VANDERBILT Peabody College

Student Engagement in Advanced Placement Courses at Rosenblatt High School

Michael H. Baron

In fulfilment of the requirements for the degree of Doctor of Education in Leadership and Learning in Organizations

Chris Quinn Trank, Ph.D., Capstone Director

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August 2020

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Acknowledgments

Significant appreciation to the entire administration and Advanced Placement course faculty of Rosenblatt High School for their continuous support of my research. I appreciate the willingness of Principal Rabbi Marshall Lesack and Vice Principal Illana Eckstein to listen carefully to my ideas and provide candid advice. Their insights have always been constructive. Moreover, I am thankful for their agreeing to collaborate with me on research in the future.

I would like to express particular gratitude to Dr. Chris Quinn Trank who invested countless hours towards guiding, supporting, and encouraging all of the students in the Ed.D. program. She has been an invaluable architect and visionary of this doctoral program. She also taught me how to walk, jog, and run as a researcher and practitioner in leadership and learning in organizations. None of this progress in research would have been possible without the ingenious and ongoing advice of Dr. Chris Quinn Trank. Within this context, I am grateful to all of the faculty at Vanderbilt Peabody College and every student in my cohort. The various faculty members have been remarkably supportive during every aspect of doctoral study. They have also been consistently inspiring about creative ways to accomplish rigorous research. My cohort members have been continually helpful in sharing meaningful, innovative perspectives which shaped my research approaches.

I want to convey special appreciation to my parents, Dr. Joan Baron and Dr. Reuben Baron, who have committed their lives to supporting family and encouraging passionate curiosity in novel ideas. They were especially supportive of my pursuing doctoral studies and have been continuously encouraging throughout my research. Moreover, I would like to express profound gratitude to my wife, Elizabeth, my daughter, Reina Dora, and my son, Nathan. Elizabeth has enabled me to ask many new kinds of questions about research. Reina Dora introduced me to the intrigue of Advanced Placement courses and how students approach such rigor. Nathan has helped me to think anew about the nature of high school studies for all students, including those with special needs. These insights have been invaluable towards inspiring me to ask meaningful research questions and utilize appropriate methods of research.

Warmest Regards,

Michael H. Baron

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Chapter 1: Executive Summary

With the growth in interest in Advanced Placement (AP) courses, administrators are often faced with concerns about how to create a program that both achieves the goals parents and students have for AP study and creates an engaging experience. Administrators at Rosenblatt High School in Boca Raton, Florida, had just such a question: they sought to increase student engagement in (AP) classes. This study examines stories students tell their parents about their most exciting experiences relevant to AP classes and the conditions in which they occurred. Through this research, I have obtained insights on how teachers can increase the amount of class engagement as well as the quality of engagement.

Since 2010, when Rosenblatt High School significantly expanded its AP course offerings from 2 to 10, there has been a substantial concern about increasing student engagement. Virtanen et al. (2015) show that student engagement is perceived as emergent, and is influenced by the behaviors of teachers and students, as well as the interaction between teachers and students. Specifically, when there is emotional support, instructional support, and organizational support for students, classroom engagement, as well as the quality of engagement, increase (Virtanen et al., 2015). In this paper, I show that the mechanism through which the engagement occurs is increased feelings of competence with subject matter in the classroom: a sense of autonomy in terms of independently contributing ideas during class and completing assignments: and feelings of relatedness or personal connections to other students and the teacher (Deci & Ryan, 2013; Reeve, 2012). In this study, I examine how teacher supporting behaviors are related to students' competence, autonomy, and relatedness in ways that increase the amount of classroom engagement and improve the quality of engagement.

After consulting with administrators at Rosenblatt, I decided to include students in all grades in which AP classes were offered—9th to 12th grade. Initial research led to the framework by Virtanen et al. (2015), which suggests that the amount and quality of engagement emerges from teacher emotional and instructional support, as well as organizational support. These support factors are argued to lead students to contribute frequent and high quality (thoughtful and creative) comments and contributions in class (Virtanen et al., 2015). To this theoretical framework, I added self-determination theory (SDT; Deci & Ryan, 2013) to better understand student cognitions that may connect to engagement behaviors such as thoughtful and creative comments. This combined framework led to my research questions:

- How do students experience engagement in their AP classes?
- What teacher behaviors seem to affect student engagement?
- Are there emotional support strategies that especially meaningful to students?
- Are there instructional strategies that appear impactful to students?
- Are there organizational strategies that seem to influence students?

Among the key findings relevant to the research questions were the following:

Finding 1: When students are personally a focus of attention, they become engaged.

> Based on interviews with 12 parents of Rosenblatt students, the types of experiences in AP classrooms that were most engaging for students consisted of active listening and immediate responsiveness by teachers. Also important was a positive tone on the part of teachers. Indicators of active listening included use of a student's ideas in classroom discussion. In other examples, teachers responded to students' questions with humor and follow-up details in a way that respected a student's question and brought welcome energy and enthusiasm to the classroom. In other situations, teachers encouraged students to share personal stories, which increased engagement because students enjoyed sharing stories, and were able to connect their personal lives--their other "selves"-- to class work. They were able to see how the teacher and others in the class responded to the connection.

Finding 2: Teachers should use student comments actively, name and frame their contributions as important, and use a positive tone.

> Active listening by teachers followed by immediate detailed responses to students' questions was essential for increasing student engagement. Specifically, active listening and responding brought about a classroom dynamic where students found it particularly worthwhile to be engaged. Their contributions were "heard" and used. Humor also proved to be an important element in teacher behavior. Appropriate humor brings lightheartedness and energy to what might otherwise be a somber classroom environment. Humor can also provide an opportunity to add critical details related to the lesson subject matter targeted to student need. Askildson (2005) notes that humor when combined with critical lesson details in a classroom helps the subject matter to be more memorable to students. For instance, they can more readily associate key information with a joke the teacher made.
>
> Some of my interviews occurred after classes moved online as a result of the COVID-19 pandemic. When the students were particularly nervous, stressed, and uncertain about what would happen to them and their family in terms of health and wellbeing, as well as the transition to online learning, it was beneficial for teachers to expand the "emotional spectrum" of the classroom environment and discuss these unpleasant feelings with students. By doing so, students became especially engaged in discussions and shared quite meaningful insights that would help the school help students to adjust. Such conversations also enabled a release of built-up tensions for students in a way that increased their emotional trust in each other and the teachers. Moreover, such sharing of emotions and personal experiences established a much greater comfort level for increasing engagement after transitioning to online learning.

> Within this context, my interviews with parents about conversations with their children indicated that a teacher's willingness to have students share personal stories about various aspects of their lives increased engagement. In terms of responsiveness, my collected data indicated that when students share personal experiences and the teacher or classmates, or both, respond positively, the student is further motivated to be engaged, and becomes a better listener to others. Likewise, their classmates become more motivated to be involved in discussions by sharing stories from their lives. These factors built strong feelings of connection and belongingness between students, and between students and their teachers.

Finding 3: Specific instructional approaches to classroom teaching can work especially well for increasing engagement.

> PowerPoint presentations, summary sheets of the content presented in class, giving in-class assignments which reinforce the subject matter by asking for creative applications of the material was consistent with the positive effects of retrieval in engendering learning. Particularly effective instructional support occurred by putting students in small discussion groups, then discussing a topic again as an entire class. A significant point is that instructional strategies do not happen in isolation. Multiple forms of information, retrieval and discussion increase feelings of competence.

Finding 4: The way class time is structured can have a substantial impact on class engagement.

> Teachers who begin the class by encouraging students to ask questions about materials they are unsure about or to share a creative insight about the materials was a key organizational strategy. Then, throughout class, when teachers created windows of opportunity for students to ask questions, students felt empowered to manage their own learning. While this might seem like an intuitive finding, it was something that parents referred to a few times during the interviews as being important for engagement.

Interviews with parents reinforced that one of the main purposes of AP courses is to provide an advanced level of instruction in which students learn to take more responsibility and initiative for their learning, thereby becoming more self-sufficient, self-directed, and self-determined. Each of these factors fosters student engagement in AP classrooms.

In terms of bringing the questions and findings together relevant to what stories students tell about their most exciting learnings and the conditions in which they occurred regarding AP classes, the interview data implies that teacher emotional support, instructional support, and organizational support are each meaningful. However, my data also indicates that what makes various classroom dynamics most exciting, motivating, and memorable are factors associated with self-determination theory (Deci & Ryan, 2013; Reeve, 2012). For example, a key reason why teacher emotional support, instructional support, and organizational support are often effective for increasing the amount of student engagement and the quality of engagement is that these facilitate and increase students' feelings of competence, autonomy, and relatedness.

Considering the findings within the context of a literature review, I propose a model of AP student engagement and excellence. This takes into account which factors motivate students to enroll in AP courses, as well as which factors reinforce support for students, motivation, and resiliency to encourage long-term class engagement.

My focus on the stories parents tell about what they hear from students resulted in a indirect set of perceptions and indications of the affective and cognitive dimensions of student engagement, providing what might be called "extreme cases" of engagement—those experiences that students have constructed and shared as memorable (Walker & Greene, 2009; Rogers, 2000). These experiences are separate from ongoing, everyday experience, and bracketed and labeled by students as meaningful (Walker & Greene, 2009; Rogers, 2000) and shared with their parents. Unlike direct questioning of experiences of student engagement that may bring about a demand response, this indirect method looks for those classroom experiences that students have constructed as "good" and exciting and interesting (Walker & Greene, 2009; Rogers, 2000).

Limitations

As in the case of all research, mine has limitations. These include:

- A relatively small sample size, i.e., 12 parents interviewed, and my obtaining student insights indirectly as perceived, interpreted, and filtered by their parents.
- Because of the sudden, intense stress, anxiety, and uncertainty of the COVID-19 pandemic, I had a very limited amount of time to conduct interviews before the full onset of the pandemic, and completed only 5 interviews prior to the onset, with 7 interviews conducted after the onset. Although this provided unexpected insights into the new conditions, it did represent a different context of exploration before and after the pandemic began.
- Even though I was able to follow up with the 5 parents that I spoke with before the full onset of the pandemic, the amount of qualitative data is more limited than would have likely occurred under more typical circumstances.

Nonetheless, there was sufficient consistency in content among the interviews to suggest that I focus on teacher emotional support, instructional support, and organizational support, with the mechanism for their impact on student engagement being through increasing students' sense of competence, autonomy, and relatedness. Even with limited data, I can suggest with some confidence that Rosenblatt should focus on the influence of teacher emotional support during class, as well as outside of class, for instance during office hours. As the recommendations below indicate, we also need to carefully consider teachers' instructional and organizational support, as key factors in bringing about an increased amount of engagement and higher quality engagement.

Recommendations for Improvement in AP Courses

The sources of my recommendations are the interviews with 12 parents and discussions with administrators at Rosenblatt, particularly Principal Lesack and Vice Principal Eckstein. While the pandemic is not the focus of my research, the insights and perspectives conveyed by parents, partially in response to the pandemic, have influenced the recommendations. Some recommendations and advice from parents include the following:

- **Conduct a Day-1 Assessment of Student Expectations and Establish Interim Goals for Achievement.** A key demotivational effect in AP courses is the lack of alignment between student expectations and class workload or performance demands. Accordingly, teachers should interview their students and determine what they expect from the course, and then outline the reality of what is being offered in order to clarify any unrealistic or uncharacteristic goals that might be affecting student expectations. Once this determination has been made, then clearly defined, attainable interim goals can be established for the first part of the course, allowing for adaptation and evolution as new experiences, challenges, and objectives are uncovered.

- **Establish a Peer Support Portal.** To extend the scope of student support, it is essential for administrators to create a student support portal for each AP course on which students can ask questions, discuss ideas, and plan study groups. This portal should be independent of teacher involvement as much as possible and only require intervention if there are disputes or allegations of misuse. The students ought to be encouraged to not only discuss existing concepts, but to use these posts to improve understanding of theories or concepts that might be lacking in their academic toolkit, thereby extending the engagement in the learning process beyond the immediacy of classroom lessons.

- **Develop Group Rules and Communication Guidelines that are based on Student-Created Goals and Expectations.** While engagement in entertaining or creative classroom environments may be a natural function of the teacher's enthusiasm, sustaining student motivation and engagement entails a firmly defined learning process that requires students to commit to a higher level of participation than they might have expressed in prior courses. This approach will not only improve student commitment to classroom policies and best practices, but it will unify all students in a given class regarding their willingness to speak openly and participate robustly in the learning process. As a cultural foundation, this group-developed model of rules will ensure that students buy-into a program which is designed to support both personal and group educational objectives.

- **Recognize and address challenging subject matter.** Related to pedagogical processes, teachers need to become more effective at addressing the stress, anxiety, and uncertainty experienced by students when the subject matter is challenging, particularly in classes

such as AP Calculus, AP Chemistry, and AP Physics. This includes greater availability of teachers outside of class. Even though each of the AP teachers reserves one hour per week for office hours, because of the pandemic, parents would like more access for students to certain teachers. Parents mentioned hiring tutors for some classes, and felt that Rosenblatt teachers should be more available for support.

- **Teachers' pacing of instruction.** Teachers are felt to be focusing their pace of instruction on the smartest students who comprehend the subject matter most quickly and effectively, and not allowing time during class for students who are confused and unable to find their footing with the materials. This occurs most often with the AP Calculus, AP Chemistry, and AP Physics courses, which are to some extent designed to move quickly because there is a significant amount of material to cover. Given that the data suggest that in-class questions and discussions proved to be an instructional and organizational strategy that affected student engagement, it may be important to attend to pacing within classes.

Chapter 2: Context of Research

Advanced Placement (AP) courses have become increasingly demanded at Rosenblatt High School (RHS). In order to be successful at teaching AP courses, the teachers rely on student engagement. However, a major challenge in AP courses has been that there is not enough student participation in terms of questions and comments.

Rosenblatt High School is a private Jewish day school located on 95th Avenue South in the central part of Boca Raton, FL. RHS is the high school component of the Donna Klein Jewish Academy (DKJA), and is located on the same 100-acre campus. RHS describes its mission as being able to educate students and the DKJA community to be "knowledgeable and responsible citizens of the world, committed to Jewish values and lifelong learning" (Rosenblatt High School, 2020). Among the core values and priorities at RHS are Jewish values and identity, best practices in teaching and learning, good character, respect for others, and a nurturing environment (Rosenblatt High School, 2020; Lesack, 2020). Rosenblatt's overall vision is conveyed as building "an extraordinary and diverse community of learners inspired by Jewish values and empowered to succeed in tomorrow's world" (Rosenblatt High School, 2020).

2.1 Brief history of Rosenblatt

In 1979, DKJA was established by several "visionary parents" along with the support of the Palm Beach County Jewish Federation. What was then called the South County Jewish Community Day School began with 50 students in Grades 1 to 6. The school was considered a "satellite campus" of the Jewish Community Day School of Palm Beach, and was located at Temple Beth El in Boca Raton, FL (Rosenblatt High School, 2020). After a couple of additional temporary moves, in 1987, the school was renamed the Donna Klein Jewish Academy by Sam Klein to honor the memory of his late wife, Donna, as the school's administration continued to search for a permanent location. In 1991, DKJA relocated to the Richard and Carole Siemens Jewish Campus of the Jewish Federation of South Palm Beach County, its current location in Boca Raton, FL. Subsequently, in 1993, the enrollment increased to include Kindergarten to Grade 8 (Rosenblatt High School, 2020).

The High School was established in 1998, when DKJA expanded to include the High School at Donna Klein Jewish Academy (Rosenblatt High School, 2020). Then, in 2009, the DKJA Board of Trustees and Head of School Karen Feller decided to relocate the High School at DKJA (situated in portable trailers on 95th Avenue South in Boca Raton) to the former Adolph and Rose Levis Jewish Community Center Administration Building, adjacent to the DKJA Lower and Middle Schools on the DKJA main campus at 95th Avenue South. Funding for the relocation was primarily accomplished by Ms. Linda R. Kaminow, a benefactor herself and President of the Claire and Emanuel G. Rosenblatt Foundation, who coordinated a substantial

financial donation that enabled expansion of the High School to the main campus in a completely renovated, remodeled, and reconfigured building (Rosenblatt High School, 2020). Moreover, through the Claire and Emanuel G. Rosenblatt Technology Program K-12 and the Claire and Emanuel G. Rosenblatt Scholarship Fund, the RHS administration intends for the legacy of Jewish education at DKJA to be continued for many generations (Rosenblatt High School, 2020).

In 2011, the DKJA Board of Trustees and Head of School Karen Feller renamed the High School at DKJA as the Claire and Emanuel G. Rosenblatt High School (Rosenblatt High School, 2020). The school is named in honor of the benefactor, Ms. Linda R. Kaminow's, parents, Claire and Emanuel G. Rosenblatt, philanthropists in Boca Raton, who shared a lifelong commitment to Jewish education and community (Rosenblatt High School, 2020).

RHS defines itself as a highly competitive college preparatory school with an increasing array of Honors and Advanced Placement courses (Lesack, 2020). Specifically, Rosenblatt describes itself as offering a college preparatory program which aims to increase the chances that students will be admitted to the college or university of their choice, with a focus on their ability to meet the stringent academic requirements for admittance into colleges and universities. Within this context, all students at Rosenblatt are required to take Hebrew and Judaic History/Culture for all four years of high school. This approach emphasizes the ethical and moral development of students in all classes, as part of their holistic preparation for college. Based on a strong demand by students and parents, Rosenblatt has been increasingly committed to expanding its Advanced Placement course offerings. Moreover, as students at Rosenblatt have increasingly succeeded in being admitted to top-tier research colleges and universities, students and parents have requested a greater diversity of choices in AP courses available, so that students can establish a stronger profile for the particular colleges and universities that they are interested in (Lesack, 2020). Since six courses, including English, History, Science, Math, Hebrew, and Judaics, are designated as “required” during both the Freshman and Sophomore years, and AP courses are always “optional,” students often decide to enroll in one or two AP courses as an elective (rather than required) class. Further, since four courses, including English, Science, Hebrew, and Judaics are designated as “required” during the Junior and Senior years, students frequently enroll in two to four AP courses as electives.

As referred to above, a significant issue at Rosenblatt, as described by Principal Lesack (2020) is that Advanced Placement courses have become increasingly desired by students at Rosenblatt. In order to be successful at teaching AP courses, the teachers rely on robust student engagement. However, a substantial challenge in AP courses has been that there is not sufficient student participation in terms of questions and comments.

