C and Study Site D offered Advanced Placement Courses that were also dual enrollment courses at the school, so students had the opportunity to obtain college credit for a course without taking the Advanced Placement Examination. The presence of Advanced Placement Exam incentives and dual enrollment options could have had an influence on teachers’ perceptions of the reasons why their students took Advanced Placement Courses and why the students chose to participate in, or opt out of, the Advanced Placement Exams.
**Relationship to the Research**

Paek, Braun, Ponte, Trapani, and Powers’ 2010 Advanced Placement Biology teacher survey concluded that 25% or fewer students in Advanced Placement Courses opted out of taking the Advanced Placement Exams. The NRC (2002) estimated between 30% and 40% of students opted out of the Advanced Placement Exams, and CEEB (2001) estimated that 34% of students opted not to take the Exams. In the present study, 26.4% of students opted not to take the corresponding Advanced Placement Exams at the four study sites during the 2012-2013 school year. The average participation rate varied largely per school, but it should be noted that incentives for Advanced Placement Exam completion and the opportunity for dual enrollment may have had an effect on participation.

This study supported the research of Paek et al. (2010), which showed that Advanced Placement Biology teachers were more likely to be veteran teachers. The 26 participants in this study also tended to be veteran teachers, with 80.8% of participants having more than ten years of experience in the field of education. Only five of the 26 teachers (19.2%), however, had more than ten years of experience teaching Advanced Placement Courses. In fact, 61.5% of the participants were only in their first, second, or third year of teaching an Advanced Placement Course.

Results of the present study helped to validate Hertberg-Davis and Callahan’s 2008 survey of 200 students that examined reasons why students chose to enroll in Advanced Placement Courses. The researchers noted the following reasons: “improved chances of admission to competitive colleges, skipping introductory courses in college, preparedness for the rigors of college, and preparation for their future careers” (p. 207).
This study concurred with the findings of Hertberg-Davis and Callahan (2008). When participants of the current study were asked why students chose to enroll in their Advanced Placement Courses, the survey results showed that most participants strongly agreed with the following reasons: to help prepare for future careers, to increase chances of college admission, and to prepare for the rigors of college. Interview results were also in agreement, with four of the eight participants (50.0%) stating that students took their Advanced Placement Courses to add weight to their GPAs and to improve their transcripts.

The results regarding the ability of teachers to cover all of the required AP Course content were incongruent to previous research results. Paek et al. (2005) found that lectures were the most commonly used instructional method, since it was the most effective means of covering such a large amount of material. Students in Hertberg-Davis and Callahan’s 2008 survey said the curriculum “often felt rushed and overwhelming due to the hurry to cover a great deal of content in time for the exams” (p. 202-203). The NRC’s 2002 report was also critical of the teaching methods reinforced in preparation for the exams. In contrast, 88.5% of the survey participants in this study believed their schools allocated the appropriate amount of time to teach the total Advanced Placement Course curriculum. Three of the eight interview participants, however, were critical of the amount of material that they had to teach in order to prepare students for the Advanced Placement Exam, with one participant, IB2, mentioning that they really move through the curriculum. Three interviewees stated that teaching an Advanced Placement Course required more preparation on the part of the teacher, which was in line with
Mason’s 2010 survey where teachers reported having a workload that was heavier than that of their peers who did not teach Advanced Placement Courses. Additionally, Paek et al. (2005, 2010) and Missett et al. (2010) mentioned the lack of authentic learning experiences and project-based instruction in Advanced Placement Courses due to the amount of material that must be covered. All eight participants (100.0%) reported completing some type of activity or activities that were project-based and group-based after the Advanced Placement Exams were administered at the beginning of May. “After so many lectures all year long, it’s nice to have something student-centered” (IC2).

The College Board (2007) reported the results of a survey of Advanced Placement teachers who participated in the Advanced Placement Course Audit, stating that 84% of the participating Advanced Placement teachers believed that “the goal of ensuring consistency in labeling courses ‘AP’ was appropriate” (para. 13) and 67% thought the audit “provided them with a valuable opportunity to reflect upon their course and its relationship to colleges’ expectations” (para. 13). While five of the eight participants in this study indicated that the audit had no impact, three participants found the process of constructing a syllabus useful in acting as a starting point for newer teachers, structuring syllabi more closely to others’ syllabi, and alerting them to potential problems. Three of the eight participants complained about the audit process, with IC2 calling it “just paperwork and bureaucracy.”

