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IMPACT OF TEACHER SUPPORT SYSTEMS ON ADVANCED PLACEMENT
ACHIEVEMENT OUTCOMES

Yolanda Gomez

The University of Texas at Tyler

A dissertation submitted in partial fulfillment
of the requirements for the degree of
EdD in School Improvement
School of Education

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Abstract

In the realm of Advanced Placement (AP) education, a persistent achievement gap exists, with low-socioeconomic students consistently underperforming compared to their affluent peers. This disparity is particularly notable in AP English Language and Composition, where 93% of students fail to achieve a score of three or higher, the score for earning college credit. This study hypothesizes that this gap is partly due to inadequate support for AP teachers, particularly the lack of collaborative planning time. In most high schools, AP English Language and Composition teachers have no dedicated time for collaboration, instead focusing on other areas like End of Course subjects or Dual Credit courses. Using a mixed-method approach with an embedded experimental model, this study examines how providing these teachers with structured collaborative planning time affects their perceptions of support and, ultimately, their students' achievement outcomes. By addressing this systemic issue, the study seeks to enhance educational equity, empowering underserved students to fully benefit from AP opportunities.

Keywords: Advanced Placement, Underserved Students, Common Planning Time, Collaborative planning time, Equity of For All, Professional Development, Differentiated Instruction

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CHAPTER ONE: PROBLEM OF PRACTICE

Introduction

This improvement science dissertation includes five chapters with a unique focus. Bryk et al. (2017) noted that improvement science is a methodology that structures investigations to enhance practice. Hinnant-Crawford (2020) states, “For example, you need to be able to see the system (principle 3) to successfully define the problem, develop change, implement change, test the change, and spread improvement.” (p.4). With this philosophy of improvement science, one will engage in Design Based Iterative Research (DBIR) and use the Plan-Do-Study-Act cycle to inform practice and impact achievement outcomes.

Advanced Placement (AP) allows secondary students to earn college credit while in high school. Students take a test over a rigorous curriculum, and if they score a three or higher, they can opt out of taking the college course upon enrollment at the university. Concurrent enrollment courses are offered to students to attain their high school credit and earn college hours while in high school if they earn a passing score for the course. Although concurrent enrollment could increase the desire in students to take AP courses, the success of concurrent enrollment courses is much higher than in AP courses. One study found that the level of rigor in AP courses is higher than in Dual Enrollment courses, yet little to no time is allotted for Advanced Placement teacher planning (Garcia et al., 2020). Despite increased access to all students, these young adults who take dual enrollment courses find it challenging to transition, tackle the rigor, and embrace the soft skills necessary to navigate the university world and meet expectations (Garcia et al., 2020). According to Dyer K. et al. (2022), positive self-concept is the highest predictor of success based on dual credit grade point average in dual credit courses. This is important because students are

automatically entered into the Advanced Placement course if they choose to take the dual credit course. Students start the AP journey at a disadvantage from the start.

Advanced Placement was designed for the privileged population, while concurrent enrollment serves the countryside, which is the underserved population (Clayton, 2021). These two distinct populations bring about unique opportunities to meet their needs. Many low-socioeconomic students encounter limitations due to various factors within the educational system and home environment. Research implies that minority students struggle more than affluent white students. According to Judson et al. (2019), many of these students chose not to take the test but were convinced by waiving the assessment fees to encourage them to take the AP test. This brings the opportunity for one to prepare and support teachers to feel confident and positively encourage students to take the assessment and be successful.

Although COVID-19 brought grief and heartaches around the country, it allowed one to reexamine current teaching practices and opportunities to consider when addressing barriers to synchronous and asynchronous remote learning (Backes et al., 2021). Teachers at all levels must effectively address the varied learning styles by differentiating instruction, whether serving students in-person or remotely (Baron et al., 2019). The digital divide became apparent to many across the nations, making headlines around the world (Backes et al., 2021). Underserved populations saw the most significant impact on achievement due to limited resources at home.

Problem of Practice Statement

As measured by the College Board Advanced Placement, 93% of students score less than a three in the Advanced Placement English Language and Composition Assessment. I am interested in researching this problem of practice because South Texas firmly believes that Early College High Schools are the bridge to prepare underrepresented, low socioeconomic students to

succeed in college. Doing well on an AP course recommends how qualified the student is to receive credit for a college course or placement. The Advanced Placement results will enlighten the researcher to understand better possible factors impacting the success of underserved students and their success in post-secondary education. The scale of this underperformance challenges the very mission and efficacy of these institutions, raising critical questions about equity, access, and the true preparedness of these students for higher education. The implications of the low scores on the Advanced Placement (AP) English Language and Composition Assessment for students, teachers, and the broader educational community are significant and multifaceted.

Students may face consequences that are both immediate and long-lasting. In the short term, failing to score a three or higher denies them the opportunity to earn college credit, a benefit that could significantly reduce their financial burden. For many low-income students in South Texas, the prospect of reduced tuition costs is not just an advantage but often a necessity for making college attendance feasible. Without these credits, students face higher education costs, potentially forcing them to take on more substantial student loans, work more hours while studying, or even postpone or forgo college altogether. This financial strain is particularly acute in a region where many families already struggle with economic hardships. Low AP scores can profoundly impact a student's academic self-perception and future educational trajectory.

AP teachers often face unique pressures. Having 93% of students underperform in AP English Language and Composition can feel like a profound failure, questioning their pedagogical skills and commitment to their students. This statistic is both a professional challenge and a personal burden. Many educators in these settings are drawn by the mission to uplift underserved students, often relating to their backgrounds and aspirations. They must deliver college-level content to students who may lack foundational skills, bridge cultural and

linguistic gaps (particularly in a region with a high English Language Learner population), and prepare students for a high-stakes exam, all while possibly lacking resources common in more affluent districts. The stress of consistently low scores can lead to professional dissatisfaction, anxiety, and even burnout. Some may resort to teaching to the test, sacrificing deeper learning for superficial test-taking strategies, a practice that, while possibly boosting scores, fails to build genuine college readiness.

The fact that 93% of students in South Texas score below a three on the AP English Language and Composition exam is far more than an academic shortfall. It is a multi-layered crisis that challenges individual aspirations, professional commitments, institutional missions, and regional ambitions. At its core, this issue tests South Texas's fundamental belief that Early College High Schools can be the great equalizer, preparing underserved students not just to attend college, but to thrive there and beyond.

Purpose of the Present Study

This study aims to evaluate the Advanced Placement Program in the Early College District to identify potential root causes and possible interventions to impact achievement outcomes positively. Underserved students do not meet a score of three or higher, which grants them the opportunity to attain post-secondary credit toward their bachelor's or associate degree of choice. Notably, in the AP English Language and Composition assessment, only seven percent of students achieve this critical threshold, highlighting a pressing need to address this disparity and increase the number of students who can benefit from these college-level opportunities.

It is particularly crucial to create strong systems that best support AP English Language and Composition teachers. This course, which focuses on rhetorical analysis, argumentation, and synthesis skills which are fundamental to academic success across disciplines is often seen as a

gateway to other AP courses and college readiness. By equipping these teachers with tailored professional development, collaborative planning time, and administrative support, one empowers them to deliver high-quality instruction that not only improves student scores but also cultivates critical thinking and writing abilities essential for college success. Furthermore, as writing proficiency is a key predictor of academic achievement and career advancement, enhancing performance in this course can have far-reaching effects, particularly for underserved students, helping to close opportunity gaps and foster equitable access to higher education. By addressing the root causes of poor performance on the English Language and Composition AP assessment, one can expect an increase in the perception of the support received by teachers and on achievement outcomes.

Theoretical Framework

This study aims to inform practice through practitioners' collective efforts within the DBIR framework. Bruggen and Kwakkkel (2019) emphasize the importance of including stakeholders to motivate individuals for the needed transformative change in practice. DeCuir-Gunby, J. T. & Schutz, P. A. (2016) mention one attempt to understand phenomena within the context and involve stakeholders in the process. According to Hedin (2010), two terms often used related to "experiential approaches" are experiential learning and experiential education. The first refers to the process, and the latter to programs or perspectives drawn from experiential learning. The author highlights David Kolb's Model, which emphasizes grasping concrete knowledge and conceptualizing the learning. Kolb's cycle of the model begins with an interaction, observation, reflection, and drawing generalizations from reflection and ending by adding or modifying concepts according to the process (pp. 108-112). Miettinen (2000) asserts that from an adult education perspective, one must have faith in the teachers' potential to learn

and grow. Kuhn et al. (2000) state, "Beliefs about knowing and knowledge are potentially important determinants of academic performance. It is not surprising that what people believe about acquiring knowledge – how it occurs and what it accomplishes –influences its operation in their own lives." This drives our work to assess the impact of teacher collaborative planning time on their perception of teacher support and structures to impact achievement outcomes. One must remain mindful of Kolb's concept of experience; teachers must process their concrete foundation of experience to observe, reflect on new learning, and apply it. Limitations at any level may bring additional implications to the study.

The program's intent and effectiveness have been challenged due to its decrease in the performance of underserved populations. Kolluri (2018) summarizes the 1997 vs. 2012 AP pass rate results comparing White, Black, and Hispanic/Latino students; the White student population outperformed Black and Hispanic students. It is apparent that although an increase in access exists for these underrepresented students, a significant lack of preparation for success minimizes their enhanced college-going experiences connected to AP course participation. Sixty-three percent of AP teachers surveyed across the United States are discouraged by the "free access" to course enrollment and believe students should be screened to ensure they are ready for the rigorous curricula.

Professional Development (PD) is an avenue to increase student engagement and literacy practices (Rajbanshi et al., 2020). These professional development opportunities allow teachers to actively contribute to their learning process. They will construct new learning and apply it to the future planning of their delivery of instruction to ultimately impact student achievement. One must remain cognizant of Kolb's concept of experience; teachers must process their concrete

foundation of experience to observe, reflect on new learning, and apply knowledge (Miettinen, 2000).

Theory of Change

Advanced Placement achievement outcomes trends in English Language and Composition courses for underserved populations are under scrutiny because only seven percent of students score a three or higher in their AP assessment. Teachers have limited to no time to plan during the instructional day due to other responsibilities within their assignments. These teachers attempt to teach two curriculums for one 90-minute class period every other day. Providing teachers with additional planning time to discuss and deepen their understanding of the expected outcomes for the course will aid in increasing achievement outcomes. McLaughlin and Mitra (2001) note that “Theory-based reforms require significant teacher learning and contextualization if they are to change teaching and learning in significant, sustained ways (p. 302)”. Teachers will have time to collaborate with their peers to discuss strategies and share best practices and student artifacts to increase their learning. Teachers will become motivated and own their collective learning journey to increase achievement outcomes.

Research Questions

These opportunities allow one to use a designed-based research approach to investigate the research problem. How will providing Advanced Placement teachers with collaborative planning time and structured professional development offered free of cost by College Board AP Central impact achievement outcomes for low socio-economic students? Question to address during the study:

- How do Advanced Placement teachers perceive the support, systems, and structures provided by the Early College District?

Questions to evaluate after the study:

- Is there a positive impact on achievement outcomes after the embedded district collaborative learning community for AP English Language and Composition?
- Is there an overall increase in positive perception by staff?
- Is there an increase in achievement outcomes?

Key Definitions

A few definitions are important to the work of improvement science. As noted by Hinnant-Crawford (2020), Improvement is a systematic approach based on core principles that direct those involved in both scholarly and practical work to clearly define issues, analyze how the current system generates those problems, identify modifications aimed at resolving the issues, evaluate the effectiveness of those modifications, and disseminate the changes if they indeed lead to improvement. Langley et al (2009) refer to improvement as the outcome after the work or process is altered, positive changes are visible by those closest to the system and the change has a long-term impact (p. 89). Scholar-practitioners ground their work in scholarly research and methodical investigations and reflect continually while striving to enhance their organization and practice through an analytical approach (Hinnant-Crawford, 2020). Reflective practitioners revisit experiences to inform action necessary for professional growth and improvement opportunities (Plack & Greenberg, 2005).

The system of profound knowledge, interwoven throughout the principles of improvement, encompasses four key aspects: an understanding of systems and how components interconnect, knowledge about variation and what causes processes to deviate, a theory about how knowledge is acquired and built upon, and insights into human psychology and behavior (Hinnant-Crawford, 2020).

Evaluation Plan of Current Context

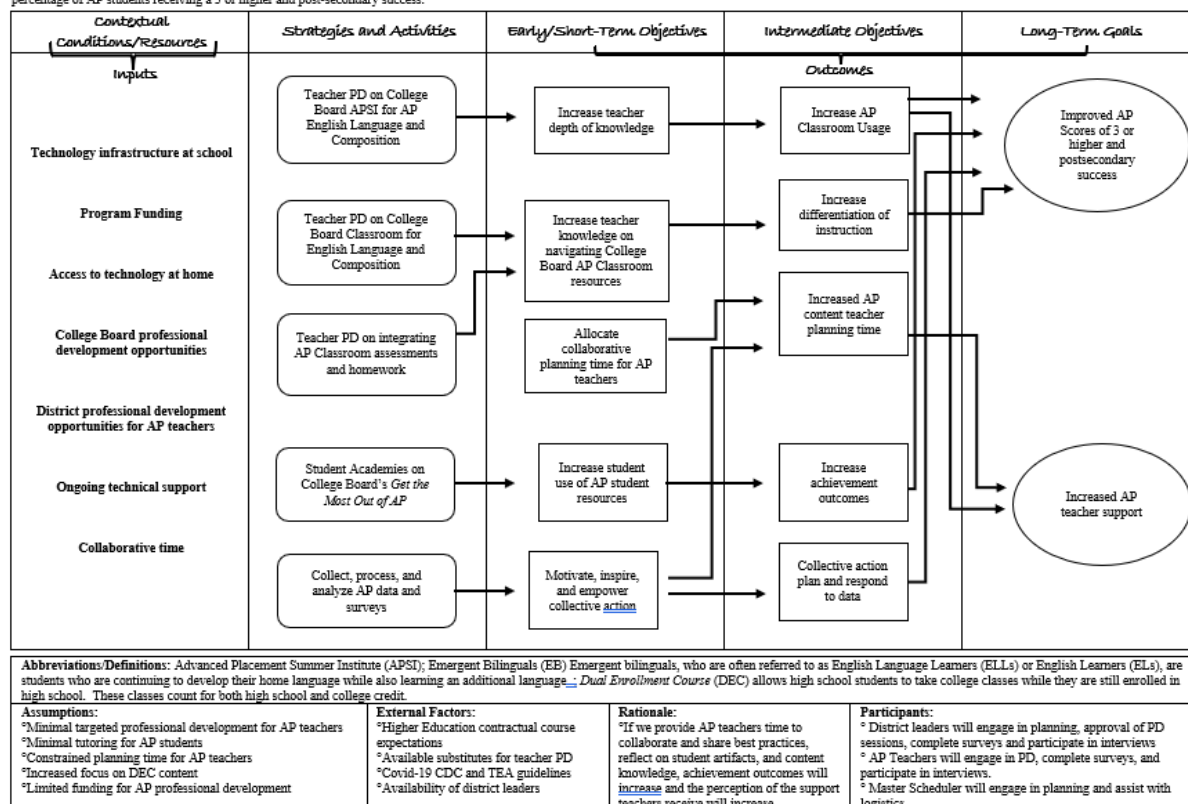
Methodology

Current opportunities do not exist for teachers to collaborate to strengthen the program deliverables for students to succeed. One perceives that teachers have minimal time to plan for Advanced Placement courses. There is minimal tutoring for AP students. There is limited funding for the Advanced Placement program. The majority of the funds are utilized for the Dual Enrollment initiatives. The overarching goals of the study are to increase awareness among district leaders of the perceived support AP teachers receive, increase AP teacher support and relationships, and improve AP scores of three or higher to ensure postsecondary success. Within the process, one will explore several intermediate goals: to increase usage of the AP Classroom and provide AP teacher planning time and collective action to guide students' success. Through the structured planning time, AP teachers will have the opportunity to share best practices and review exemplars of student artifacts to guide their lesson delivery and optimize student learning. For further details, see Figure 1, *Overarching Logic Model: Increasing Achievement Outcomes in AP English Language and Composition Courses* below. The overarching logic model provides a visual for the contextual conditions/resources, goals and objectives, and assumptions that inform practice and improvement efforts. The long-term goal is to improve scores on AP EL & C assessment and increase positive perception of the support these teachers receive.

Figure 1*Overarching Logic Model: AP English Language and Composition Program***Overarching Logic Model: AP English Language and Composition Program**

Problem Statement: Ninety-three percent of students enrolled in high school AP English Language and Composition classes score below a three on the Advanced Placement (AP) test, eliminating students' opportunity to receive credit for a similar course at most US colleges.

Theory of Change: Teachers will have an opportunity to interact, observe, reflect, draw generalizations from reflection, and end with adjustments to their lesson delivery. Teachers do not have time to plan with other AP teachers in the district. Creating time for collaboration amongst their colleagues will increase teacher pedagogy knowledge and support. Encouraging College Board AP Classroom access for students and teachers will increase the percentage of AP students receiving a 3 or higher and post-secondary success.

**Designed Based Iterative Research**

Designed-Based Iterative Research allows one to understand the intricacies of learning and theory. "DBR involves the iterative refinement of both designs for learning and theory" (Svihla, 2014, p. 36). Hoadley and Campos (2022) expressed that educational psychology has helped one better understand the human mind, which is crucial to gauge teaching, learning, and the impact on achievement outcomes. Hoadley and Campos (2022) emphasized,

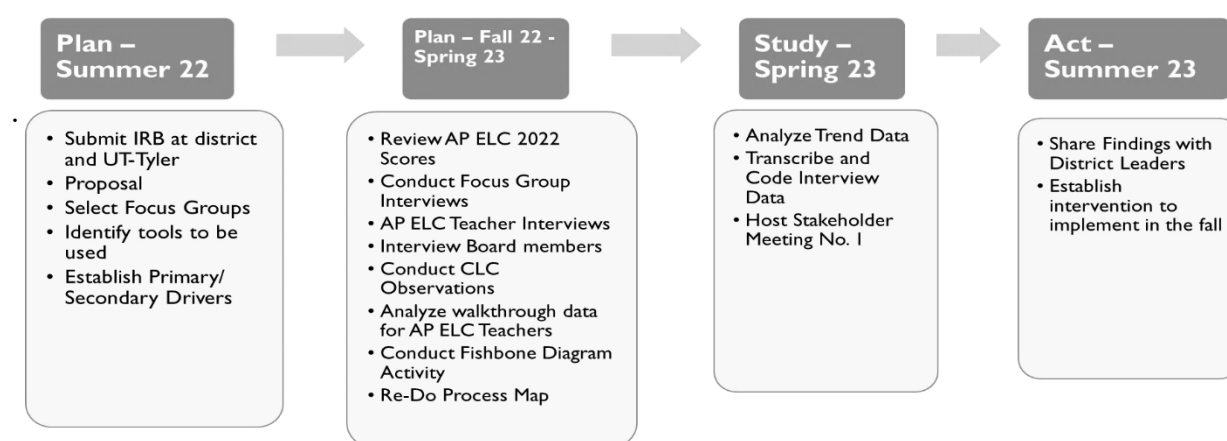
"DBR attempts to understand the world by trying to change it, making it an interventionist research method. However, DBR problematizes the designed nature of interventions, recognizing that the intended design is different from what may be enacted

in a complex social context, in which both participants and designer-researchers have agency. (p. 5)”

For this evaluation, we will follow a minimum of one iteration. We will begin by evaluating the current context and surveying teachers before the implementation year (See Figure 2 *Evaluation Timeline*). AP English Language and Composition scores will be analyzed to assess the need.

This timeline is used to keep one focused on important next steps.

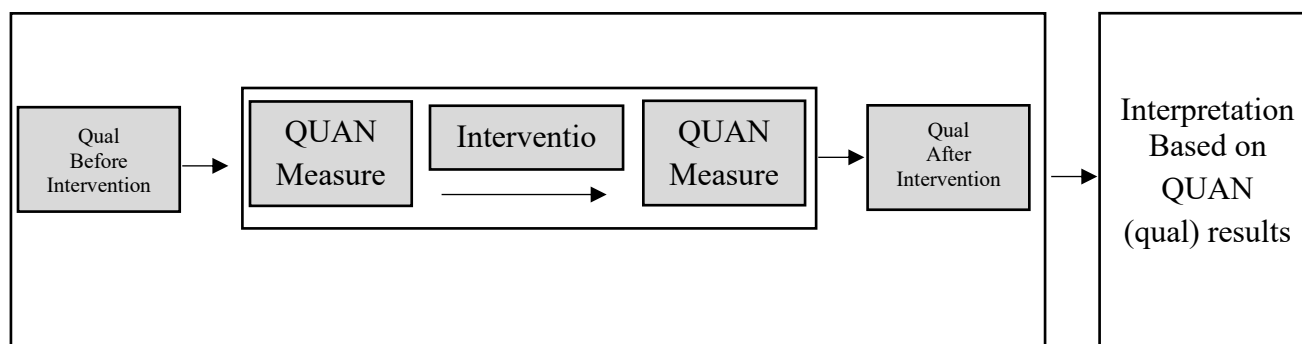
Figure 2 Evaluation Timeline



Once the evaluation is conducted, we will shift to the iterative cycles. Through each ninety-day cycle, we will conduct the pre/post tests before the intervention. Figure 3, *Data Collection Process*, depicts when the data will be collected during the PDSA cycle. This visual informs of the general process used to collect the qualitative and quantitative data to inform practice.

Figure 3

Data Collection Process



Design & Methodology

A design-based iterative approach will be used to understand teacher collaborative planning time and support structures' impact on student performance. Teachers will take a survey that contains highly structured, semi-structured, and loosely structured interview questions to inform potential opportunities to improve achievement outcomes. The work intends to assess its impact with only the English Language and Composition Teachers to possibly scale at large for all AP teachers in a similar situation across the district.

Setting

The Early College District is a public Local Education Agency (LEA). All schools vary in size and population and tailor student learning experiences to students' needs. There are eight high schools, eight middle schools, 26 elementary schools, and several childhood centers throughout the district in partnership with local and county organizations.