Rosenblatt High School currently has an enrollment of approximately 140 students with about 40 Freshmen, 37 Sophomores, 33 Juniors, and 30 Seniors. The Principal of Rosenblatt High School is Rabbi Marshall Lesack, who is also the Chair of the Jewish Studies Department at RHS. His overall academic strategy has been to have small to medium class sizes of 8 to 12 students, with some classes consisting of as few as 4 students and others consisting of as many as 16 students (Lesack, 2020). RHS formally has three levels of courses: “Regular,” “Honors,” and

"Advanced Placement." Contingent upon the specific subject area, each of these three class levels might be utilized or only one or two levels. For example, in Spanish and Japanese (both elective rather than required courses), only 10 to 12 students tend to be enrolled in each level of the course, and only one class section is provided for each grade level. For instance, there is Spanish 1,2,3, and 4, with the numbers corresponding to the Freshman through Senior years. The exception is that AP Spanish is offered for particularly high-achieving Seniors. The same approach is used for Japanese courses. In contrast, for English, History, Chemistry, Physics, and Math, there is a noteworthy differentiation of skill levels, competencies, and learning paces among students. As such, all three levels of courses are utilized, ranging from "Regular" to "Advanced Placement," with 8 to 12 students typically enrolled in each level of the subject area. A key point is that as more students at RHS have had success in being accepted at top-tier universities and colleges, there has been increased interest in Honors and Advanced Placement courses, with more emphasis placed on AP courses in terms of enrollment. The main problem is that the essential aspect of success in AP courses, which have particularly demanding curriculums, is having sufficient student engagement to make sure each student develops mastery of the concepts. Unfortunately, there has not been enough student participation or an adequate quality of engagement.

2.2 Philosophy and Mindset of Teaching and Learning at Rosenblatt

Among various factors that characterize the faculty and administration at Rosenblatt, they are particularly attuned to asking questions oriented towards how numerous teaching and learning methods designed to increase the amount of student engagement and the quality of engagement can be more effective for each student. In essence, the faculty and administration approach various potential new methods on a granular, individual level, considering how each teaching and learning method might affect specific students, the nuanced student-teacher relationships, and how students relate to each other (Lesack, 2020; Eckstein, 2020). Then, if a new method is implemented, each teacher adapts and modifies the method in accordance with the particular classroom dynamics (Lesack 2020; Eckstein, 2020).

Such a mindset is a direct manifestation of Rosenblatt's educational and personal development philosophy that in being a small learning community, the faculty and administration get to know each student in an especially high-quality way (Lesack, 2020; Eckstein, 2020). This ultimately leads to more enriched, holistic academic and personal growth for each student (Lesack, 2020; Eckstein, 2020). Of note, similar to many larger high schools, Rosenblatt has chosen to focus on Advanced Placement courses and numerous other course offerings that prepare students for a diverse academic experience at almost any type of college or university. Within this context, a fundamental commitment at Rosenblatt has been to contemplate what a "college preparatory" curriculum means to each student, and how every student at the school can reach their full potential in high school and beyond (Lesack, 2020; Eckstein, 2020). A particularly positive aspect of this philosophy is that the faculty and administration give their full efforts towards making new teaching and learning methods successful for every student, including class engagement (Lesack, 2020, Eckstein, 2020).

Chapter 3: Research Background and Rationale

3.1 Research Background

Modern educational systems are devised to provide a range of curriculum-defined academic benefits to a broad population of diverse and differentiated learners. As a result, the strategic constructs of motivation and engagement are malleable and inherently adaptive, creating both opportunities and challenges for teachers seeking to support their students in academic achievement. Researchers such as Reeve (2012), Virtanen et al. (2015), and Ramirez-Arellano et al. (2018) have tried to distil the structural and instrumental features of pedagogy and classroom activities into models of achievement-supporting student engagement. From the relational dimensions of student-teacher interactions in the classroom (Roorda et al., 2011) to the active participation and open communication in course-based focus groups and discussions (Rocca, 2009), the moderating effects of engagement can have a positive and sustained influence on student achievement throughout their academic career.

While the fundamental ideal of active student engagement in educational settings represents a widely accepted determination of learning effectiveness, Harris (2008) recognizes that conflicted interpretations of engagement and its associated constructs over the past six decades of academic debate have led to disputes regarding its instrumentality in the classroom. Formally, student engagement is characterized by Virtanen et al. (2013, p.963) as a "commitment and investment in learning and school life" which has been positively associated with students' participation (Frymier & Houser, 2015), academic resilience (Martin & Marsh, 2008), and achievement (Skinner et al., 2008). Yet, Harris (2011) challenges educators to consider their general conceptualizations of engagement from a student perspective, assessing whether the emphasis is placed on engagement in learning outcomes (e.g., acquisition of knowledge) or in the scholastic processes and guidelines themselves (e.g., curriculum, procedures, policies). As a result, the misorientation of engagement towards a structural and systemic agenda rather than a learning resource and developmental catalyst can result in disparities between expected and realized educational outcomes (Harris, 2011).

When discussed as a conditioning mechanism in student engagement, classroom environments, including the opportunities for collaboration, participation, and communication, affect a range of intrinsic influencers encompassing student enthusiasm, attitude, and overall topical passion (Theroux et al., 2004). As modern classrooms evolve towards new structures and students engage in processes that include self-determination and goal-setting, the imperative of active engagement is transformative and sustaining, while the negative consequences of disengagement and demotivation can lead to "academic fissures" and sustained performance gaps (Anderman & Patrick, 2012). Advanced Placement courses and similar accelerated learning programs have emerged in modern high schools as a developmental resource capable of rewarding high-performing students for their rigor and engagement with the opportunity for college credits and career-oriented advantages (Shaunessy-Dedrick et al., 2015). However, as institutions seek to develop systems and educational pathways that support productive learner outcomes in AP courses, there is a need for additional research regarding the critical role of

student motivation and classroom engagement in supporting and sustaining student objectives and learning outcomes.

3.2 Research Rationale and Central Problem

Introduced "in an effort to increase rigor for students who had mastered typical high school curricula," AP courses allow students to focus their efforts on higher level educational challenges, while also contributing to their college career through the potential award of college credit based on successful course completion and passing the AP exam at the end of the course (Fenty & Allio, 2017, p. 39). While some students may actively avoid the challenges associated with AP courses, as college enrollment has become increasingly competitive, the decision to pursue advanced educational opportunities is often a direct response to long-term academic career objectives (Suldo & Shaunessy-Dedrick et al., 2013). Simplifying this decision-making process into its "catalyzing forces," Bryan et al. (2011) propose that students are motivated by three core dimensions, including intrinsic motivation (satisfaction in learning), self-efficacy (belief in specific aspects of achievement potential), and self-determination (perceived control over learning).

Due to the additional stressors and pressures placed on students over the course of AP education, the underlying resiliency and organizational competency of the learners is often a predictor of course success and academic achievement (Virtanen et al., 2015). Martin & Marsh (2008) have demonstrated that the core antecedents to academic resiliency consist of confidence-improving factors such as self-efficacy, engagement, and "relationship mediation" (i.e., resolving or reducing problems in relationships). Overcoming anxiety and effectively leveraging self-efficacy to maximize in-classroom effectiveness is both a function of intrinsic factors, e.g., psychological and confidence-oriented, and extrinsic factors, e.g., support, communication, and validation, which stabilize the motivated learner foundation (Martin & Marsh, 2008). As a result of the varying effects of such factors, Virtanen et al. (2015) posit that teachers must strive to develop high-quality classroom environments that resolve student needs, provide organizational and instructional support, and encourage or support emotional engagement in learning processes that produce more effective and sustained knowledge outcomes (see Figure 1).

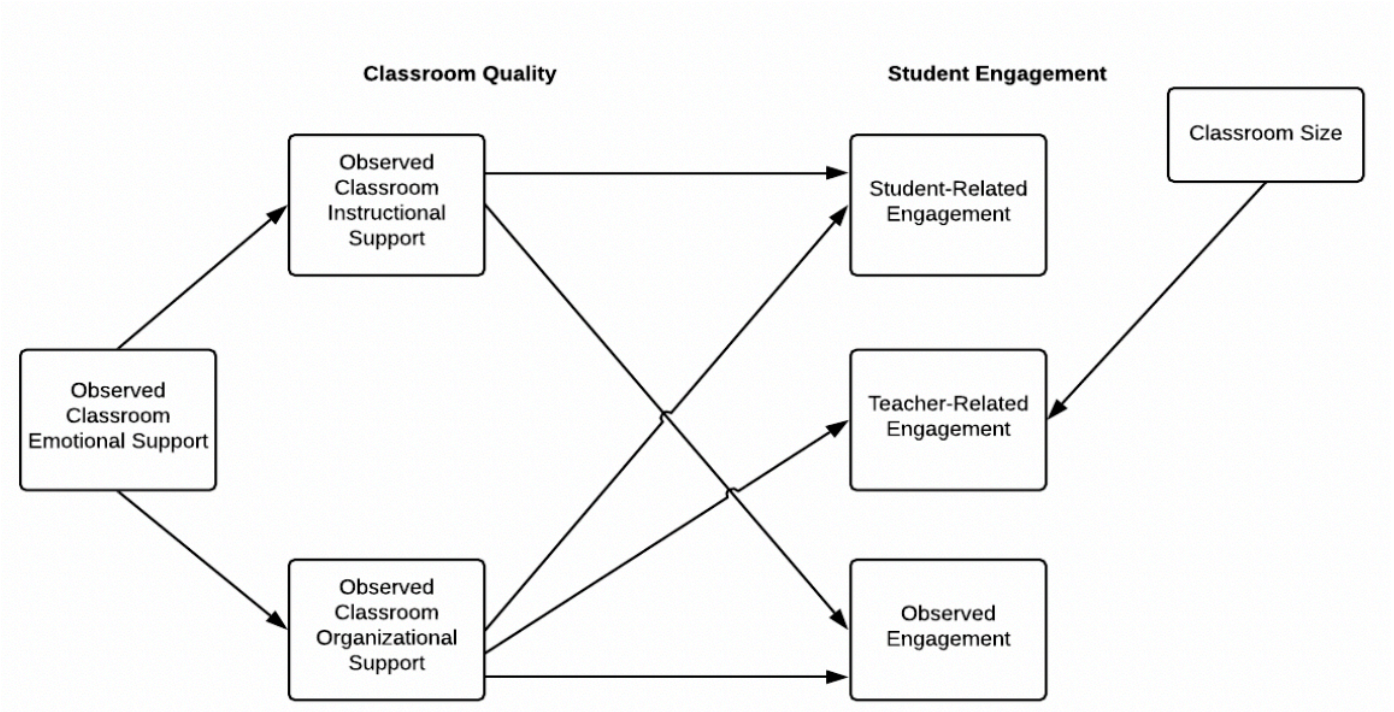

Figure 1: Relationships between Classroom Quality Domains and Students' Engagement (Source: Virtanen et al., 2015, p. 971)

Within this context, while high school AP programs have begun to develop guidelines to support such student-centered outcomes, the range of student and parent concerns identified in prior literature (Reis et al., 2004; Solorzano & Ornelas, 2004; Suldo & Shaunessy-Dedrick, 2013; Shaunessy-Dedrick et al., 2015), suggest a critical gap between expected and realized outcomes.

A range of variables is likely to impact student engagement, with various temporal, experiential, and environmental factors predicting whether students will be motivated to engage in strategic learning practices (Kandiko, 2008). Critical to understanding the experiences of students in AP courses, a range of narrative instruments and communicative insights have been explored by researchers in recent years (McKenna & Millen, 2013). The process of storytelling is particularly relevant to achieving effective parent-student communication, as the dyadic exchange of information and reciprocating insights from student experiences in school creates a constructed basis for understanding and contextualizing various events (Auerbach, 2002; Rogers, 2000; Phelan et al., 1991). Parents convey stories based on their lived experiences. As a result, there is no objective reality, but instead, there are layers of socially constructed realities that are developed as individuals share their narratives, perspectives, and perceptions of lived experiences with each other (Gallagher, 2008; Rogers, 2000; Phelan et al. 1991). Gallagher (2008, p.163) characterizes this phenomenon as "intersubjectivity" and suggests that through the sensemaking process, these storied beings collectively evaluate and interpret the spectrum of actions and interpersonal dynamics.

As Advanced Placement courses increase in demand, the responsibility for teachers to engage students in a productive and effective learning process has resulted in an array of pedagogical challenges related to student motivation and engagement. At Rosenblatt High School, AP courses represent a critical gateway to educational advantages during a student's academic career, bridging the experiential and developmental gap between high school and university studies (Fenty & Allio, 2017). Through a central mission of developing "an extraordinary and diverse community of learners inspired by Jewish values and empowered to succeed in tomorrow's world," RHS has committed to preparing students for the challenges of higher education and career development (Rosenblatt High School, 2020). To realize this objective, the school has adopted a three-tiered program of classroom classification which includes "Regular," "Honors," and "Advanced Placement" studies that span varying subject areas and range from elective to placement-based enrollment. Despite this effort to subdivide courses according to their underlying rigor and weighted scope of student demands, a range of systemic and structural inadequacies have resulted in critical gaps between desired and realized student achievement outcomes at RHS.

For Junior and Senior students pursuing a post-graduation higher education experience, both Honors and AP courses provide a distinct advantage in terms of application quality, skills development, and educational preparedness. Recently, as more RHS students have been accepted into top-tier universities and colleges, the demand for Honors level and AP courses has increased as parents and students view these accelerated learning opportunities as gateway representations of long-term academic excellence (Lesack, 2020). The distinction between educational opportunities and student preparedness, however, has led to a performance gap that magnifies the range of demands which AP courses place on student motivation and in-classroom engagement. As a result, administrative, teacher, and student dissatisfaction with course performance, particularly relevant to class engagement, has led to an effort at problem-solving that has created the need for an in-depth assessment of the modalities of student engagement, the supporting and motivating factors encouraging student participation, and the pedagogical techniques and strategies shaping student performance.

3.3 Research Aim and Objectives

The primary aim of this investigation was to critically assess the antecedents to student engagement in AP classrooms in order to identify support strategies that can be adopted and implemented by key stakeholders, including teachers and parents, to improve student success. These factors are strongly related to motivation. This research goal has focused on several overlapping and interdependent relationships including student-teacher, student-parent, and teacher-parent, along with the broader conceptual domain of "student-stakeholder" support services in educational settings (e.g., administration, counselors, other teachers). Over the course of this study, the following core research objectives have been accomplished:

1. To critically assess the factors contributing to student engagement and motivation, and evaluate specific considerations related to AP courses.
2. To evaluate the relationship between student engagement and motivation, and identify strategies for improving engagement outcomes in the classroom.
3. To assess the effects of student-parent relationships and storytelling on academic motivation and engagement.
4. To propose targeted pedagogical strategies that can be used to improve student engagement and motivation in AP classroom settings.

3.4 Research Questions

The primary question answered over the course of this research was defined as follows:

1. How do students experience engagement in their AP classes?

This led to an important additional question:

2. What direct (internal, pedagogical) and indirect (external, constructive) strategies can be used to improve student engagement and motivation in AP classrooms?

Moreover, this led to several related sub-questions:

3. What teacher behaviors seem to affect student engagement?
4. What teacher behaviors are associated with improved student engagement? Student motivation?
5. Are there emotional support strategies that are especially meaningful to students?
6. Are there instructional strategies that appear impactful to students?
7. Are there organizational strategies that seem to influence students?

Underlying the primary question were several other sub-questions explored in relation to student motivation and engagement regarding AP courses at RHS.

8. What role do parents play in student motivation, and what strategies can be developed to improve the effects of parental influence on student engagement?
9. How do students communicate their experiences in AP classrooms to their support base (e.g., teachers, parents, counselors)?
10. What pedagogical and support solutions can be recommended to improve student motivation and engagement in AP classrooms?

3.5 Research Contribution

For RHS, the expansion of the AP program is indicative of a paradigm shift in educational structuring away from curricular limitations and towards a student-centered, career-oriented outcome (Fenty & Allio, 2017). By designing educational programs and strategies that not only motivate students to commit to the rigor and complexity of AP courses, but engage students in achieving high-value educational objectives, these programs and strategies are redefining the standards of modern education (Fenty & Allio, 2017). This study has considered the additional challenges and significance associated with AP courses, as well as critically explored the role of student motivation in shaping classroom engagement, a dimension of active educational reinforcement that has been identified as critical to meaningful, high-performing outcomes (Reeve, 2012). Considering that AP courses often challenge students to develop their concepts of education beyond the traditional rote memorization and top-down structure of traditional classrooms (Fenty & Allio, 2017), I posit that the refocusing and restructuring of pedagogical strategies can significantly improve student experiences. As such, this research highlights the essential role which key stakeholders (i.e., teachers and parents) play in shaping student experiences and reinforcing those self-actualizing factors that improve motivation and classroom engagement (Fenty & Allio, 2017; Reeve, 2012). Through a study of students enrolled in AP courses at Rosenblatt High School, as interpreted, perceived, and filtered via the lens of parents being interviewed, the results captured during this capstone research have revealed important systemic and structural lessons that can potentially be transferred across multiple institutional channels. Even though there are several unique aspects of Rosenblatt's teaching and learning environment, this research can possibly result in improving the reinforcing and motivating effects of student engagement in AP programs in various educational systems.

3.6 Summary and Research Overview

This chapter has provided an in-depth review of the core problems facing RHS and the broader educational benefits of a critical analysis of the affective role of motivation and engagement on student performance in Advanced Placement courses. The remainder of this document has been structured to facilitate an in-depth analysis of the current institutional challenges and the range of academic proposals, theories, and solutions offered to improve pedagogical outcomes related to engagement. The following is a brief overview of each of the subsequent chapters and its contribution to this study:

Chapter 4: Literature Review: Providing an in-depth review of the literature surrounding student motivation and engagement, this chapter presents various conceptual and theoretical underpinnings related to teaching strategies. This includes their effects on engagement and student learning outcomes.

Chapter 5: Research Methodology: This chapter provides an in-depth review of methodological considerations, explains the selection of a qualitative research approach, and outlines the instruments and sources of evidence responsible for shaping these findings.

Chapter 6: Data Presentation and Findings: Through interviews with 12 parents of RHS students, this chapter introduces a range of storytelling considerations, narrative insights, and student-centered observations regarding motivation and engagement in AP classroom settings.

Chapter 7: Discussion and Analysis: To contextualize these interview findings, this chapter draws upon the extant literature, applying theoretical reasoning and modelling to develop a pedagogical interpretation that can be used to improve the potential for student engagement in classroom settings.

Chapter 8: Conclusions, Limitations, and Recommendations: This chapter draws summative conclusions from the full scope of research captured over the course of this study, highlighting several methodological limitations, and outlining targeted recommendations that can be applied to AP pedagogy at RHS. Such recommendations will help to improve student motivation and enhance engagement in high-demand, high-reward educational settings.

Chapter 9: COVID-19 Post Hoc Analysis: Due to parent interviews conducted by phone starting before the onset of the pandemic and continuing during the pandemic, a "natural experiment" transpired. As such, 5 interviews can be considered pre-COVID-19, while 7 others can be considered post-COVID-19.

Chapter 4: Literature Review

4.1 Introduction

Throughout educational research, a broad spectrum of pedagogical modalities and support strategies have been explored and analyzed. From direct, student-centered solutions that are activated and supported by teacher strategies and discipline to indirect, self-motivated solutions that are student-developed and self-sustaining, the range of "affective triggers" and influential relationships create a complex field of academic research (Virtanen et al., 2015; Reeve, 2012). The following sections focus on two targeted factors shaping success in AP education (i.e., student motivation and engagement), highlighting the precipitating and sustaining forces that have been identified across prior studies in relation to these desirable outcomes.