**Recommendations for Future Research**

Teachers’ perceptions regarding student participation in Advanced Placement Courses and Advanced Placement Exams, as well as the level of value placed on teaching
all of the required course content, were the focus of this study. The extent of this study could be expanded to address students’ perceptions concerning why they chose to enroll in Advanced Placement Courses and why they chose to take, or opt out of, the corresponding Advanced Placement Exam. The perceptions of college admissions counselors could also be studied in order to explore the effects that Advanced Placement Courses and Advanced Placement Exams have on the college admissions process.

A study of the experience level and the proficiency level of both Advanced Placement teachers and their non-Advanced-Placement-teaching peers may be meaningful and worthwhile in order to examine how teachers are chosen to teach Advanced Placement Courses. Further consideration should be given to the study of the relationship between teachers who substitute content in place of College Board-prescribed required content and subsequent Advanced Placement Exam scores. Researchers could explore the reasons why teachers use student self-directed learning to cover material and how varying amounts of self-directed learning affects Advanced Placement Exam scores.

An evaluation could be completed on the effects incentives have on Advanced Placement Exam participation; one such incentive is allowing students to be exempt from taking the course final exam if they instead take the Advanced Placement Exam. Likewise, the results of Advanced Placement Courses doubling as dual enrollment courses should also be explored in order to determine the effects on Advanced Placement Exam participation. It is further recommended that data be examined to see if there exists a correlation between the number of Advanced Placement Courses that each student takes and the resulting number of student who take multiple exams in a given year.
Conclusion

This study sought to explore teachers’ perceptions regarding reasons students enrolled in Advanced Placement Courses, why students took, or opted out of, the corresponding Advanced Placement Exams, and whether or not teachers were reliable in the implementation of the required Advanced Placement Course content. Likert-scale survey questions, open-ended survey questions, and interview question were utilized to address the three research questions that drove this study.

Overall, participating teachers’ perceptions concerning the reasons students enrolled in their Advanced Placement Courses were consistent among survey and interview answers: to be academically challenged, to prepare for future careers, to increase chances of gaining college admission, to prepare for college-level rigor, to gain exemption from entry-level college courses, and to add weight to their grade point average. Additional reasons mentioned during the interviews included the students’ affinity for the topic and/or for the specific teacher, as well as being a means to avoid other classes, remain with peers, or gain prestige. The data showed that the participants perceived student awareness of the role that Advanced Placement Courses could play in the college admissions process.

Data analysis indicated that the cost of the Advanced Placement Exams was not a deterrent for students’ participation. An issue that resulted from the interviews, however, was that cost did indeed start to become a factor for students who were taking three or more Advanced Placement Courses in a given year. It was also apparent that while participants believed that their students were fully prepared to do well on Advanced Placement Exams, they were aware that the students did not share their level of
confidence. When analyzing Advanced Placement Course enrollment numbers and exam participation rates, it is reasonable to suggest that offering incentives to students to complete the Advanced Placement Exam and offering Advanced Placement Courses that can double as dual enrollment courses can impact the number of students who choose to participate in Advanced Placement Exams. Of the students in the four study sites who were enrolled in Advanced Placement Courses, 26.4% of them opted not to participate in the corresponding Advanced Placement Exams, which was a lower percentage than the estimated 34% as stated by the CEEB in 2001; the difference could have been due, in part, to the role that incentives played in two of the four study sites.

While 100% of the survey participants agreed that the content taught in their classrooms and the content covered on the Advanced Placement Exams were fully aligned, the number of participants who admitted to supplementing College Board-approved content (88.5%) or substituting other content in its place (34.6%) was surprising. Data analysis indicated that one-third of the participants did not believe that it was important to teach the content of an Advanced Placement Course exactly the way it was prescribed by the College Board. Another unexpected result was that although 88.5% of participants believed that they were allotted the appropriate amount of time to teach the required course content by their school’s schedule, 61.6% of participants still required self-directed learning.