I will work with this Early College District's four comprehensive Early College High Schools. Within the district's student population of approximately 30,000 students, 94.2% are economically disadvantaged, 46% are Emergent Bilinguals, 12% Special Education, and nearly 2% are Migrant. School A has approximately 2300 students, School B has 1940 Students, School C has 2190 students, and School D has 1560 students. Within the population of School A, 94% are economically disadvantaged, 31% are Emergent Bilinguals, 8% are Special Education, and 56% are At Risk. Within the population of School B, 97% are economically disadvantaged, 42% are Emergent Bilinguals, 11% are Special Education, and 58% are At Risk. See Table 1, *Student Demographics of Each Comprehensive Early College High School*, for additional information on all four participating schools. This table provides specific information on the student demographic being represented by each school.

Table 1*Student Demographics of Each Comprehensive Early College High School*

School	Total Number of Students	Economically Disadvantaged	At Risk	Emergent Bilinguals	Special Education	Migrant	Gifted & Talented
A	2325	93.6%	56%	30.8%	8.4%	1.2%	9.1%
B	1945	96.7%	58%	42.2%	10.8%	3.8%	7%
C	2193	91.9%	63%	37.1%	8.8%	1.1%	6.7%
D	1562	96.8%	65%	54.4%	12.5%	2.8%	9.1%

Participants

The participants chosen for this study consist of nine Advanced Placement English Teachers (All AP EL&C teachers), all students taking AP English Courses (For retrieval of AP scores only), four Campus Principals, two Executive Officers that support participating Early College High Schools or The Advanced Placement Program, and one Advanced Academics Director. These participants will inform the data of this Early College District, which has structures and support services that have been provided within their years of service.

Data Sources

College Board Advanced Placement Scores from the Early College District will be used as the control group to inform the researcher of the district's baseline and areas of opportunity. Survey results will be used to monitor the impact of the expected outcomes. District resources will be collaborative planning time and Advanced Academics Program funds to support professional development opportunities.

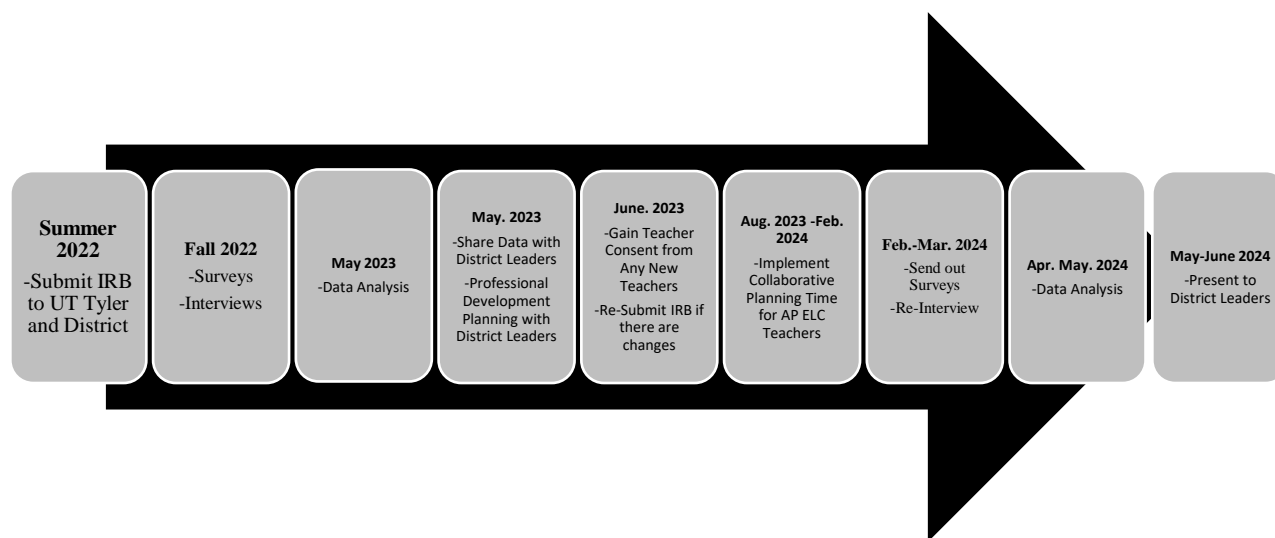
Data Collection

I will begin this project by conducting an evaluation to understand the current system, its drivers, levers, and perceived causes that impact student performance. I will send out semi-structured surveys to all advanced placement English teachers and conduct interviews with students and staff in the district. The interviews focus on investigating if low-socioeconomic, underserved students such as Emergent bilinguals in Early College High Schools are succeeding in passing the Advanced Placement exams compared to traditional high school students. Are teachers prepared with pedagogy and training to execute rigorous lessons connecting students to the broad concepts and content to prepare them for post-secondary education? One hopes to gain insight into how much support is offered to these Ap, AP/DC teachers in this Early College District. Surveys will be sent out via email with a Qualtrics survey link and stored electronically on the UT Tyler one drive when received. I will use Otter.ai software to help me transcribe interviews to achieve accuracy and use a deductive decoding system to help analyze the data. Then, I will work with the four comprehensive high schools during the months of Fall 2022 – Spring 2023 to inform them of current practices and support systems that are currently in place. See Figure 4 *Preliminary Timeline for Advanced Placement Study for an Early College District* to review the preliminary timeline to conduct surveys, analyze data, and gain district support of the implementation for the professional development provided free of cost from College Board AP Central. AP Central is a learning community of teachers that provides free resources for teachers and students. Prior work affirms student achievement gains when used with fidelity. In addition, Matrix 1 *Evaluation Questions, Indicators, and Targets* detail the evaluation sample questions that will be used and considered to evaluate progress and areas of opportunity, including indicators to help measure the intended targets. Matrix 2 *Evaluation Questions,*

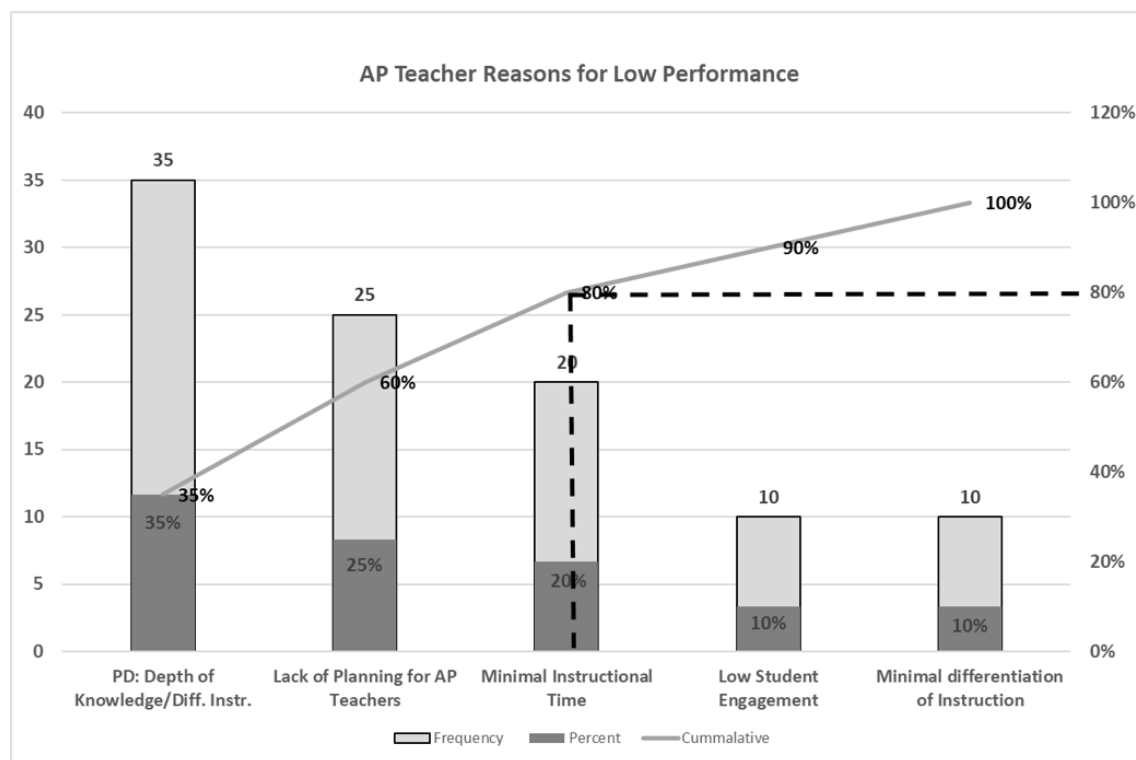
Indicators, Targets, Data Source, and Data Collection, includes sample data sources and collection methods used and considered to measure the impact of the intervention and all targets. Refer to the appendices for additional details.

Figure 4

Preliminary Timeline for Advanced Placement Study for the Early College District



To gain a deeper insight into the current practices and support systems in place at the partnering Comprehensive Early College High Schools in the district, I will invite teachers to participate in a brainstorming activity using a fishbone diagram. I will use a Pareto chart to understand what AP teachers perceive to be the reasons for 93% of students not achieving a score of three or higher on their AP EL & C assessment. This will allow us to target 20% of the perceived causes that account for 80% of the alleged issues. See Figure 5 *Early College District AP Teacher Reasons for Low Performance*.

Figure 5*Early College District AP Teacher Reasons for Low Performance*

In addition, I will analyze survey data to identify themes that will help delineate what professional development teachers believe they will benefit from and if and/or how much planning time to allow during the instructional day or every six weeks, and support structures that teachers can benefit from which will ultimately impact student achievement. By May of 2023, I will complete the coding and data analysis of the survey participants. In June 2023, I will collaborate with the district leaders and experts in Advanced Placement work to reflect on the findings. In addition, I will share themes found, projected outcomes, proposed scheduling of planning time, and professional development plan for Advanced Placement teachers to begin implementation in the Fall of 2023 or the 2024 school year. The teachers will be monitored and supported for nine months, from August 2023 to May 2024. The researcher will work with four comprehensive high schools. All AP/DC teachers will have structured professional development

with embedded teacher support for AP English Language and Composition. After the implementation, we will re-send the survey to AP/DC or AP teachers to assess the perceived level of impact professional development and structured planning time had on their perception of support and student achievement. Once again, by May of 2023, I will complete the coding and data analysis of the surveys submitted. In June 2023, I will collaborate with the Early College District experts in Advanced Placement work to reflect on the findings.

Data Analysis

We will use qualitative and quantitative measures to study the impact of professional development and structured planning time on student achievement. The statistical method needed to inform the researcher's questions is descriptive statistics. This is the most appropriate because it will determine if offering professional development and structured planning time impacts teachers' perceived level of support to impact student achievement. We know the sample mean and the standard deviation. We can compare the average score to last year's average of 1.45 rating and a standard deviation of 0.68 on AP English Assessments for the four participating comprehensive high schools. Furthermore, descriptive statistics are necessary to address the research question, "Will offering professional development and structured planning time impact teachers' perceived level of support to impact student achievement? This same process will be used to analyze the students' perception of their level of support from their teachers.

In July 2024, I will conduct a comparison analysis of the AP English Scores of students who took the AP assessment after completing the course and comparing them to the performance of students who took the assessment in the Spring of 2023 (Their teachers received no professional development or had no structured planning time). Descriptive statistics is the most appropriate because it will determine if a difference exists between the means of two

independent groups on a continuous dependent variable. Several design considerations were met when deciding on descriptive statistics. The first was that participants were randomly chosen from the larger population. In addition, no pretest was conducted prior to the Advanced Placement test. Furthermore, descriptive statistics are necessary to address the research question, “Is there a difference in student achievement when comparing scores of students who sat in classrooms of teachers who received professional development and planning time versus those teachers who did not?”

Data Management Plan

The University of Texas at Tyler IRB Committee approved my study for evaluation. I used pseudonyms to protect the anonymity or confidentiality of the participants. Survey data and AP scores will be stored in the UT Tyler One Drive.

Limitations of the Research

There are a few limitations to the study. This study occurred in one Early College District, which limits the transferability due to its context and unique student demographics. Due to the high level of rigor and TSI criteria, a few special populations may enroll in the advanced placement courses. In addition, I served as the Migrant Education Program Director and later became the Executive Officer for Learning Acceleration in this South Texas district, which may influence how staff responds to the survey. Finally, I have a healthy collegial relationship with the Advanced Academic Director and high school principals who will support the Advanced Placement research and provide support systems for AP/DC or AP teachers. These may help with the progress of the project.

Due to the COVID slide that our students and school community have experienced during these past few years, data may not accurately depict the average expected growth in

academic achievement. Results may balloon to numbers more significant than average or deflate less than usual, depending on the student's learning environment. Students who continue to engage virtually have shown an increase in significant learning loss compared to students attending in person. Teachers may showcase an increased stress level due to the current pandemic learning platforms and increased social-emotional learning issues for students and staff. Taylor, E. W. (2007) informs one that due to the nature of the surveys and interviews, it may be difficult to remember reflective moments that impacted their perceptions.

CHAPTER 2: REVIEW OF THE LITERATURE

Introduction

Advanced Placement (AP) provides secondary students with the opportunity to earn college credit while in high school. Students take a test over a rigorous curriculum, and if they score a three or higher, they can opt out of taking the college course upon enrollment at the university. Concurrent Enrollment Courses are offered to students to attain their high school credit and earn college hours while in high school if they earn a passing score for the course. Although concurrent enrollment could increase the desire among students to take advanced placement courses, the success rate of concurrent enrollment courses is much higher than that of advanced placement courses. Gurantz, O. (2021) mentions that AP students may deepen their studies by taking more courses within their preferred discipline or expose them to various disciplines. One study found that the level of rigor in AP courses is higher than in dual enrollment courses, yet little to no time is allotted to advanced placement teacher planning (Garcia et al., 2020). Despite increased access to all students, these young adults who take Dual Enrollment courses find it challenging to transition, tackle the rigor, and embrace the soft skills necessary to navigate the university world and meet expectations (Garcia et al., 2020). Gurantz (2021) states that “Exposing students to a college-level curriculum can have multiple benefits: preparing students for the academic rigor of college; increasing students’ knowledge of or confidence about college-readiness; and learning about potential college majors or career choices” (p. 2). Students who earn a high AP score have a higher chance and completing the bachelor’s degree when the AP course is linked to college credit (Gurantz, 2021).

Advanced Placement was designed for the privileged population while Concurrent Enrollment serves the countryside, which is the underserved population (Clayton, 2021). These two distinct populations bring about unique opportunities to meet their needs. Many low-socioeconomic students encounter limitations due to various factors within the educational system and home environment. Research implies that minority students struggle more than affluent white students. According to Santoli (2002), AP was used to keep high-achieving students from repeating introductory courses they had taken in high school as far back as the early 1950s. Judson et al. (2019) add that many of these students chose not to take the test but were convinced by waiving the assessment fees to encourage them to take the Advanced Placement test. This brings the opportunity for one to prepare and support teachers to feel confident and positively encourage students to take the assessment and be successful.

Although COVID-19 brought grief and heartaches around the country, it allowed one to reexamine current teaching practices and opportunities for one to consider when addressing barriers to synchronous and asynchronous remote learning (Backes et al., 2021). Teachers at all levels must effectively address the varied learning styles by differentiating instruction, whether serving students in-person or remotely (Baron et al., 2019). The digital divide became evident to many nations making headlines worldwide (Backes et al., 2021). Underserved populations saw the most significant impact on achievement due to limited resources at home.

The literature review in this improvement science evaluation study aids in providing a comprehensive overview of the existing research, theories, and practices relevant to advanced placement opportunities for AP teachers and underserved populations. It helps one to contextualize the research within the broader academic landscape, identify gaps and areas

needing further study, and establish the theoretical framework upon which this evaluation study is centered. In short, this literature review will guide the focus of the work.

Research Questions

These opportunities allow one to use an evaluative approach using DBIR to investigate the research questions. Several of the guiding research questions are as follows: Questions to address during the study:

How do Advanced Placement teachers perceive the support, systems, and structures provided by the Early College District?

Questions to evaluate after the study:

- Is there a positive impact on achievement outcomes after the embedded district collaborative learning community for AP English Language and Composition?
- Is there an overall increase in positive perception by staff?
- Is there an increase in achievement outcomes?

Theoretical Framework

The purpose of this evaluation is to guide professional practices by utilizing the combined efforts of practitioners operating within the design-based implementation research (DBIR) framework. Bruggen and Kwalkkel (2019) stress the significance of involving relevant stakeholders to inspire and motivate the individuals to embrace the necessary transformative changes in their practices. According to Hedin (2010), two terms often used related to "experiential approaches" are experiential learning and experiential education. The first refers to the process and the latter to programs or perspectives drawn from experiential learning. The author mentions the various models of experiential learning and highlights David Kolb's Model, which emphasizes grasping concrete knowledge and conceptualizing the learning. Kolb's cycle

of the model begins with an interaction, observation, reflection, and drawing generalizations from reflection and ending by adding or modifying concepts according to the process (pp. 108-112). Miettinen (2000) asserts that from an adult education perspective, one must have faith in the teachers' potential to learn and grow. Kuhn et al. (2000) state that "Beliefs about knowing and knowledge are potentially important determinants of academic performance. It is not surprising that what people believe about acquiring knowledge – how it occurs and what it accomplishes – influences its operation in their own lives." This drives our work to assess the impact of teacher collaborative planning time on their perception of teacher support and structures to impact student achievement. One must remain mindful of Kolb's concept of experience; teachers must process their concrete foundation of experience to observe, reflect on new learning, and apply it. Limitations at any level may bring additional implications to the study.

The program's intent and effectiveness have been challenged due to its decreased performance of underserved populations. Kolluri (2018) highlights the 1997 vs. 2012 AP pass rate results comparing White, Black, and Hispanic/Latino students. The White student population outperformed both Black and Hispanic students. It is apparent that although an increase in access exists for these underrepresented students, a significant lack of preparation for success minimizes their enhanced college-going experiences connected to AP course participation. Sixty-three percent of AP teachers surveyed across the United States are discouraged by the "free access" to course enrollment and believe students should be screened to ensure they are ready for the rigorous curricula.

Professional development enhances student engagement and literacy practices (Rajbanshi et al., 2020). These PD opportunities enable teachers to participate in and contribute to their learning process actively. They construct novel understandings and can apply this new learning

when planning future instructional delivery to improve student achievement. However, one must remain mindful of Kolb's emphasis on the role of experience; teachers need to process and build upon their existing concrete experiences, observing and reflecting on new learning to apply that knowledge effectively (Miettinen, 2000).

Literature Review

Equitable access remains one of the core objectives of the Advanced Placement (AP) Program. According to Kolluri (2018), nationwide college access initiatives have resulted in impressive gains in access to the rigorous curriculum for all marginalized populations. One must acknowledge that barriers exist and disparity in post-secondary outcomes recommend increased work with low socio-economic and underrepresented populations. Parents of elite status seek a distinction between their children and those underserved, inadvertently pressing to maintain inequalities amongst low-income families. Extensive research exists on AP access and its measures of success. Accountability for the success of gifted students in advanced placement courses is a shared responsibility of the local education system and the state. However, there are minimal studies on how to overcome barriers to such inequities.

Advanced Placement History

Origins and Evolution of AP Programs.

Back in 1954, only 532 students took the AP tests. Fast forward to the twenty-first century, over one million students can access AP courses across the United States (Schneider, J., 2009). According to Rothschild (1999), in the early 1950s, high-achieving students limited effort while attending college until the Cold War and the outbreak of the Korean War changed the demand for increased talent, requesting engineers and scientists to operate the political realm (Schneider, J., 2009). Rothschild, E. (1999) shares a pictorial of the stance during those times,

“The college work was too easy. So I drank, and wasted time, and ran down to New York. I didn't have to work so I didn't. My grades were excellent and if I had bothered to work, they would have been better.... I disliked all the courses, knew none of the professors, and didn't care to. It was a game. I was seeing how little work I could do and still keep good grades, and how much I could drink in the weeks before exam period.... In the second half of my sophomore year, I got an inspiring tutor and took four fine courses. I started working for the first time in 18 months. I also stopped drinking. Even now with the objectivity of two more years I am seriously convinced that I was magnificently prepared at school and that my first 3 terms at college were a total loss” (p. 1).

Hence, advanced placement courses were created to prevent high-achieving students from taking coursework they had previously mastered in high school (Santoli, 2002).

Shifting Focus from Elite to Underserved Populations.

Schneider, J. (2009) mentions that the second director Dudley highlighted that not all students were created equal; and AP was only granting top students in elite schools who were prone to succeed an opportunity to excel and keep them motivated. Nevertheless, the driving force was the belief that high school students could manage the rigor of college (Santoli, 2002). Keller (1958) mentions that forty-eight school and college teachers from twenty-seven schools and twelve colleges met at Williams College to discuss AP courses which were to gain college credit in exchange for ideas. Santoli (2002) added that “A committee of college and high school teachers recommended that achievement examinations be set up in major subjects to enable students to obtain college credit while still in high school” (p. 24). By 1954, tests were created based on the syllabi and outlines and by 1955, the first AP exams were administered (Santoli, S. P., 2002).

*Equity for the underserved population***Rebranding Advanced Learning opportunities.**

Meyer and Plucker (2021) assert that advanced learning opportunities should be carefully advertised to attract all learners, not just the gifted child, which implies superiority. Rebranding advanced learning opportunities and often questioning the labels placed upon them are a few approaches to warrant equity and excellence in education (Meyer & Plucker, 2021). Even after its inception and the victorious win to provide AP access to those underserved, brings a new thread to the AP label, many of the high-class schools have rejected the program (Schneider, 2009).

Tailoring Support to Student Needs.

To prevent a one-size-fits-all service model, schools should accommodate, and support students based on their needs (Meyer & Plucker, 2021). As Schneider, J. (2009) states, “In the case of the Advanced Placement Program, a greater push for equity has, ironically, incited a reaction that may, in the end, result in greater inequity” (p. 813). Mavrogordato and White (2020), emphasize that leaders can influence policy implementation to achieve equity and social justice for the underserved population.

*Achievement Gap in AP Enrollment***Disparities in Hispanic and African American Enrollment.**

A collaborative approach was used to examine the issues in Advanced Placement amongst marginalized populations with Hispanic and African American students (Bittman et al., 2017). They identified potential candidates and monitored their progress to eliminate barriers from enrollment through completion. Despite the high Hispanic representation at some high schools, Hispanics barely reached double-digit enrollment rates in Advanced Placement courses.