4.2 Student Motivation

For students to achieve academic success, there is a need for what Skinner and Pitzer (2012) identify as a drive to learn, or a motivational intention to achieve through persistent effort, commitment, and self-efficacy. Supportive factors such as self-confidence, self-discipline, and attitudinal orientation have been identified as key antecedents to learner motivations, and as a result, are often linked to broader outcomes, including student engagement and academic outcomes (Reis et al., 2004; Peterson et al., 2009; Skinner & Pitzer, 2012). As the weight and rigor of academic study increases at the high school level, Skinner & Pitzer (2012) propose that there is a need for students to develop stress mitigation and resilience in order to remain motivated and stay focused on the desirability of productive outcomes such as achievement. By drawing upon a foundation of emotional awareness, self-discipline, cognitive processing, and metacognition, Ramirez-Arellano et al. (2018) acknowledge a broad and multi-dimensional framework for motivational outcomes that have the potential to significantly impact student learning capabilities.

Within the range of prevalently cited models of motivation, Vroom's (1964) expectancy theory represents an important conceptual foundation for interpreting and predicting student motivation and learning behavior. According to this model, there are three affective variables which shape motivational orientation, including valence, expectancy, and instrumentality (Vroom, 1964). Valence is defined by Vroom (1964, p.15) as "affective orientation towards particular outcomes," reflecting the underlying desirability or perceived benefit of the behavior or activity. Expectancy highlights the likelihood that particular behaviors or actions will precipitate the desired outcome; while instrumentality serves as a determination of individual control or influence over the outcomes of the activity (Vroom, 1964). From an educational perspective, expectancy theory represents a "weighted determination" of advantage or value, whereby students make personal determinations of the degree of effort required to achieve desirable results (Geiger & Cooper, 1995). While procedural guidelines and academic requirements may form a normative basis for student motivation, the realization of high-quality, exemplary performance is largely determined by a broader motivational emphasis which draws

upon the student's positive attitude and orientation towards desirable achievement objectives (Geiger & Cooper, 1995).

As a "teleological process," motivation is shaped and sustained by internal (cognitive, metacognitive) and social (goal-setting, encouragement) factors, engendering student progress towards the realization of expected outcomes and objectives, or resulting in the failure to do so (Lee et al., 2003; Ramirez-Arellano et al., 2018). Drawing upon Vroom's (1964) expectancy theory and highlighting the importance of expectation, control, and perceived value in relation to academic achievement, Ramirez-Arellano et al. (2018) propose that student achievements are moderated by the degree of motivation exerted towards their realization. This motivational dynamic is regulated by positive and negative emotional capacity, and supported or constrained by a range of cognitive and metacognitive strategies (Ramirez-Arellano et al., 2018). These overlapping relationships are visualized in Figure 2, and reflect a multi-layered process of motivated learner achievement that is contingent upon the reconciliation between positive, supportive forces and negative, demotivational triggers (Ramirez-Arellano et al., 2018).

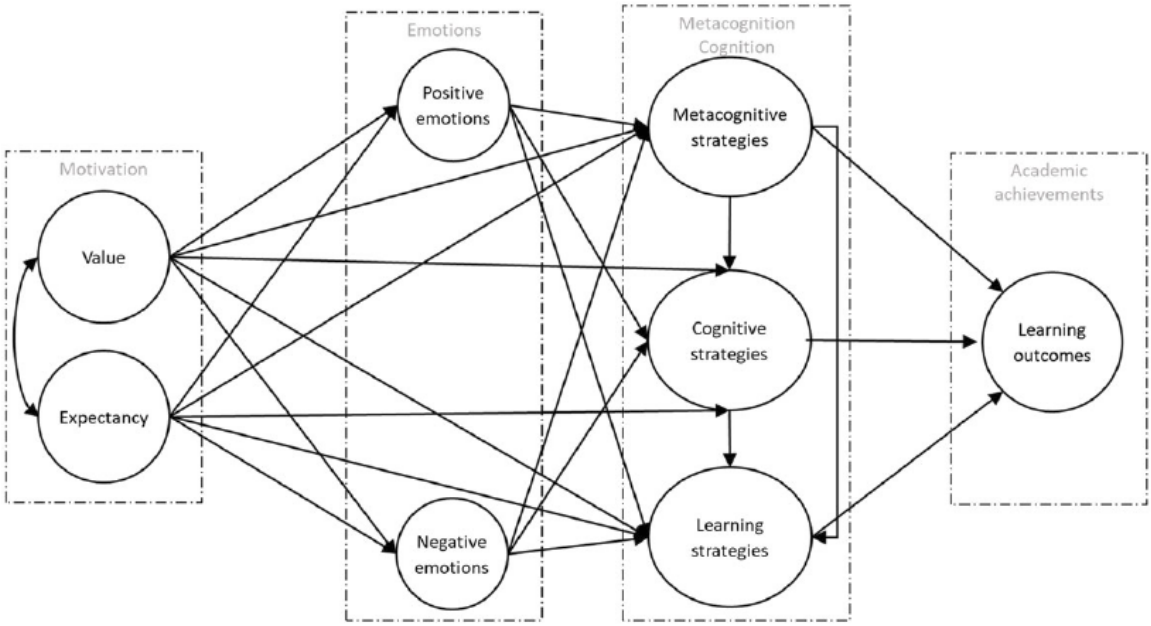

Figure 2: Model of Student Motivation (Source: Ramirez-Arellano et al., 2018, p.809)

Underscoring the conceptual foundations of student motivation is what Deci & Ryan (2000; 2013) and Reeve (2012) have described as self-determination theory (SDT), a belief that nearly all students possess some degree of intrinsic motivation that will support learner engagement and academic achievements. From this assumption, Reeve & Halusic (2009) posit that student motivation must be energized and inspired through teacher support, direction, and encouragement in order for high-functioning outcomes to be achieved. By targeting what Reeve (2012, p.152) describes as the students' "inner motivational resources," teachers are able to "nurture and vitalize these resources during the flow of instruction to facilitate high-quality student engagement." Figure 3 visualizes the constructs of this theory, outlining the range of

psychological needs, motivational influences, cognitive effects, and orienting forces which shape student motivation and ultimately, learning engagement (Reeve, 2012). While not all students are capable of self-determination organically due to a lack of self-motivation or general disaffection with school itself, Deci and Ryan (2013), Reeve et al. (2004), and Reeve (2012) argue that by developing targeted teaching strategies which support students' autonomy, competence, and relatedness, intrinsic motivational forces can be triggered and sustained.

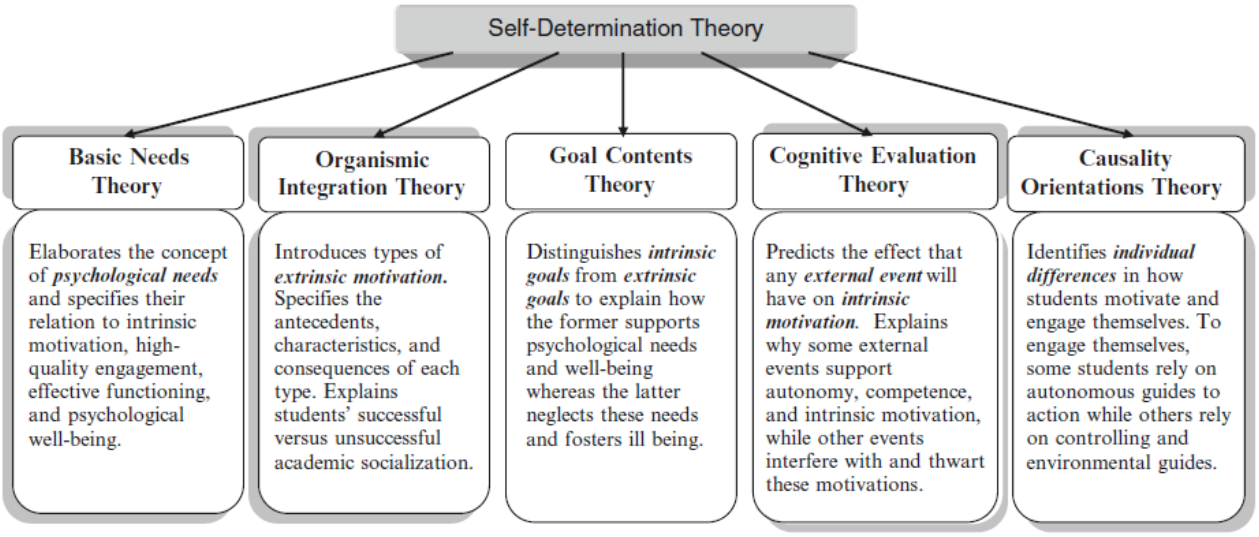

Figure 3: Theoretical Constructs of Self-Determination Theory (Source: Reeve, 2012, p.153)

Figure 4 visualizes the modality of transformation in classroom settings, whereby student-teacher interactions trigger and support sources of motivation, resulting in active engagement with the learning environment in ways that support and sustain student motivation over time (Reeve, 2012). In classroom environments, teaching style, therefore, plays a critical role in student motivation by either supporting or discouraging autonomy, developing student-teacher relationships, and forming the basis for aspirational and self-determined learning pathways that support student achievement (Reeve, 2009). The challenge, as evidenced by variations in student motivations observed by Reeve (2012), is that teacher strategies are not effective on a homogeneous level; and for this reason, they must acknowledge the range of personal traits, strengths, and motivations that drive students toward a more positive learning outcome (Bandura, 2006). Through a longitudinal comparative assessment of learner motivations across their educational careers, McMillan et al. (1994) revealed that student attitudes and perceptions of self-efficacy were of equal and overlapping importance to student motivation in high school settings. When aligned with the engagement model posited by Reeve (2012), this evidence suggests that both attitudinal factors (e.g., passion, energy, enthusiasm) and self-efficacy as a learner (e.g., self-determination, capabilities, metacognition) are moderating influences for those motivational forces which support and sustain learning engagement over time (McMillan et al., 1994).

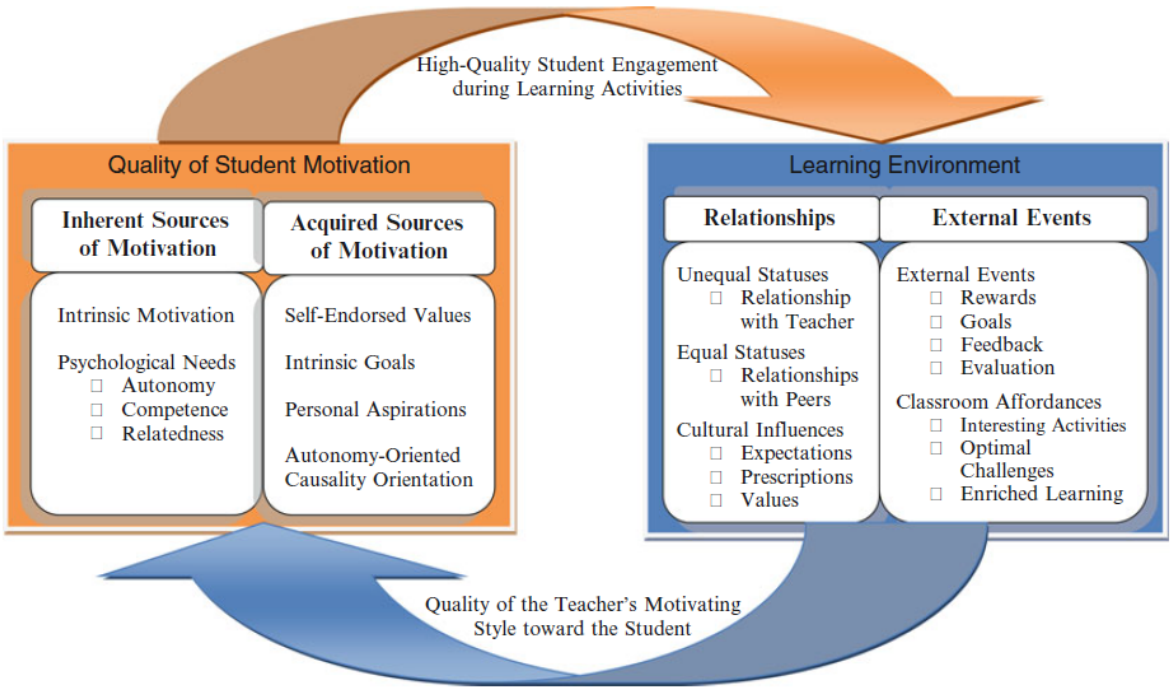

Figure 4: Student-Teacher Dialectical Framework (Source: Reeve, 2012, p. 158)

One strategy proposed by Anderman & Patrick (2012, p.173) that could moderate the gap between student motivation and teacher support is achievement goal theory, a social-cognitive "framework used to explain academic motivation." Derived from a core student belief in overarching intelligence and, as a result, achievement potential, goal-orientation (or lack thereof) represents either a supporting or discouraging orientation relative to key achievement objectives (Anderman & Patrick, 2012). By utilizing a broad, cohesive framework of classroom subject-matter mastery, teachers create a "coherent set of practices which communicate a consistent perspective towards learning and task engagement" (Anderman & Patrick, 2012, p.185). As teachers maintain control over goal-setting and classroom practices, they are likely to shape student perceptions of goal mastery and attainability, either supporting or discouraging the likelihood of attainment as they influence the orienting effects of goal-setting behavior and learning outcomes (Anderman & Patrick, 2012). When combined with the constructive effects of self-determination theory discussed by Reeve (2012), the central role of autonomy and student-perceived competency has a direct impact on the likelihood of goal attainability, and the realization of tangible outcomes relevant to subject-matter mastery and overarching learning objectives.

In academic settings, students must develop strategies to adjust productively and responsively to a broad spectrum of stressors and changing environmental conditions (Ouweneel et al., 2011). To operationalize such resiliency, Martin & Marsh (2008) introduce the concept of "academic buoyancy" as a representation of the capacity for students to navigate conceptual, situational, and experiential uncertainties in order to realize more predictable academic outcomes. Supported by a range of mediating variables, such as student-teacher relationships,

active engagement in classroom proceedings, and self-efficacy, the antecedents to resiliency are a combination of both intrinsic and extrinsic supports (Martin & Marsh, 2008). Focusing such efforts, Lee et al. (2003) have demonstrated how goal-striving can improve directional motivation, targeting specific outcomes via a process of self-gratification and success. Through improved mental focus and a commitment to tangible and attainable goals, individuals are encouraged to maximize the utility of their actions and energies by realizing specific, high-value outcomes associated with predefined goals (Lee et al., 2003). Characterized by Ouweneel et al. (2011, p.142) as "flourishing," through creating those support-based conditions that encourage students to draw from a wealth of personal strengths and resources, the capacity for engagement is magnified by decreasing other negative weights (e.g., stress, frustration, uncertainty, lack of self-confidence).

4.3 Student Engagement

The range of academic models regarding student engagement is broad, and as a result, characterized by a variety of structural and conceptual interpretations. Through a critical review of 44 prior engagement studies, Fredricks et al. (2004) proposed that there are three dominant categories of engagement including emotional, cognitive, and behavioral. Emotional engagement represents a positive attitudinal orientation towards school and is indicated by positive responses to school experiences, teachers, learning processes, and peer interactions (Fredricks et al., 2004). Behavioral engagement reflects a participative response to a range of academic, social, and extracurricular school activities, and is demonstrated through associated student actions or commitments (Fredricks et al., 2004). Cognitive engagement is more difficult to observe or qualify and represents a level of personal investment in learning processes that is targeted, strategic, and self-directed (Fredricks et al., 2004). Further research in this field conducted by Anderson et al. (2004) confirmed the efficacy of this three-category model, but subdivided the behavioral engagement category into a separate academic category to highlight distinctions between academic and non-academic engagement in school activities. Moreover, the model re-structures emotional engagement to emphasize psychological engagement, suggesting a broader range of considerations reflecting both positive and negative intrinsic factors (Anderson et al., 2004).

A central challenge in the classification of engagement is the degree of variability, and as a result, incongruity which characterizes student behaviors and activities in their academic endeavors. Early research in this field conducted by Finn (1989), for example, outlined a hierarchical range of student behaviors that reflect progressively elevating levels of student engagement extending from rules and procedures at the base to participation in learning and ultimately to social and personal investment in academic achievement at the top. Similarly, Nystrand and Gamoran (1991) observed varied levels of engagement which included procedural or basic behavioral engagement at the bottom of the hierarchy that reflected rule following and activity participation (e.g., homework completion). At higher levels, more substantive engagement activities, such as psychological and cognitive investment in learning processes, were identified as progressively positive for student learning outcomes and academic achievement (Nystrand & Gamoran, 1991). Distilling the classroom-based characteristics of engagement into universally transferrable or applicable categories, Skinner et al. (2008)

recognize that there are two primary domains which include degrees of behavioral and emotional engagement and disaffection as visualized in Table 1. By focusing on the desirable characteristics of engagement, Skinner et al. (2008) present a strategic solution for teacher support and student motivation which includes autonomy, warmth, and self-direction that are designed to maximize behavioral and emotional engagement, while minimizing the likelihood of disaffection.

	Engagement	Disaffection
Behavioral	Action initiation	Passivity
	Effort, exertion	Giving Up
	Attempts, persistence	Withdrawal
	Intensity	Inattentive
	Attention, concentration	Distracted
	Absorption	Mentally disengaged
	Involvement	Unprepared
Emotional	Enthusiasm	Boredom
	Interest	Disinterest
	Enjoyment	Frustration, anger
	Satisfaction	Sadness
	Pride	Worry, anxiety
	Vitality	Shame
	Zest	Self-Blame

Table 1: Comparative Model of Engagement and Disaffection in the Classroom (Adapted From: Skinner et al., 2008, p.766)

The nature of assessment in student engagement is a complex process, which is largely conditioned by the effectiveness and consistency of the measures themselves. For example, Linnenbrink & Pintrich (2003) suggest that there must be a distinction between hands-on and minds-on levels of engagement in order for students to receive the net academic benefits of educational settings. Whereas attentiveness may reflect a hands-on approach to learning processes (e.g., note-taking, teacher eye-contact, hand-raising), without the affective value of minds-on engagement, learning outcomes may not be fully realized (Linnenbrink & Pintrich, 2003). By discussing engagement as a range of behavioral (lowest), psychological (middle), and cognitive (highest) student characteristics through a "phenomenological assessment" of teacher-reported classroom observations, Harris (2008) reveals that there are often distinctions drawn between teacher emphasis on learning outcomes and the emphasis placed on schooling or procedural adherence. The assumption of engagement equating to learning was shown throughout teacher responses, wherein any form of participation or task fulfilment was viewed as an outcome that is indicative of positive learning outcomes and engagement effects (Harris, 2008). Similar to prior research in this field (Linnenbrink & Pintrich, 2003; Lankshear & Knobel, 2005), Harris (2008) challenges the simplification of engagement effects, suggesting that there must be a distinction between engagement in schooling (e.g., behavioral, procedural) and engagement in learning (e.g., cognitive, psychological, emotional) in order to develop programs that have a more positive impact on student achievement.