This study was developed for the purpose of providing data concerning teachers’ perceptions regarding students’ reasons for enrolling in Advanced Placement Courses and subsequently taking or not taking Advanced Placement Exams. Since Advanced Placement Courses and Exams are increasingly playing a major role in both the high
school college-preparatory process and the college admissions process, the
data in this study may serve to assist high school administrators who wish to increase
their Advanced Placement Course enrollments and their Advanced Placement Exam
participation rates. The other purpose of this study was to examine the fidelity with which
Advanced Placement Courses were taught. These particular data may be useful if
administrators are faced with the need to analyze their Advanced Placement teachers’
course content fidelity due to low exam scores or participation rates.
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Appendix A

List of Advanced Placement Courses, 2012-2013

Arts
- AP Art History
- AP Music Theory
- AP Studio Art: 2-D Design
- AP Studio Art: 3-D Design
- AP Studio Art: Drawing

English
- AP English Language and Composition
- AP English Literature and Composition

History and Social Studies
- AP Comparative Government and Politics
- AP European History
- AP Human Geography
- AP Macroeconomics
- AP Microeconomics
- AP Psychology
- AP United States Government and Politics
- AP United States History
- AP World History

Math and Computer Science
- AP Calculus AB
- AP Calculus BC
- AP Computer Science
- AP Statistics

Sciences
- AP Biology
- AP Chemistry
- AP Environmental Science
- AP Physics B
- AP Physics C: Electricity and Magnetism
- AP Physics C: Mechanics

World Languages and Cultures
- AP Chinese Language and Culture
- AP French Language and Culture
- AP German Language and Culture
- AP Italian Language and Culture
- AP Japanese Language and Culture
- AP Latin
- AP Spanish Language and Culture
- AP Spanish Literature and Culture

Note: An Advanced Placement Course that was offered by at least one of the four study sites, but was not represented by any participants; An Advanced Placement Course that was not offered at any of the four study sites.
Appendix B

**Advanced Placement Teacher Survey**

You are invited to participate in a study about Advanced Placement teachers’ perceptions of AP Course content fidelity and student participation in AP Courses and AP Exams. If you taught an AP Course during the 2012-2013 school year, I am asking you to complete a survey, comprised of 32 questions (3 demographic questions, 3 check-all-that-apply questions, 23 Likert-scale questions, and 3 open-ended questions) that should take about 20 minutes to complete.

Participation in this study is voluntary. You may decline to answer questions or withdraw participation at any time. All data will remain anonymous and confidential. Your responses will be used collectively with all other responses. You will not be asked to provide personally identifiable information. There are no anticipated or known risks from participating in this study.

If you have any questions pertaining to my study, feel free to contact me at home (717) 738-3421 or on my cell phone (717) 994-2330 or email: zimmega@hotmail.com. You can also contact my supervisor, Dr. Joseph Corabi at 610-647-4400 ext. 3288, or email jcorabi@immaculata.edu if you have any questions.

This study has been reviewed and approved by the Research Ethics Review Board at Immaculata University. Any questions about your rights as a research subject may be directed to Dr. Thomas F. O’Brien, Chair, Research Ethics and Review Board, (610) 647-4400 ext. 3221; tobrien@immaculata.edu; Room 1 Loyola Hall.

Clicking “Yes” will indicate that you understand this consent form and that you agree to take part in this study, giving permission to the researcher to use the provided information in the final report. Clicking “Yes” will not waive any legal rights, and you may withdraw consent at any time.

1. At the end of this school year, how many years will you have in the education profession?
   a. 1-3 years
   b. 4-10 years
   c. 11-15 years
   d. 16+ years

2. Which AP Course(s) did you teach during the 2012-2013 school year? (Please list all.)

3. How many years, up to and including the 2012-2013 school year, have you taught the above listed AP Course(s)? Please list the course and number of years taught for each course.

4. Please check all that apply, regarding AP-related professional development.
   a. I have not participated in AP-sponsored professional development.
   b. I have participated in AP Summer Institutes.
   c. I have participated in AP Workshops.
   d. I have participated in online AP professional development, such as seminars, workshops, and presentations.
   e. My school district fully paid for my AP professional development.
   f. My school district partially paid for my AP professional development.
g. I financed my AP professional development on my own and received no funding from my district.

h. I have participated in multiple AP professional development opportunities, of which payment method (district or self) has varied.

i. I am active in the AP teacher community and/or discussion groups.

j. I have participated as a trained AP Reader.