Bittman et al. (2017) state that when comparing students from a magnet school with similar backgrounds, Hispanic and Black students had similar success rates with Advanced Placement assessments (P. 43).

Impact of AP Success on Postsecondary Opportunities.

Numerous research indicate that students passing the AP assessment with a three or higher increase their potential for undergraduate-level degrees; hence addressing these gaps for the underserved population is critical to increasing postsecondary opportunity and success (Lam, 2021). Herscher (2013) states “The teacher must provide them with structure and predictability while providing supplementary instruction time to bring their skills up to expectations” (p. 251). Underrepresented students were learning in person at much lower rates than their fourth-grade peers: White 66%, Black 44% (U. S. Department of Education. NCES, 2022). Also, most fourth-grade students reduced their in-person instruction by 4 hours daily. According to Hinnant-Crawford (2020), within complex systems, Linda Darling-Hammond termed five key factors that create disparities in educational opportunities: poverty and insufficient social support systems, limited access to early childhood education, the re-emergence of racial segregation and unequal schooling conditions, shortage of qualified teachers in some schools, and lack of access to high-quality curriculum and instructional materials in educational settings.

Student Recruitment and Motivation

Inclusive Enrollment Strategies.

Judson et al. (2019) discussed that staff wanted to allow all students to partake in the Advanced Placement journey. They did not focus only on students whose teachers believed in their passing abilities. Although they were successful in their recruitment

efforts, the pass rate gap worsened between Hispanics and their White peers. Increasing enrollment did not necessarily provide equal access to success in passing Advanced Placement exams.

According to Rodriguez and McGuire (2019), student participation has increased by 188% over the last ten years due to states including AP outcomes as part of accountability measures. As per Texas Education Agency accountability (2022), Advanced Placement is now represented under the accountability for the school year 2021 under Other Indicators within the College, Career, and Military Ready rate component. Martinez et al. (2018) assert an incredible drive seen in leaders across Rio Grande Valley Counties to bridge educational attainment and increase opportunities for the underserved student population. Undoubtedly, efforts to improve achievement and participation are evident.

Incentive Programs and Their Effects.

Incentive programs were used to motivate students and increase participation and success in the Advanced Placement courses. Students had an option to attend class virtually or access tutors. Classroom teachers could incentivize them by giving them an extra point for completing the course and taking the Advanced Placement assessment. The three factors that motivated students to enroll were college credit, increased college enrollment opportunities, and the effort that would help them succeed in the course. Although these positive motivators were the drivers for most students, some hesitated due to the potential risk of a lower grade point average if they performed poorly on the course (Judson et al., 2019).

Difficulties Navigating the Post-Secondary World

Evidence shows that Dual Enrollment best prepares students for college by exposing them to college life in high school. Contradicting findings show that students also find it challenging

to meet the expectations of university professionals. Once students embark on their post-secondary journey, most students who take advantage of Dual Enrollment opportunities and Advanced Placement struggle to fit in (Garcia et al., 2020). Many have earned enough college hours to enter their first year as junior or senior-level students, making it difficult for them to decide what they would like to major in quickly. Their opportunities to explore career options were rapidly halted by the immediate decision-making task of declaring a major. Poor decisions will sometimes jeopardize their financial aid support or scholarship opportunities. Some professionals believe they are not mentally prepared for them to embrace and enjoy their post-secondary career exploration (Garcia et al., 2020).

Federal and State Accountability

Federal accountability (ESSA) tasked states to create a coherent system across programs for various student populations, including gifted students who generally enroll in Advanced Placement courses. Landl (2018) emphasized that their efforts were admirable; however, the operational definition of a coherent system was missing. States created systems to comply with these mandates. Hackmann, et al. (2019) discuss that only twelve states had a fair-minded approach to include AP participation data.

The No Child Left Behind Act (NCLB) provided minimal improvement in math for lower-grade students but did see growth in reading (Dee et al., 2010). Texas Education Agency (TEA) recently transitioned from the Performance-Based Monitoring Accountability System (PBMAS) to Results-Driven Accountability (RDA) to account for special populations and the TEA 2022 Academic Accountability System. The TEA academic accountability system comprises three subparts: Student Achievement, School Progress, and Closing the Gaps. ESSA requires states to disaggregate and monitor all students' progress, including gifted students. As

per Carnoy and Loeb (2002), "Texas was a pioneer in using a state assessment test to measure school performance directly and both to sanction those schools not meeting improvement norms and to reward schools exceeding norms" (p. 306). Texas and the Carolinas focused was alignment and capacity building.

According to Dee et al. (2010), the No Child Left Behind Act caused resources to shift to two areas: reading and mathematics. Districts began to offer more instructional time for those areas, limiting elective opportunities for students. Texas Education Agency (TEA) recently transitioned from the Performance-Based Monitoring Accountability System (PBMAS) to Results-Driven Accountability (RDA) to account for special populations and the TEA 2022 Academic Accountability System. The TEA academic accountability system comprises three subparts: Student Achievement, School Progress, and Closing the Gaps. Under the Student Achievement Domain STAAR Component, College, Career, and Military Readiness (CCMR) Component, the success of advanced placement is monitored. Graduates can demonstrate they are CCMR ready by "Meet Criteria on Advanced Placement (AP)/International Baccalaureate (IB) Examination. A graduate meets the criterion score on an AP or IB examination in any subject area. Criterion score is three or higher for AP and four or higher for IB." Therefore, achievement outcomes in AP courses will not only help the student meet postsecondary criteria and prepare them for post-secondary readiness but also increase the STAAR Achievement performance overall score.

Research highlights the following: states need a coherent system across levels, monitoring students' progress includes gaps in the systems, teachers feel the pressure to excel by making poor decisions when deciding on tutoring groups, and local board members can be used as drivers for improvement. Less funding is causing LEAs to struggle with allocations and

support opportunities for students. Regardless of the local education agencies' issues, everyone strives to provide equitable opportunities for all learners.

Coherent State System

Aligning Federal Initiatives (ESSA, Perkins V, WIOA).

According to Landl (2018), the United States Department of Education (ESDE) expects states to provide better accountability and validity of their assessments. The initial template required revising the agency's vision and how it would support the consolidated state plan. Land, E. M. states, "This is evident in ESSA and the Strengthening Career and Technical Education for the 21st Century (Perkins V) Act (2018), both of which necessitate and support improved alignment with each other and the Workforce Innovation and Opportunity Act (WIOA)." (p. 1). Landl (2018) referred to the following:

- inclusion of common terms and definitions;
- required alignment of academic and Career Technical Education (CTE) content standards;
- increased focus on incorporating and measuring, the state's academic content standards in CTE courses and programs of study;
- increased consistency in the indicators and procedures required for accountability;
- aligned requirements for federal reporting (Advance CTE, n.d.); and
- increased flexibility afforded to states around the use of federal funds. (p. 1)

Although USDE demonstrated efforts at the federal level, much work was needed within our state and local systems. Sigman and Mancuso (2017) state that to ensure a shared responsibility across levels, one must start by developing a shared understanding of the characteristics or elements of a comprehensive system.

Building Capacity Through Aligned Standards.

All laws aim to prepare students for the workforce and postsecondary success (Landl, 2018). Programs that work independently and in isolation would not produce the desired outcomes. Landl (2018) mentions that the alignment approach between ESSA and Perkins V is great but lacks coherence since the state does not have clear goals for student learning outcomes and their support system. Carnoy and Loeb (2002) state, "Educational reform needs to improve the capacity of teachers and administrators to deliver better education. Coherent organizations built around aligned standards and assessments can increase the capacity to deliver improved education. If teachers know what to teach, and the organization acts to support their efforts to achieve the defined standard, this increases the collective capacity of the school or the district to deliver education." (p. 307). Schools that foster a shared vision, established norms for instructional practices, collaborative norms among staff, and a collective sense of responsibility for ensuring students' academic achievement tend to provide incentives and opportunities that enable teachers to enhance their professional skills and teaching methods (Spillane & Louis, 2002).

Gaps in Accountability Data**Overlooked Populations.**

According to the Early College District, only special education and emergent bilinguals are highlighted on district reports sent to district and campus leaders. Gifted and Talented, Dyslexia, and Migrant are not part of those reports. The director of Learning Supports Dyslexia and 504 believes her number of students is too small and that minimal urgency is placed on the academic success of these students. Booher-Jennings (2005) recognizes, "I illustrate how

teachers use the loopholes in the accountability system—in particular, the existence of an accountability subset in which all students are not included." (p. 233).

Resource Allocation Challenges.

Although our federal, state, and local accountability emphasize the need to support all learners and close the achievement gaps, many gaps within each system exist, as noted by Wisemen and Bell (2022). Various reasons discussed are small numbers within populations, data access to make decisions, and funding for these programs limiting their ability to make decisions successfully. Districts and campuses do not prioritize populations with small numbers. They focus on the populations included in the state and federal accountability. In addition, students lose out on learning opportunities due to a lack of monitoring or program funding (Wisemen & Bell, 2022).

Unspoken Pressures

Teacher Practices Under Accountability.

Booher-Jennings (2005) asserts that pressure causes teachers to change their practices to help students make gains. Through support, leaders discover how teachers have lower expectations for minority students. Teachers recommended special education services to prevent these students from making a dent in accountability (Booher-Jennings, 2005). The researcher encountered these findings through the support process of collaboration and feedback. In a the Early College District, campus leaders must share their data and plan of action to address the needs of students with district leadership. There are two understood phenomena, “The first, neoinstitutional theory, emphasizes the ways in which sociocultural expectations construct the work of schools. The second, which I refer to here as the "faculty workplace tradition," attends to the implications of the social organization of teachers for what happens in classrooms and

schools” (Booher-Jennings, 2005, p. 234), which brings an understood, unforeseen pressure and accountability. The district jeopardizes their collegial trust by comparing teachers and campuses, putting them in competition (Booher-Jennings, 2005).

Local Politics and School Board Influence.

Kogan et al. (2016) examined if school board members and their elections could influence achievement outcomes and accountability. Although there is limited research, local politics can be used as a mechanism for improvement. Kogan et al. (2016) stated that Ohio State "has the power to affect student learning via several mechanisms, such as updating district strategic plans, shifting the allocation of resources, modifying the procedures for hiring and evaluating the performance of teachers and administrators, negotiating with unions on the specifics,” (p. 641). Through rigorous Lone Star Governance Training, our local school district embraces strategic goals with performance targets monitored towards progress. If the district leaders believe they set unrealistic goals, they are revisited, modified to a realistic goal, and taken to the board for approval.

Connecting Policy and Advanced Placement

National policies and regulations special populations exist, including refugees and humanitarian immigrants. States cannot deny entry to students seeking to learn within our system. Dee et al. (2010) discuss how the No Child Left Behind Act brought minimal gains in students' outcomes yet shifted the allocation of resources to the areas of reading and mathematics. The TEA academic accountability system comprises three subparts: Student Achievement, School Progress, and Closing the Gaps. TEA says, "Closing the Gaps uses disaggregated data to demonstrate differentials among racial/ethnic groups, socioeconomic backgrounds, and other factors. The indicators included in this domain, as well as the domain's

construction, align the state accountability system with the Every Student Succeeds Act (ESSA)." Up to fourteen student groups are monitored if the minimum size is met: all students, seven racial/ethnic groups: African American, American Indian, Asian, Hispanic, Pacific Islander, white, and two or more races, economically disadvantaged, students receiving special education services, students formerly receiving special education services, current and monitored English learners (through year 4 of monitoring), continuously enrolled and non-continuously enrolled. The performance of advanced placement is covered under the CCMR criteria; however, monitoring their progress throughout the year is left to the discretion of the AP teachers.

Current Practices of Local Education Agencies

Current Practices of Local Education Agencies are influenced by various factors. As Carnoy and Loeb (2002) point out, "accountability and assessment were loosely connected" (p. 306). Districts primarily used them for tracking or diagnostic purposes. However, it's important to note that schools and parents were often driven by the policies set by local school boards, especially in more affluent neighborhoods. The higher the income, the higher the expectation for student success; the lower the income, the lower the expectation. Campus leaders and teachers, on the other hand, take the responsibility to ensure students make progress. Some LEAs create internal monitoring systems to gauge students' progress, but not all have the data systems teams to help them achieve reliable and valid data, which may be why achievement outcomes of AP EL & C have been on a stagnant trend over the years.

Professional Development

High-quality professional opportunities are vital to the professional growth of teachers and their impact on student achievement. According to Borg (2018), teacher aptitude is complex and varies according to the student's level of comprehension: "...effective teaching is

underpinned by sound knowledge and skill in domains such as planning, classroom management, explanations and instructions, questioning techniques and assessment for learning.” (Borg et al., 2018, p. 77). Therefore, one must assess the level of need amongst teachers to encourage a collective growth mindset. Meissel et al. (2016) add that professional development is complex and may not demonstrate the expected impact on student outcomes. Small (2021) asserts, “While teachers learned AP content and pedagogy for instruction in their AP classes, reaching all learners appeared to be a lingering concern not addressed in the APSI.” (p. 275).

Collaborative Planning Time

Benefits of Teacher Communities

Frumint et al. (2018) highlighted that teachers' learning is connected to a desire for positive student outcomes; teachers want to increase student success through professional development and prepare students for college. McGuane (2022) states, “True school improvement requires a change in professional culture grounded in teachers’ active involvement in school-based learning communities; improved student learning is entirely dependent on teacher learning.” (p. 31). Advanced Placement Teacher Communities (APTC) statistically affected teachers' self-reported craft and student achievement changes. This brings an opportunity to explore professional development opportunities for teachers in the Early College District.

Online vs. In-Person Collaboration.

The online Advanced Placement Teacher Communities (APTC) allowed teachers to engage with others to share resources, learn teaching strategies, and support one another. In 1954, Keller (1958) recalls, "A group of school and college teachers talked freely and learned much from one another. Such familiarity bred considerable respect. The Williams conference; I

wrote, was a rousing proof of the value of school and college relations at the teacher.” (p. 6).

Collaboration is key in person or online and strengthens collegial relationships and trust among participants.

Differentiated Instruction

VanTassel-Baska (2019) emphasizes that when teachers differentiate instruction for gifted students, they more effectively reach their needs. Teachers were empowered, assumed responsibility, and used rubrics to assess the level of learning by students. When differentiating instruction, teachers need to know the reading levels and identify reader profiles such as typical readers, poor decoders, and poor comprehension, as noted by Baron et al. (2019). Contradicting most research, Graefe and Ritchotte (2019) found one factor in AP success for Hispanic students. All students were identified as gifted learners. Small (2021) states, “As a result of improved content knowledge, teachers changed their ability to explain the content, but they did not necessarily improve their ability to differentiate as a result of APSI.” (p. 275).

Conclusion

The need for improvement is not just to produce engineers and scientists. It is an undeniable truth that accountability for achievement outcomes has been negated over the years. Without a doubt, efforts to increase enrollment and success are unquestionable among district and campus leaders nationwide. An increase in enrollment does not imply successful completion of the course, a passing score on the Advanced Placement assessment, or post-secondary success. Leaders can leverage policy and provide equity to the marginalized population. Therefore, as evidenced by the research, Advanced Placement teachers' professional development and collaborative planning opportunities should be explored in search of effective strategies and sustainable practices to maximize achievement outcomes. Although COVID-19 brought

enormous barriers to educational systems, student learning must remain the focus of all efforts to ensure one closes the achievement gap for underserved populations and addresses their diverse learning acquisition needs. Federal accountability (ESSA) challenged states to create a coherent system across programs within a state for various student populations, disaggregate the data, monitor their progress, and address their needs with supplemental services using federal or local funds. States accepted the responsibility and have systems to monitor the progress of students and special populations. One population not mentioned is the gifted child.

Some implications of the literature review include gaps in knowledge. In this Early College district, most courses are taught within the same instructional time (45 or 60 minutes). There was not enough research on courses being taught within the same allotted instructional time, such as English III AP and English 1301 Dual Credit. Much of the literature old and new is specific to Dual Credit or Advanced Placement respectively. Future research on combined courses within the same allotted instructional time would be recommended.

Nevertheless, there is a need to create systems and structures for Advanced Placement teachers to collaborate and deepen their understanding of best practices to best serve emergent bilinguals and other underrepresented students within the Advanced Placement learning community. Research emphasizes that professional development impacts teacher learning and student outcomes. Differentiated instruction remains a crucial practice that must evolve to address the varied learning styles and levels of ability. One must continue to explore additional opportunities to expand on the support leaders provide AP teachers to maximize student success. After conducting the literature review, several questions emerged: 1) Were the College Board Advanced Placement course offerings designed for gifted students? 2) Considering specific student populations' low performance and increased participation percentages, are educational

systems providing AP and DE opportunities for underserved populations to meet outcome-based and accountability measures for early college access? 3) Is there a disservice to students by offering two-course offerings with different curricula, limiting the teacher's instructional time to ensure students master AP and DE content?

CHAPTER 3: EVALUATION OF THE IMPACT OF TEACHER SUPPORT SYSTEMS ON AP ACHIEVEMENT OUTCOMES

Abstract

Achievement outcomes in Advanced Placement courses for low-socioeconomic students have not been as high as those students from affluent families. Teacher course loads vary across the district. This study employs a mixed-method approach with an embedded experimental model to examine how AP teachers' collaborative planning time and support structures affect AP teachers' perceptions and/or achievement outcomes, using both qualitative and quantitative data (Creswell & Plano Clark, 2007). Its narrow scope on English Language and Composition sought to investigate improvement opportunities to impact achievement outcomes. Teachers participated in campus CLC to collaborate with one another to increase performance on End of Course (EOC) subjects or Dual Credit courses. Survey results indicated that planning time for Advanced Placement English Language and Composition is non-existent. Advanced Placement Teachers only met to discuss Dual Credit expectations or End of Course planning. Coordinating a planning time for AP EL&C teachers will provide the opportunity for them to collaborate and support their individual needs. Ultimately, we hope that providing AP EL&C teachers with planning time will positively impact the perception and ultimately achievement outcomes.

Keywords: Advanced Placement, Underserved Students, Common Planning Time, Collaborative planning time, Equity of For All, Professional Development, Differentiated Instruction

Introduction

The public Early College District was founded in March of the year 1919 to transform our community through student-centered excellence. Through the years, it has evolved into the district it is today. Students have options to follow a pathway with their career of choice. One important change was in 2009 when the district embarked on providing early college access to students and changing the trajectory of all students. Students had opportunities to walk away with college hours bringing the challenge that teachers face today. Teachers have dual credit and AP curricula to teach within one instructional 90-minute period. AP leads were chosen to assist in providing boot camps before a test for students and provide a communication avenue for teachers. Nevertheless, a problem was created by minimizing support for AP teachers, and the expectation for achievement outcomes remained the same.

Advanced Placement (AP) offers high school students a unique chance to earn college credit while still in secondary education. By undergoing rigorous testing on advanced curriculum materials, students who score a three or higher can potentially bypass certain college courses upon university enrollment. Conversely, Concurrent Enrollment Courses present another avenue for students to accrue both high school credits and college hours concurrently, contingent upon achieving a passing score. Although Concurrent Enrollment may cultivate an increased interest in AP courses, the comparative success rates between the two reveal a notable distinction. Despite AP courses boasting a higher level of academic rigor, they often suffer from a lack of dedicated planning time for teachers, as observed in a study by Garcia et al. (2020). This discrepancy becomes more pronounced when considering the challenges faced by low-socioeconomic students transitioning to university-level coursework, such as limited access to resources, lack of academic support at home, and financial constraints. These challenges, as

highlighted in a study by Dyer et al. (2022), underscore the critical role of positive self-concept in determining success in dual credit courses, which is significant given that students are automatically enrolled in AP courses if they choose the Dual Credit option. This automatic enrollment places students at a disadvantage from the outset of their AP journey. Furthermore, while Advanced Placement courses were initially designed to cater to a privileged demographic, Concurrent Enrollment courses cater more toward underserved populations in rural areas (Clayton, 2021). These distinct student populations present unique opportunities and challenges that require tailored support mechanisms. Many socioeconomically disadvantaged students face barriers within both the educational system and their home environments, a disparity exacerbated by research suggesting minority students struggle disproportionately compared to affluent white students (Judson et al., 2019). To address these disparities, proactive measures such as waiving assessment fees and providing robust teacher support systems are crucial in encouraging underrepresented students to take AP tests and succeed.

The Early College District aims to provide opportunities for students to reach their full potential and prepare for the competitive world. The opportunity presents itself to provide equitable opportunities for not only students but also teachers to better prepare for lesson delivery to impact achievement outcomes. As noted in Texas Border Business (March 22, 2024), “Acosta humbly attributes his success to the college courses he took at PSJA Memorial ECHS, which allowed him to seamlessly transition into university-level coursework at UT Austin and pursue advanced studies. He emphasizes the benefits of the dual enrollment program in reducing time and cost associated with obtaining a bachelor’s degree.” As mentioned by the student, the dual enrollment program benefited him to pursue his dreams. Teachers need the time to plan to

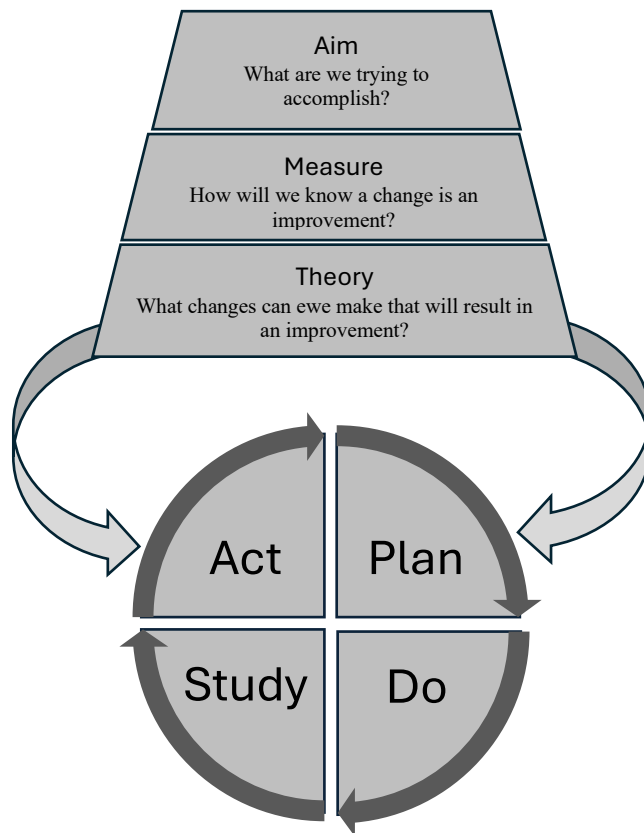
better prepare all students, just like Acosta, which brings the opportunity to embark on the Improvement Science journey.