To assess the varying relationships between engagement in school and engagement in learning, Harris (2011, p.384) drew upon teacher feedback to distinguish between the "what" and the "how" of engagement as observed in classroom settings. Within such findings, there was an overarching expectation of supporting student engagement which was reported as a critical antecedent to positive learning outcomes by most of the teaching professionals (Harris, 2011). As a result, pedagogical strategies which mobilized student activities (e.g., participation, self-direction) and translated those activities into cognitive outcomes (e.g., thinking, processing, questioning, modifying) were identified as critical antecedents to engagement, combining the what and how into a "tactical modality" (Harris, 2011). Formally applying such constructs of engagement to intra-classroom modalities, Virtanen et al. (2015) emphasize classroom quality and the role of emotional, instructional, and organizational support in moderating student engagement. In those classrooms with higher student and teacher-reported quality, a comparative empirical assessment indicated that students are likely to "have better possibilities to satisfy their basic needs, engage in learning, and develop optimally" (Virtanen et al., 2015, p.976). From a structural proposition, establishing the basis for productive learning through instructional and organizational support provides students with the basis for emotional investment and motivated engagement in learning processes that improve achievement over time (Virtanen et al., 2015).

While student support and self-determination may establish the basis for engagement in most academic settings, Kandiko (2008) suggests that there are significant variations in student commitment and focus that can lead to both intra-classroom and intra-organizational variations. Comparative empirical evidence from two nationally disparate school systems (US and Canada) reveals that student engagement varies according to a range of factors including time (e.g., stage in academic career), course interest and amount of choice (e.g., elective versus mandatory), and classroom environments, e.g., participative versus instructive (Kandiko, 2008). When viewed as a multi-layered, self-regulatory process as visualized in Figure 5, Reeve (2012, p.151) suggests that the outcomes of engagement can lead to autonomy, needs gratification, and self-satisfaction. Meanwhile, the lack of engagement can lead to student withdrawal, frustration, or heightened stress levels, thereby inhibiting the successful realization of learning objectives or involvement in the expected learning processes (Reeve, 2012). For this reason, Thereoux et al. (2004, p.82) propose the need for supportive as well as challenging academic environments that not only motivate students towards cognitive engagement in the traditional learning process, but also towards emotional and participatory engagement in the diversified advantages of an "authentic" learning experience.

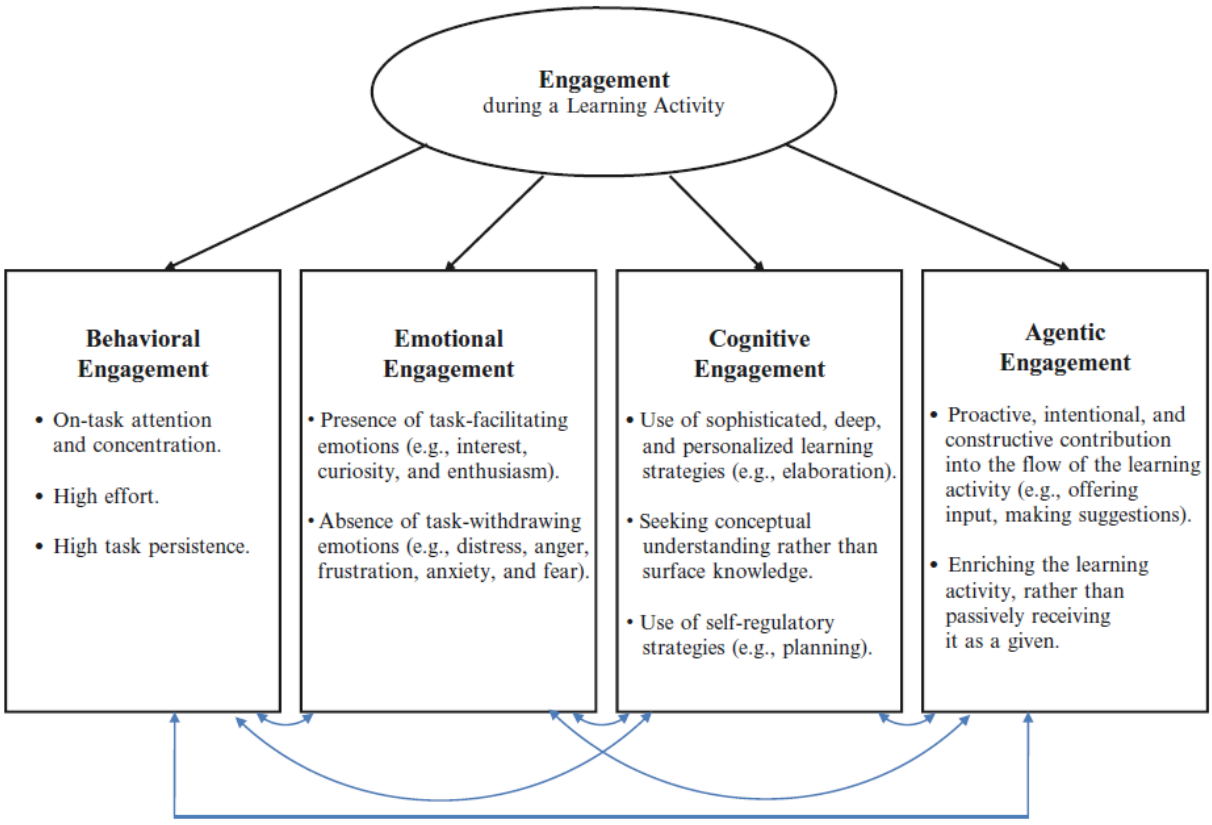

Figure 5: Interrelated Aspects of Student's Engagement During a Learning Activity (Source: Reeve, 2012, p.151)

4.4 Participation

The expectation of student participation in classroom settings is based on an assumption of benefit, whereby teachers in the American school system have historically relied on a formal participation grade to validate or confirm the associated degree of student engagement (Frymier & Houser, 2015). Within this context, Rocca (2009) argues that in order for students to participate effectively, they must be sufficiently engaged in the learning process, creating a circular expectation that can lead to adverse outcomes. To clarify the often interchangeable and confusing use of participation and engagement in pedagogical guidance, Fredricks et al. (2004) argue that participation should be recognized as a component of engagement, while engagement should represent a multi-dimensional construct which includes a variety of student practices and behaviors. As a function of communication, participation, thereby represents a dimension of engagement which is indicative of various "student confidences," including self-efficacy, knowledge, identity, motivation, and incentive (Weaver & Qi, 2005; Rocca, 2009). As a result, the essential elements of student participation are similar to those associated with engagement, but are indicated by a specific contribution-based, rather than complementary or replacement-based role (Rocca, 2009; Frymier & Houser, 2015).

While teachers may associate oral participation with effective student engagement, empirical evidence collected by Frymier and Houser (2015) reveals that communication apprehension is negatively correlated with engagement. For students without the self-efficacy or self-confidence to participate robustly in classroom discussions, participation requirements can negatively impact learning outcomes, exacerbating anxieties and leading to student apprehension or frustration (Frymier & Houser, 2015). As an alternative, teachers have been encouraged in numerous classroom settings (Fredricks et al., 2004; Harris, 2011) to acknowledge other traits or indicators of student engagement, such as active note-taking, persistent eye contact, and attentive posture as indications of student participation and focus. Through informal encouragement and an open, non-adversarial environment, even those students with communication apprehension can be encouraged to participate actively in settings where student-centered communication is a productive and motivational solution to top-down instruction (Frymier & Houser, 2015).

Central to participation is a weighted determination of what Glover & Bodzin (2019, p.799) describe as "perceived cost value," or a function of "motivation dynamics," which determines whether a student will cognitively and physically participate in classroom-based learning activities. Derived from Vroom's (1964) expectancy theory and weighted against the perceived value or independent advantage of the learning task, Glover and Bodzin (2019) describe the cost value determination as weighted according to a range of both intrinsic factors (e.g., enjoyment, passion, expectation, identity) and extrinsic factors (e.g., expectations, goals, policies, guidelines). By considering more complex variables such as sacrifice, burden, and stress, Glover and Bodzin (2019) have critically analyzed the effects of value, cost, and achievement on the weighted decision to participate by academically advanced high school students. Such research suggests that self-regulation to mastery or high-performing levels requires a high level of intrinsic, self-determined motivation. From this perspective, participation becomes a function of an effective academic career and thereby represents a subset of achievement that can be conditioned and supported through environmental and procedural conditions (Glover & Bodzin, 2019).

4.5 Relationships and Support

The affective weight of positive student-teacher relationships has been shown to have significant impacts on student engagement and achievement throughout their academic career (Murray & Malmgren, 2005; Roorda et al., 2011). Based on the socio-emotional proposition of supportive classroom management, Baroody et al. (2014, p.71) suggest that a "responsive classroom approach" provides a "caring, well-managed classroom environment" capable of improving instructional efforts and enhancing students' social skills and academic outcomes. As a collaborative system of student-teacher interaction, the responsive classroom relies on positive reinforcement, participative rule creation, and guided discovery to support a more interactive and engaging learning process (Baroody et al., 2014). Through an assessment of teacher experiences with responsive classroom techniques, Baroody et al. (2014) confirmed that when teachers were appropriately trained in these competencies and applied their values and practices with "high fidelity," relational closeness with students was universally improved. Higher relational closeness and teacher sensitivity to student learning needs positively correlated with improved

student engagement and academic performance, creating a reinforcing basis for encouraging and sustaining motivated and engaging student-supported learning (Baroody et al., 2014).

Drawing upon self-determination theory, Reeve (2012) proposes that high-functioning student engagement fulfils three critical roles, which include improving the flow and responsiveness of the learning environment, improving psychological needs satisfaction, and improving academic gains and performance. As catalysts for engagement, student-teacher relationships are "motivational triggers" that can either support autonomy and self-directed learning outcomes or constrain students from realizing self-efficacy and achieving personal learning objectives in favor of more authoritarian structures (Reeve, 2009, 2012). Within this visual model presented in Figure 6, student learning becomes a combinative function of productive academic relationships within the educational environment, meaningful peer relationships outside of the learning process, and a responsive and invested parental foundation that can be used to moderate both aspects of the learning process (Reeve, 2009, 2012).

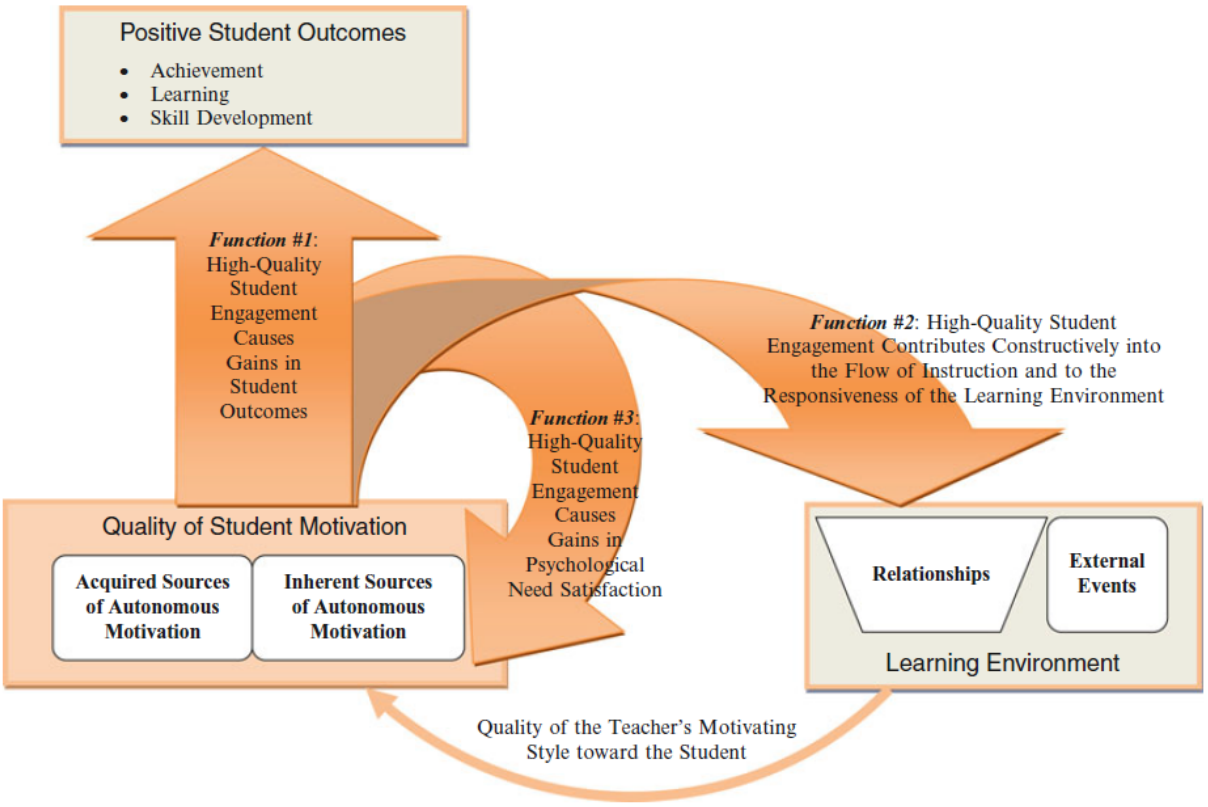

Figure 6: Functions of Student Engagement within the Student-Teacher Dialectical Framework (Reeve, 2012, p.163)

4.6 Reinforcement, Communication, and Intersubjectivity

Developmental theory predicts that classroom interactions play a critical role in shaping student learning outcomes with the effectiveness and affective value of the student-teacher relationship serving as a moderating factor for learning motivation and student engagement (Hafen et al., 2014). Within this relationship-centered paradigm of interactive development, Hafen et al. (2014) propose the following three overarching domains and their underlying affective dimensions:

- Emotional Support: Climate (positive/negative), Sensitivity, Student-Centered.
- Classroom Organization: Behavior Management, Productivity, Focus.
- Instructional Support: Content Understanding, Analysis and Inquiry, Feedback, Interactional Dialogue.

Although several of these underlying dimensions are reconciled through the structured architecture and program architecture of the school itself, key elements, such as sensitivity, feedback, and climate represent dynamic and adaptive features of the student-teacher relationship (Hafen et al., 2014). Within this "learner-sensitive" commitment to student-centered pedagogy, Fenstermacher and Richardson (2005, p.205) prioritize "teacher understanding and assessment of individual construction of meaning" over structural continuity and systemic adherence. Moreover, there is a transfer of agency from teacher to student which encourages self-accountability and self-responsibility, thereby supporting autonomous learning processes that are personally engaging (Fenstermacher & Richardson, 2005). Given that many students lack the full scope of support or involvement needed to direct performance outside of the school environment, Borup and Stevens (2015) recognize that self-regulation and self-determination are of critical importance to student performance in advanced or higher-level courses. Figure 7 visualizes this scope of engagement in relation to three different axes of support including parent, teacher, and peer, with student engagement in scholastic achievement centered under a variable arc of participation (Borup & Stevens, 2015). While some learners depend highly upon an increased level of parental engagement, others may rely more heavily upon teacher or peer engagement to compensate for absentee or under-involved parents, as they pursue support from extrinsic sources to supplement their own self-determination and intrinsic motivation (Borup & Stevens, 2015).

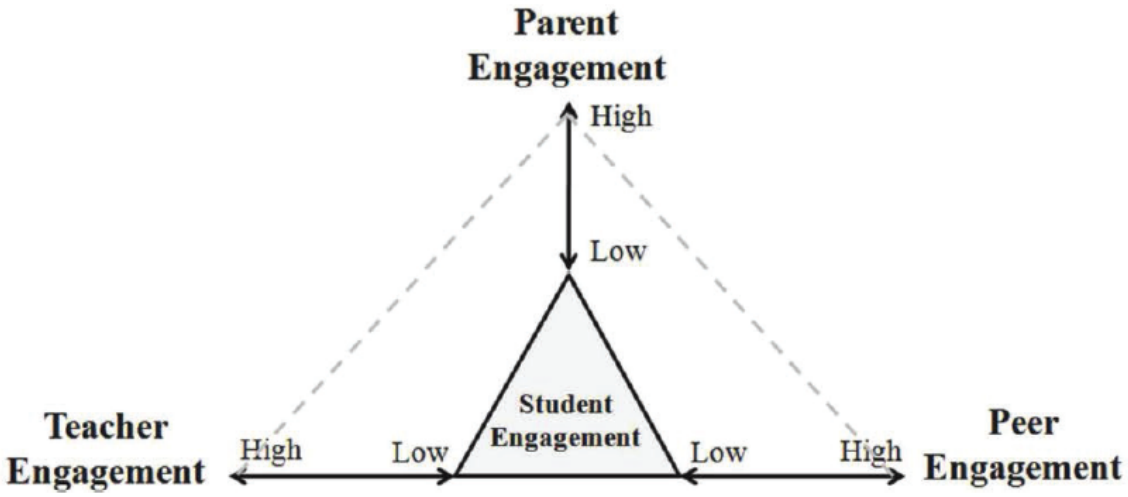

Figure 7: Spectrum of Engagement (Source: Borup & Stevens, 2015, p.73)

In order for students to develop the academic resilience needed to support long-term learning and consistency, Martin & Marsh (2006) argue that there is a need for a strong and supportive social foundation, or some alternative coping mechanism, which is capable of reinforcing learner confidence and self-efficacy. Classroom participation, for example, has the potential to increase student enjoyment in the school experience, and thereby reinforce engagement in learning processes that might otherwise be challenging or demotivational (Martin & Marsh, 2006). From this perspective of interactive learning, Barnes (1976, p.84) recognizes that "children use language to make knowledge their own," interpreting and analyzing new information and applying the familiar experiential and learned paradigms to understand new conditions, insights, and perspectives. Comparison of perceptual evidences and interpretations across in-classroom discourse or outside of the classroom through discussions at home allows validation and the justification of an emergent, oftentimes substantial interpretation of the evidence (Barnes, 1976; Renshaw & Brown, 1998; Mitchell, 2010). From a pedagogical perspective, O'Connor and Michaels (1996, p.76) propose a "re-voicing" exercise which demonstrates the transferability of value across student insights, through teacher reformulation and rephrasing, and confirms downstream effects on peer learning outcomes. Whether affirmative or contradictory, the active translation of student perspectives and ideas through teacher vocalization can have a potent impact on learning reinforcement (O'Connor & Michaels, 1996).

While classroom discussion and student participation may form the basis for a collective learning protocol, there is a potential for the typical initiation-response-feedback (IRF) cycle to inhibit honest student responses and discourage independent thinking despite open forum discussions (Sarason, 2017; Dawes, 2004). Through a series of practical examples and critical thinking exercises, Mitchell (2010) demonstrates how discourse can be used to improve the depth and interpretive value of the IRF process, as students are asked to challenge both accurate and inaccurate conceptions of meaning. For example, in challenging the right answer, students interpret the deterministic traits of a particular concept, analyzing why it must be correct and

ways in which it could potentially be invalidated (Mitchell, 2010). By encouraging open discussion, affirming student opinions, and returning to the topic of discussion to reinforce central concepts, Mitchell (2010) proposes that teachers can utilize interactive communication as a vehicle for critical thinking and "topical immersion." Such an approach engages students in an active process that eliminates many of the limitations associated with traditional downstream teacher-to-student teaching practices (Mitchell, 2010).