5. Regarding the AP Course(s) that you teach, please check all that apply,
   a. Semester course, approximately 45 minutes in length
   b. Semester course, approximately 90 minutes in length
   c. Year long course, approximately 45 minutes in length
   d. Year long course, approximately 90 minutes in length
   e. One high school credit
   f. One-half of a high school credit
   g. Other

6. Regarding your district’s AP Policy, please check all that apply,
   a. My school has prerequisites in place for students to enroll in AP Courses.
   b. My specific course has prerequisites in place for student enrollment even though other AP courses have no prerequisites.
   c. In my school, any student, regardless of their academic history, can enroll in AP courses (open enrollment).
   d. My school has open enrollment for some, but not all, AP Courses.
   e. My school adds weight to a student’s GPA upon completion of an AP Course, regardless of whether or not the student completes the AP Exam.
   f. My school adds weight to a student’s GPA upon completion of an AP Course, but only if the student also completes the AP Exam.
   g. My school does not add weight to a student’s GPA upon completion of an AP Course.
   h. My school requires AP Course students to complete the AP Exam.
   i. My school does not require AP Course students to complete the AP Exam.
   j. My school offers an incentive to students to complete the AP Exam, such as excusal from the final exam.
   k. My school partially contributes to AP Exam fees, in addition to the reduced AP Exam fee for free-and-reduced lunch students.
   l. My school pays for the entire AP Exam fee.
   m. Teachers in my school receive financial compensation based on the AP Exam scores that students achieve.
   n. Teachers in my school receive non-financial compensation based on the AP Exam scores that students achieve (such as additional classroom resources, additional conference attendance, smaller class sizes, etc.).
   o. Teachers in my school receive non-financial compensation for offering to teach AP Courses (such as additional classroom resources, additional conference attendance, smaller class sizes, etc.).
<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Students take my Advanced Placement Course(s) because the weight of</td>
<td>SA A D</td>
</tr>
<tr>
<td>the course affects their GPA (Grade Point Average, sometimes referred</td>
<td>SD</td>
</tr>
<tr>
<td>to as Cumulative Grade Point Average).</td>
<td></td>
</tr>
<tr>
<td>8. I know the reasons why my students choose to take, or opt out of,</td>
<td>SA A D</td>
</tr>
<tr>
<td>the AP Examination.</td>
<td>SD</td>
</tr>
<tr>
<td>9. Students in my class have the required content knowledge to take</td>
<td>SA A D</td>
</tr>
<tr>
<td>the Advanced Placement Examination after completion of the AP Course.</td>
<td>SD</td>
</tr>
<tr>
<td>10. I have on occasion replaced parts of AP-prescribed content with</td>
<td>SA A D</td>
</tr>
<tr>
<td>my own content that I believe is more important for students to know.</td>
<td>SD</td>
</tr>
<tr>
<td>11. I expect my students to learn some of the required course content</td>
<td>SA A D</td>
</tr>
<tr>
<td>on their own, receiving no direct instruction on the material.</td>
<td>SD</td>
</tr>
<tr>
<td>12. Students take my Advanced Placement Course(s) to help prepare</td>
<td>SA A D</td>
</tr>
<tr>
<td>for their future careers.</td>
<td>SD</td>
</tr>
<tr>
<td>13. Students who choose to not participate in the AP Exam make that</td>
<td>SA A D</td>
</tr>
<tr>
<td>choice because they do not feel prepared to score well.</td>
<td>SD</td>
</tr>
<tr>
<td>14. My school has allocated the appropriate amount of time to</td>
<td>SA A D</td>
</tr>
<tr>
<td>completely teach the required AP Course curriculum.</td>
<td>SD</td>
</tr>
<tr>
<td>15. Students take my Advanced Placement Course(s) because doing so</td>
<td>SA A D</td>
</tr>
<tr>
<td>increases their chances of gaining college admission.</td>
<td>SD</td>
</tr>
<tr>
<td>16. AP Exam participation in my school would increase if financial</td>
<td>SA A D</td>
</tr>
<tr>
<td>incentives were provided to students who receive a score of 3 or</td>
<td>SD</td>
</tr>
<tr>
<td>above.</td>
<td></td>
</tr>
<tr>
<td>17. The questions asked on the AP Examinations are fully aligned to</td>
<td>SA A D</td>
</tr>
<tr>
<td>the content that is taught in my class.</td>
<td>SD</td>
</tr>
<tr>
<td>18. I supplement AP-prescribed content with additional content that</td>
<td>SA A D</td>
</tr>
<tr>
<td>I believe is important for students to know.</td>
<td>SD</td>
</tr>
<tr>
<td>19. My students take the AP Exam with the goal of achieving a score</td>
<td>SA A D</td>
</tr>
<tr>
<td>high enough to gain college credit.</td>
<td>SD</td>
</tr>
<tr>
<td>20. After the AP Exam is administered, I provide enrichment activities</td>
<td>SA A D</td>
</tr>
<tr>
<td>consistent with the Advanced Placement curriculum, as designed by the</td>
<td>SD</td>
</tr>
<tr>
<td>College Board.</td>
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<tr>
<td>21. Students take my Advanced Placement Course(s) in order to be exempt from entry-level courses in college.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>22. I place an order of importance on the required AP Course content to ensure that the most important topics are covered prior to the AP Exam.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>23. Students who do not participate in the AP Exam make that choice because they are unable to pay the fee for the AP Exam.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>24. Students take my Advanced Placement Course(s) to help prepare for the academic rigors of college courses.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>25. It is important to teach the content of an AP Course exactly the way it is prescribed by the College Board.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>26. Students choose to take my Advanced Placement Course for the academic challenge.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>27. My school has not allocated the appropriate amount of time to completely teach the required AP Course curriculum.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>28. After the AP Exam is administered, I provide students with enrichment activities that I have determined are complimentary to the AP Curriculum, yet not endorsed by the College Board.</td>
<td>SA A D SD</td>
</tr>
<tr>
<td>29. Students participate in the AP Exam for the experience of a college-level exam.</td>
<td>SA A D SD</td>
</tr>
</tbody>
</table>