This chapter focuses on evaluating the current problem of practice: “As measured by the College Board Advanced Placement, 93% of students score less than a three in the Advanced Placement English Language and Composition Assessment. Improvement Science cycles were implemented for Advanced Placement teachers to assess the impact on achievement outcomes and the teacher perception of the support received by campus and district leaders. As Chapter One mentions, a structured discipline inquiry grounds each PDSA cycle to drive the proposed change.

The fundamental principle of Improvement Science or Design-Based Iterative Research is to inform practice. Reinking (2021) emphasized that as educational leaders, we are responsible for guiding and informing practice within our field. We cannot reasonably expect individuals outside of our profession to fulfill this crucial role. Crow et al. (2019) assert that continuous improvement mobilizes all stakeholders within a system to collaboratively pursue improvement efforts to achieve targeted outcomes for specific populations. They advocate for applying improvement science theory to identify and test change ideas in this endeavor. For this study, we followed the Model for Improvement using the Plan-Do-Study-Act cycle to inform theory and improvement opportunities. See Figure 6 *Model for Improvement: Plan-Do-Study-Act cycle*. This figure emphasized the reflective questions used throughout the process to guide the improvement effort.

Figure 6

Model for Improvement: Plan-Do-Study-Act cycle



Literature Review

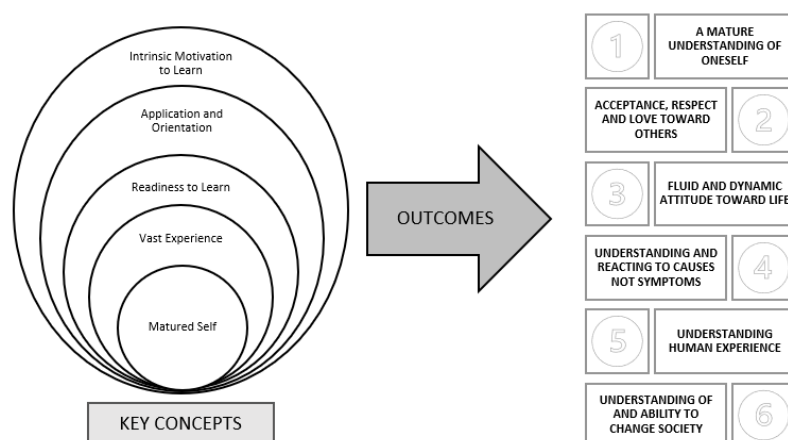
Professional Development

According to Chen et al. (2020), students' success comes to fruition as teachers take time to plan practical lessons and moderate student discourse while motivating students to clarify their thinking to deepen their understanding. Chen et al. (2020) mention that teachers find it challenging to create open-ended questions that allow students to engage in classroom talk as they become the facilitators of the learning taking place. Teachers must lead the Academic

Productive Talk (APT) within their classrooms. Chen et al. (2020) define APT as “A form of dialogic instruction that teachers use to position students as active thinkers in classroom conversations. (p. 632). Therefore, professional development for job-embedded teachers is no easy task. Research mentions various approaches to professional development to increase the learning of teachers to impact achievement outcomes within their classrooms positively (Svendsen, 2020). Teacher Professional Development (TPD) is an innate will to learn to develop personal skill levels continuously. However, one cannot provide professional development opportunities without understanding the various fundamental concepts of andragogy and the produced outcomes (Graham, 2017), as noted in Figure 7 *Malcolm Knowles Reference Guide to Andragogy* and the individual needs of each participant (Svendsen, 2020). The adult learners must understand themselves with a willingness to learn for reflection and adaptability to the newly acquired learning. Brady (2009) emphasized that professional development brought on amongst peers is the most effective.

Figure 7

Malcolm Knowles Reference Guide to Andragogy



Collaborate Learning Community

Success happens when teachers and leaders collaborate on their perceived areas of need or areas they want to develop (Svendsen, 2020). Tu and Corry (2012) notes “Collaborative Learning (CL) is a personal philosophy, not just a classroom technique. In all situations where people come together in groups, it suggests a way of dealing with people, which respects and highlights individual group members’ abilities and contributions.” (p. 52). Having one another to clarify or challenge their thinking brings opportunities for growth and development (Brady, 2009).

Differentiated Instruction

VanTassel-Baska (2019) highlights the significance of differentiated instruction for meeting the needs of gifted students effectively. By empowering teachers, encouraging them to assume responsibility, and utilizing rubrics for student assessment, educators can enhance their effectiveness in catering to all learners. It is essential for teachers to differentiate instruction based on factors such as reading levels and reader profiles, as suggested by Baron et al. (2019), which include categories such as typical readers, poor decoders, and those with limited comprehension skills. In contrast to prevailing research, Graefe and Ritchotte (2019) identify one factor contributing to the success of Hispanic students in Advanced Placement (AP) courses: the recognition of all students as gifted learners.

Background

The study takes place in an Early College District with a predominantly 99% Hispanic student population. It is an open-enrollment district serving students from neighboring towns as well. As a public school district, all Texas Education Agency (TEA) and public-school law guidelines and

requirements regarding curriculum and instruction, special student populations compliance, Federal and State accountability, and Federal and State funding are adhered to by district leaders, teachers, and staff. The district has four comprehensive high schools that follow the Early College model, allowing all students to enroll in dual credit courses. In most schools, students take Advanced Placement courses within the same instructional time as the dual enrollment course. The instructional time is 45 or 90 minutes every other day as these comprehensive high schools run an A Day and a B Day schedule. See Figure 8 *Sample High School Schedule for reference.*

Figure 8

Sample High School schedule.

2023-2024 Bell Schedule											
Daily Schedule - 45 Minute Classes					Daily Schedule - Blocked Classes						
30 min	Morning Duty			8:05 AM - 8:35 AM		30 min	Morning Duty		8:05 AM - 8:35 AM		
35 min	Breakfast			8:00 AM - 8:35 AM		35 min	Breakfast		8:00 AM - 8:35 AM		
45 min	1 st Pd			8:40 AM - 9:25 AM		95 min	1 st /2 nd Period		8:40 AM - 10:15 AM		
45 min	2 nd Pd			9:30 AM -10:15 AM		90 min	3 rd /4 th Period		10:20 AM -11:50 AM		
90 min	3 rd /4 th Period			10:20 AM - 11:50 AM		45 min Lunch 90 min Class	A Lunch	11:50 AM -12:35 PM	5 th /6 th Pd	11:55 AM -1:25 PM	
45 min Lunch 90 min Class	A Lunch	11:50 AM -12:35 PM	5 th /6 th Pd	11:55 AM -1:25 PM	5 th /6 th Pd		12:40 PM - 2:10 PM	B Lunch	1:25 PM -2:10 PM		
	5 th /6 th Pd	12:40 PM - 2:10 PM	B Lunch	1:25 PM - 2:10 PM							
30 min	Literacy Time / Raider Time Mon - Thurs Friday			2:15 PM - 2:45 PM		30 min	Literacy Time / Raider Time Mon - Thurs Friday		2:15 PM - 2:45 PM		
45 min	7 th pd			2:45 PM - 3:30 PM		95 min	7 th /8 th Period		2:45 PM - 4:20 PM		
45 min	8 th pd			3:35 PM - 4:20 PM		20 min	Afternoon Duty		4:20 PM - 4:40 PM		
20 min	Afternoon Duty			4:20 PM - 4:40 PM		A Lunch			B Lunch		
					Halls: A, G, H, Gyms Kennedy Hall 11:30 AM -12:15 PM			Halls: B,C,J, K, L, M, N, P, V			

This Early College district was given a high-performing rating of a B for the 2021 – 2022 school year, being one of the largest, high-performing in the area. Before 2019, the success rate of Advanced Placement courses was not part of the Texas Accountability System. Students taking Advanced Placement courses took them simply for personal aspirations. Current accountability measures have highlighted the lack of success in former years. Under the 2023

Texas Accountability, one of the College, Career, and Military Readiness (CCMR) Components includes the following: “Meet Criteria on Advanced Placement (AP)/International Baccalaureate (IB) Examination. A graduate meeting the criterion score on an AP or IB examination in any subject area. Criterion score is three or higher for AP and four or higher for IB.” (TEA 2023 Accountability Manual, p.15). I will now inform you of the problem of practice for the Early College district is that only seven percent of students are scoring a three or higher in the Advanced Placement English Language and Composition Assessment. There exists an opportunity to provide teacher support systems to impact achievement outcomes. I will share the PDSA Cycle and the current teacher perceptions of the support provided by campus and district leaders.

PDSA Improvement Cycle

The PDSA cycle has four steps: Plan, Do, Study, and Act (Bryk et al., 2015). Considering the scope of the work, the cycle was conducted over two years. During the first year, the current state of teacher perception of the support provided to Advanced Placement teachers was assessed. The focus was narrowed to English Language and Composition teachers from the four comprehensive high schools, and AP teachers collaborated to brainstorm opportunities to improve achievement outcomes.

Plan

During the planning phase, thoughtful consideration was given as to who the participant invitation would be sent to. Any improvement effort requires all stakeholders to engage throughout the process for optimal results (Chen et al., 2021). The AP teachers at the four comprehensive high schools were chosen to join us, along with district and campus leaders, for decision-making. As noted by Chen et. Al (2021), “Frontline employees should be included

because they are closest to the work and understand vital details regarding the specific challenges at hand (p. 10)".

Before engaging in collaborative efforts, the 2022 College Board AP data indicated that our students were underperforming, with 93% scoring less than a three on their English Language and Composition AP test. One will measure the effectiveness of the intervention by the increase or decrease in teacher perception of the support provided to assist in increasing achievement outcomes and an increase or decrease in achievement outcomes in English Language and Composition AP scores.

Do / Study

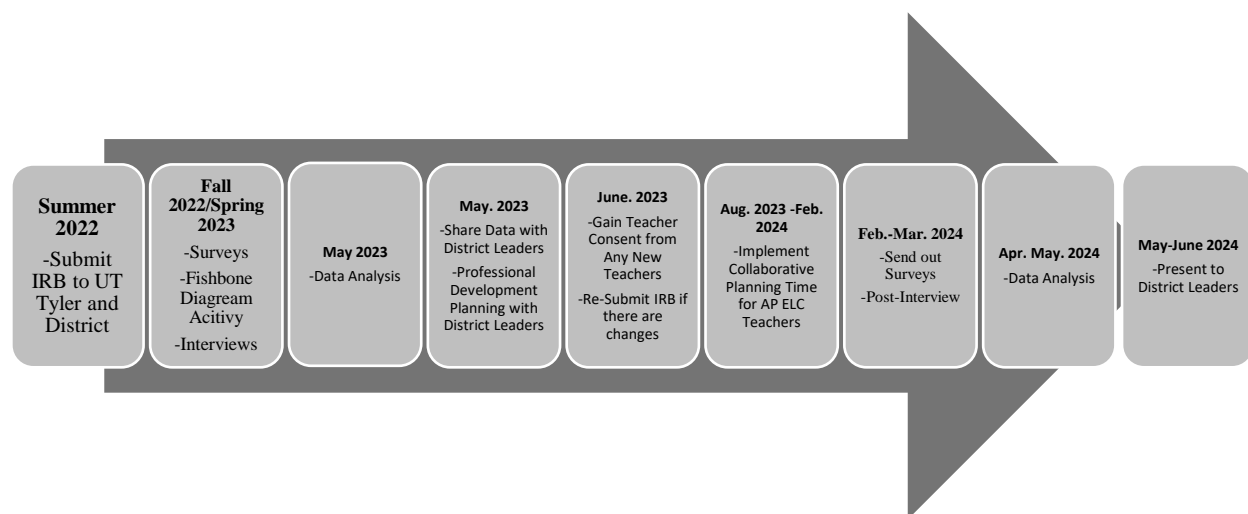
During the Do/Study stage, there are key steps to take to move the work forward. One begins with the evaluation of the current system in place attributing to the outcomes and analyze the data on hand. This data allows one to measure the improvement efforts by comparing the qualitative/quantitative data within the surveys. Chen et. al (2021) share the importance of this step, which highlights how people react to the recommended changes. During the evaluation phase, the Study stage is combined with the Do stage, allowing one to conduct the survey, conduct brainstorming sessions, and evaluate the results. Based on the survey results and input from brainstorming session(s), initial intervention ideas are visualized and shared with decision-making stakeholders to decide what interventions one can implement with minimal cost while protecting the quality of efforts.

To thoroughly understand how one can increase achievement outcomes, all AP teachers in the district were surveyed during the evaluation year and engaged in a Fishbone diagram activity with English Language and Composition Teachers to narrow the focus. Then, the intervention will be provided during the implementation year. The intervention provides AP

English Language and Composition Teachers with a District Collaborative Learning Community opportunity for them to share best practices and resources and reflect on data to increase achievement outcomes, and the typical 90 PDSA cycle will be extended to provide teachers enough time to internalize the learning, embrace their experiences to have an accurate measure when surveying at the end of March/Early April 2024. See Figure 9, *Preliminary Timeline for Advanced Placement Study for the Texas Early College School District*, which provides further details on the timeline used for this study.

Figure 9

Preliminary Timeline for Advanced Placement Study for the Early College District



Act

During the Act stage, an intervention is recommended to impact achievement outcomes. If time and resources allow, additional iterations are conducted. Survey results are shared with district leaders, who will decide if the intervention will be implemented and supported for the duration of the iteration.

Teacher support systems for advanced placement teachers have been minimal. Much of the professional development provided has been to meet compliance requirements or to serve as support for teachers who teach End of Course subject areas. According to the survey, AP teachers never met to collaborate on curriculum and instruction to address the areas of need for students and opportunities for professional development for teachers. The professional development provided was by the higher education partner for the Dual Credit course. When meeting during district CLC, the data discussed was for compliance or content to address the needs of students in their End of Course subject areas. Advanced Placement teachers were left to figure things out independently with minimal support from the campus or district leaders. They only had the online resources provided by the college board. The instructional resources provided are as follows: *AP Classroom*, which helps teachers plan and structure the course content, including support for students; AP Daily provides videos created by AP teachers to highlight content and skills, and Teaching AP for the First Time provides an at-a-glance guide for educators teaching AP for the first time. If teachers ever make time to discuss course content with one another, it is their own time. District leaders do not realize the required support for these teachers. AP teachers often go without feedback from any campus/district leader. Each subject area has advanced placement leads. They help set up two boot camps each semester to allow students to come and get accelerated instruction on AP content. Other than that, communication is minimal amongst one another.

The belief embraced by leaders is that these teachers have good students and that teachers do not need additional resources or opportunities to collaborate. As a campus leader would say, “Oh, we do not have to worry about her. She knows what to do. She has been teaching AP for many years.” The emphasis of support of campus and district leaders is on state accountability

curriculum, instruction, and assessment. There is a need for collaborative time for AP teachers to share best practices and reflect on student data to improve achievement outcomes.

Students take AP assessments during May each year, which are provided by the College Board and administered at their respective campuses. The original cost of any AP assessment is \$98.00, but a fee reduction of \$36.00 and the Texas subsidy of \$32.00 reduces the final cost to only \$21.00. This financial incentive has been provided since 1996, initially aimed at gathering more comprehensive data on advanced placement. However, since not all schools offered AP courses, accountability measures were noted as report only, quite different from 2023. Nevertheless, some students do not see it as a burden since they do not pay for the test in the Early College District, where about 94% of students are economically disadvantaged.

Research Questions

The evaluation conducted was driven by the research question: How will providing Advanced Placement teachers with collaborative planning time and structured professional development offered free of cost by College Board AP Central impact achievement outcomes for low socio-economic students? Questions to address during the study:

- How do Advanced Placement teachers perceive the support, systems, and structures provided by the Early College District?

Questions to evaluate after the study:

- Is there a positive impact on achievement outcomes after the embedded district collaborative learning community for AP English Language and Composition?
- Is there an overall increase in positive perception by staff?
- Is there an increase in achievement outcomes?

Target Population and Participants

The target population for this evaluation consists of students taking Advanced Placement courses. The Early College District serves approximately 30,000 students. Of those 30,000 students, 46% are Emergent Bilinguals (formally known as LEP), 94.2% are economically disadvantaged, 12% are special education, and 75% are at risk. Table 2, *Student Demographics of Each Comprehensive High School*, provides an overview of the populations served within these four comprehensive high schools.

Table 2

Student Demographics of Each Comprehensive High School

School	Total Number of Students	Economically Disadvantaged	At Risk	Emergent Bilinguals	Special Education	Migrant	Gifted & Talented
A	2325	93.6%	56%	30.8%	8.4%	1.2%	9.1%
B	1945	96.7%	58%	42.2%	10.8%	3.8%	7%
C	2193	91.9%	63%	37.1%	8.8%	1.1%	6.7%
D	1562	96.8%	65%	54.4%	12.5%	2.8%	9.1%

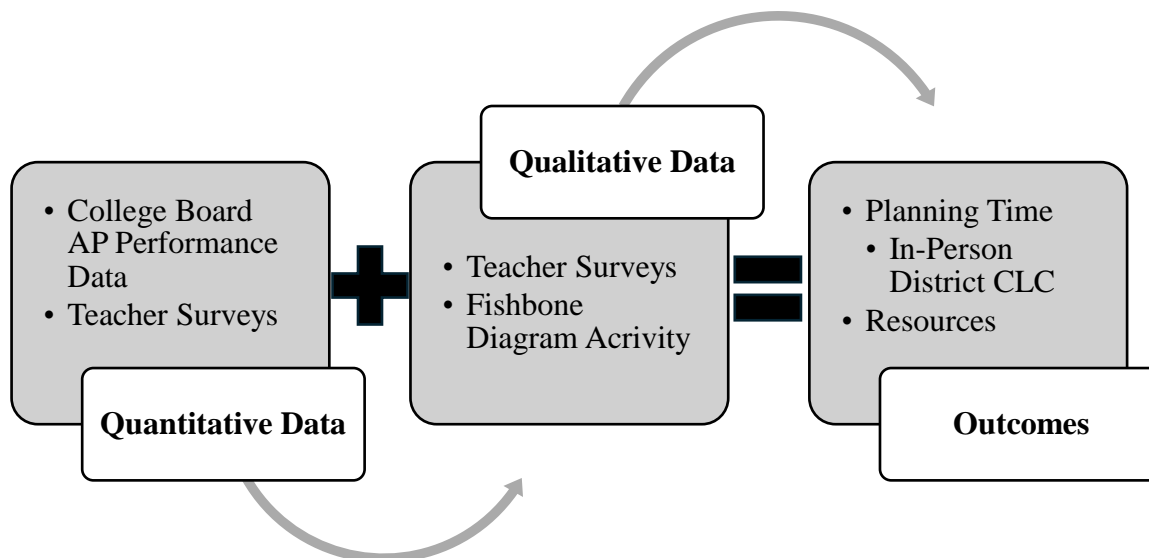
The participants chosen for this study consist of about 60 Advanced Placement teachers (all AP, AP/DC teaching during the evaluation or implementation year) in the Early College District. Including 9 Advanced Placement English Teachers (At least one from each Early College comprehensive high school), All students' scores taking AP English Courses, 4 Campus Principals, Executive Officers (EOs) for High Schools (3 EOs during the evaluation year and 2 EOs during the implementation year), and 1 Advanced Academics Director. These participants

will inform the data of this Early College District with structures and support services provided within their years of service.

Methodology

Research Design

A mixed-method research approach will be used to understand teacher collaborative planning time and support structures' impact on teacher perception and/or achievement outcomes. Mixed methods with an embedded experimental model allow us to use qualitative and quantitative data to determine planning time's impact on teacher perceptions and achievement outcomes (Creswell & Plano Clark, 2007). See Figure 10 *Embedded Experimental Model* for further details on data collection. Reinking's (2021) DBIR decision-making process design questions were considered to ensure adjustments were made during decision-making opportunities before the intervention. Figure 11, *DBIR Design-Making Process*, provides some guiding questions used throughout the evaluation process (Reinking, 2021). The planning of each phase is critical to ensure a successful implementation of the recommended intervention, and its monitoring for adjustments and support. Teachers will be surveyed at different stages of the study. The appendix includes highly structured, semi-structured, and loosely structured interview questions. Granting teachers the opportunity to express their opinions of the support they receive as they are tasked with increased performance on Advanced Placement assessments to meet accountability measures is critical to best understanding the areas of opportunity.

Figure 10*Embedded Experimental Model*

During the evaluation year, we used Designed-Based Iterative Research (DBIR) and improvement science tools. The experiential learning theory and Malcolm Knowles theory of andragogy remind one of how adult learners learn best. DeCuir-Gunby and Schutz (2017) mention one attempt to understand phenomena within context and involve stakeholders in the process. According to Hedin (2010), two terms often used related to "experiential approaches" are experiential learning and experiential education. The first refers to the process and the latter to programs or perspectives drawn from experiential learning. The author mentions the various models of experiential learning and highlights David Kolb's Model, which emphasizes grasping concrete knowledge and conceptualizing the learning. Kolb's cycle of the model begins with an interaction, observation, reflection, and drawing generalizations from reflection and ending by adding or modifying concepts according to the process (pp. 108-112). Miettinen (2000) asserts that from an adult education perspective, one must have faith in the teachers' potential to learn

and grow. Kuhn et al. (2000) state, "Beliefs about knowing and knowledge are potentially important determinants of academic performance. It is not surprising that what people believe about acquiring knowledge – how it occurs and what it accomplishes –influences its operation in their own lives." This drives our work to assess the impact of teacher collaborative planning time on their perception of teacher support and structures to impact student achievement. One must remain mindful of Kolb's concept of experience; teachers must process their concrete foundation of experience to observe, reflect on new learning, and apply it. Limitations at any level may bring additional implications to the study.

Figure 11

DBIR Design-Making Process Adapted with permission from Frey, Lapp, and Fisher (2009).