Beyond in-classroom learning and development, student support systems also provide a firm and effective basis for developing and sustaining engagement. McKenna & Millen (2013), for example, applied a narrative analysis to assess the degree of parent presence in child education, focusing on both traditional activities within the school and out-of-school support systems. By targeting support solutions that unify the parent-teacher voice and provide students with a foundation for motivation and engagement that exists both within and outside of the classroom, evidence presented by McKenna & Millen (2013) revealed a contiguous voice which improves the presence of support regardless of varying environmental conditions. Although ideal, Lawson & Alameda-Lawson (2012) posit that parent participation and engagement in student education programs requires institutional openness and systems (e.g., opportunities, procedures, invitations) that afford parents the ability to participate. Evidence suggests that parental participation in educational environments (e.g., conferences, in-classroom events) not only increases the sense of collective school engagement, but creates a community centered basis for motivating and supporting student interest and engagement within the institution (Lawson & Alameda-Lawson, 2012).

4.7 Advanced Placement and Learning Challenges

While AP courses were initially introduced as a "springboard solution" to pre-university preparation, Fenty and Allio (2017) report that there is a direct, positive relationship between AP course enrollment and student engagement with educational excellence. In this context, empirical studies conducted by Attewell and Domina (2009) and Foust et al. (2009) revealed that there is a direct and positive correlation between AP enrollment and students' academic performance, scholastic experiences, and social confidence. Where students excel at their AP courses and achieve high marks on their final exams, Warne et al. (2015) confirm that there is a strong, positive correlation between achievement and long-term academic success which is likely to extend throughout their higher education career. Despite such advantages, Fenty & Allio (2017) argue that there are systemic disadvantages throughout the US-based educational system that often restrict access to AP courses, limit enrollment opportunities, or inhibit student openness to engaging in a higher-level educational experience. With ethnic groups such as African Americans and Hispanics widely underrepresented in such programs, and a negative correlation between student income levels and the likelihood of AP enrollment, evidence suggests that there are both social and systemic gaps that may impact educational settings to demotivate student pursuit of AP course opportunities (Solorzano & Ornelas, 2004; Walker & Pearsall, 2012; Fenty & Allio, 2017).

As moderating influences, the systemic exclusions identified by Solorzano and Ornelas (2004), Walker and Pearsall (2012), and Fenty and Allio (2017) suggest some delimiting factors in AP course enrollment and performance. Moreover, other considerations related to academic achievement, resiliency, and engagement play a critical role in shaping the effectiveness of AP classroom settings. In an assessment of student resiliency and stress-based coping strategies, Suldo & Shaunessy-Dedrick (2013) revealed that the majority of AP students reported achieving higher academic success than their peers in general education, and exhibited traits that were characteristic of increased resiliency and more effective stress coping mechanisms than non-AP students. Distilling the range of factors shaping such resiliency into a framework of both positive and negative influences through a qualitative review of student feedback, Shaunessy-Dedrick et al. (2015, p.118) revealed a range of thematic dimensions, of which three core categories, i.e., stressors, coping, and personal traits, are visualized and explained in Table 2. This baseline model was subsequently applied by Shaunessy-Dedrick et al. (2015) to an assessment of student communications, weighting both positive and negative thematic references to determine the areas in which AP students were successful and those in which they were struggling. By applying strong coping abilities and employing specific personal traits, such as a strong work ethic and strong achievement motivation, the thematic evidence revealed a distinction between successful AP students and those at risk for course exiting due to inadequate or unsustainable resiliency (Shaunessy-Dedrick et al., 2015).

Codebook Example of Thematic Descriptions

Category	Theme	Code	Description
Stressors	Academic Assignments	Volume of Assignments	Assignments associated with classwork and homework
		Studying	Study requirements in order to achieve performance objectives in class
		Magnitude of projects	Preparation for time-intensive projects
		Overlapping due dates	Tests or assignments within a short-term period
Coping	Cognitive Reappraisal	Perspective	Placing problems in perspective
		Accept reality	Adjusting standards to suit personal performance
		Focus on positive	Focus on positive outcomes of academic situation
Personal Traits	Achievement Orientation	High	Goal-oriented towards the future
		Low	Living in the present without future considerations
	Valuation of Rigorous Coursework	High Commitment	Personal interest in staying in program
		Low Commitment	No long-term interest in program or lack of informed choice

Table 2: Codebook Example of Thematic Descriptions (Source: Shaunessy-Dedrick et al., 2015, p.118)

While the evidence presented by Shaunessy-Dedrick et al. (2015) implies a degree of innate or trait-specific resiliency which characterizes successful AP student outcomes, it is evident from other research in this field (Bryan, 2011; Suldo & Shaunessy-Dedrick et al., 2013; Fenty & Allio, 2017) that effective engagement and achievement in AP courses is a function of learned proficiency and support. Bryan et al. (2011), for example, focused on a specific advanced course with limited opportunity for interpretation or autonomous learning in the form of AP scientific studies. At the core of student success, the researchers identified a strong "motivation to learn science" as a driving force which "arouses, directs, and sustains science-learning behavior," thereby encouraging engagement in classroom execution and task fulfilment (Bryan et al., 2011, p.1050). Such results implied that both innate or trait-specific and external learning processes and support factors contributed to student success. Looking towards innate factors, through a quantitative analysis of trait-specific characteristics of AP science students, Bryan et al. (2011) revealed three overlapping predictors of student success. These are intrinsic motivation, self-efficacy, and self-determination dimensions, which combine to increase positive achievement outcomes. For students seeking to commit to AP courses and achieve successful outcomes, there was an underlying need for intrinsic motivational forces. Such motivational factors were supported by a student's self-efficacy as well as their overall confidence in their academic abilities and control over knowledge acquisition, as aspects of self-determination (Bryan et al., 2011).

4.8 Conceptual Framework

This chapter has provided an in-depth review of the conceptual and theoretical underpinnings of student motivation and engagement in modern classroom settings. By emphasizing the role of key considerations such as participation, communication, and support, this literature review has explored a range of factors shaping the optimal and sub-optimal conditions that characterize the AP learning environment. Based on these findings, a conceptual framework has been devised which identifies several targeted points of opportunity for improving educational interventions and maximizing the motivational effects of classroom structure, systems, and supports. Figure 8 provides a visual representation of this model that introduces a range of moderating, influencing, and sustaining factors/forces that predict and affect a student's pathway from course enrollment to end-of-course achievement. The following formally defines and outlines each of these dimensions in relation to the underlying literature:

- Moderating Factors: These are the core antecedents to the student's decision to enroll in AP courses and remain invested throughout the full courses in the pursuit of academic excellence (Bryan, 2011; Shaunessy-Dedrick et al., 2015; Fenty & Allio, 2017).
    - Support: A combinative foundation of teacher and parental support resources provides the basis for student resilience and commitment to the associated courses (Reis et al., 2004; Peterson et al., 2009; Skinner & Pitzer, 2012).
    - Enthusiasm: Personal enthusiasm for course-specific learning objectives that includes passion and interest ensures long-term resilience and buoyancy (McMillan et al., 1994).

    - Perceived Value: The anticipated and perceived advantages of AP course completion related to personal and academic objectives as defined by specific, attainable goals (Vroom, 1964; Lee et al., 2003; Ouweneel et al., 2011).

- Self-Efficacy: The student's personal belief in their ability to achieve the course objectives and to realize their own academic goals within the conditions or environmental characteristics of the course (Weaver & Qi, 2005; Rocca, 2009; Frymier & Houser, 2015).
- Participation: The student's willingness to be active in classroom discussions, idea-formation exercises, and classwork in general (Frymier & Houser, 2015; Rocca, 2009; Harris, 2011; Glover & Bodzin, 2019).
- Motivation: The energized and committed investment of personal cognitive, emotional, and organizational capabilities towards the realization of course learning objectives (Reeve & Halusic, 2009; Anderman & Patrick, 2012; Reeve, 2012; Ramirez-Arellano et al., 2018).
- Engagement: The active commitment of personal resources to the learning process including the adaptation and deployment of energy and interest in the classwork, testing, and learning outcomes (Deci & Ryan, 2013; Reeve et al., 2004; Reeve, 2012).

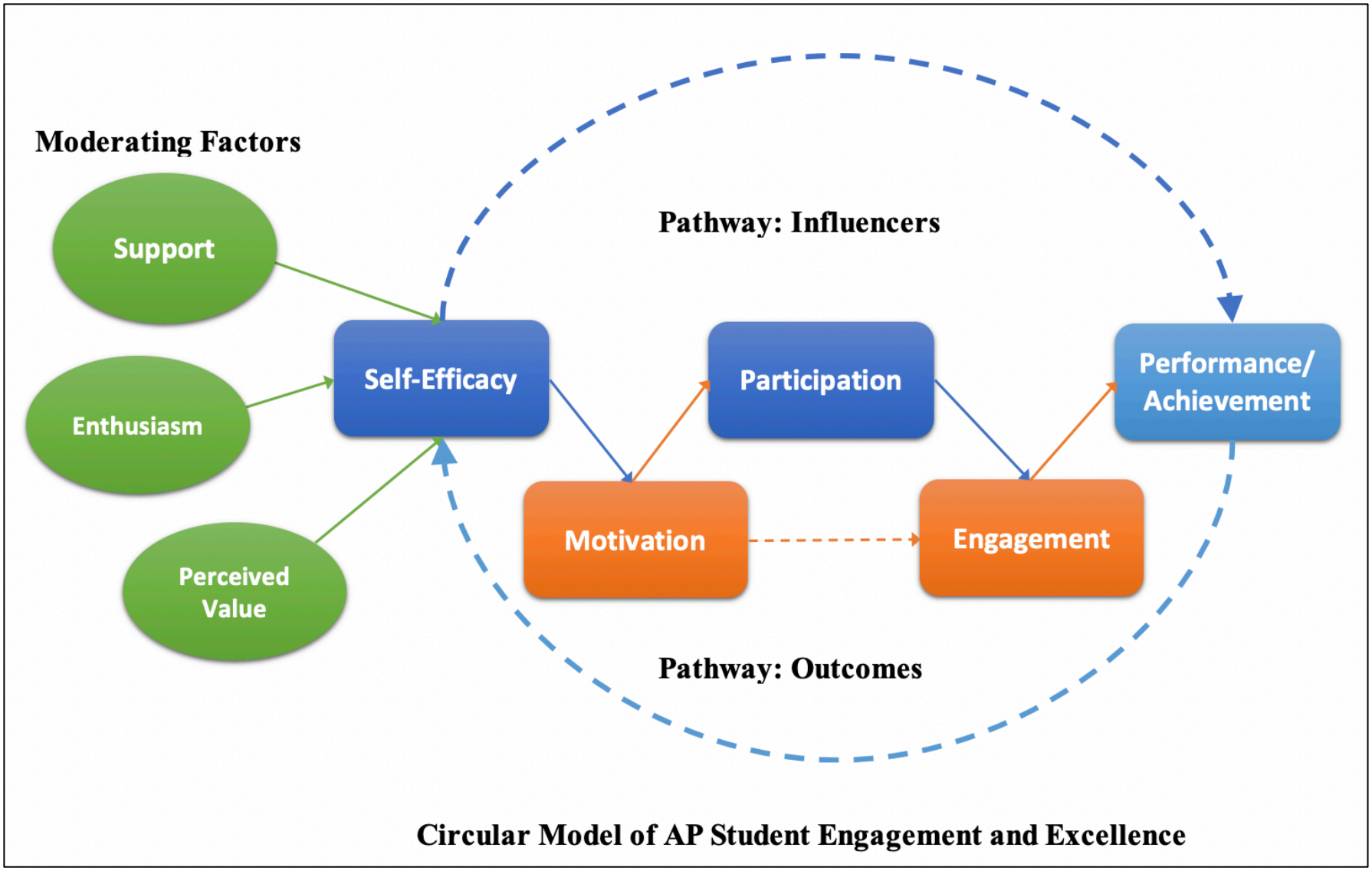

Figure 8: Circular Model of AP Student Engagement and Excellence

4.9 Summary

This chapter has provided an in-depth review of the leading academic theories of student motivation and engagement. By drawing comparisons between an array of factors supporting student performance outcomes and those factors which could potentially lead to demotivational effects, this review has demonstrated the critical intermediary role of both teacher and parent stakeholders in student achievement. Based on these findings, there is evidence to suggest that AP courses present a unique challenge for student resilience and buoyancy which could potentially undermine more traditional educational systems and procedures. Accordingly, in order to develop a comprehensive and analytical academic perspective of these effects and influences within the context of Rosenblatt High School, the following chapter outlines an empirical methodology that was devised to glean insights on student narratives and experiential storytelling in parent-student conversations regarding AP courses.

Chapter 5: Research Methodology

5.1 Introduction

While the field of educational research is methodologically diverse, the underlying epistemological basis for empiricism is derived from a relatively narrow scope of constituent techniques and modalities. For the current study, consideration was given to several different empirical pathways, with a selection process determined by a range of enabling and supporting variables. The following sections outline these considerations and present the techniques and sources of data used to contribute new evidence to the field of research surrounding student engagement and motivation.

5.2 Research Paradigm

Underscoring the epistemological and ontological basis for empirical research is what Creswell (2014, p.4) has identified as a "worldview" or philosophical perspective which shapes the researcher's intentions, pursuit of knowledge, and frame of reference. O'Reilly & Kiyimba (2015, p.3) formally define this philosophical proposition as a "paradigm, or a basic set of beliefs held by the researcher guiding their actions." Although vague, when distilled by Saunders et al. (2015, p.164) into the "research onion" visualized in Figure 9, the critical role of the paradigm is referred to as an underlying foundation upon which the constructs of methodological procedure are based. While this model may reflect a broad spectrum of philosophical considerations, Bryman (2015) argues that in social research there are two dominant positions: the positivist and the constructivist. Positivism, a philosophy that originated in the natural sciences, is characterized by a deductive pursuit of knowledge through systematized and structured empirical techniques that are primarily quantitative, replicable, and explicit (Jonker & Pennink, 2010). In contrast, constructivism which originated in the social sciences, emphasizes the phenomenological origins of experience and behavior, and applies an inductive lens to the interpretation of predominately qualitative sources of evidence (Jonker & Pennink, 2010).

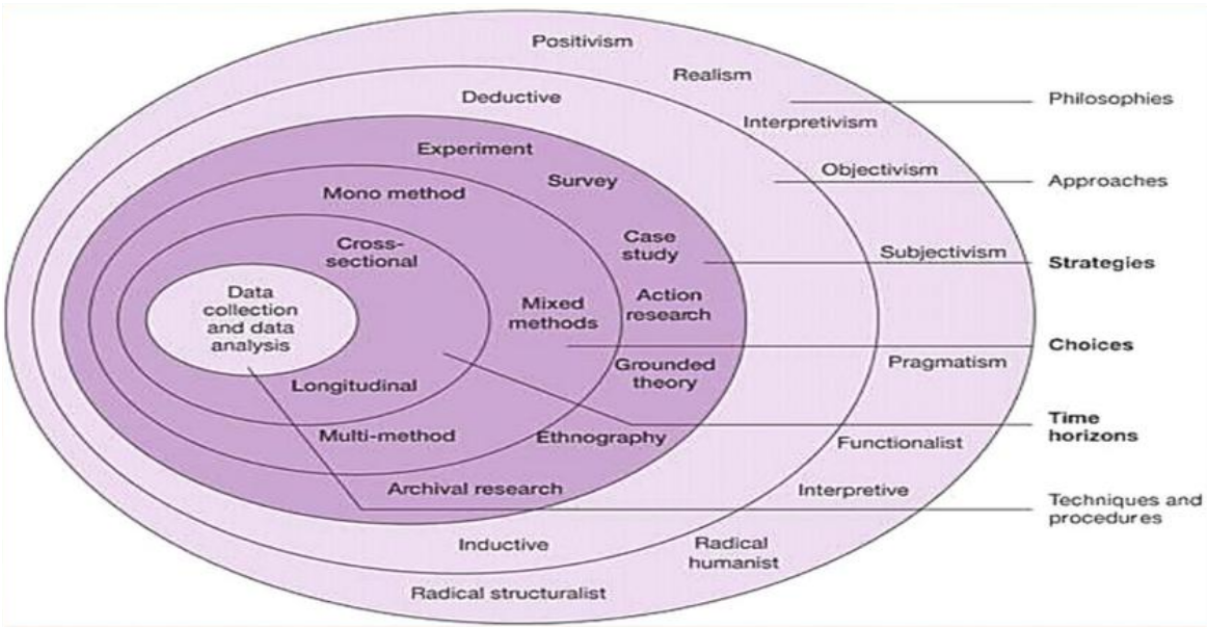

Figure 9: The Research Onion (Source: Saunders et al., 2015, p.164)

To assess the appropriateness and relative value of each of these paradigms for the current study, consideration was given to the strengths and weaknesses of these various propositions. Positivism in educational research for example, has traditionally involved performance monitoring (Ouweneel et al., 2011; Ramirez-Arellano et al., 2018) or surveying (McMillan et al., 1994; Glover & Bodzin, 2019) through structured methods that were designed to illuminate comparable, representative results. Drawing upon causal linkages between learning strategies, pedagogy, and student engagement, for example, Kandiko (2008) used a purely quantitative measure to weigh the relationships between triggering forces and student outcomes. By applying this technique to multiple student samples, the quantitative approach allowed for cross-cultural and cross-systemic comparability, clarifying the varying weights of academic, learning modalities and student preferences in diversified educational settings (Kandiko, 2008). Although the current study could have applied a similar approach to the assessment of student engagement across multiple regional schools in Boca Raton, FL, the central focus of this study involved developing a support program and strategy that could be tailored and applied to the unique academic practices and pedagogical techniques used within RHS. As such, I wanted to get a clearer sense of what students find exciting and interesting about AP class experiences relevant to engagement in terms of the how and why of what happens, going beyond what could be ascertained through obtaining quantitative, survey data. In order to accomplish this objective, it made more sense to focus on qualitative data derived from interviews. An aspiration is was that this approach would enable me to glean insights on the more encompassing relationship between student motivation (both within and beyond school borders), parental support, and teacher strategies

Here, the application of the constructivist paradigm in educational research represents a broader, much more diverse range of techniques that include field-based observations (Ozkan, 2004), focus group studies (Theroux et al., 2004; Lawson & Alameda-Lawson, 2012), and

interviewing (Borup & Stevens, 2005). After reviewing these techniques, it was evident that source-based insights associated with experiential and observational reporting yielded the most substantive weight when considering educational practices and classroom experiences related to engagement. Student responses presented in a comparative interview-based study conducted by Shaunessy-Dedrick et al. (2015), for example, utilized thematic cues to streamline a frequency-based analysis of student traits, motivations, and support factors. In another study conducted by Bryan et al. (2011), interview findings were used to verify student-weighted motivations for AP course-taking and assess the relationship between achievement and engagement in classroom environments. Each of these techniques relied heavily upon a narrow source of evidence, the student, to draw experiential observations from responses to semi-structured interviews designed to prompt memory and personalized storytelling. It is this advantage of primary insights represented by storied accounts of observed experiences and emotions that was identified as a key reason for applying a purely qualitative approach to the current study, and its consideration of student motivation and engagement at RHS.