**Open Ended Questions:**

30. What are the variables that may affect the teaching of all required AP Course content, as required by the College Board and included on your approved syllabus?

31. What could either you as the teacher, or your school, do to increase AP Course participation for your specific course?

32. What could either you as the teacher, or your school, do to increase AP Exam participation in your AP Course? If your AP Exam participation rate is close to 100%, what reasons do you attribute to that participation rate?
Appendix C

Teacher Interview Questions

1. As a teacher of an Advanced Placement Course, what does your job entail that is different from teaching a regular course?

2. The survey of four districts resulted in an average of 26.4% of students who took AP Courses but did not take the corresponding AP Exam during the 2012-2013 school year. Studies from the College Board estimated that 30-40% of students who completed AP Courses did not complete AP Exams. What do you believe was the most prevalent reason or reasons why students in your school did NOT sign up for the AP Exam? Please elaborate.

3. Has the AP Course Audit had an impact on adjustments made in your classroom to cover more or all of the required course content? Why or why not? If so, how have those adjustments been made?

4. What do you teach in your AP classroom in the last few weeks of school after the AP Exams are given? What is your reason for the chosen topic/lesson? Does the AP Course Audit have an impact on your decision as to how you spend the last few weeks?

5. What do you believe is the most important reason or reasons students consider when signing up for your AP Course? Please elaborate.
Appendix D

Panel of Experienced Educators

Panel Member A
Current consultant for Pennsylvania Department of Education
Former Assistant Superintendent

Panel Member B
Current Superintendent

Panel Member C
Current Assistant to the Superintendent

Panel Member D
Former Assistant Superintendent of Elementary Education

Panel Member E
Former Superintendent
Appendix E

Superintendent Consent Letter

June 27th, 2013

Dear (Superintendent),

The purpose of this letter is to request your support for a research project I am conducting to fulfill the requirements of my doctoral program at Immaculata University. My dissertation topic will focus on the perceptions of Advanced Placement teachers regarding AP Course content fidelity and student participation in AP Courses and AP Exams.

For my research project, I will ask high school teachers of Advanced Placement courses to complete an online survey; I am hoping that some of those AP teachers will also agree to participate in an interview. These activities will occur at a time and location convenient to the participants. I will follow the standard of confidentiality in research and will ensure respondent anonymity.

Your willingness to grant me access to (high school) in order to conduct my study would be greatly appreciated. There is a signature line provided at the bottom of this letter should my request meet with your approval. A stamped envelope has been provided for the letter’s return. If you have any questions pertaining to my study, feel free to contact me at home (717) 738-3421 or on my cell phone (717) 994-2330 or email: zimmega@hotmail.com. You can also contact my supervisor, Dr. Joseph Corabi at 610-647-4400 ext. 3288, or e-mail jcorabi@immaculata.edu if you have any questions. Thank you so much for your time and consideration in this matter.