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Elements of Intervention Design	Design Questions
Before the intervention	<ul style="list-style-type: none"> *Who will coordinate? *How will stakeholders (teachers, administrators, families) be consulted? *How will interventionists be identified? *What materials will be used? How will they be obtained? *What are the space requirements? *What is the budget for the intervention?
Before the intervention	<ul style="list-style-type: none"> *What is the intent of the intervention? *What is the method of delivery? *What lesson framework fits the intent? *What are the duration and frequency of the intervention? *What formative assessments will be used? *How will data be collected?
During the intervention	<ul style="list-style-type: none"> *How will interventionists be trained? *How will they be coached? *How will they access professional development? *How will they communicate with classroom teachers? *How will ongoing assessments be utilized to make instructional decisions?
After the intervention	<ul style="list-style-type: none"> *What do the collected data, both qualitative and quantitative, reflect about the intervention? *What improvements can be made to the next intervention? *How will students gain access to the next intervention?

After the intervention	*At what interval will subsequent interventions occur? *How will continuity from one intervention cycle to the next be assured?
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A design-based iterative research design will be used to understand the impact of teacher collaborative planning time and support structures on teacher perception and/or achievement outcomes. Teachers will be surveyed at different stages of the study. See the highly structured, semi-structured, and loosely structured interview questions in the appendix. Granting teachers the opportunity to express their opinions of the support they receive as they are tasked with increased performance on Advanced Placement assessments to meet accountability measures is critical to best understanding the areas of opportunity.

Data Collection: Quantitative

Quantitative data will allow us to measure improvement efforts on Advanced Placement teachers' perception of the support they receive from their campus or district leaders. A Likert scale from one to five, five being the highest, was used to rate the following: Professional development opportunities, resources for AP teachers, resources for dual credit teachers, allotted instructional time, and planning time to collaborate with other AP teachers, DC teachers, AP/DC teachers, and end of course teachers. The cumulative percentages of teachers choosing a three or higher will be used and compared to those choosing a one or a two on the scale. Measures of central tendency will be used to gauge if the average changed at all pre/post-intervention. The percentage from the survey results will be used for most questions where participants had yes/no or number of years teaching.

Data Collection: Qualitative

Qualitative data is essential in our study as teachers have the flexibility to express beyond the yes/no or enter a numeric value. An inductive thematic analysis was used to identify themes within the open-ended questions. This qualitative approach will allow the researcher to answer

the following question: How do Advanced Placement teachers perceive the support and structures provided by the Comprehensive Early College High School and district in a Texas Early College School District? Teachers will share their personal experiences and perceptions based on their reflections on the support they have received from their campus and district leaders. This information will provide insight into the root causes that can improve achievement outcomes and help teachers feel supported, translating to increased student support.

Data Analysis

Due to the small sample size in this evaluation, descriptive statistics were used to analyze qualitative data. To analyze the qualitative data, inductive analysis was used for loosely structured questions on the survey. Braun and Clarke (2006) recommend thematic analysis as a valuable and versatile methodological approach for qualitative research, not only within the field of psychology but also across other disciplines. See Table 3 *Braun and Clarke's Phases of Thematic Analysis for a description of each phase*. Between 2017 and 2023, a range between 70% and 85% of all students in all subjects tested scored less than a three on their Advanced Placement tests. Refer to Figure 12, *AP Student Performance Trend Data – All Subjects*, for more details. When narrowing the focus to English Language and Composition Subject Area, within the same range of years, between 91% and 95% scored less than a three on the AP assessment. Refer to Figure 13, *AP English Language & Composition Trend Data*, for detailed yearly percentages. The initial results informed the improvement science work and the opportunity to impact achievement outcomes.

Table 3*Braun and Clarke's Phases of Thematic Analysis*

Phase	Description of the Process
1. Familiarizing yourself with your data	Transcribing data (if necessary), reading and re-reading the data, and noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

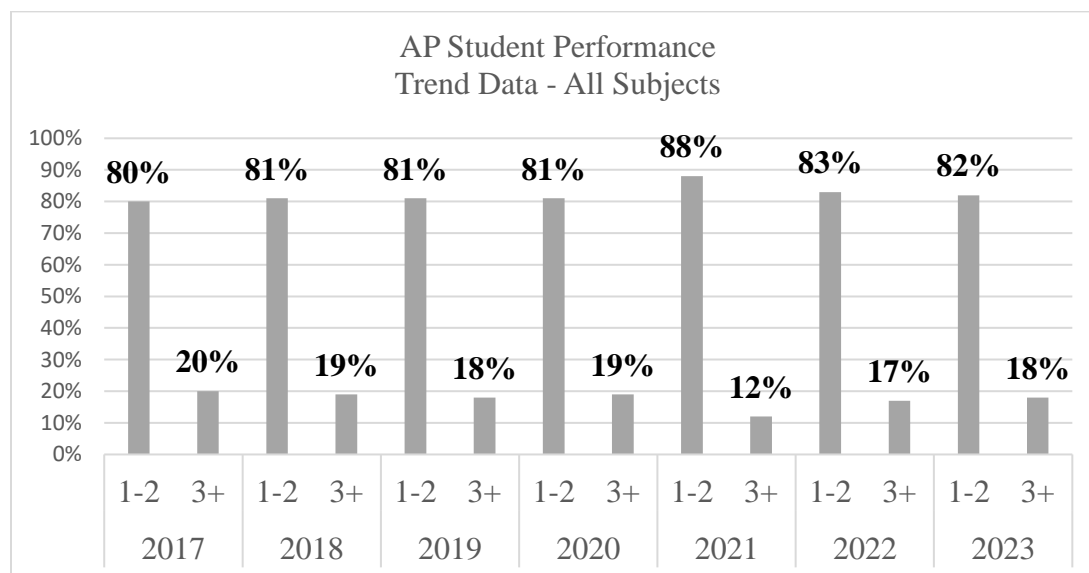
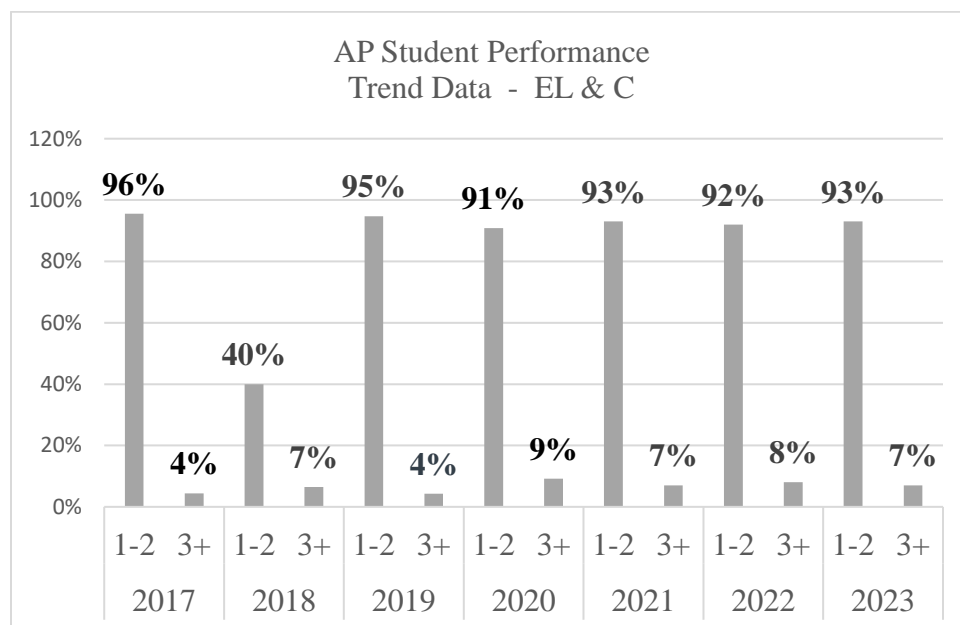
Figure 12*AP Student Performance Trend Data – All Subjects*

Figure 13*AP Student Performance Trend Data – EL & C*

After reviewing the trend data, investigating ways to improve achievement outcomes was motivating. A logic model was created to examine the current system, potentially producing the current performance. Figure 14 *Overarching Logic Model: Increasing Student Achievement in AP English Language and Composition Courses*. The logic model helped one understand the current context. Teachers have no allocated time to plan for their Advanced Placement course. If you are lucky, the district allows AP teachers (every three years) to attend the AP professional development provided by IPSI. Teachers are encouraged to use the AP Central for professional development. There is no money set aside for AP teacher resources. The books they have are over ten years old.

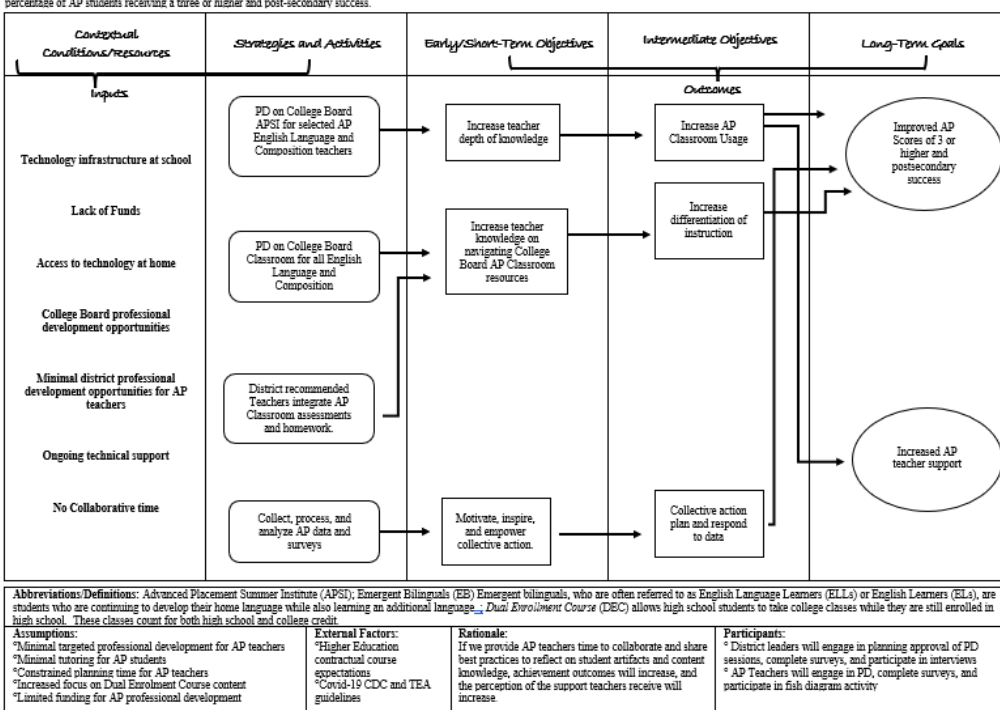
Figure 14

Overarching Logic Model: Increasing Student Achievement in AP English Language and Composition Courses

Overarching Logic Model: Increasing Achievement Outcomes in AP English Language and Composition Courses

Problem Statement: Ninety-three percent of students enrolled in high school AP English Language and Composition classes score below a three on the Advanced Placement (AP) test, eliminating students' opportunity to receive credit for a similar course at most US colleges.

Theory of Change: Teachers will have an opportunity to interact, observe, reflect, draw generalizations from reflection, and end with adjustments to their lesson delivery. Teachers do not have time to plan with other AP teachers in the district. Creating time for collaboration amongst their colleagues will increase teacher pedagogy knowledge and support. Encouraging College Board AP Classroom access for students and teachers will increase the percentage of AP students receiving a three or higher and post-secondary success.

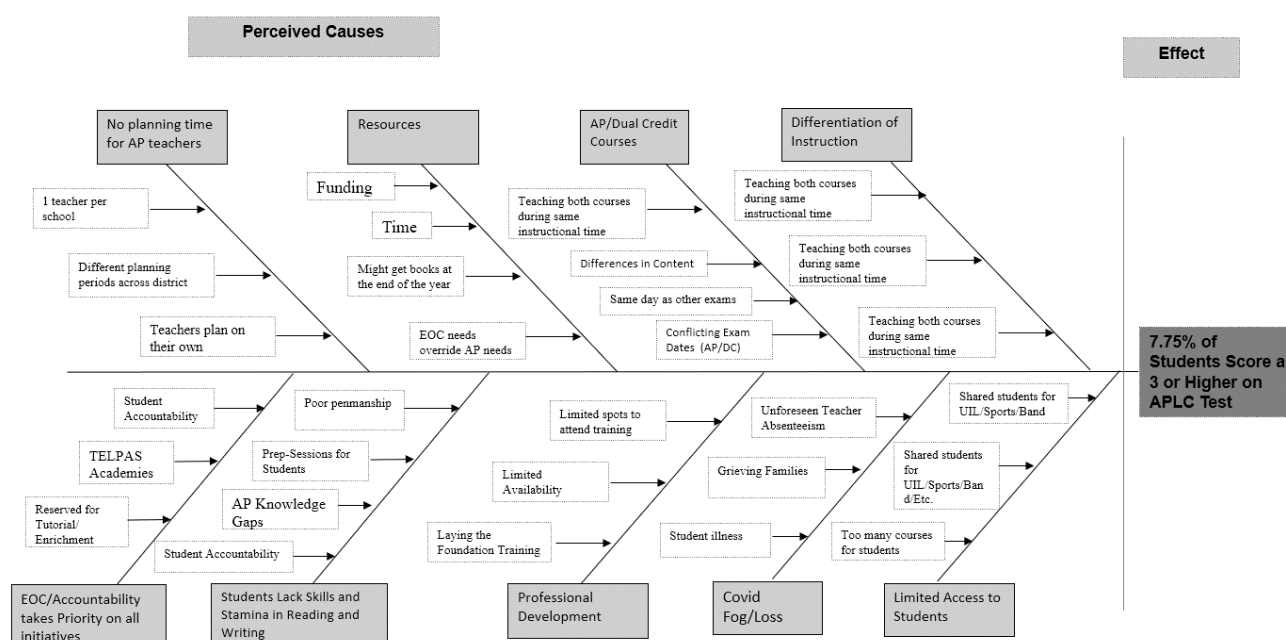


The researcher examined overall achievement outcome percentages and further investigated how AP teachers felt about the support provided by campus and district leaders. Qualtrics was used to survey all AP teachers in the district, using closely and loosely structured questions to gain insight into possible reasons for the low performance. Responses were analyzed to identify patterns and themes to narrow the scope of the work. Breaking down the data by subject area, the highest number of teachers responding were the AP English Language and Composition teachers. To better understand the perceived causes of low achievement outcomes, the researcher invited AP English and Composition Teachers to participate in a Fishbone

Diagram Activity. Figure 15 *Fishbone Diagram: Understanding Perceived Causes Attributing to Low Student Performance on the AP Language and Composition Assessment* highlighted the perceived causes attributing to students not scoring a three or higher on their AP test. The fishbone diagram activity mirrored similar opportunities expressed in the logic model. A few examples of the perceived causes are no planning time, resources, and having to teach two curricula during the same allotted instructional time. The researcher then compared the survey's qualitative and quantitative data using an iteration process to implement an intervention to support teacher learning that will help increase achievement outcomes.

Figure 15

Fishbone Diagram: Understanding Perceived Causes attributing to low student performance on the AP Language and Composition Assessment



Fishbone Diagram: Understanding Perceived Causes attributing to low student performance on the AP Language and Composition Assessment

Results

A total of 60 Advanced Placement teachers helped inform the evaluation phase of the PDSA cycle to allow the researcher to narrow down the focus for future work during the implementation phase. Of the 60 participants selected, 18 responded to the survey; of these 18 respondents, 33% were from Advanced Placement and Composition Teachers. See Figure 16 *Survey Participants by Subject Area* for additional information. Figure 17 *AP Teacher's Years of Experience In AP Courses*, provides a breakdown of the number of years teachers have been engaged with the delivery of AP curriculum; 39% have been teaching within a range of 6-10 years. When teachers were asked if they had participated in professional development provided by the district, 65% of them said yes. Twenty-four percent of teachers surveyed said they engaged in webinars provided by the College Board. The information was used to better understand the scope of the work and possible intervention opportunities that could later be scaled at large for all AP teachers and that would impact achievement outcomes.

Figure 16

Survey Participants by Subject Area

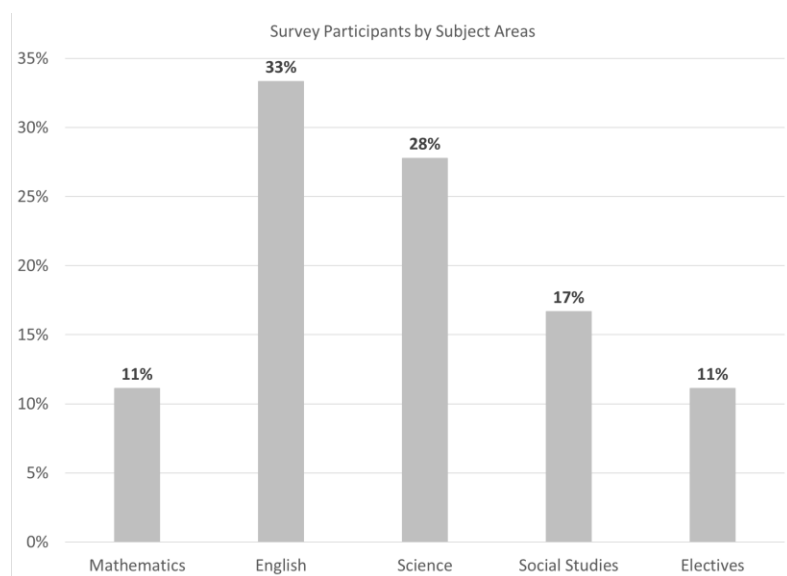
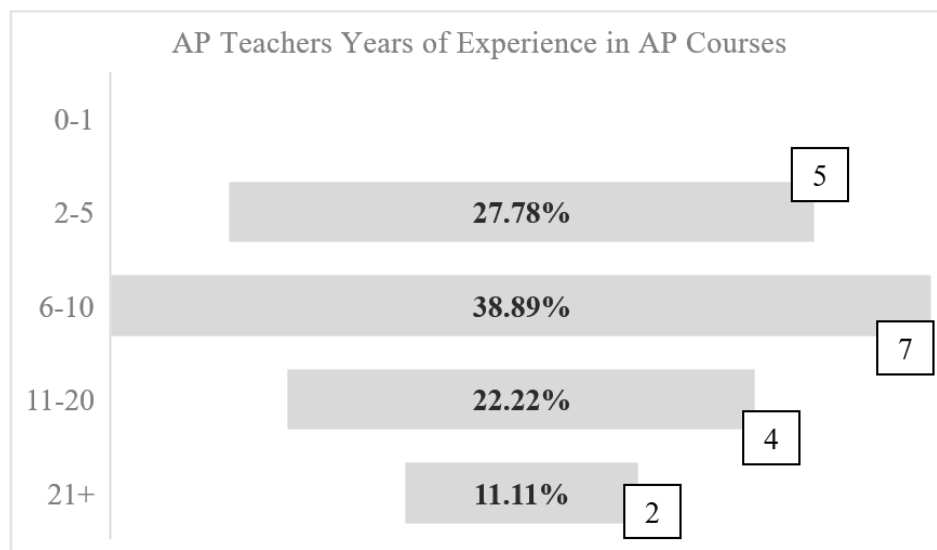


Figure 17*AP Teacher's Years of Experience In AP Courses*

Teachers were asked to rate the level of support provided by the questions on a Scale from 1 to 5; Table 4 *Perceived Level of Support by AP Teachers*. This demonstrates the results of the Likert-style closed-ended responses of AP teachers' perception of the support they received for the different areas. Out of the eighteen that completed the survey, over fifty percent rated planning time with other AP, DC, or AP/DC teachers at a level 1, but planning with other End-of-Course Teachers was rated 72% between a 3 -5. A similar rating was given when asked about the resources they receive for AP courses and professional development opportunities in general (52%, and 41%) gave it a rating of a 1 or 2, respectively.

Table 4

Perceived Level of Support by AP Teachers

Question	1		2		3		4		5		Total Ratings
Professional Development Opportunities	5	29%	2	12%	6	35%	4	24%	0	0%	17
Resources for Advanced Placement Courses	8	47%	1	6%	4	24%	2	12%	2	12%	17
Resources for Dual Credit Courses	3	21%	1	7%	7	50%	1	7%	2	14%	14
Allotted Instructional Time	1	6%	2	12%	3	18%	5	29%	6	35%	17
Planning Time to Collaborate with other AP teachers	9	50%	2	11%	5	28%	0	0%	2	11%	18
Planning Time to Collaborate with other DC teachers	7	54%	2	15%	3	23%	0	0%	1	8%	13
Planning Time to Collaborate with other AP/DC teachers	8	50%	2	13%	4	25%	0	0%	2	13%	16
Planning Time to Collaborate with other End of Course Teachers (If you teach an EOC course)	3	17%	1	6%	7	39%	3	17%	3	19%	18

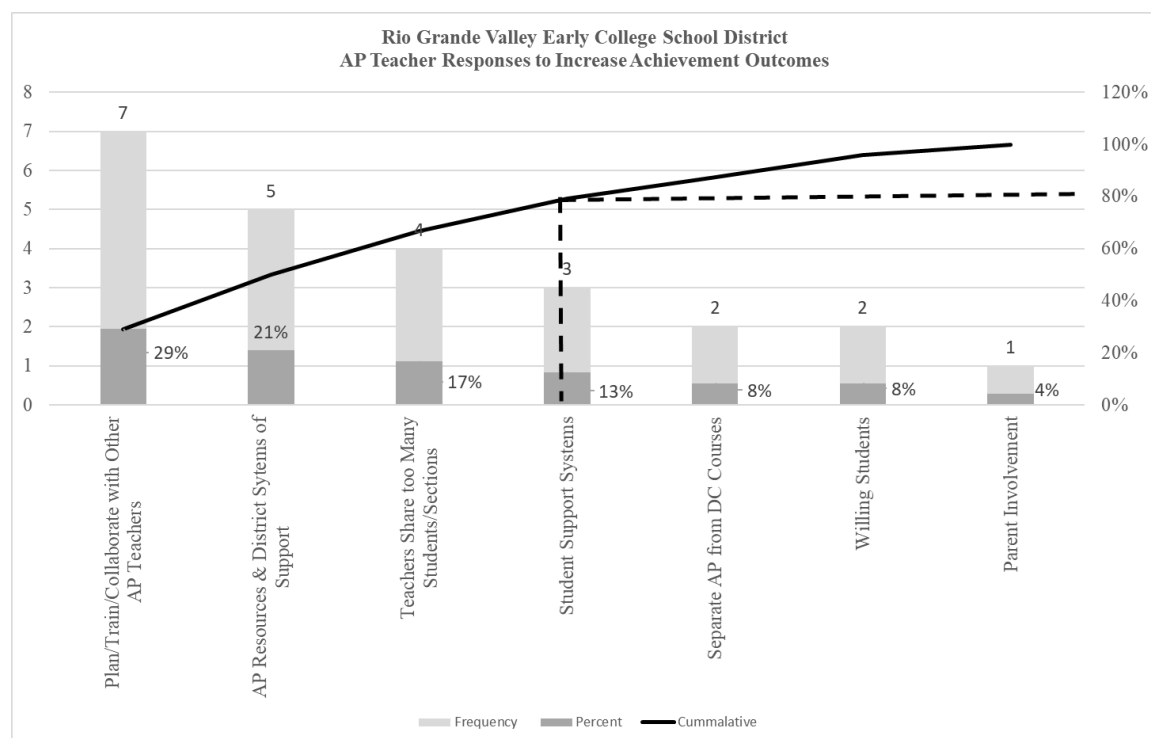
The survey addressed loosely structured questions that drove the study toward focused improvement efforts. Thornton et al. (2020) discuss the importance of teacher self and collective efficacy in their ability to impact achievement outcomes are crucial to organizational change. Therefore, seeking teachers' experiences to increase achievement outcomes was important. Of the 18 participants who responded, 16 answered the following question, "In your opinion, what

resources would help you improve achievement outcomes?” Among those who responded, teachers provided 24 possible opportunities that could impact achievement outcomes. The information was coded into seven categories; refer to *Figure 18, AP Teacher Responses to Increase Achievement Outcomes*, for details. 29% of teachers indicated that planning time contributed to students not being prepared for the AP EL & C test, therefore scoring a 1 or 2.