5.3 Research Approach

Recognizing the value and insights of the narrative accounts of storied beings in educational dynamics, Auerbach (2002) has demonstrated how parental feedback and observational reporting can illuminate the relationship between expected and realized educational experiences. Whereas student narratives (Bryan et al., 2011; Shaunessy-Dedrick et al., 2015) are valuable representations of situational and relational experiential reports, they are intrinsically reactive and framed according to the weight of emotional and sentimental affectation represented by student experiences. In order to extend the scope of student experiences beyond the constraints of personal or self-reflective considerations, researchers including Auerbach (2002) and McKenna and Millen (2013) have highlighted the storytelling advantages of parental narratives and reflection. This form of intermediary analysis of student affectation allows for direct contact with the individuals who are responsible for yielding extra-curricular support to aspiring learners, while simultaneously receiving, interpreting, and responding to student communication and reporting relevant to scholastic challenges and experiences (McKenna & Millen, 2013). On the basis of the likelihood of a more objective, more top-down perspective regarding AP coursework and student engagement, it was determined that this study would target parental representatives through a purely qualitative approach to collecting, organizing, and analyzing evidence.

Said differently, I will focus on the stories parents tell about what they hear from students. This will result in a somewhat indirect set of perceptions and indications of the affective and cognitive dimensions of student engagement, providing what might be called “extreme cases” of engagement—those experiences that students have constructed and shared as memorable (Walker & Greene, 2009; Rogers, 2000; Phelan et al., 1991). These experiences are separate from ongoing, everyday experience, and bracketed and labeled by students as meaningful (Walker & Greene, 2009; Rogers, 2000; Phelan et al., 1991). Unlike direct questioning of experiences of engagement that may cue a demand response, this indirect method looks for those classroom experiences that students have constructed as “good” and interesting and exciting (Walker & Greene, 2009; Rogers, 2000; Phelan et al., 1991).

A pivotal notion to keep in mind is that parents' perceptions, interpretations and shared stories about their children in an educational context have an especially meaningful role in this analysis. Specifically, parents will often ask their children for summary-type information and narratives about their school day, which includes asking a student what instances, events, and stories stand out the most to them (Virtanen et al., 2015; Auerbach, 2002; Rogers, 2000; Phelan et al., 1991). Moreover, conversations between parents and students often influence students to cognitively sift through various experiences during the school day and discuss those which truly stand out as most important (Auerbach, 2002; Rogers, 2000; Phelan et al., 1991). These might be construed as "extreme cases" (e.g., relevant to especially meaningful memories of engagement in a classroom). Nonetheless, they are experiences which students have constructed as particularly memorable and carry more personal meaning than other instances, events, and experiences during the school day (Auerbach, 2002; Rogers, 2000; Phelan et al., 1991). It is noteworthy that when students share stories about their school day with their parents, it can serve the purpose of helping the student to engage in meaning making or sense making pertinent to their school day (Juang & Syed, 2014). This can have significant benefits for the students contextualizing and interpreting their experiences, and parents being able to relate more effectively to their children and teachers (Juang & Syed, 2014).

The stages of research associated with this qualitative collection of primary evidence from a sample population of high school parents involved the following core stages:

- Stage 1: Interview Design: Based upon the central themes and conceptual dimensions identified in the literature review, a series of 7 interview questions were developed and approved by the Institutional Review Board at Vanderbilt University.
- Stage 2: Administration: The administration period consisted of interviewing 12 parents that were conducted over a 6-week time period from mid-February to late-March 2020.
- Stage 3: Analysis: The results were transcribed and analyzed using appropriate tools and digital resources.

5.4 Questionnaire Design and Themes

While I included 7 interview questions for parents, for the purposes of this analysis, the first 6 questions were subdivided into three separate themes. They were then divided categorically pertinent to the interview context in order to improve the likelihood of thematically relevant, objective, critical responses from the participating parents. Each of these questions was structured to address the central research objectives and core questions presented in the introductory chapter, ensuring that the responses would yield meaningful insights and storytelling from these parents that could be translated into practical pedagogical solutions. Tables 3 to 5 provide a subdivision of these 6 questions according to their thematic basis, their relationship to the research objectives (ROs), the research questions (RQs), and the indicative sources related to their underlying conceptual basis.

Note: The 7th question in the questionnaire, "Have you met the teacher? If so, what was your overall impression of the teacher?" was less relevant to the following thematic framework, and was not answered as frequently due to time constraints in speaking with parents. However, as will be seen in the data presentation and results section, when a parent discussed their having met a teacher, it turned out be a pivotal factor in terms of trying to improve the quality of their child's education.

Theme 1: Communication			
Q#	**Prompt**	**RO/RQ**	**Indicative Sources**
Q1	What are some of the notable narratives or stories about classroom experiences in AP classes which your daughter or son has shared with you?	RO2, RO3; RQ1, RQ2, RQ3, RQ4, RQ9	Lawson & Alameda-Lawson (2012); McKenna & Millen (2013)
Q2	Did your son or daughter ever come home and tell you about some lesson or class they thought was really great? What did they say about it? Did they talk about the teacher and what the teacher did?	RO2, RO3; RQ1, RQ2, RQ3, RQ4, RQ5, RQ6, RQ7, RQ9	McMillan et al. (1994); Rogers (2000); Auerbach (2002)

Table 3: Theme 1: Communication

Theme 2: Motivation			
Q#	**Prompt**	**RO/RQ**	**Indicative Sources**
Q3	What seemed to matter to your daughter or son about their teacher's actions, attitudes, emotions, and (perhaps) inspirations in these experiences?	RO1, RO2; RQ1, RQ2, RQ3, RQ4, RQ5, RQ6, RQ9, RQ10	Theroux et al. (2004); Martin & Marsh (2008); Reeve (2012)
Q4	Based on their stories, did anything stand out for your daughter or son regarding their specific interactions with the teacher? Did they mention any classmates' interactions with the teacher?	RO1, RO3; RQ1, RQ2, RQ3, RQ4, RQ9, RQ10	Reis et al. (2004); Peterson et al. (2009); Skinner & Pitzer (2012); Virtanen et al. (2015)

Table 4: Theme 2: Motivation

Theme 3: Engagement			
Q#	**Prompt**	**RO/RQ**	**Indicative Sources**
Q5	In general, what kinds of AP teachers are your son's or daughter's favorites? How do they describe them? What classes seem to cause the biggest issues for them?	RO1, RO2, RO4; RQ3, RQ4, RQ5, RQ6, RQ7, RQ9, RQ10	Deci & Ryan (2013); Reeve & Halusic (2009); Anderman & Patrick (2012); Reeve (2012); Skinner & Pitzer (2012)
Q6	Was your daughter or son interested in the subject matter to start? Have you noticed that they are exploring more on this subject on their own?	RO1, RO2, RO4; RQ3, RQ4, RQ9, RQ10	Deci & Ryan (2013); Reeve & Halusic (2009); Anderman & Patrick (2012); Reeve (2012); Skinner & Pitzer (2012)

Table 5: Theme 3: Engagement

5.5 Sampling and Participant Selection

The selection process for this study was inherently opportunistic in nature. However, because of the focus on AP courses, several inclusion criteria were defined before the selection and administration process. Bryman (2015) posits that when a sample population is classified by specific inclusion criteria, then a non-probabilistic, purposive sampling approach ensures that these expectations are met and that the sample is representative of the empirical objectives. The primary inclusion criteria for this study were simple, but directly related to the focus of this research: (1) parents of a student at RHS and (2) the student in question was enrolled in one or more AP courses within the past year. The interview request forms and relevant letters were distributed by the school administration following approval and questionnaire review by the Principal and Vice Principal of RHS. Parents were then asked to respond via e-mail to participate in the interviewing process which would be determined by their schedule and availability.

The following details are intended to clarify this process:

The participants were parents of RHS students Freshman year through Senior year, and 12 parents agreed to be interviewed by phone. A key goal was to make everything as convenient as possible for parents by conducting phone interviews rather than needing to meet them at a specific location. Parents were sampled through self-selection by responding to an email. Of note, research by Wenger (2018) suggests that having at least 10 parents in a sample provides sufficiently accurate information for this type of research.

In terms of the specific details of recruitment, the parents were self-selected by sending emails to parents of students in AP courses from the 9th through 12th grade that inquired whether they were interested in participating in a 15 to 20-minute phone conversation. These emails were sent from a Rosenblatt administration address so that parents were more inclined to notice the email. The Rosenblatt administration needed to send two rounds of emails spaced a week apart to have 9 parents willing to participate, then a third round of emails a week later to have 3 additional parents volunteer to participate. In the emails, I explained that I was interested in

learning more about the classroom experience, including engagement, for students in Advanced Placement courses, and that I would appreciate any insights which parents could provide based on their conversations with their children who are in AP courses. Specifically, I was interested in how students talk about their classroom experiences in AP classes.

Regarding documents used, in addition to utilizing the questions for conducting 15 to 20-minute phone interviews with parents, I requested the syllabi pertinent to all AP courses, any visual presentations of materials which might be available for AP courses, and any teaching notes on student behaviors/conduct which might be available. I was able to review two weeks of teaching notes from approximately February 10 to 24, 2020 for four AP teachers (i.e., AP Human Geography, AP Chemistry, AP Physics, and AP English Literature), including a few PowerPoint presentations in each course. However, based on the school's confidentiality of information policies, I was not allowed to bring these materials out of the classroom. Moreover, while I was able to take a few notes on the syllabi, I was not allowed to take any syllabi from the classroom. Nonetheless, my notes on this information enabled me to triangulate the data to a limited extent with observations based on parent interviews. In essence, I tried to add reliability, validity, and credibility to the interview data analysis by comparing it with insights in my notes.

The persona model in Table 6 provides a categorical subdivision of the 12 participants including the gender of their child, their general sentiment regarding AP education and student engagement, and the central themes that were identified through an assessment of the individual responses to the 6 interview questions highlighted above. Within this model, the child experience was generalized, with the sentiment of the participant comments orienting the feedback towards one of three indicators, including positive, negative, and mixed. While positive and negative responses were self-evident in the observed experiences of these students as reported by the parents based on conversations with their child, mixed sentiments reflected parental concerns regarding particular aspects of the learning process, including support, motivation, engagement, and communication. Course-specific indicators were important to the analysis of these narrative responses because they had a direct impact on the structure and character of the classroom environment, as well as the strategies used by teachers to instruct these students and support their learning outcomes (e.g., participation in English Literature or Spanish; top-down instruction in Macroeconomics).

Persona Model for Parent-Student Experiences				
P#	**Child Gender**	**Child Course**	**Child Experience**	**Themes**
P1	Female	Chemistry	Positive	Engaging, Communicative, Motivational
P2	Male	Chemistry	Positive	Active, Participative, Engaging
P3	Male	Macroeconomics	Positive	Active, Engaged
P4	Male	Human Geography	Negative	Top-Down, Low Support Level
P5	Male	Computer Science	Mixed	Feedback, Support, Energy, Excitement
P6	Female	Psychology	Positive	Dialogue, Guidance, Support
P7	Female	Human Geography	Positive	Engaging, Interesting, Humor, Support
P8	Female	English Literature	Positive	Engaging, Higher Expectations, Acknowledgement
P9	Male	Calculus	Mixed	Concerned with Support, Workload, Challenges
P10	Male	English Literature	Positive	Supportive, Engaging
P11	Female	Physics	Negative	Inaccessible, Lack of Support
P12	Female	Spanish	Positive	Supportive, Interactive, Exciting, Goal-Oriented

Table 6: Persona Model for Parent-Student Experiences

5.6 Key Challenges Regarding the Methods

The primary unforeseen challenge was that when I conducted these interviews, everyone was anxious and focused on the COVID-19 pandemic (many of them still are). As such, I needed to be very empathetic to the circumstance that every parent was still trying to ascertain

what COVID-19 was all about, whether their children and spouse (or significant other) would be ok, whether other relatives and friends would be all right, and other aspects of life might be suddenly changing/upended and transformed. With such a high amount of health-related concerns and pertinent life adjustments/transformations, I needed to be particularly careful, sensitive, and respectful about how I conducted the interviews. This included not taking up too much time, yet trying to obtain sufficient meaningful data from each parent. Within this context, from an ethical perspective, I always emphasized the option of discontinuing the interview or re-scheduling it at a more convenient time.

Almost all of the phone interviews lasted for at least ten minutes. I kept the process straightforward and fully respectful by emphasizing to each parent that I was interested in the stories students shared about their most exciting and interesting learnings or other meaningful experiences related to teachers and learning in AP courses. I began with question 1: What are some of the notable narratives or stories about classroom experiences in AP classes which your daughter or son has shared with you? This was fully in accordance with my IRB approved questionnaire. If the parent indicated comfort and willingness to do so, I then proceeded with the additional 6 questions. No parent needed more than the first prompt to start conveying the pertinent information, which turned out to be a "treasure trove" of qualitative data. I was highly attuned to the most comfortable time to end each interview, and have used alternative names in the data files for purposes of confidentiality.

Due to the health and safety risks of the COVID-19 pandemic, all Rosenblatt classes were transitioned to an online format (via Zoom), which started on Thursday, March 12. While 7 of the interviews occurred in one 10 to 20-minute discussion, 5 of the interviews were conducted in two parts. This is because 5 of the earlier interviews occurred in late February of 2020, before classes transitioned online. As such, I politely and empathetically followed up with these parents, having the same questions in mind, and, as part of that context, was curious what additional thoughts, if any, the parent might want to share about their child's reaction to the online format of classes. The follow up interviews were conducted two weeks after the online courses began -- on March 26 and 27. In essence, a “natural experiment” transpired where 5 interviews can be considered pre-COVID-19, relevant to the first part of the interview, while the others can be considered post-COVID-19.

5.7 Data Analysis

The results of the interviewing procedure involved 12 interviews approximately 10 to 20 minutes in length that were recorded digitally and transcribed using Google Voice audio processing online software. The software analysis drew distinctions between the vocalizations in the recordings, thereby separating the interviewer from the interviewee. As a result, the only post-processing work required for this study was a question-based, theme-specific grouping of the responses prior to the data analysis procedure. King & Horrocks (2010) acknowledge that due to the varying character of the content generated by each individual interview, comparative analysis is confronted with the lack of interoperability and direct comparability of the responses. As a result, appropriate qualitative analysis methods need to be applied to distil the evidence in relation to its central thematic elements, and then combine those themes in order to generate a

representative thematic code that can be used to analyze and interpret the findings (King & Horrocks, 2010). Merriam (2015, p.206) refers to this approach as "analytical thematic coding" and describes the following core stages of evidential distillation:

1. Stage 1: Grouping and Division: The separation of the participant responses according to individual questions and subsequently into categorical themes.
    a. Themes: There were three central themes developed during the interview construction process including motivation, engagement, and communication.
2. Stage 2: Line-By-Line Analysis: Once all results have been grouped by question, then a line-by-line analysis can be conducted to both hand code and digitally code (Using NVIVO) the results according to their overlapping thematic elements.
3. Stage 3: Frequency Analysis: The output of the coding exercise is a list of themes which need to be assessed for similarity and then regrouped in order to form a master list of major and minor thematic codes.
    a. Operations: The NVivo software applied semantic reasoning to the grouping and frequency analysis of the thematic codes, creating a declining frequency model that allowed for the identification of high-frequency coded outputs.
4. Stage 4: Inductive Analysis: To facilitate a comparative content analysis, this study has relied upon the representative feedback from the individual parents, as well as a comparative analysis of these storytelling findings with the central thematic code.
    a. Reporting: Both majority and minority perspectives were identified and reported to maintain objectivity and to reflect a full and representative report on parent-student experiences.

As an analytical tool, Ozkan (2004, p.601) acknowledges that NVivo is a "powerful resource for sophisticated data coding," allowing researchers to distil varying participant responses into their overlapping thematic elements. By organizing the interview outputs in NVivo's document browser, the results to each individual question could be coded and compared separately, reducing the data to its most granular dimensions, then allowing for comparison across the parental feedback. The grouping modules and visual mapping resources afforded by the built-in analytical resources in NVivo allowed insights to be drawn from within the textual relationships, offering meaningful visual cues that could be used to analyze what Ozkan (2004, p.602) has acknowledged are otherwise "fuzzy" respondent insights and feedback. By adopting a thematic coding framework similar to the techniques employed by Shaunessy-Dedrick et al. (2015), this study illuminated the weight of particular responses which were represented by higher frequency mentions across the parental feedback. By "normalizing" the results (e.g., eliminating plurals, erasing redundancies, finding a common verb or descriptor), this analytical process ensured that the outputs were indicative of a comparable thematic code which could be used to discuss the overarching themes associated with each of the question grouping categories.

Due to the lack of direct comparability between responses (e.g., word for word), this inductive analytical approach involved a combinative process of thematic review, comparison, and weighting that resulted in key responses introduced as a form of storytelling and discourse comparison. The associative value of storytelling in relation to thematic inferences and a common grouped discourse was indicative of the transferability of storytelling and intersubjectivity identified by Gallagher (2008) as a representation of experiential interpretations. As each of the parents in this interviewing process was responsible for at least one student enrolled in the RHS AP program at the time of the research process, the similarities and dissimilarities of the responses were viewed as an important revelation to the current investigation. In fact, Shaunessy-Dedrick et al. (2015) recognized that in order for educators to understand the strengths and weaknesses associated with AP education programs, there was a need for a common discourse to be assessed across stakeholder groups, comparing the range of responses with the idealized outcomes (e.g., successful students). This approach included the coping and engagement strategies responsible for improving overall student performance. The approach applied to this study has leveraged this form of comparable lens to extrapolate the storied value and insights of these parent reports which not only illuminates the weight of at-home support in student resiliency, but reports those honest insights which students might readily disclose to their parents, but might otherwise resist communicating at school.

5.8 Ethical Concerns

The empirical basis of this study was derived from primary evidence collected from the parents of Rosenblatt High School students. As a result, the underlying ethical responsibilities associated with this research were significant, drawing upon several targeted control measures to limit the potential for participant harm, to ensure objectivity and limit bias, and to yield meaningful and valuable insights (Punch & Oancea, 2014). Bryman (2015) acknowledges that ethical integrity in empiricism begins with the acknowledgement of the potential for harm and negative impacts, allowing the researcher to design structural controls that can protect participants from any adverse consequences. For this study, all parents participating in the interviewing process were asked to first provide informed consent which consisted of the distribution of a standardized letter which outlined the participants' rights, the topic of study, and the expectations of the study, see Appendix C (Hammersley & Trainou, 2012). This document not only highlighted the central focus of this research and the themes that would be explored within the questioning, but it outlined two primary rights that were designed to protect the participants from harm throughout this research process: anonymity/confidentiality and at-will participation. Babbie (2015) acknowledges that by allowing participants to respond anonymously, they are encouraged to provide more detailed, subjective responses to the interview questions, circumventing any potential fear or concerns regarding exposure and rights violation. The at-will status of this process ensured that the interviewing process would be flexible and allow the participants to exit without consequence should they feel that the questions were invasive or unfair (Hammersley & Trainou, 2012).