Sincerely,

Megan Z. Ament

My signature gives Megan Ament permission to obtain data from my school district to complete the research project titled: INVESTIGATION OF TEACHERS’ PERCEPTIONS REGARDING ADVANCED PLACEMENT COURSE CONTENT FIDELITY AND STUDENT PARTICIPATION IN AP COURSES AND EXAMINATIONS.

_________________________________________  _______________________
Superintendent’s Signature                          Date
Appendix F

RERB Approval Form

IMMACULATA UNIVERSITY RESEARCH ETHICS REVIEW BOARD
REQUEST FOR PROTOCOL REVIEW--REVIEWER’S COMMENTS FORM
(R1297)

Name of Researcher: Megan Ament

Project Title: Investigation of Teachers’ Perceptions Regarding Advanced Placement Course Content Fidelity and Student Participation in AP Courses and Examinations

Reviewer’s Comments

Your proposal is approved. You may begin to collect your data. PLEASE NOTE THAT THIS APPROVAL IS VALID FOR ONE YEAR (365 days) FROM DATE OF SIGNING.

Reviewer’s Recommendations:

_____ Exempt
X  Approved
_____ Expedited
_____ Conditionally Approve
_____ Full Review
_____ Do Not Approve

_________________________  ___________________________
Thomas F. O’Brien, Ph.D., Ed. D., RERB, Chair     Date

August 21, 2013
Appendix G

Principal Consent Letter

August, 2013

Dear (Principal),

The purpose of this letter is to request your support for a research project I am conducting to fulfill the requirements of my doctoral program at Immaculata University. My dissertation topic will focus on the perceptions of Advanced Placement teachers regarding AP Course content fidelity and student participation in AP Courses and Exams.

For my research project, I will ask high school teachers of Advanced Placement courses in the 2012-2013 school year to complete an online survey; I am hoping that some of those AP teachers will also agree to participate in an interview. These activities will occur at a time and location convenient to the participants. I will follow the standard of confidentiality in research and will ensure respondent anonymity. I would also like to formally request a copy of your high school’s 2012-2013 Advanced Placement data, including AP Course registration numbers, AP Exam completion numbers, and AP Exam scores for each subject.

On (date), Dr. (Superintendent) granted me permission to conduct research in (school district). Your willingness to allow the high school’s Advanced Placement teachers to participate in the study would be greatly appreciated. There is a signature line provided at the bottom of this letter should my request meet with your approval. A stamped envelope has been provided for the letter’s return. If you have any questions pertaining to my study, feel free to contact me at home (717) 738-3421 or on my cell phone (717) 994-2330 or email: zimmega@hotmail.com. You can also contact my supervisor, Dr. Joseph Corabi at 610-647-4400 ext. 3288, or e-mail jcorabi@immaculata.edu if you have any questions. Thank you so much for your time and consideration in this matter.

Sincerely,

Megan Z. Ament

My signature gives Megan Ament permission to obtain data from my high school to complete the research project titled: INVESTIGATION OF TEACHERS’ PERCEPTIONS REGARDING ADVANCED PLACEMENT COURSE CONTENT FIDELITY AND STUDENT PARTICIPATION IN AP COURSES AND EXAMINATIONS.

___________________________  _______________________
Principal’s Signature              Date
Fall 2013
Dear Advanced Placement teacher,

The purpose of this letter is to request your support for a research project I am conducting to fulfill the requirements of my doctoral program at Immaculata University. My dissertation topic will focus on the perceptions of Advanced Placement teachers regarding AP Course content fidelity and student participation in AP Courses and AP Exams.

Participation in this study is voluntary. You may decline to answer questions or withdraw participation at any time. All data will remain anonymous and confidential. There are no anticipated or known risks from participating in this study.

There are two segments to this research study in which you may choose to participate: an online survey and a face-to-face interview. If you were a teacher of an AP Course during the 2012-2013 school year, your participation would be greatly appreciated.

The online survey can be found at (website) and will take approximately 20 minutes to complete. The Teacher Informed Consent Form, found on page 2 of this packet of information, will be the first page of the online survey. If you wish to participate in the survey and agree to the contents of the Teacher Informed Consent Form, then click on “Yes” to move onto the (#) survey questions.