This Pareto chart highlights 20% of the perceived causes, attributing 80% of the reasons students are not meeting that three or higher on the AP test. If students attend a higher institution within Texas, they need to earn at least a 3 to earn college credit; this is not always the case if they attend out-of-state colleges or universities.

Figure 18

AP Teacher Responses to Increase Achievement Outcomes



Limitations of Results

The evaluation study has several limitations. One is the sample size of participants. There are only a few AP teachers per comprehensive high school, which limits the responses, validity, and accuracy of the feedback. study occurred in one Early College District, which limits the transferability due to its context and unique student demographics Out of the possible 60 AP teachers that received the survey, only 18 responded. This is only 30% of the possible 100%. The generalizability of teachers' perceptions about the support they received from the campus and district leaders may differ based on those who chose not to participate. Also, as of June 2023, the researcher became part of the Early College District's leadership team. This transition might positively impact the increased effort from teachers and staff during the intervention implementation year.

Recommendations for Intervention

This design-based iterative research investigates the impact of job-embedded professional development opportunities and structured planning time on teacher perception and achievement outcomes. The data from this evaluative study highlights several opportunities for the Early College district to provide Advanced Placement teachers with positive change in the perceived support they receive and impact achievement outcomes. Based on the survey results and teacher feedback, several recommendations exist for the Early College District.

Teachers expressed that there is no time allotted for them to plan with other AP teachers. I am proposing to intervene by recommending that the Early College District provide a District Collaborative Learning Community once every six weeks for all AP English Language and Composition teachers. The AP teachers will engage for half a day to collaborate and share best practices, reflect on student artifacts, and internalize their learning.

Second, I recommend that the district use the current AP lead teacher to guide the collaborative learning community once every six weeks. Collaborative structures need instructional leaders. The AP lead will collaborate with AP EL & C teachers to inform what topics are discussed during the AP district CLC. The AP lead will create the agenda, use current district CLC norms to maintain the collaborative structure and engage participants in rich discussions centered around curriculum and instruction to impact achievement outcomes. If the AP lead needs assistance in the process, I will collaborate with the high school principals to accommodate her requests to ensure a smooth transition.

Third, I recommend that the district continue to encourage the usage of the AP College Central, where teachers have access to webinars and accessible professional development. Since there is no money allotted for professional development for AP teachers, these free webinars provided free of cost by the College Board is a great opportunity. Monitoring the usage of the AP College Central and sharing with principals will help with this effort. Although funding is limited to send them to APSI sessions, this effort will minimize the cost for the district.

Fourth, although it is noted that there are no additional monies for AP resources either, I recommend that the district provide an Advanced Placement class set of books for teachers to use as their resource. The book title is Advanced Placement Edition English Language and Composition by Addon, Freitas, and Peterson. This book covers the content and prepares the students for their test with engaging nonfiction reading and practical writing instruction. With these few recommendations, I am hopeful that one will see a positive impact on teacher perceptions of the support they receive from their campus and district leaders and achievement outcomes.

CHAPTER 4: INTERVENTION OF SUPPORT SYSTEMS AND ITS IMPACT

Abstract

The academic achievements of low-socioeconomic students in Advanced Placement (AP) courses have often lagged behind their affluent peers, attributed to disparities in resources and support. Varied teacher workloads exacerbate the issue, particularly on campuses where teachers or DC instructors juggle dual credit and AP courses within ninety-minute instructional slots. This workload strain can compromise teaching quality and student achievement outcomes, needing additional resources and support across all campuses.

The implementation phase of the study focuses on implementing the recommendations, such as providing AP English Language and Composition teachers with a district Collaborative Learning Community (CLC) to allow them to plan, share best practices, and learn from one another. One utilized mixed methods to monitor improvement areas. The work highlighted the impact of collaborative planning among teachers in enhancing student performance to address achievement gaps. Survey findings revealed positive quantitative and qualitative results. The teachers expressed that they felt supported. Teachers were given autonomy to exchange best practices with one another. Allocating structured planning periods is crucial in reshaping teachers' perceptions of campus and district support, fostering a supportive environment, and ultimately improving achievement outcomes.

Keywords: Advanced Placement, Underserved Students, Common Planning Time, Collaborative planning time, Equity of For All, Professional Development, Differentiated Instruction

Problem of Practice

According to the College Board Advanced Placement data, 93% of students score below a three on the Advanced Placement English Language and Composition Assessment. This alarming trend prompts the need to investigate this issue as a practitioner. In South Texas, one firmly believes that Early College High Schools serve as crucial bridges, preparing underrepresented, low socioeconomic students for success in college. However, we learned from Chapter Three that for districts that combine two courses into one, excelling in AP courses becomes monumental and takes the opportunity from students to earn college credit for the advanced placement course.

Chapter Three: Evaluation informed one of the perceived root causes of students' not scoring a three or higher on their advanced placement English Language and Composition assessment. I delved deeper into the factors influencing the success of underserved students in their AP EL & C test by analyzing survey data results; engaging in brainstorming activities allowed one to gain valuable insights into what possible interventions one could implement to address the research questions. We learned in the previous chapter that teachers have too many students in their classes. AP teachers do not have time to plan and receive minimal resources from the campus or district.

The intervention implemented was a District Collaborative Learning Community for AP EL&C teachers. Providing this district CLC had a positive impact on teachers' perceptions of the support they receive from the campus and district. Due to the number of times they were scheduled to meet, one iteration was completed. Teachers met in the morning once every six weeks on the Friday before each six-week period started for a total of four hours.

Intervention

During the Summer of 2023, a meeting was held with key stakeholders who make decisions for high schools. The evaluation survey data pre-intervention was presented, and options were provided that promise to impact achievement outcomes and AP teachers' perceptions of the professional development, support, systems, and structures they receive from their campus or the district. Free professional development was provided free of cost by the college board. Collaborative planning options such as dates and times were discussed. Due to scheduling conflicts, planning during the instructional day was not feasible because of the teachers' courseloads and the limited staff who qualified to teach the AP and/or AP/DC. The district accepted the recommendation to offer a district collaborative learning community as the intervention for the 2024 school year. Figure 19, *Preliminary Timeline for Advanced Placement Study for the Early College District*, provides a visual of the timeline used for data collection of pre and post-surveys and brainstorming activity with teachers.

Figure 19

Preliminary Timeline for Advanced Placement Study for the Early College District



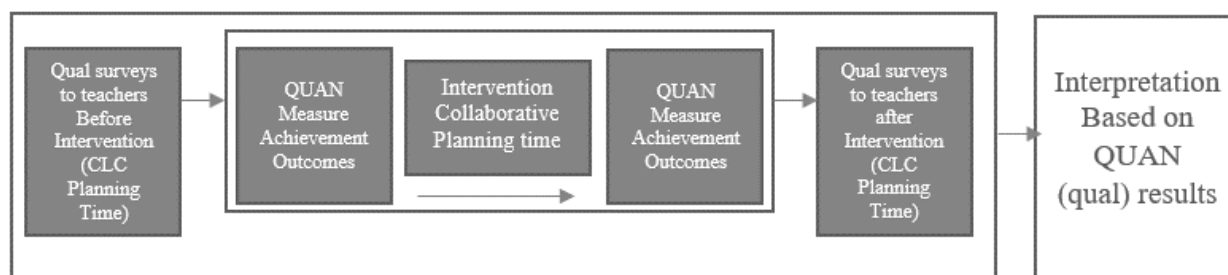
After the district agreed to provide this collaborative planning time for AP EL & C teachers, the Advanced Academic director met with the four comprehensive high school principals before the start of the school year to inform them about the excellent opportunity for their AP EL&C teachers at their schools to share best practices and support one another throughout the year. Without hesitation, all four principals agreed to provide a substitute for half a day every six weeks. Regardless of when the teacher had their conference period, the teachers' conference period would not be taken from them on those days scheduled to plan and collaborate.

The AP EL&C teachers met six times throughout the implementation year. The district lead took charge of planning and preparation for the AP district CLC. The district already had AP leads for the four content areas and one for electives. The district leads do receive a monetary stipend from the district each year for their leadership. The AP English Lead provided the agenda each time. It reflected the same norms and protocols used across the district for a regular Collaborative Learning Community (CLC). Therefore, she was excited to take on the lead role and explore the possibilities to impact achievement outcomes and teachers' perceptions. The date initially selected for the 6th six-weeks conflicted with the AP academies in preparation for the AP test, so the teachers agreed to move it to May 20, 2024.

Before the AP EL&C district CLC met, the AP lead sent emails requesting presenters to share a best practice that had worked for them (One to two weeks before). The district AP English lead created a Google classroom to share resources and ideas and create a collaborative opportunity during the weeks they did not meet. Not all teachers shared a best practice when meeting, but they actively participated during the AP EL&C district CLC. Figure 20 *Embedded Experimental Model* provides the process for data collection during the implementation year.

Figure 20

Data Collection Model for Iteration No. 1



The Advanced Academics directors provided lunch for them each time to minimize stress as they returned to their campuses in the afternoon. The district provided morning coffee and snacks to get their morning started. District staff reserved a large training room for them. Teachers were invited to come prepared to engage and collaborate on the best practices being shared and follow the district meeting norms (Refer to Appendix C) used at all campuses and departments.

Although the survey results indicated this opportunity, teachers requested a book for their class during the first meetings. The Advanced Academics director mentioned that it was a recommendation from the research and honored their request. The director purchased a teacher edition and a class set for each of them. The book arrived in late March, so the teachers did not have as much time as they wanted to explore that resource and use it with their students.

Purpose

The persistent underperformance of underserved students in Advanced Placement (AP) courses, particularly in English Language and Composition where only 7% achieve a score of three or higher, underscores a critical need for systemic change. This improvement science study seeks to address this issue by focusing on a key factor that may influence student achievement: teacher support. Specifically, the study's purpose is to evaluate the impact of collaborative planning time on teacher perceptions and achievement outcomes.

In the complex system of education, teachers are the primary source through which any systemic change must flow to reach students effectively. Their perceptions of support, professional growth, and collective efficacy can significantly influence classroom practices and student performance. This study hypothesizes that by providing AP English Language and Composition teachers with structured, collaborative planning time, a resource often scarce yet critically needed in high-demand courses, we can enhance their sense of support, which may, in turn, lead to improved instructional strategies and higher student achievement.

To rigorously examine this hypothesis, the study will systematically investigate three interrelated questions:

- 1) Is there a positive impact on achievement outcomes after the embedded district collaborative learning community for AP English Language and Composition?

This question directly assesses whether the intervention, providing collaborative planning time, translates into tangible improvements in student performance. By comparing AP scores before and after the intervention, we can gauge its direct effect on the core issue: low achievement rates.

- 2) Is there an overall increase in positive perception by staff?

This question probes the intervention's psychological and professional dimensions. Using surveys and qualitative feedback, we examine whether collaborative planning time enhances teachers' feelings of support, professional satisfaction, and efficacy. This data will help us understand the intervention's impact on teacher well-being and engagement, factors often overlooked yet critical to sustaining any educational reform.

3) Is there an increase in achievement outcomes?

While similar to the first question, this broader inquiry looks beyond the specific AP English Language and Composition course to see if there are spillover effects. Do teachers apply insights from collaborative planning to other courses they teach? Do students show improvements in related areas like general English classes or other AP subjects? This question helps us gauge the intervention's systemic impact.

Literature Review

Equitable access remains a central principle of the Advanced Placement (AP) Program, reflecting broader efforts in college access initiatives nationwide to expand rigorous curriculum opportunities for marginalized populations (Kolluri, 2018). However, despite these efforts, persistent barriers exist, contributing to disparities in post-secondary outcomes, particularly among low socio-economic and underrepresented groups. Elite parents often seek to maintain distinctions between their children and underserved peers, inadvertently perpetuating inequalities within low-income families. While extensive research explores AP access and success metrics, there remains a paucity of studies addressing strategies to overcome these persistent inequities.

Equity for Underserved Populations

Ensuring equitable access to advanced learning opportunities is essential for fostering excellence in education (Meyer & Plucker, 2021). However, rebranding these opportunities and

challenging existing labels are crucial steps towards achieving true equity (Meyer & Plucker, 2021). Despite strides in expanding AP access, disparities persist, with high-performing schools often rejecting the program (Schneider, 2009). Leadership plays a critical role in influencing policy implementation to promote equity and social justice for underserved populations (Mavrogordo & White, 2020).

Student Recruitment and Motivation

While incentive programs and virtual learning options have been introduced to boost AP participation, challenges remain in ensuring equal access to success (Judson et al., 2019). Motivating factors such as college credit and increased enrollment opportunities drive student participation, but concerns about GPA impact deter some students from enrolling (Judson et al., 2019). Advanced Placement teachers believe that by increasing parental engagement in the enrollment process of AP courses, students will make the AP course a priority.

Federal and State Accountability

Federal and state accountability measures play a crucial role in monitoring AP participation and success rates. However, gaps exist in accountability data, particularly concerning small student populations and limited funding for support programs (Wisemen & Bell, 2022). Local education agencies (LEAs) face challenges in allocating resources effectively, impacting their ability to support student achievement (Carnoy & Loeb, 2002).

Professional Development and Collaborative Planning Time

High-quality professional development opportunities are paramount for empowering teachers to deliver effective instruction, especially within differentiated settings (Borg et al., 2018). Collaborative platforms like Advanced Placement Teacher Communities serve as invaluable avenues for fostering knowledge sharing and professional growth among educators

(McGuane, 2022). Additionally, according to Chen (2020), the success of students hinges on teachers' ability to meticulously plan lessons, moderate student discourse, and motivate learners to articulate their thoughts for deeper comprehension. However, facilitating effective classroom discussions and crafting open-ended questions poses challenges for educators transitioning into the role of facilitator (Chen, 2020). Job-embedded teacher professional development is a multifaceted endeavor, requiring tailored approaches to address individual needs (Svendsen, 2020). Svendsen (2020) emphasizes that while Teacher Professional Development (TPD) is driven by a continuous quest for personal growth, its effectiveness relies on a comprehensive understanding of participants' unique requirements. Ultimately, the collaborative efforts of teachers and leaders in identifying and addressing areas for development are key to fostering success in professional learning initiatives (Svendsen, 2020).

Differentiated Instruction

VanTassel-Baska (2019) emphasizes the crucial role of differentiated instruction in effectively meeting the diverse needs of gifted students. By empowering teachers to take ownership of their instructional approaches and employing rubrics for student assessment, educators can significantly enhance their ability to address the needs of all learners. Teachers must tailor instruction according to various factors, such as reading levels and reader profiles, including typical readers, poor decoders, and poor comprehenders, as suggested by Baron et al. (2019). In contrast to prevailing research, Graefe and Ritchotte (2019) highlight one key element contributing to the success of Hispanic students in Advanced Placement (AP) courses: the acknowledgment of all students as gifted learners. Consequently, differentiated instruction customized to the unique needs of gifted students improves their learning outcomes and fosters overall success in AP courses (VanTassel-Baska, 2019).

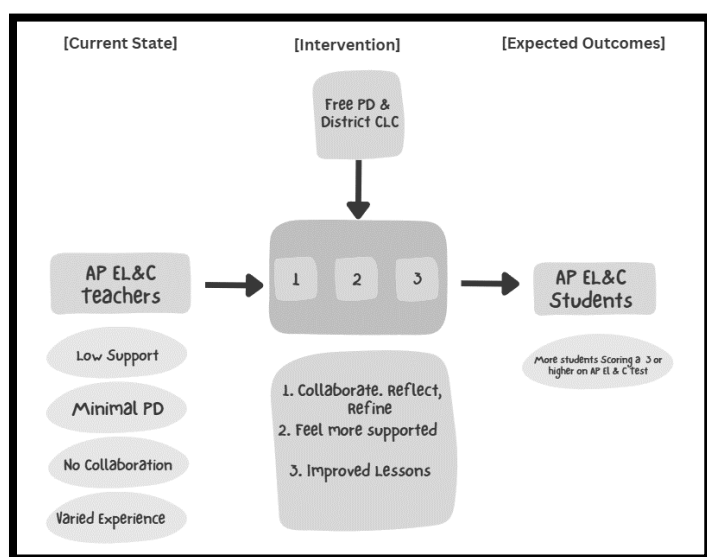
In conclusion, while the Advanced Placement program has expanded access to rigorous coursework, persistent barriers and inequities remain. Addressing these challenges requires local, state, and federal collaborative efforts to ensure equitable access and support for all students. The need to action is left to the local education agencies to engage in improvement efforts to support all learners, ensure that they maximize the student's potential to excel, and provide professional development, monitoring, and support for teachers to deliver rigorous lessons.

Theory of Change

For as long as Advanced Placement course offerings have been available to students, teachers have not received enough support or guidance from district or campus administrators. If teachers got lucky, they would receive a class set of books and be sent to the Summer Institutes being provided by the district office or campus principals would allow a few to attend the summer institutes for professional development. However, when the early college initiative began in South Texas (2008-2009), all those resources shifted to provide more resources and support for dual credit course offerings. The professional development for dual credit is provided by the district's higher education partner, South Texas College.

Students come from different middle schools that feed into each high school, and all vary in their academic track; some have taken advanced Pre-AP courses, while others have followed a regular track. Teachers serving students in AP courses also have a wide range of experience with pedagogy and working with the rigorous curriculum of Advanced Placement courses. Professional development for AP teachers has been minimal, and there is no opportunity for them to meet. See Figure 21 *Theory of Change* for a visual of the current state pre-intervention, once the teachers are provided with free professional development and a district CLC for them to collaborate to share best practices, reflect on lesson delivery and student artifacts, then:

- 1) Teachers will have the opportunity to collaborate, reflect, and refine their rigorous lessons.
- 2) Teachers will feel more support from campus and district leaders.
- 3) There will be an increase in students scoring a three or higher on their AP EL&C test.

Figure 21**Theory of Change****Setting**

The study is in a South Texas District with an overwhelmingly Hispanic student population, comprising approximately 99% of enrolled students. This district operates on an open-enrollment basis, welcoming students from its immediate vicinity and neighboring towns. Committed to upholding the educational standards set forth by the Texas Education Agency (TEA) and adhering to the guidelines outlined in Public-School Law, the district diligently follows all regulations concerning curriculum, instructional practices, compliance with special student populations, and accountability measures at both federal and state levels. Additionally, the district receives funding from both federal and state sources, which is allocated in accordance

with established protocols. Structurally, the district comprises of four comprehensive high schools, each embracing the Early College model (wall to wall), which affords every student the opportunity to engage in dual credit courses. Notably, within most schools, students can participate in Advanced Placement (AP) courses concurrently with their dual enrollment curriculum. The instructional schedule typically entails 45 to 90-minute sessions every other day across all high schools within the district.

Target Population and Participants

The target population for this study encompasses the scores of students enrolled in Advanced Placement (AP) courses within the Early College District, which caters to approximately 30,000 students. Among these students, 46% are Emergent Bilinguals (formerly known as LEP), 94.2% are economically disadvantaged, 12% receive special education services, and 75% are considered at risk. The student demographics across the four comprehensive high schools within the district, showcase diversity of the student body. These comprehensive schools were chosen as their demographic for underrepresented student populations was higher compared to the special purpose campuses within the district. These schools also had more AP English Language and Composition teachers than those with less students to provide one with good reliability and validity results.

The study's participants consist of approximately 60 Advanced Placement teachers, all teaching AP or AP/DC courses during the implementation year. This includes at least one Advanced Placement English teacher from each Early College comprehensive high school and the scores of students enrolled in AP English courses. Additionally, the participant pool comprises four campus principals, three Executive Officers (EOs) for High Schools during the evaluation year and two during the implementation year, plus one Advanced Academics Director.

These participants will provide valuable insights into the structures and support services offered within the Early College District over their years of service. Out of the sixty that received the survey, 15 responded to the survey post-intervention.