In qualitative research, the subjectivity and variability of the participant responses has the potential to threaten reliability, broadening the potential range and scope of responses beyond their meaningful focus and objectives (Flick, 2009). Concerns regarding credibility,

representation, and transferability emerge in relation to the selective representation of individual responses or weighted themes, and the exclusion of other incongruous feedback (Flick, 2009). For the current study, the adoption of the structured analytical approach to thematic coding was used to confirm the reliability of the participant responses and to ensure that the outcomes were representative of a broader, comparable perspective that would be considered valuable in similar, educational settings (Merriam, 2015). Given that the underlying characteristics of validity were inherently based upon credibility and trustworthiness, efforts to preserve objectivity and to present parent responses accurately and consistently ensured that the results were intrinsically valid and "topically qualified" (Seidman, 2006, p. 256). Through a triangulation of the empirical findings with the underlying conceptual and theoretical models and propositions introduced in the literature review, this study has extended the intrinsic value of these findings to reflect a broader condition of generalizability within the context of pedagogy and its effects on student engagement (Maxwell, 2005).

5.9 Summary

This chapter has provided an in-depth overview of the methodological selection process and outlined the empirical techniques that were used to collect and analyze evidence related to student experiences with AP learning at RHS. The qualitative interviewing techniques utilized for this study were based on the exploratory assessment of factors shaping student motivation and engagement in these critical, but often challenging high school courses. The following chapter presents the results of these interviews in their entirety, synthesizing these stakeholder observations into representative models of student development opportunities and support.

Chapter 6: Data Presentation and Findings

6.1 Introduction

As outlined in the prior chapter, this research has focused on parental narratives regarding students' shared stories about their experiences in AP classes at RHS. By grouping the interview questions according to three central themes (i.e., communication, motivation, and engagement), this investigation has focused on students' sharing of information with their parents and the affective nature of stakeholder influences on student AP learning experiences. The following sections introduce these findings, apply a variation of analytical techniques to the extrapolation of thematic indicators and significance, as well as demonstrate the range of overlapping and inconsistent experiences and perspectives reported through this comparative narrative review.

6.2 Interview Findings

The following sections distil the interview findings into the three central themes of communication, motivation, and engagement. Through a comparative review of the major thematic elements and the direct parental feedback, these findings highlight responses to each of the individual interview questions and provide a breadth of stakeholder feedback regarding student-reported experiences, perceptions, and expectations in AP courses. All student names have been eliminated from the responses by adding the indicators 'My Son' or 'My Daughter' to protect from potential identification, and any teacher names or indicators have also been eliminated from the responses.

6.2.1 Central Theme: Communication

Q1: What are some of the notable narratives or stories about classroom experiences in AP classes which your daughter or son has shared with you?

Major Thematic Elements: Activities, Engagement, Participation, Communication, Enjoyment, Humor, Different, Personal, Support, Immersive

The parental narratives surrounding student experiences in AP courses were either a reflection of positive student experiences and storytelling or they were defensive and frustrated, emphasizing a subjective sense of protectionism that highlighted parental concerns about teacher behavior or course experiences. The following are two positive stories that outlined the creativity and variations in teaching strategies adopted by these AP teachers, and demonstrated the importance of the social dimensions of a higher-level learning procedure.

P10:

I remember the lesson on Shakespearean sonnets because my son was very embarrassed to think that he was going to have to read something that he wrote in front of the class. But, as my son said, the teacher broke them up into small groups and had each student write a line of the poem, and then combine it together like a MadLibs page. Then they divided them up further across the groups and put them all together into one long poem. Then each student stood up and read someone else's line, and by the end of the class they were all laughing hysterically. There was learning in there. As my son said, they understand form and flow and what happens when you lack consistency in your ideas. And they worked together on something, productively.

P12:

There was supposed to be this long, pretty scary final exam in my daughter's AP Spanish course that she stressed about for weeks. But starting two weeks before the final, they stopped speaking English at all and everyone sat in a circle in the classroom and they talked through the vocabulary and the concepts out loud, in Spanish. Then the teacher had them talk to each other as though they were on a vacation or a cruise and everyone had to try to get something different from their peers, a drink, directions, even an apartment. By the time the final came, she was practically dreaming in Spanish, and lo and behold, she passed. Now she's planning a summer trip…once things settle down…to Spain or Mexico to practice.

Although most of the parent stories were positive, the inclination towards defensiveness in response to teacher actions or behaviors was repeated across several of these second-hand stories.

P4:

We didn't have any experience with AP courses, but after about three weeks and a lot of frustration, it just seemed like something was wrong. We went in to try to have a conference with the teacher, but he looked at us like we were being unreasonable. He told me that my son wasn't paying attention in class, wasn't taking notes, and really didn't seem interested in Human Geography. He actually recommended that my son drop the course so it didn't have a negative impact on his record. When I asked him about it later, he told me that the teacher just stood at the front and talked at them every day for the whole 45 minutes of class. He didn't really let them ask questions, he used a projector and a study guide and just went lesson by lesson. Then he gave them tests. I asked the teacher if this was normal in an e-mail and he told me that this was AP and what did I expect? My son switched out to a different teacher and the class was completely different. He did so much better. So whose fault was that?

P11:

My daughter came home practically in tears, told me she'd failed her quiz and just didn't get it. I asked her what she didn't get and she used the old 'everything, mom' statement, so I pressed more. She told me that the class was too fast, that everything

> *was just flying at her and she was missing a lot of the skills in math needed for the formulas in AP Physics. I asked her if she had gotten help or went in for extra support, and she told me her teacher's office hours were during another class she already had. I encouraged her to try to figure something out over e-mail, and she told me her teacher wasn't really willing to communicate much outside of class. What is that about? Anyway, she couldn't get the support she needed, so she dropped the class. Switched over to AP Bio since it was still early in the year, and that has gone better for the most part.*

These insights highlight two basic concerns raised by the students: the format and pedagogical structure of the course itself (e.g., traditional, lecture-driven, iterative), and the level or depth of instructor support outside of the lessons themselves. There was a consensus among the parents who discussed negative AP experiences that students were frustrated by either the pace of the course or the lack of tutor support. It is notable that in the case of the two negative experiences conveyed by parents, there was also a sense of agency, taking action, and seeking to empower their children by switching courses or course sections to find a better experience in an AP course. We also see, particularly in the negative examples, that the parents become emotionally invested in the experience, and in a sense, actively part of the storyline or narrative, rather than simply listening and responding to stories shared by their children after the fact. The P4 example is also directly relevant to question 7 on the questionnaire in terms of the parent having met the AP teacher and providing their impressions of the teacher based on direct experiences.

Of interest, is that P7 and P4 described disparate experiences that their children had with AP Human Geography teachers in the same academic year with one experience being very negative and stressful, while the other was quite positive and inspiring. These parents referred to different sections and teachers of AP Human Geography, which has the largest enrollment of any AP course at RHS, and often has two sections in the same year taught by different teachers. Perhaps most intriguing, is this data suggests the significant difference that a teacher can make in the nature of class dynamics, the type of support for students, and the way in which a student is either discouraged and despondent or energetic and inspired – given the same subject matter and curriculum.

For instance, P7 described her daughter's experience with the AP Human Geography teacher that the student discussed by P4 eventually switched to in the following way:

> *We've talked at length about her experiences with the interactive activities that her teacher has used to make learning fun. She really enjoys the humor and the enthusiasm that her teacher uses to keep things light in the classroom. She told me about how he used a specific example of ritual ceremonies used by medicine men in tribes in Equatorial Guinea to protect against illnesses and death. Then the next day, they came into class and he was dressed up as a medicine man and stayed in character almost the entire class. Not only was it informative, but she hasn't forgotten the information at all. I feel like those activities where she gets to participate, or where things are very interactive, she is much more invested in the lessons.*

To further illuminate the nature of parental responses to question 1, the following examples were interesting.

P8 suggested that:

At the AP level, they expect more from the students, treat them more like adults, like college students, but where was the preparation for this type of learning? They didn't have this before, so they either excel at it now, or they struggle until they figure it out.

P9 reflected that:

There needs to be a higher level of teacher communication and one-on-one support for students at this level. This is not about an educational curve or group achievement, it is about individual outcomes, and that means direct communication and feedback.

Similar to this perspective of teacher-driven feedback, P5 mentioned that:

My son has been really surprised by the amount of feedback that the teachers give in AP courses; before, it was about grades and generic scoring, but here, you actually see comments, see opinions, and you have a chance to defend yourself if it is appropriate.

This active participation in self-advocacy was repeated by several parents who perceive the net value of an advanced, self-directed, teacher-supported system as the "*evolution of modern education that should have happened decades ago"* (P2).

Q2: Did your son or daughter ever come home and tell you about some lesson or class they thought was really great? What did they say about it? Did they talk about the teacher and what the teacher did?

Major Thematic Elements: Excitement, Engaging, Discussion, Motivated, Repeating, Humor, Emotion, Support, Communication, Peers

Although the parents conveyed several valuable stories regarding positive student experiences, it was evident that there were two intersecting considerations regarding positive feedback: the willingness to discuss school experiences in the first place and the openness of the student stories regarding class-specific experiences.

Highlighting this challenge, P1 recognized that:

If I can get my son to take five minutes and tell me anything about his day, I'm happy. Most of the time he is just blowing through from one thing to the next, and we only really talk when there's something wrong.

Similarly, P6 articulated that:

> *I am pretty much only going to hear about things in any detail when my kid's upset, other than that, she just wants to keep on powering through on her own, and I think that's a pretty healthy way to think.*

From the perspective of those parents who have received positive feedback from their students, there were several stories that illuminated the dynamism and adaptive advantages of the AP curriculum. For example, P7 reflected that her daughter was initially apprehensive about completing an AP course at an early stage in her high school career (i.e., Freshman year). However, once engaged with her teacher's unique style of humor and lighthearted teaching approach, such apprehensions dissipated:

> *She left the house afraid and apprehensive and came home excited and energized. She talked about how her AP Human Geography teacher had used the Marx Brothers as a comedic approach to liven up dry and bland material on the Industrial revolution. Instead of just reciting facts, he used humor to keep the class interested. She laughed really hard as she described his physicality and his interaction with the students, like he was a showman or a circus performer—just immune to the self-consciousness that makes teachers seem cold and distant. More importantly, she actually recited the information and talked about how she was already planning a final report on the same topic because she was just so connected to the stories and people of the period. I don't think I've ever seen her so excited about any subject or class or teacher.*

Considering other positive classroom experiences, another parent, P2, recounted a chemistry lab experiment which excited her son, and the role of the teacher in encouraging active learning:

> *My son talked about this big upcoming experiment for weeks. He was learning how to mix chemicals and create this amazing chemical reaction and they were going to do it on a huge scale in the commons area. His teacher put up signs warning of some impending biohazard and everyone dressed up like zombies for the actual experiment. I've never really seen him get into something like this, but he tells me all the time that AP Chemistry was "awesome." He says his teacher is "really cool" and as long as they stay safe, she 'lets them try things out.' He always says 'For Science' in this big voice which tells me that he is parroting something from class.*

This form of idea or value-based communication was replicated across the feedback from other parents, as P5 described a "*class mantra that my son is always reciting right before he sits down to study,"* and P3 recognized that:

> *There's a club or team mentality that my son has when it comes to his AP Macroeconomics course; it's like something from Wall Street; Bid Low, Sell High, or something financial.*

In addition to direct spillover effects from classroom communication, there were positive solutions offered through course resources that were identified by these parents as things that were advantageous about AP courses at RHS. For example, P10 highlighted an "*online support group that offers my son somewhere to get help if he has a question outside of class.*" Contrary to the insufficient support experience conveyed by P4 and the lack of teacher accessibility, P5 emphasized that:

> *My son's Computer Science teacher is an absolute doll, she always hands out personalized notes to the students or sends them home with something to investigate on their own and report on for extra credit; he just loves the direct attention and little extra challenges.*

This commitment to a multi-layered and diversified educational experience formed the basis for the parents' overall interpretation of positive communication and support within these AP courses, while limited interactions, narrow curricula, and emphases placed on structure and traditional schooling were viewed as damaging and oftentimes detrimental to students' learning processes.

6.2.2 Central Theme: Motivation

Q3: What seemed to matter to your daughter or son about their teacher's actions, attitudes, emotions, and (perhaps) inspirations in these experiences?

Major Thematic Elements: Action, Communication, Engagement, Participation, Authority, Positive Influence, Environment, Technique, Support

P8 reflected that:

> *She told me the teacher does a good job of recognizing student contributions, and by acknowledging student feedback and applauding independent thinking, she creates an environment in which students feel comfortable sharing.*

Similarly, P10 observed that:

> *The structure of the course is very different from traditional school; my son enjoys the open discussion and the collaborative learning processes.*

Of note, considering both P8 and P10, in addition to the students being motivated by independent thinking, open discussions, and collaborative learning processes, the parents also referred to the teachers' acknowledging student contributions in a very positive tone as a key factor in motivating further engagement. As referred to by P8:

> *My daughter mentioned a few times that when the AP English teacher makes her feel like a creative question or comment was really important for the lesson it lights up her day.*

In a different AP classroom where a more traditional teaching framework was retained, P1 argued that:

> *She's frustrated with the lack of personal attention and the unwillingness of the teacher to consider anyone else's opinions; I mean, they want them to become independent thinkers, but only if it fits the mold of the curriculum.*

This perspective, coupled with several other observations regarding the "*authoritative voice"* (P4) of one student's teacher and the "*self-importance and posturing"* (P11) of another, revealed a potential breach of expectations or supports that triggered parental and student frustrations. Highlighting this affectation through a student storytelling, P11 mentioned the following:

> *My daughter came home last week very upset. She was livid, could barely get in the door and she was as angry as I have seen her in a while. She had been embarrassed in her AP course for trying to make an argument about an alternative theory. The teacher had called her idea "simplistic" and told her to think more carefully before she speaks about the subject matter. It is unclear what the exact tone of voice of the teacher was. However, it was a shock to me because at the start of the semester she was so excited for the challenge. Now she wants to disenroll, and can you blame her?*

Although this observation was extreme, similar concerns regarding teacher attitudes were raised, as P4 argued that:

> *Why have a challenging course when you are just going to shove more memorization or endless concepts down the students' throats? This should be about the ideas and how you get there in the first place, not just mirroring the right answer because an uppity teacher expects conformity.*

The question raised by these concerns was significant: Is there a different level of expectations in AP courses at the student or parent level and at the teacher level when it comes to knowledge replication and application? For some parents, it was the approach and style adopted by the teacher that made a significant difference.

P2, for example, conveyed that:

> *I think that the energy of the classroom was really important. Even when the teacher was handling some dull material or they were memorizing the periodic table or something basic like that, there was some form of interactive component, a rhyme, a song, something to keep them active in the classroom. These kids are using their brains to push through all these hard concepts, so they need something to break up the monotony of learning. The teacher was particularly good at making the learning something to actually look forward to. I would call it an active approach to teaching. My son just loves his AP Chemistry teacher; he talks about her like she's a superhero or something. It must be the energy and active approach. He can't wait to go to class.*

Offering a similar perspective but in a different course, P8 recognized that:
When my daughter's AP English teacher is willing to dress in theme and adopt an accent to engage the kids in Shakespeare or Faulkner, I mean who wouldn't want to go to class? I even caught my daughter talking to her friends about it on social media…That never happens with school.

The juxtaposition of styles and approaches to pedagogy at the AP level was clear throughout the parental feedback, and for the most part, there is a preference for what P2 identified as the "*active approach to teaching"* over what P4 and P11 identified as an authoritative class management style.

Q4: Based on their stories, did anything stand out for your daughter or son regarding their specific interactions with the teacher? Did they mention any classmates' interactions with the teacher?

Major Thematic Elements: Challenges, Support, Motivation, Encouragement, Emotion, Investment, Engagement, Fun, Humor, Activities

Focusing on a more personal relationship between students and teachers, the responses to this question highlighted a range of direct and indirect teaching strategies.

For instance, P9 conveyed that:
My son was really falling behind in AP Calculus; he was just missing the core concepts and felt like he was swimming upstream. His teacher took every afternoon for one week and held a group study session; most of the class attended. Now he's excelling and actually excited about the fact that he gets it.

Similar stories were reported when teacher-student interactions were cited, with P1 highlighting a "*heart-to-heart conference with the teacher"* that "*really boosted her confidence"* and P7 reflecting on the "*personal support and direct interaction"* which has "*really helped her to excel in this challenging, but fun course*." The framework of support represented in the parent storytelling consisted of three central themes, including emotional support (e.g., motivating, encouraging, engaging, recognizing, praising), instructional support (e.g., procedural, task-specific, functional, solution-oriented), and organizational support (e.g., notetaking, scheduling time for student questions and comments, agenda following). The following parent remarks distil these insights according to each of these thematic categories:

Emotional Support

P10:
When things grew more challenging, the teacher took time to reassure him of his abilities and his own unique vision. He told me, "Mom, I had a creative bone…now it's a skeleton." Pretty powerful image if you ask me.

P5:
He wanted to quit early on, started to doubt his abilities, but she sat him down and asked him to think about all the games he loved playing, all the software he used, and then reminded him that he was the next generation of developers. It really boosted his self-confidence and his motivation.

P8:
When she felt stuck on a short story, they had a brainstorming session, threw out all kinds of ideas and characters. Then he pushed it back on her and reminded her that "You have the dough, now use it to give life to your characters."

Instructional Support

P1:
There are a lot of complex procedures in chemistry, and a knowledge base that means that the students need to figure out the sequence or combination in advance before they blow up the classroom. Her teacher walked them through the procedures, then challenged them to do it on their own, then reinforced the expectations over and over again. Now things are structured and focused.

P12:
A lot of AP Spanish is vocabulary and applied language. So when my daughter would have questions, the teacher always challenged her to work through it in Spanish. He asked her to watch telenovelas and even set up Skype calls with native Spanish speakers in Argentina and Mexico. It was learning through immersion from the classroom.

P7:
I've heard a lot about the role of humor and the participation of students in the learning process. It's very effective and engages the students in the learning. When they are at home, working on projects from class, the same type of positive attitude brings sanity to the workload, and it is a powerful effect.

Organizational Support

P10:
Success in these AP classes is about organization; so I have heard a lot about how teachers are structuring the curriculum and giving students a foundation to keep them organized. It's a discipline, not something that you just know innately.

P3:
Without being organized, my son would never have gotten through this course. He relied a lot on structured note-taking, on a formal agenda, and on organized research. All of these were skills that he developed over the first month of classwork.

P6:
There are those students that are naturally organized, and then there are ones like my daughter who think they will just remember everything. I've seen a lot of habit changes over the past semester, and it's had a strong impact on her work ethic.

The breadth of support described across the participant feedback was multi-faceted and included both direct and indirect resources. Direct support provided by the teacher involved one-on-one communications, group learning exercises, and a range of organizational or instructional solutions that could be applied to regular coursework. A core concept that most parents referred to regarding organizational support was the teachers' willingness to schedule sufficient class time for students to ask questions or make comments about materials they were not sure about, or to contribute creative insights about a topic being discussed. Indirect support included those emotional and cognitive reinforcement solutions that improved the students' self-confidence and metacognition, affecting academic discipline and motivating improved learning activities.

6.2.3 Central Theme: Engagement

Q5: In general, what kinds of AP teachers are your son's or daughter's favorites? How do they describe them? What classes seem to cause the biggest issues for them?