This packet of information also includes a Teacher Interview Consent Form (page 3), which will be the first page found at (website). If you would like to participate in a face-to-face interview and agree to the contents of the Teacher Interview Consent Form, then click “Yes” to be able to fill in the required contact information. The online survey and online interview consent form are two separate sites, thus preserving anonymity. Two interviewees from each participating school will be selected at random. We will work together to schedule an interview at a time and place of your convenience; the interview should take approximately 30 minutes. Notes taken by the researcher will be sent to the interviewee to ensure the information is accurate.

If you have any questions pertaining to my study, feel free to contact me at home (717) 738-3421 or on my cell phone (717) 994-2330 or email: zimmega@hotmail.com. You can also contact my supervisor, Dr. Joseph Corabi at 610-647-4400 ext. 3288, or email jcorabi@immaculata.edu if you have any questions. Thank you so much for your time and consideration in this matter. Your participation in this study would be greatly appreciated!

Sincerely,

Megan Ament
zimmega@hotmail.com
Appendix I

Teacher Informed Consent Form for Survey

Fall 2013

Dear Advanced Placement teacher,

If you were an AP teacher during the 2012-2013 school year, I invite you to participate in a study about Advanced Placement teachers’ perceptions of AP Course content fidelity and student participation in AP Courses and AP Exams. I am asking you to complete a survey, comprised of 32 questions (3 demographic questions, 3 check-all-that-apply questions, 23 Likert-scale questions, and 3 open-ended questions) that should take about 20 minutes to complete.

Participation in this study is voluntary. You may decline to answer questions or withdraw participation at any time. All data will remain anonymous and confidential. Your responses will be used collectively with all other responses. You will not be asked to provide personally identifiable information. There are no anticipated or known risks from participating in this study.

If you have any questions pertaining to my study, feel free to contact me at home (717) 738-3421 or on my cell phone (717) 994-2330 or email: zimmega@hotmail.com. You can also contact my supervisor, Dr. Joseph Corabi at 610-647-4400 ext. 3288, or email jcorabi@immaculata.edu if you have any questions. This study has been reviewed and approved by the Research Ethics Review Board at Immaculata University. Any questions about your rights as a research subject may be directed to Dr. Thomas F. O’Brien, Chair, Research Ethics and Review Board, (610) 647-4400 ext. 3221; tobrien@immaculata.edu; Room 1 Loyola Hall.

The first page of the online survey, found at (website address) will be this consent form. Please review it again. Clicking “Yes” will indicate that you understand this consent form and that you agree to take part in this study, giving permission to the researcher to use the provided information in the final report. Clicking “Yes” will not waive any legal rights, and you may withdraw consent at any time.

Sincerely,

Megan Ament
zimmega@hotmail.com
Appendix J

Teacher Informed Consent Form for Interview

Fall 2013

Dear Advanced Placement teacher,

If you were an AP teacher during the 2012-2013 school year, I invite you to participate in a study about Advanced Placement teachers’ perceptions of AP Course content fidelity and student participation in AP Courses and AP Exams. I am asking you to complete an interview as part of the data collection. The questions will be open-ended and will take approximately 30 minutes. The researcher will take notes during the interview. The interview notes will be sent to you to ensure that you are in agreement with the researcher’s summary of your interview responses.

Participation in this study is voluntary. You may decline to answer questions or withdraw participation at any time. All data will remain anonymous and confidential. There are no anticipated or known risks from participating in this study.

If you have any questions pertaining to my study, feel free to contact me at home (717) 738-3421 or on my cell phone (717) 994-2330 or email: zimmega@hotmail.com. You can also contact my supervisor, Dr. Joseph Corabi at 610-647-4400 ext. 3288, or email jcorabi@immaculata.edu if you have any questions. This study has been reviewed and approved by the Research Ethics Review Board at Immaculata University. Any questions about your rights as a research subject may be directed to Dr. Thomas F. O’Brien, Chair, Research Ethics and Review Board, (610) 647-4400 ext. 3221; tobrien@immaculata.edu; Room 1 Loyola Hall.

The first page of the interview consent, found at (website address), will be this consent form. Please review it again. Clicking “Yes” will indicate that you understand this consent form and that you agree to take part in the interview portion of this study, giving permission to the researcher to use the provided information in the final report. Clicking “Yes” will not waive any legal rights, and you may withdraw consent at any time. You will then be directed to fill in contact information necessary for scheduling the face-to-face interview. The link to the Teacher Informed Consent Form for Interview is separate from the link to the Teacher Survey, thus preserving your anonymity.

Sincerely,

Megan Ament
zimmega@hotmail.com