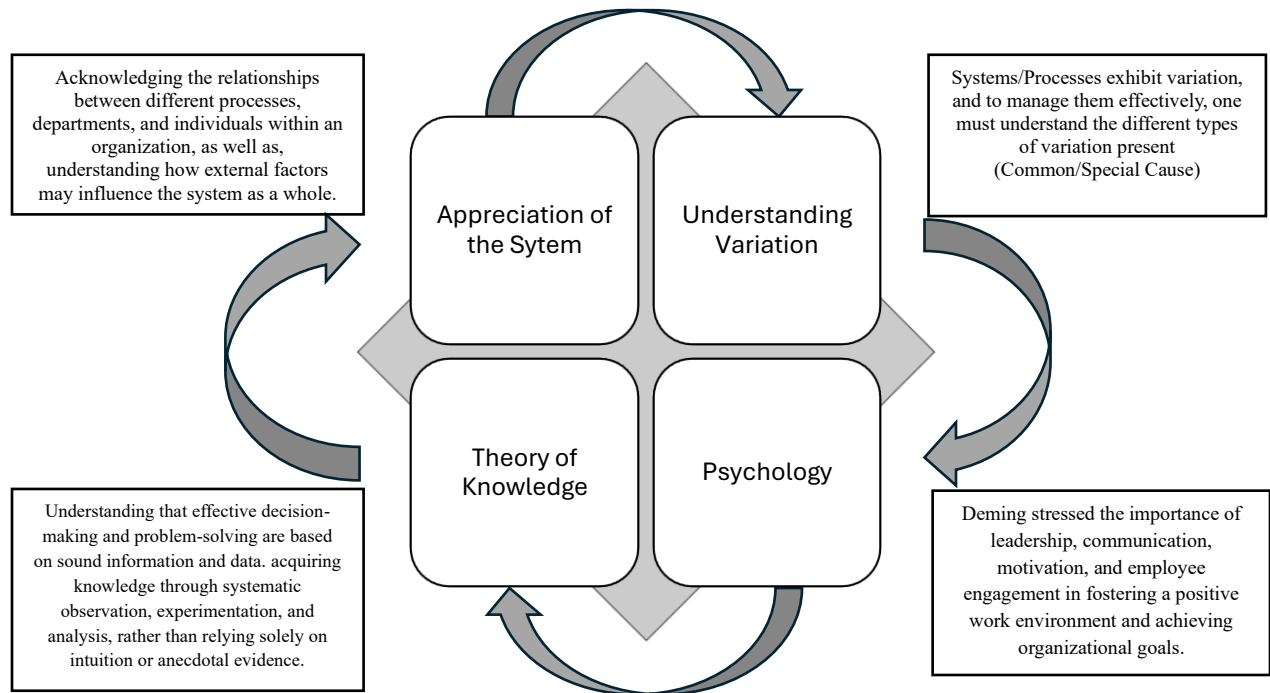
Research Methodology

To investigate the effects of teacher collaborative planning time and support structures on teacher perceptions and/or student achievement outcomes, a combined research approach utilizing both qualitative and quantitative data will be employed. Specifically, an embedded experimental mixed methods design will enable the use of qualitative and quantitative data to assess the impact of planning time on teacher perceptions and achievement outcomes (Creswell & Plano Clark, 2007). An iterative research design based on design principles will be utilized to examine the effects of teacher collaborative planning time and support structures on teacher perceptions and/or student achievement outcomes. Teachers will be surveyed at various points throughout the study to gather data. DBIR allows a Network Improvement Committee (NIC) to collaborate and inform practitioners on improvement opportunities and their effectiveness once implemented.

Improvement science presents an invaluable opportunity to achieve desired outcomes by systematically investigating and understanding the underlying factors contributing to current results. Through a continuous and rigorous process of scientific inquiry, improvement science aims to identify and address root causes, thereby fostering positive changes that align with the desired goals (Hinnant-Crawford, 2020). Hinnant-Crawford (2020) defines improvement science as “Improvement science is a methodological framework that is undergirded by foundational principals that guide scholar-practitioners to define problems, understand how the system produces the problems, identify changes to rectify the problems, test the efficacy of those

changes, and spread the changes (if the change is indeed an improvement) (p. 29).”. Hinnant-Crawford (2020) highlighted the importance of comprehending Deming's four interdependent components, essential for accomplishing any objective. Figure 22 *Deming's System of Profound Knowledge*

Figure 22 *Deming's System of Profound Knowledge*



Research Design

In our study, we adopted a mixed method embedded experimental design to explore the influence of professional development and structured planning time on achievement outcomes. Figure 23, *the Embedded Experimental Model*, provides a visual representation of our mixed-method approach. DeCuir-Gundy and Schutz (2017) highlight that mixed methods research involves developing research questions that guide the exploration of relationships between qualitatively and quantitatively collected and analyzed data. For a clearer understanding of the research process, refer to Figure 24, *Process of the Basic Procedures in an Embedded*

Experimental Model, which presents a flowchart outlining the basic procedures for implementing a Mixed Methods Evaluation Design (Creswell & Clark, 2017, p. 314). We will employ pre- and post-surveys to assess the impact of collaborative planning time before and after the intervention. Given the inability to pair individual respondents' surveys, descriptive statistics will be utilized to address the research question effectively. This approach will enable us to determine whether offering professional development and structured planning time influences teachers' perceived level of support in enhancing achievement outcomes. Notably, descriptive statistics will facilitate comparisons with last year's average score of 1.6 on AP English Assessments, providing valuable insights into the effectiveness of the intervention in improving teacher support and impacting student achievement.

Figure 23 Embedded Experimental Model

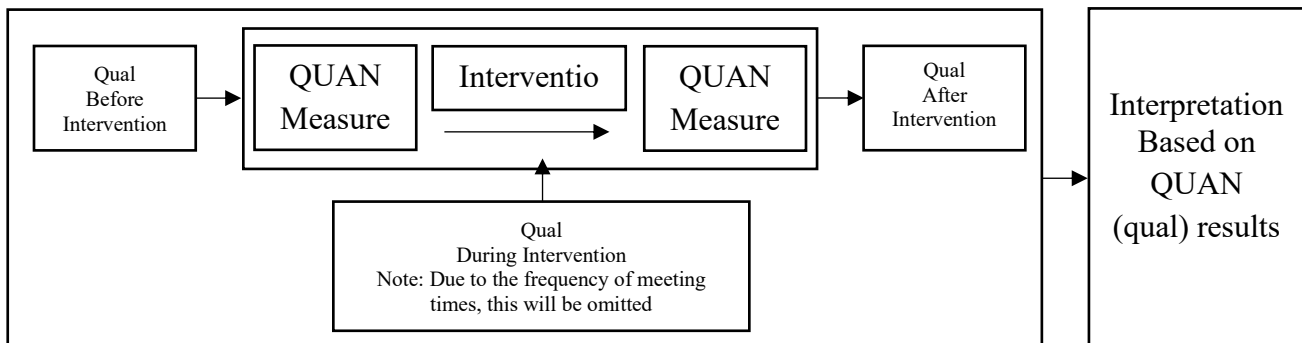


Figure 24 *Process of the Basic Procedures in an Embedded Experimental Model*

Design Based Research

Designed-Based Research (DBR) offers a comprehensive framework for understanding the nuances of learning in a collaborative manner with a focus on iteration. According to Svihla (2014), DBR involves an iterative refinement of learning designs and theories, facilitating a deeper understanding of educational processes. Additionally, Hoadley and Campos (2022) underscore the pivotal role of educational psychology in illuminating the complexities of the human mind, which significantly influences teaching, learning, and, ultimately, achievement outcomes. They emphasize that DBR serves as an interventionist research method, aiming to actively comprehend and modify the world. Moreover, DBR acknowledges the inherent challenge of implementing intended designs within complex social contexts where participants and researcher-designers exert effort (Hoadley & Campos, 2022). In this project, we engaged in one iteration of DBR due to the type of intervention and the number of times teachers had the opportunity to meet throughout the year. Our approach began with evaluating the current context and pre-implementation surveys were administered to teachers, as outlined in Figure 25

Evaluation Timeline. Figure 26 AP EL&C District CLC Planning and Implementation Timeline

depicts the implementation timeline followed during this iteration. Subsequently, we will analyze 2024 AP scores to identify forthcoming areas of opportunity.

Figure 25

Evaluation Timeline

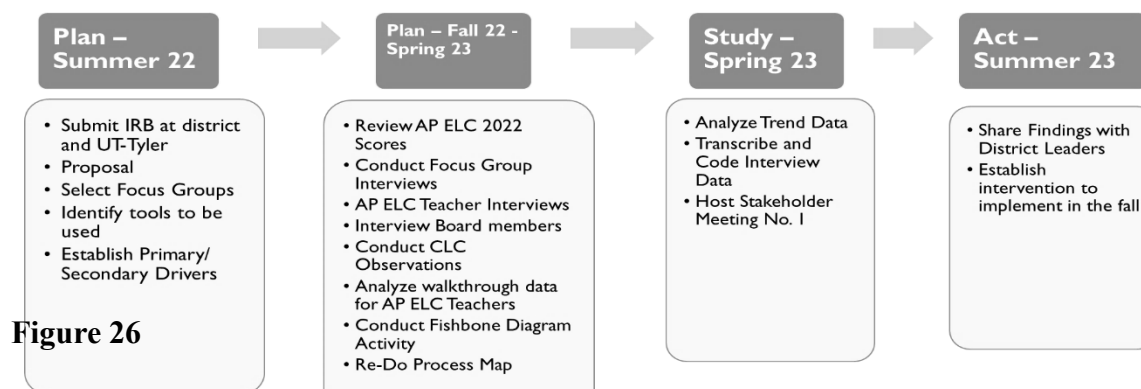


Figure 26

AP EL&C District CLC Planning and Implementation Timeline

Summer 2023	Fall 2023	Spring 2024	Summer 2024
<ul style="list-style-type: none"> • Meet with Stakeholders (Principals and District Leads) to Create District CLC • Protocols for District CLC • Reserve Meeting Room in District Facility • Create Workshops on E-System • Create Calendar Invites • English AP lead creates Agenda for 1st meeting 	<ul style="list-style-type: none"> • English AP lead creates Agendas for each meeting • Send email reminders to AP teachers prior to meeting • English AP lead creates moderates all meetings • Create google classroom for AP teachers 	<ul style="list-style-type: none"> • Continued from Fall 2023 • English AP lead creates Agendas for each meeting • Send email reminders to AP teachers prior to meeting • English AP lead creates moderates all meetings • Send out surveys in late Spring • Analyze qualitative and quantitative data • Present results to stakeholders for district scheduling and planning for next school year 	<ul style="list-style-type: none"> • Await for AP scores to arrive in July • Reflect, revise and repeat as necessary

Results

Quantitative

As measured by the college board, English Language and Composition scores of three or higher are at seven percent. The first research question focused on teacher perceptions, “How do Advanced Placement teachers perceive the support, systems, and structures provided by the Early College District?” Survey participants were asked the following question for eight different

areas, “On a Liker-scale from one to five, five being highest, how would you rate the level of support provided to you either by the campus or district? The percentage of teachers who selected a 4, increased in seven of the eight categories listed. Three of the highest increases were in the areas when asked about the planning time with AP/DC teachers (56%), AP teachers (40%), and DC teachers (38%). Followed by planning time with EOC teachers (26%) and Professional Development opportunities (6%). Refer to Table 5 *Pre and Post Ratings on Perception of Teachers* for detailed percentages by question and rating. One can see that overall, there was a decrease in the selection of ones and twos and an increase in the others.

Table 5*Pre and Post Ratings on Perception of Teachers*

			1	1	2	2	3	3	4	4	5	5	3-5	3-5 (+/-)	
1	Post	Professional Development Opportunities	1	10%	1	10%	4	40%	3	30%	1	10%	80%	21%	10
1	Pre	Professional Development Opportunities	5	29%	2	12%	6	35%	4	24%	0	0%	59%		17
2	Post	Resources for AP Courses	1	10%	2	20%	5	50%	1	10%	1	10%	70%	23%	10
2	Pre	Resources for AP Courses	8	47%	1	6%	4	24%	2	12%	2	12%	47%		17
3	Post	Resources for DC Courses	1	13%	2	25%	2	25%	2	25%	1	13%	63%	-9%	8
3	Pre	Resources for DC Courses	3	21%	1	7%	7	50%	1	7%	2	14%	71%		14
4	Post	Allotted Instructional Time	1	11%	1	11%	1	11%	4	44%	2	22%	78%	-5%	9
4	Pre	Allotted Instructional Time	1	6%	2	12%	3	18%	5	29%	6	35%	82%		17
Planning Time															
5	Post	to Collaborate with other AP teachers	2	20%	0	0%	3	30%	4	40%	1	10%	80%	41%	10
5	Pre	to Collaborate with other AP teachers	9	50%	2	11%	5	28%	0	0%	2	11%	39%		18
6	Post	to Collaborate with other DC teachers	1	13%	1	13%	2	25%	3	38%	1	13%	75%	44%	8
6	Pre	to Collaborate with other DC teachers	7	54%	2	15%	3	23%	0	0%	1	8%	31%		13
7	Post	to Collaborate with other AP/DC teachers	1	11%	0	0%	2	22%	5	56%	1	11%	89%	51%	9
7	Pre	to Collaborate with other AP/DC teachers	8	50%	2	13%	4	25%	0	0%	2	13%	38%		16
8	Post	to Collaborate with other EOC	1	14%	0	0%	0	0%	3	43%	3	43%	86%	11%	7
8	Pre	to Collaborate with other EOC	3	17%	1	6%	7	39%	3	17%	3	19%	74%		18

Qualitative

To answer the research question, participants were asked to respond to the following:

“How would you describe the current support received by Advanced Placement/Dual Enrollment teachers?” Only 8 participants responded. Six of seven teachers (85%) responded positively,

indicating that they have district support. Of the six expressing they feel supported, they also added a few opportunities to improve the level of support. One participant stated, “I will say that many times we find ourselves sitting in staff meetings that do not apply to us. We need a lot of time to grade. For instance, I have 140+ students. They are all required to write essays that can range from 4-8 pages. That is a lot of grading to tackle. I don't think administrators realize that.” One of seven participants who said very little support also stated the following, “Very little from school administration. They are not aware of the demands of the course and make no effort to elicit our views.”

Data Analysis Plan

Descriptive statistics were used to see if an improvement was evident in each survey question that aligned to the research question. An increase in positive perception indicates that the teachers feel supported. Their positive statements such as “Fantastic. Great. And Good.” validate the ratings they gave each of the areas. Additional qualitative data they shared on areas of opportunity is also a positive. They remain hopeful and are open to improvement efforts.

Quantitative

As measured by the College Board, English Language and Composition scores of a three or higher are at seven percent. The second research question focused on district CLC and teacher perception, “How does providing professional development and a district Collaborative Learning Community for AP ELC teachers impact teacher perception of the support they receive by their campus/district?” Survey participants were asked the following question, “Did you attend any advanced placement professional development within the last year?” Forty-one percent of the respondents said yes before the intervention, compared to 73% post-intervention. Another notable result is that 100% of teachers are now part of the AP Central community, which offers

free professional development provided by the College Board, compared to 88% pre-intervention. When asked, “Did you attend AP professional development provided by the district?” 65% responded yes prior to the implementation compared to 91% post-intervention. Only 24% of them engaged in teacher webinars prior to the intervention year, compared to 55% post-intervention year. It is evident that awareness of the improvement effort with a focus on achievement outcomes motivates the adult learner to self-engage to better prepare the students for their AP tests.

Qualitative

Although no open-ended question focused on professional development specifically, when teachers were asked, “Describe your experience in teaching Advanced Placement/Dual Enrollment courses with the current school district.” Professional Development was mentioned three times, and now they have requested to attend professional development opportunities outside of the district. One participant shared, “APSI is a great professional development; however, teachers need to attend other professional developments on critical thinking, approaching literature, and writing workshops from other regions and not just Region 1.”. Small (2019) stated, “Findings indicated that the strongest benefits of APSI were gains in teacher content knowledge, but also that pedagogy learned lead to improved teacher perception of ability to support student achievement.”

Data Analysis Plan

Descriptive statistics were used to see if an improvement was evident in each survey question that aligned to the research question. An increase in positive perception indicates that the teachers feel supported by the current professional development opportunities they received this year. The increase in percentages of teachers attending webinars or sessions provided by the

district is a good sign of support. It also validates the ratings they gave each of the areas when asked to rate the level of support. One still has an opportunity to continue revisiting support efforts to address the needs of each individual teacher to maximize support efforts.

Limitations of Results

This study has limitations. One key limitation is generalizability in that the district CLC was offered to only the English Language and Composition Teachers from the four comprehensive high schools. Offering this intervention to all AP teachers across contents within the district may provide different results. The quantitative and qualitative results may differ as each teacher from each content area may have different perspectives as to what are the root causes contributing to students scoring less than a three on their AP assessment. Another limitation is that the district support was strong from all levels of leadership allowing this research to thrive in this respective context. Other districts may not have the resources to allow teachers to leave their school and convene at an alternate location to minimize distractions and maintain the focus on teacher development and learning. Although the anonymous surveys allows for them to feel open, I believe the last limitation I will note is that I have known most of these teachers and leaders, having a relationship with the participants has an influence in their participation or lack thereof. The results may differ in districts where the researcher has no connections to the participants. Although limitations exist, the overall increase in positive perceptions of teachers brings us to a positive outlook on future school improvement research opportunities.

Summary of Results and Future Recommendations

The research questions guiding the study were answered. The questions to evaluate after the intervention: 1) Is there a positive impact on achievement outcomes after providing

professional development and a district collaborative learning community for AP English Language and Composition teachers? 2) Is there an overall increase in positive perception by staff? 3) Is there an increase in achievement outcomes for English Language and Composition Teachers? There was no increase in achievement outcomes of students earning a three or higher (7% in 2023 and 7% in 2024) for the AP English Language Composition teachers at the early college comprehensive high schools that engaged in the District AP EL&C CLC. Also, the average score of 1.45 rating and a standard deviation of 0.68 remained almost unchanged for the 2024 AP results ($\mu=1.39$ and $\sigma = 0.68$). However, the overall performance of students earning a three or higher in EL&C AP courses at the Early College district did increase from 6.5% to 7.9%. Also, there was an overall increase in staff positive perception, evident in both the quantitative and qualitative feedback provided by AP teachers after the district CLC was implemented.

Future Recommendations

It is evident that teachers, no matter the label their students carry, need and thirst for professional learning opportunities. Collaborating with their colleagues had an impact on the support received by the school or district. One recommendation for future study is to pilot separating the AP and Dual Enrollment courses at one comprehensive early college high school; the majority of stakeholders mentioned this at every opportunity. Exploring this opportunity would inform future research if allocating instructional time specifically for one curricula will increase achievement outcomes.

Also, allotting funding for AP teacher resources would be in the best interest of students. Their teachers can request supplemental materials to support their students. At this time, there are minimal opportunities provided to AP teachers.

CHAPTER 5: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

The primary aim of this improvement science dissertation was to investigate how providing Advanced Placement teachers with collaborative planning time and structured professional development offered free of cost by College Board AP Central impacts achievement outcomes for low socio-economic students. By employing mixed methods, design-based iterative research, this study sought to gain insights into the impact of teacher support systems, resources, and professional development on teacher perceptions of the support received by campus and district leaders and achievement outcomes. The results yielded a positive impact of collaborative planning time and structured professional development on teacher perceptions and AP achievement outcomes. The study found that teachers who participated in structured collaborative planning time reported a significant increase in their sense of support and efficacy. These findings are consistent with Bryk et al. (2017), who emphasized the importance of iterative cycles in achieving educational improvements. The findings from this evaluation study offered important implications for research and practice in the field of school improvement for practitioners. To determine the impact the following research questions were investigated: 1) How do Advanced Placement teachers perceive the support, systems, and structures provided by

the Early College District? 2) How does success compare between AP ELC assessment scores and grades in the Dual Credit Course? Questions addressed during the study: 3) Is there a positive impact on achievement outcomes after the embedded district collaborative learning community for AP English Language and Composition? 4) Is there an overall increase in positive perception by staff? 5) Is there an increase in achievement outcomes?

This chapter synthesizes and discusses the key results in relation to the existing literature and theoretical frameworks underpinning the study. It highlights the study's contributions to advancing knowledge and understanding of how campus and district leaders can best support AP teachers to positively impact achievement outcomes. Furthermore, it outlines the practical implications of the findings for informing and enhancing AP teacher support systems in comprehensive high schools. Implementing structured professional development and collaborative planning time can be a scalable model for other districts aiming to improve AP outcomes. In addition, the PDSA cycle proved effective in facilitating incremental improvements, though the limited sample size and short duration posed challenges to generalizability. The chapter concludes by acknowledging the study's limitations and providing recommendations for future research opportunities.

Discussion of Results

The quantitative analysis indicates that, according to College Board metrics, only seven percent of students achieve a score of three or higher in Advanced Placement English Language and Composition assessments. The primary research question explores Advanced Placement teachers' perceptions of support from the Early College District, revealing an increase in positive ratings across various support categories. Notably, planning time with AP/DC teachers saw a significant increase of 56%, followed by increases in planning time with AP and DC teachers by

40% and 38%, respectively. Additionally, there was a rise in planning time with EOC teachers (26%) and Professional Development opportunities (6%). Teachers' increased collaboration and access to resources directly contributed to enhanced instructional strategies and an increase level of support. Following the intervention, the percentage of students scoring a three or higher on the AP English Language and Composition exam did not increase. It remained at 7%.

The qualitative analysis, based on responses from eight participants, further explains teachers' views on support, with 85% expressing positivity. However, some participants highlighted areas for improvement, particularly regarding the relevance of staff meetings and the need for more grading time. They believe leaders underestimate their workload.

The data analysis plan used descriptive statistics to assess improvements in survey questions aligned with the research objectives, indicating an increase in positive perceptions. Moreover, the qualitative data emphasizes the importance of professional development, with participants expressing interest in attending sessions outside the district to enhance their teaching skills. Overall, the findings suggest a positive impact on teacher perception of support, with continued efforts needed to address individual needs effectively.

The literature explores the landscape of Advanced Placement (AP) and Concurrent Enrollment Courses, focusing on their benefits, challenges, and implications for student success. It delves into the historical context of AP, its evolution, and its current role in addressing educational inequities. The challenges underserved populations face in accessing and succeeding in AP courses are discussed, along with strategies to bridge the achievement gap. The importance of professional development for teachers, differentiated instruction, and effective policy implementation is emphasized as key factors in promoting student achievement and closing equity gaps. Overall, the review of the literature presents a comprehensive overview of the

complexities surrounding AP programs and provides avenues for improvement to ensure equitable access and success for all students.

Conclusion

The evaluation study highlights the need for improvement in Advanced Placement (AP) programs to address accountability for achievement outcomes and ensure equitable access and support for all students, particularly underserved populations. The focus was to provide collaborative planning opportunities and professional development for AP teachers to maximize student achievement. One significant challenge was aligning the schedules of all participating teachers with conference periods spread throughout the day, which sometimes limited the effectiveness of collaborative planning sessions. The literature review raises questions about the effectiveness of current AP offerings and the impact of educational systems on early college access for underserved populations. The evaluation and intervention outcomes revealed the importance of collaborative efforts to address persistent barriers and inequities in AP programs.

The design-based iterative research design investigated how teacher collaborative planning time and support structures influence teacher perception and achievement outcomes. Teachers were surveyed at various stages of the study to gather their perceptions. This process allowed one to identify areas for improvement by allowing teachers to express their opinions, perceptions, and experiences on the support they receive. The study recognizes the importance of understanding teachers' perspectives to effectively address areas of opportunity. AP English Language and Composition teachers collaborated, reflected, internalized their learning, and adjusted their lesson delivery or provided student opportunities to impact achievement outcomes. In addition, AP teachers owned their autonomy and created a Google Classroom to continue sharing resources after they left their district CLC. It was impactful to witness them sharing

strategies and resources they found to be effective in their classrooms beyond the expected four-hour time frame. This brings hope to continue the iterative structure of the improvement science.

Recommendations for Further Study

This improvement science dissertation emphasizes the crucial role of professional learning opportunities for teachers, regardless of their students' backgrounds or educational labels. Instituting quarterly professional development workshops focused on AP instruction could sustain and build on the initial improvements observed. It highlights the positive impact of collaboration among colleagues, indicating that such interactions enhance the support schools or districts provide. Future research should explore the applicability of these support systems in subjects beyond English Language and Composition, such as mathematics and science. Longitudinal studies involving multiple districts could provide a more comprehensive understanding of the long-term impacts of these interventions.

One significant recommendation proposed for future research is the piloting of separating AP and Dual Enrollment courses at a comprehensive early college high school and districts should consider mandating collaborative planning time as part of teachers' and administrators' contractual obligations to ensure sustained support. This recommendation stems from consistent feedback from stakeholders, who believe separating the two curricula could lead to better outcomes. By exploring this opportunity, future research could investigate whether allocating specific instructional time for each curriculum enhances achievement outcomes.

Another recommendation is to set criteria for students, parents, teachers, and administrators, such as creating a contract delineating each person's responsibilities, to tailor the systems, structures, and support of all. Klopfenstein (2003) states, "In addition, it may be helpful to have students and their parents sign a contract at the beginning of the term acknowledging that

AP classes are more difficult than other classes and that students will have to work much harder to earn the grades they have come to expect. Having administrators sign these contracts can increase their understanding of the program.” (p. 46).

Furthermore, the shows that allocating funding for AP teacher resources is important. Currently, AP teachers have limited opportunities to access supplemental materials to support their students effectively. Allotting funding for resources would enable teachers to request and utilize materials tailored to their students' needs, ultimately benefiting student learning outcomes. These recommendations underscore the significance of investing in teacher support and resources to improve educational outcomes for students in AP programs. Klopfenstein (2003) emphasizes that in order to provide effective AP programs administrators must: 1) Have a thorough comprehension of the AP program to match the teacher with the course, 2) Motivate AP teachers to actively engage in professional development, and 3) Advocate for rigorous delivery of instruction. Implementing an annual review process to assess the effectiveness of support systems and make necessary adjustments will be crucial for sustained success.

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Appendices

Appendix A Interview Protocols & Questions

Interview Protocol for Staff and Students

I will use the following script to introduce myself and describe the process we will engage in to capture their experiences.

Hello. My name is Yolanda Gomez. I serve as the Migrant Education Program Director for a South Texas School District. I want to start by thanking you for your time and allowing me to capture your experiences as you teach or lead the Advanced Placement work and prepare students for post-secondary success. We will have a minimum of 10 minutes and at most 20 minutes for this process. I will not use your actual name. I will use a pseudonym during this process to maintain confidentiality. Feel free to ask me any clarifying questions at any point. Again, thank you for your time and for providing further insight into your experiences with Advanced Placement/Dual Credit.

Highly Structured Questions

- 1) Select from the following options your overall years of teaching experience?
 - a. 0
 - b. 1-5
 - c. 6-10
 - d. 11-15
 - e. 16 plus
- 2) Select from the following options your overall years of experience teaching Advanced Placement courses?
 - a. 0
 - b. 1-5
 - c. 6-10
 - d. 11-15
 - e. 16 plus
- 3) Do you have a master's degree in your assigned content area?

- a. Yes
 - b. No
- 4) Do you have to teach a Dual Credit and Advanced Placement course within the same allotted instructional time for each class?
- a. Yes
 - b. No
- 5) Did you attend any professional development to teach Advanced Placement (AP) within the last year?
- a. Yes
 - b. No
- 6) Did you attend any professional development to teach Dual Credit Course within the last year?
- a. Yes
 - b. No
 - c. Not Applicable
- 7) Are you part of the AP Classroom community provided by College Board AP Central?
- a. Yes
 - b. No
- 8) Have you attended any of the following workshops and or Summer Institutes provided by College Board AP Central?
- a.
- 9) Have you engaged on the Teacher Webinars provided by College Board AP Central?
- a. Yes
 - b. No
- 10) Have you attended any professional development provided by your campus or school district?
- 11) On a scale from 1 to 10, where 10 is excellent support and 1 minimal support, how would you rate the support provided by our district to execute quality instruction for students?
- a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. 5
 - f. 6
 - g. 7
 - h. 8
 - i. 9
 - j. 10

Semi-Structured Questions

- 1) How long have you been in your role?
- 2) What percentage of your budget is allotted to Advance Placement training and student support?
- 3) What are the expected outcomes for providing Advanced Placement and Dual Credit courses within the same allotted instructional time?

- 4) Is it a district expectation to administer the Advanced Placement test to all students at the end of the year?
- 5) What systems and structures are in place to support Advanced Placement teachers?
- 6) What is the hiring process to select the best-qualified teachers for students to master a 3 or higher on their AP assessment?
- 7) Are you involved in the hiring process for Advanced Placement teachers?
 - a. Yes
 - b. No
- 8) Do you have any recommendations for district leaders to better support AP/DC teachers?

Loosely Structured Questions

- 1) What do you enjoy most about your role as the District Executive Officer for College Readiness?
- 2) What support structures do you provide departments you oversee?
- 3) What systems and support structures do you use to support campus instructional leaders?
- 4) As you know, several schools provide Advanced Placement and Dual Credit courses to secondary students. Talk to me about the expected outcomes to provide these opportunities to students?
- 5) Do campus instructional leaders have the option to provide Advanced Placement and or Dual credit as separate courses?
- 6) What are the success factors tracked to ensure academic growth for our students?
- 7) From observation, do you believe Advanced Placement/Dual Credit teachers have the support to ensure our students make academic gains and attain a score of a 3 or above on their exam?
- 8) If there were no barriers, what additional support would you provide AP/DC teachers and their campus leaders to ensure positive trends in student outcomes?

Appendix B Evaluation Questions, Targets and Data Collection

Matrix 1

Evaluation Questions, Indicators and Targets

	Logic Model Components	Evaluation Questions	Indicators	Targets
Early/Short-term Objectives	Increase teacher depth of knowledge	Describe your perception on the support provided regarding professional development.	Increase teacher knowledge	By May 2024, 50% of teachers will express an increase on AP content knowledge.
	Increase teacher knowledge on navigating College Board AP Classroom resources	Describe how AP Classroom Resource PD impact your level of knowledge with the available resources?	Increase College Board AP Classroom content knowledge	By May 2024, 50% of teachers will express an increase on College Board AP Classroom content knowledge.
	Allocate collaborative planning time for AP teachers	How has the collaboration opportunities transformed their delivery of instruction?	Virtual AP CLC will be available for teachers	By August 2023, AP ELC teachers will have a minimum of 60mins per six weeks CLC planning time.
	Increase student use of AP student resources	Describe students successful were students in accessing resources?	Increased usage on College Board AP	By May 2024, 50% of students will have increased usage on College

			student resources	Board AP student resources. 60mins per week
Intermediate Objectives	Increase AP Classroom Usage	How has AP Classroom usage changed the delivery of instruction and student learning opportunities?	Increased usage on College Board AP Classroom	By May 2024, 50% of teachers will have increased usage on College Board AP Classroom.
	Increase differentiation of instruction	To what extend is the training on differentiation of instruction impacting student learning?	Increased student-centered instruction	By May 2024, delivery of instructional methods will shift away from direct instruction only.
	Increased AP content teacher planning time	To what extend is the Virtual AP CLC impacting delivery of instruction?	Virtual AP CLC will be available for teachers	By August 2023, AP ELC teachers will have a minimum of 60 mins per six weeks of CLC planning time.
	Increase student achievement	To what extend has student achievement improved over time?	Increase performance on AP assessments	By July 2024, student AP ELC scores will shift from 1s to 2s and 2s to 3s.
	Collective action plan and respond to data	Describe teacher collaboration opportunities that have impacted student learning?	Increase teacher collaboration	By May 2024, AP ELC 100% teachers will create a plan of action and respond to student data to impact achievement.
Long-term Objectives	Improved AP Scores of 3 or higher and postsecondary success	To what extent did teacher collaborative planning time impact achievement outcomes?	Increase scores of 3 or higher on AP assessments	By July 2024, AP ELC scores of a 3 or higher will increase by a minimum of 5%.
	Increased student engagement	What are some characteristics of changed student behaviors that has impacted engagement?	Increase in student participation	By May 2024, 50% of classrooms will see an increase in student engagement.

	Increased AP teacher support	On a level from one to five, rate the support provided by the campus and district, five being the highest.	Positive teacher to teacher relationships	By May 2024. , 50% of teachers will see an increase in positive feedback
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Note: AP ELC: Advanced Placement English Language and Composition

Matrix 2

Evaluation Questions, Indicators, Targets, Data Source and Data Collection

	Logic Model Components	Evaluation Questions	Indicators	Targets	Data Sources	Data Collection
Early/Short-term Objectives	Increase teacher depth of knowledge	Describe how APSI change your depth of content knowledge?	Increase teacher knowledge	By May 2024, 50% of teachers will express an increase on AP content knowledge.	-Teacher survey administered in October 2023 and April 2024	-A teacher survey will be sent out via google form before and after implementation. -Teacher survey analyzed with basic descriptive statistics including mean and frequency distribution; open ended items are summarized and is necessary, analyzed for

						themes or patterns
	Increase teacher knowledge on navigating College Board AP Classroom resources	Describe how AP Classroom Resource PD impact your level of knowledge with available resources?	Increase College Board AP Classroom content knowledge	By May 2024, 50% of teachers will express an increase on College Board AP Classroom content knowledge.	-College Board teacher usage reports will be collected weekly	Teacher usage reports will be collected at the end of each week noting the hours used per week. Descriptive statistics (percentages and counts) will be reviewed.
	Allocate collaborative planning time for AP teachers	How has the collaboration opportunities transformed their delivery of instruction?	Virtual AP CLC will be available for teachers	By August 2023, AP ELC teachers will have a minimum of 60 mins. of CLC planning time (per six weeks)	- Collaborative Learning Community (CLC) Agenda, CLC Notes & Sign-in sheets (twice a month)	CLC notes will be reviewed for the monumental growth and dialogue on student outcomes and delivery of instruction. Data will be reviewed for patterns and trends.
	Increase student use of AP student resources	What percent of students were successful in accessing AP resources?	Increased usage on College Board AP student resources	By May 2024, 50% of students will have increased usage on College Board AP student resources. 60 mins. per week	-College Board student usage reports	Student usage reports will be collected at the end of each week noting the hours used per week. Descriptive statistics (percentages and counts)

						will be reviewed.
	Motivate, inspire, and empower collective action	How do teachers characterize their experiences with teaching AP ELC courses?	Stakeholder ownership and positive survey feedback	By May 2024, 50% of teachers will express positive experiences in teaching AP ELC courses.	-Teacher survey results -Teacher interview results	-A teacher survey will be sent out via google form before and after implementation. -Teacher interviews will be conducted before and after implementation.
Intermediate Objectives	Increase AP Classroom Usage	How has AP Classroom usage changed the delivery of instruction and student learning opportunities?	Increased usage on College Board AP Classroom	By May 2024, 50% of teachers will have increased usage on College Board AP Classroom.	-College Board teacher usage reports - Walkthrough data	Teacher usage reports will be collected at the end of each week noting the hours used per week. Descriptive statistics (percentages and counts) will be reviewed.
	Increase differentiation of instruction	To what extent is the training on differentiation of instruction impacting student learning?	Increased student-centered instruction	By May 2024, delivery of instructional methods will shift from one mode of instruction to flexible	- Walkthrough data - Professional Development examined in October 2023 for evidence it	-Monthly walkthrough data will be collected and analyzed for trends on increased differentiated instruction across AP ELC classrooms

				instructional methods.	was offered	-PD Agenda and sign-in sheet -Teacher survey analyzed with basic descriptive statistics including mean and frequency distribution; open ended items are summarized and is necessary, analyzed for themes or patterns
	Increased AP content teacher planning time	To what extend is the Virtual AP CLC impacting teacher relationships?	Virtual AP CLC will be available for teachers	By August 2023, AP ELC teachers will have a minimum of 60 mins. of CLC planning time per six weeks.	-Teacher surveys - Collaborative Learning Community (CLC) Agenda, CLC Notes & Sign-in sheets	-Teacher surveys will be conducted before and after implementation looking for increased teacher to teacher support trends -VCLC notes will be reviewed monthly for the monumental growth on teacher collaboration during the VCLCs
	Increase student	To what extend has	Increase performan	By July 2024,	-College Board AP	-Scores will be

	achievement	student achievement improved over time?	ce on AP assessments	student AP ELC scores will shift from 1s to 2s and 2s to 3s.	Scores for English Language and Composition teachers	downloaded in July 2023 and July 2024 from the college board district administrator website
Long-term Objectives	Improved AP Scores of 3 or higher and postsecondary success	To what extent did teacher collaborative planning time impact student performance?	Increase scores of 3 or higher on AP assessments	By July 2024, student AP ELC scores of a 3 or higher will increase by a minimum of 5%.	-College Board AP Scores for English Language and Composition teachers	-Scores will be downloaded in July 2023 and July 2024 from the college board district administrator website
	Increased student engagement	What are some characteristics of changed behaviors that has impacted engagement?	Increase in student participation	By May 2024, 50% of classrooms will see an increase in student engagement.	- Walkthrough data -Teacher interviews	- Walkthrough data will be reviewed and analyzed for trends shifting from teacher directed instruction to student centered instruction before and after implementation -Teacher interviews will be conducted before and after implementation looking for increased

						trends on student engagement
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Note: AP ELC: Advanced Placement English Language and Composition

Appendix C District CLC Intervention Sample Artifacts

District Norms for Meeting

Norms

Think

- Be present and attentive in the moment
- Have a positive attitude
- Be responsible and accountable for self and team

Speak

- Speak openly and honestly, without fear: everyone has a voice
- Discuss and solve problems here, not outside the group
- Live by what you share

Listen

- Listen with an open mind to understand
- Believe people are coming from their best place
- Challenge the idea, not the person

Action

- Talk the talk, walk the walk
- Respect the time limit

Sample Emails sent to AP teachers

Sample A

Subject: ENG AP Language 1st Meeting

Good morning everyone!

Sorry for the late notice, but we will be meeting tomorrow, Friday September 1, at 8:30 a.m. in the Library @ Napper. Please make arrangements for a sub for half a day and lunch will be provided. Thankfully, we were able to get some assistance for ENG AP Language and Composition only so we will be meeting the first Friday of every six weeks. I will explain with more detail during the meeting. The agenda is being attached just for your records.

Let me know if you have any questions or concerns.

Have a great day!

Sample B

Subject: ENG AP Language Meetings

Good morning and happy Friday!

Last day for this semester! Since we like to plan ahead, please make sure you register for next semester's ENG AP Language and Composition Meetings. Remember that we try to have this meeting once every six weeks and preferable at the beginning of each. Please let your administrators know ahead of time.

Here are the EROs:

1. Your reservation for **workshop 299988** at the Napper Training Center (old library) for **1/19/2024 8:00 AM** - 12:00 PM has been APPROVED.
2. Your reservation for **workshop 299996** at the Napper Training Center (old library) for **3/1/2024 8:00 AM** - 12:00 PM has been APPROVED.
3. Your reservation for **workshop 300002** at the Napper Training Center (old library) for **4/26/2024 8:00 AM** - 12:00 PM has been APPROVED

Have a Merry Christmas and a Happy New Year!

Sample C

Subject: ENG AP Language

Hello team!

I hope everyone ended the 4th six weeks in a good note! Now, as we start the 5th six weeks period, we will be having out ENG AP Language and Composition best practice this Friday:

Workshop 299996 at the Napper Training Center (old library) for **3/1/2024 @ 8:00 AM**

Who is going to be sharing a best practice for this Friday? Please let me know.

Have a great afternoon!

Sample Google Classroom Post

The screenshot shows the Google Classroom interface for the 'AP ENGLISH DISTRICT TEAM'. The left sidebar contains navigation options: 'Create', 'Home', 'Calendar', 'Resources' (with a 'New' badge), 'Teaching' (expanded), 'To review', 'AP ENGLISH DISTRICT TEAM' (selected), 'Archived classes', and 'Settings'. The main area has tabs for 'Stream', 'Classwork', 'People', and 'Grades'. The 'Stream' tab is active, displaying a header banner for 'AP ENGLISH DISTRICT TEAM' with a 'Customize' button. Below the banner, there is a 'Meet' section with a 'Generate link' button, a 'Class code' section showing 'p5clc2e', and an 'Upcoming' section stating 'No work due soon'. The right side of the stream shows a list of posts, including an announcement to 'Announce something to your class' and three posts about new materials: 'Unit 9 Anchor Text - "Games"', 'Unit 8 Anchor Text - "On Morality"', and 'Unit 6 Anchor Text - "The Ways We Lie"'. A black redaction box covers the names of the users who posted the materials.

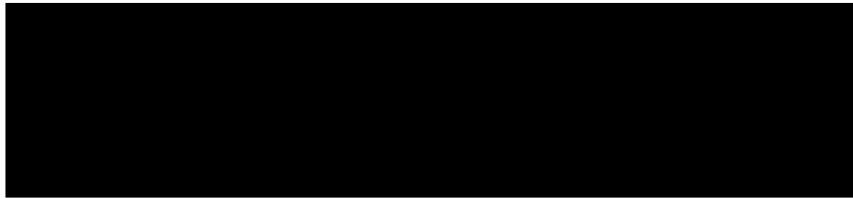
Samples of District CLC Agendas

Sample A from September 1, 2023

ENGLISH AP LANGUAGE 09/01

01 September 2023 / 8:30 AM - 12:00 PM / ROOM - Library @ Napper

ATTENDEES (English AP Language and Composition teachers)



AGENDA

DAY ONE

1. Norms / Objectives
2. Analyzing ENG AP Language Data
3. Setting Goals based on Data
4. Sharing Best Practices
 - [REDACTED] - How AP Language and Composition Essays are scored.
5. Planning
 - Supplemental Aids
 - DC - how to utilize Fridays for AP - strategies
6. Lunch (it will be provided)

NOTES

Sample B from January 19, 2024

ENGLISH AP LANGUAGE 01/19

19 January 2024 / 8:00 AM - 12:00 PM / ROOM - Library @ Napper

ATTENDEES (English AP Language and Composition teachers)

AGENDA

4th Meeting

1. Norms / Objectives
2. ENG AP Mock Exams
3. Sharing Best Practices
 - AI - the pros and cons
 - NoRedInk
 - UWorld - check rosters - communicate with Mr. David Villarreal and CCC Mr. Murray about issues with rosters
 - Cathy Alaniz - Argument Frame
5. Planning
 - Supplemental Aids
 - DC - how to utilize Fridays for AP - strategies
 - Create a lesson within UWorld or any other platforms
6. Lunch (it will be provided)

NOTES

- Several materials were added to the Google Classroom (AP ENGLISH)
- Next Meeting - Friday, March 1st

Sample PowerPoint used to host the district CLC

English AP LANGUAGE AND COMPOSITION October 16, 2024 Meeting

ENG AP LANGUAGE AND COMPOSITION

OCTOBER 16, 2023 Meeting

1. Go to your slide and complete the following:

**What bell ringer strategies do
you use in your classroom?**

The information below was taken from the presentation used by the AP lead to host the October 16, 2023, AP English Language and Composition Meeting.

1. Go to your slide and complete the following:

What bell ringer strategies do you use in your classroom?

Teacher A

Bellringers: 1. MyAP Multiple Choice Practice 2. Other mini lessons

Example: Fix this essay, comma practice, fixing citations, reflect on grade, etc.

Teacher B

I usually start my class with a “do now” activity. This year I have been using padlet a lot. I ask my students a question that has to do with their background knowledge on a new concept I am about to introduce or usually a review question to see how much they remember from a previous class/lesson.

Teacher C

I am using IXL grammar and writing skills. So far, we have practiced identifying and analyzing rhetorical appeals, main idea, synonyms in context, and other skills that are related to AP.

Teacher D

Journal Prompts (Problems in Society), Google Surveys, Cold Read and/or Annotation, and IXL Grammar Quizzes

Teacher E

1. Read through the agenda with emphasis on verbs and “by the end of the period you will...”
2. Review previous class period’s topics/lessons to scaffold 3. At the start of each week, read through the STC weekly module and write down due dates 4. Give a practice short passage with a citation expectation for students to apply then pair share and review the correct format 5.

Guided revising strategy

Teacher E

Daily Bell Ringers - SAT/ACT Vocabulary or Visual Graph analysis from NYTimes.learning

Once a week: AP Multiple Choice practice from Collegeboardm , Quick Writes before each lesson to make connections

Teacher F

Write Right Now: Daily Write on a poem or student's mood of the day using a literary device of the day

Teacher G

Teacher-created grammar bellringer: mostly punctuation because that's where they are weakest or/ Outstanding student essays, read by the authors Week after final drafts submitted.

Teacher H

Bell Ringers - Grammar, punctuation, sentence structure, rhetorical terms. *I do try to match DC grammar lessons with my daily bell ringers.

2. Best Practice: *Teacher C*

Synthesis Essay How to create activities through UWorld

3. Planning

Now, let's collaborate while we create activities through UWo

Picture of the Book Purchased for Teachers