Major Thematic Elements: Support, Encouragement, Energy, Passion, Instruction, Guidance, Direct, Communication, Engagement, Motivation, Openness

The feedback to this question drew upon similar themes from the prior responses, highlighting the advantages of an affiliative pedagogical relationship that could support, motivate, and engage students in achieving academic excellence.

P5 conveyed that:
I think the best teachers are those that motivate students to keep learning outside of school, those that encourage them to take their knowledge and apply it to their own interests and explorations. At least, this is what has been reinforced by my conversations with my son.

Similarly, P8 reflected that:
The best teachers create lifelong learners, they inspire students through energy and a general passion for learning, and they set an example that can used in the future.

Even though for P8 there was not a direct reference to remarks by their child, the comments were quite informative. Beyond these positive examples of what could be expected from a favorite or exemplary teacher, P7 offered the following insight of how her daughter's teacher exhibited a positive and engaging influence in the classroom in a different way:

> *Beyond simple things like humor and energy, I think that there is a humanity in teaching that is demonstrated by those who our kids value the most. My daughter's teacher, for example, has gotten so passionate about a topic that he's practically broken down and cried in the classroom. Although some students might be turned off by the teacher's emotions, he's talked about these deep social issues with the kids like they are his peers, and most students respect him for it.*

A similar passion for teaching and learning was expressed by P2 who acknowledged that:

> *Chemistry is not always fun, and in fact, it's a lot of work. So you have to find a way to keep the kids interested and entertained. This means active lessons and participative dialogue that encourages students to open up and actually get invested in the lessons.*

While I ideally hoped to hear P2 articulate more of their child's perspectives based on their conversations, a characteristic of the interview dynamics was that the parent decided to offer their insights and reflections a few times.

The feedback regarding favorite or highly supportive teachers emphasized the critical role which engagement plays in shaping student interest and investment in academic endeavors. P10 pointed out:

> *My son's favorite teacher was also the one who taught him the most about the things he was passionate about; it works both ways, passion breeds passion.*

Contributing to student motivations and supporting interest in positive educational outcomes, these forms of active approaches create a justification for engagement, one which encourages students to participate in the learning process because they are interested in fulfilling specific objectives, meeting expectations, or gaining new knowledge for personal reasons. Within this context, P6 described the following:

> *My daughter's favorite teacher was the one who was most open to discussion and collaborative problem solving. She got rid of this authority-learner type of distinction and she challenged the students to ask questions and build up their knowledge from the ground up. My daughter told me that other kids had reported negative experiences in the same course taught by other teachers because there wasn't the same amount of open dialogue and participation.*

While these findings supported the role of a participative classroom in motivating student engagement, some courses, such as AP Calculus, did not yield the same level of energized or participative discussion.

P9 recognized that "*by the end of the course, my son was generally frustrated with everything, including the teacher*." The parent's observations suggested that the weight of the workload, coupled with the "*mostly lecturing and going briskly approach adopted by his teacher,"* led the student to describe a learning process that was "*frustrating and really demanding."* Ultimately, this resulted in a passing outcome that was barely adequate and largely demotivational (P9).

Q6: Was your daughter or son interested in the subject matter to start? Have you noticed that they are exploring more on this subject on their own?

Major Thematic Elements: Future, Focus, Interest, Motivation, Engagement, Support, Inspiration, Excitement, Investment, Burden, Challenge, Achievement

Across the participant feedback, there was a pervasive belief that students were interested in the subject matter to start. Nonetheless, the outcomes of the AP experiences were mixed, with most parents reporting positive results, but some parents visualizing an uncertain academic future. Insights from these parent stories highlighted the following:

P5:
My son was an avid gamer. It was logical that he pursue AP Computer Science, it is the one thing that he is passionate about, and he's very good at figuring out code.

P8:
My daughter always loved to write. Stories, poetry, plays. She was so excited to get into the AP course. She had to write a personal essay to even get approved. She is going to follow this path into college.

P9:
My son has always been infatuated with numbers and the logical flow of mathematics. The challenge presented by the AP Calculus class, however, has had questionable effects, and I'm not sure if he is going to continue in this field in the future.

The feedback also revealed a distinction between meaningful study and busy work or schooling for academic's sake. P7 reported that:

My daughter has visualized a future in this field, even developed long-term research plans that are based upon the learning she has done during the course; it is inspiring to see.

However, for parents such as P11 and P4 that reported negative classroom experiences, concerns were raised regarding the "*threat to student sanity versus the net academic benefits in the long run"* (P11) or the "*consequences of failure in Senior year"* (P4). These concerns focused on the potential cognitive and confidence-based challenges for students, as they are confronted with possible failure or the difficulties arising from AP courses in general.

Whereby most teachers were described as providing a positive learning environment for the students, P9 cautioned that:

> *When teachers impose lessons or pass down busy work to students that don't support or contribute to the lesson, they are suggesting that their time is not valuable; tell me what high school Senior has extra time to just give away to irrelevant work?*

There was a firm expectation of transferability, whereby students in AP programs would consistently and effectively apply their learning to future academic study, as highlighted by P1:

> *The opportunity to learn about a possible career field at this age is remarkable. Do I think that my daughter is going to be a Chemist? Maybe. Do I think that her passion for Chemistry as a field of study is going to give her an advantage in college? Absolutely. This experience was hard, but rewarding, and I credit the teachers with creating a really positive learning environment for our students.*

As another point, when I tried to triangulate the aforementioned results with teacher notes on lesson plans and syllabi, the limited notes that I had access to reinforced many of the above observations based on parents' interview data. Some of the noteworthy comments were that using dynamic PowerPoint presentations, as well as showing brief but highly entertaining videos, were especially effective for engendering creative questions and comments from students as part of active, responsive teaching and learning. This was particularly the case for AP Human Geography, AP English Literature and Composition, AP Chemistry, and AP Physics. Moreover, teachers in these subject areas noted that when they provided summary materials to students which highlighted in bullet point format, or another clearly structured format, the key points from long reading assignments or complex science material or other challenging concepts presented in class, students responded quite positively. According to the teachers' notes, there was a high return on investment from these efforts, as students understood advanced, nuanced concepts more rapidly and were more inclined to contribute creative questions and insights.

Overall, I deemphasized question 7 in this presentation of data and findings (i.e., "Have you met the teacher? If so, what was your overall impression of the teacher?"), since only a few parents allowed sufficient time to answer that question during interviews. Moreover, it focuses on the parents meeting teachers themselves, including their personal impressions of the teachers, rather than stories shared by their children.

6.3 Thematic Analysis

To confirm the thematic codes identified in a question-by-question analysis, the full scope of the empirical results was analyzed within NVivo's database management toolkit. Figure 7, for example, presents the weighted percentage of the most identified words throughout the participant responses, with common indicators such as students, teacher, and class mentioned with the greatest amount of frequency.

Word	Length	Count	Weighted Percentage	Similar Words
students	8	77	4.16%	student, students, students'
teacher	7	71	3.83%	teacher, teachers
class	5	70	3.78%	class, classes
helpful	7	26	1.40%	help, helped, helpful, helps
participate	11	26	1.40%	participate, participated, participating, participation
zoom	4	26	1.40%	zoom
year	4	22	1.19%	year, years
really	6	22	1.19%	really
much	4	20	1.08%	much
learning	8	18	0.97%	learn, learning, learns
materials	9	18	0.97%	material, materials
feel	4	17	0.92%	feel, feeling, feelings, feels
better	6	17	0.92%	better
online	6	17	0.92%	online
senior	6	16	0.86%	senior, seniors
pandemic	8	16	0.86%	pandemic
felt	4	14	0.76%	felt
time	4	14	0.76%	time, times
like	4	14	0.76%	like, liked
engagement	10	14	0.76%	engaged, engagement

Table 7: NVivo Analysis

When distilled into a visual representation, Figure 10 provides a word cloud which reflects the relative frequency of words mentioned in the parent interviews text by applying larger fonts to those words that were used most often in the participant responses. Similar to the results in Figure 10, this visual model confirmed that the words students, teacher, and class were the most often conveyed. However, in addition to these common, high-frequency words, a spectrum of secondary themes with greater construct value for the current study, such as participation, encouragement, responsiveness, motivation, confidence, and attentiveness, can be identified, forming a weighted frame of reference. These constructs highlight the relationship between parent-student experiences and teacher support strategies in the classroom.

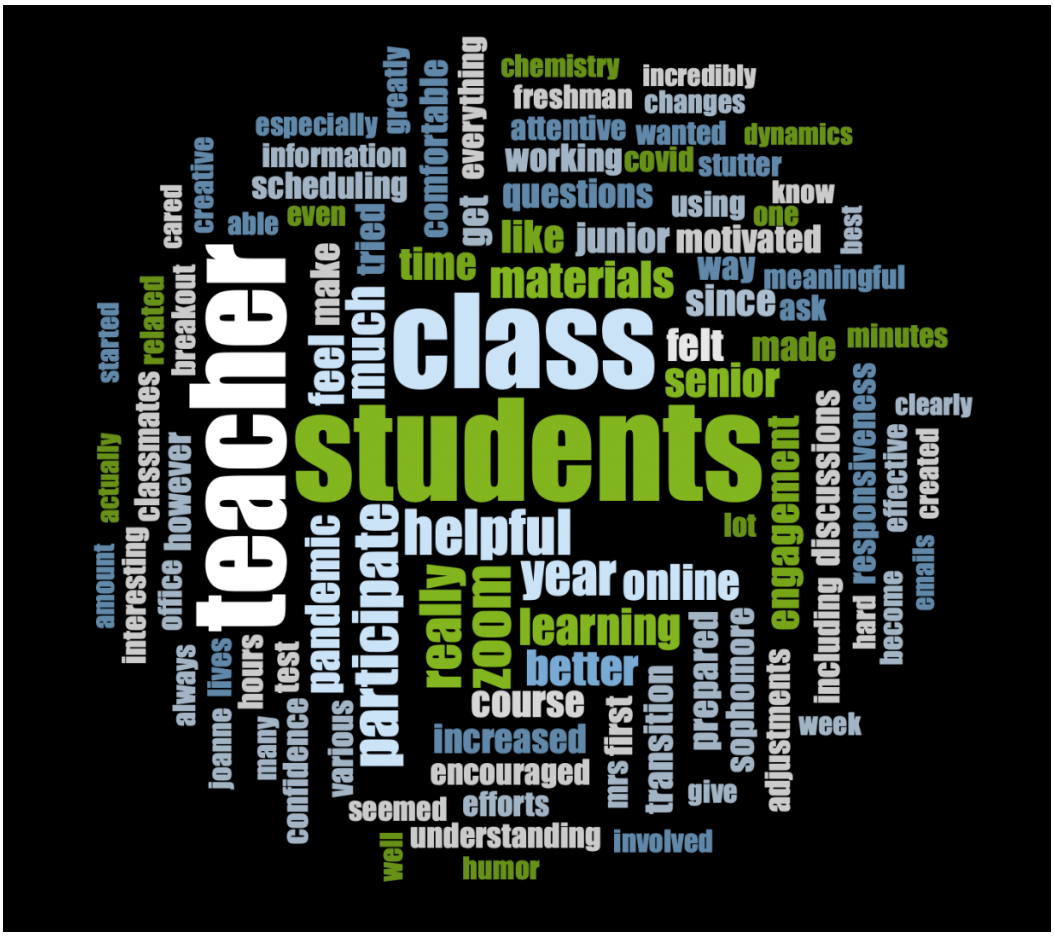

Figure 10: NVivo Word Cloud

Further extending this thematic analysis to highlight the range of variants emergent within the qualitative findings, Figure 11 provides a hierarchy model which includes both positive and negative themes reflected across the parental responses, such as low and high stress, low and high confidence, and low and high enthusiasm. The importance of this model is that the relative weights applied to these concepts by the analytical module indicated a frequency-based weighting, thereby identifying positive indicators, such as low-stress, high confidence, high enthusiasm, and highly supportive as the most common indicators of parental perceptions and interpretations based on discussions with their children. This output confirms the overall thematic interpretation of the positive or negative perceptions articulated by the 12 parents in response to the 7 interview questions presented in Appendix D.

Figure 11: NVivo Conceptual Hierarchy Model

Finally, when subdivided into a weighted, visual sunburst diagram, see Figure 12, the frequency effects of positive thematic representations emerge, with key variables such as enthusiasm, participation, confidence, responsive, supportive, and inspiration assuming primary positions within the circular visual. While other variables such as stress are identified within this model, when the weights from Table 7 and Figure 10 are applied back to their interpretation, it is evident that the weighted representation by the parents is more likely to be positive, with indicators like low stress, high enthusiasm, and high confidence represented as positive outcomes of classroom support and student engagement.

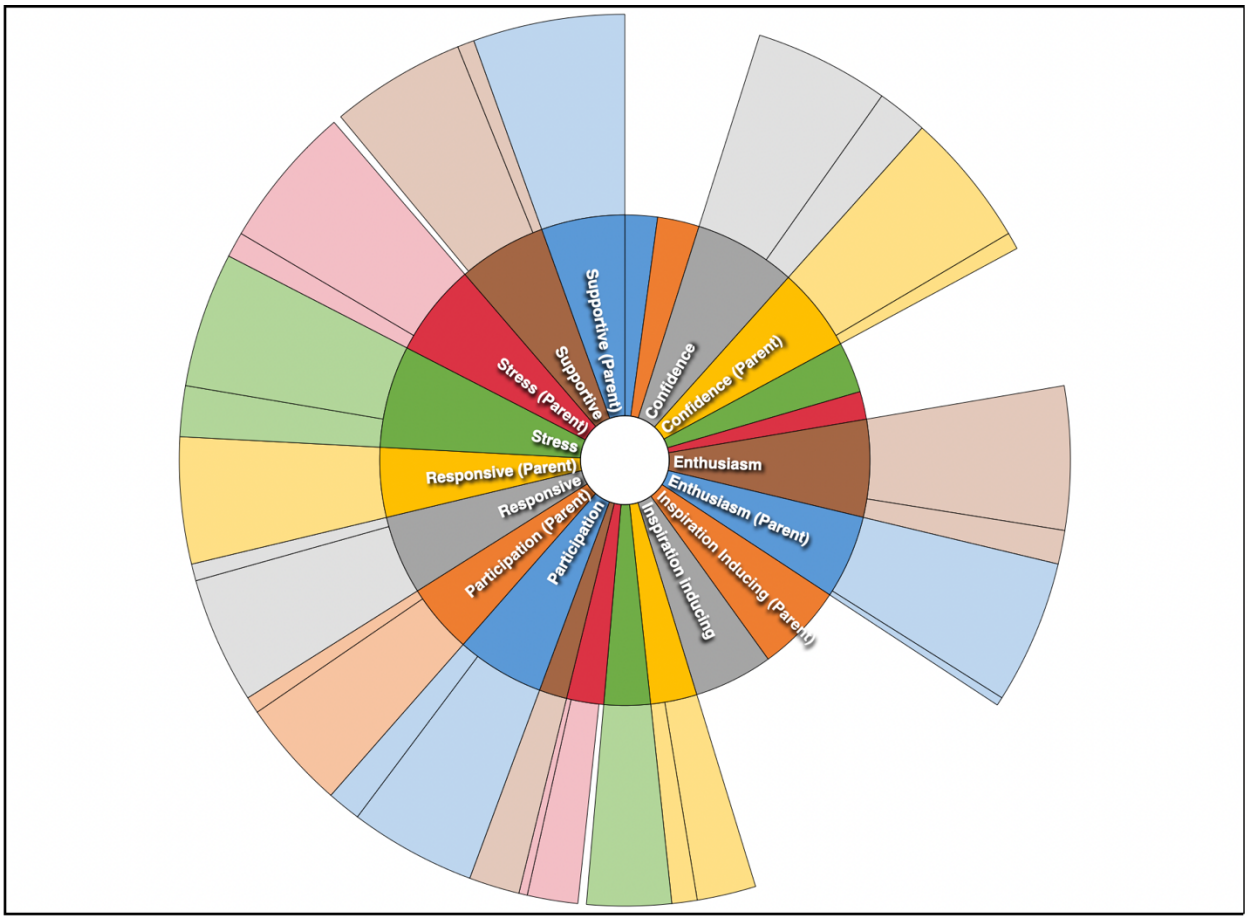

Figure 12: NVivo Sunburst Diagram

6.4 Thematic Assessment Model

Focusing on the parental narratives and the student-reported pedagogical strategies with the greatest value, weight, and influence in AP classrooms (based on parents' perceptions and interpretations of their conversations with their children), Table 8 distils the interview findings into four teaching strategies, a range of perceptual responses, the affective manifestation of the behaviors, and the range of short and long-term effects of each approach. This model reveals several overlapping advantages associated with strategic teaching approaches and student-centered pedagogy. First, stress reduction is a critical antecedent to student motivation and engagement in the classroom. When the weight of coursework and course requirements is too great, the likelihood of productivity is threatened.

> In this context, P3 recognized that:
> *When he enjoys the topic or the activity is interesting, then he doesn't stress as much about the expectations or the tests; it is more about the learning and the new knowledge.*

Second, teacher support and encouragement through direct and indirect channels is critical to student development.

For example, P1 reported that:

> *When your daughter, a child who has never really talked about school with any form of enthusiasm, comes home and says, "Dad, guess what, my teacher thinks that I can do," or that "my teacher called me up to the front to demonstrate the technique," and this is a positive thing, then I feel like the approach to school is changing for the better.*

Finally, the strategic review and analysis revealed that there is a need for consistency and sustaining support in order to ensure that students achieve long-term benefits from a more interactive and engaging learning environment. Both P5 and P7 recognized that their students were likely to pursue careers in the same subject areas they had taken for AP courses, a finding that suggests the weight and affective value associated with these courses. However, other parents, such as P11 and P4, who observed negative experiences, indicated that their students would likely diverge from such pathways, and maybe even experience a decline of their overall academic confidence and performance. P11, for example, conveyed that:

> *My daughter was so completely stressed and overwhelmed during this course that she couldn't get anything done in any class; she would spend all her time on AP work, and then fall asleep with tears of frustration on her cheeks, without getting other assigned work done. All of her grades suffered and it has damaged her entire academic experience.*

Citing the lack of support and the lack of engagement associated with courses like AP Physics or Calculus that require significant procedural learning, it was evident from these findings that the conditions of instructional and organizational support needed to fulfill student achievement were lacking within this pedagogical infrastructure.

Teaching Strategy	Student Perceptions	Manifestation	Short-Term Effects	Long-Term Effects	Insights and Explanations
Humor	Positive	Task-Specific	Motivational, Encouraging	Supporting	Teacher use of humor is welcomed by students and humanizes the learning process, even during difficult lessons
	Supportive	Relaxing, Intervening	Confidence-Building	Stress Reduction	
	Engaging	Directional, Encouraging	Effective Communication	Confidence-Building	
Emotional Support	Encouragement	Recognition	Cognitive Influence	Motivation, Engagement	Through direct and indirect emotional support, students gain confidence and commit to personal achievement
	Driving	Communication	Improved Focus	Commitment, Goal-Orientation	
	Acknowledgement	Identification, Confirmation	Engagement, Confidence	Self-Efficacy	
Energetic Presentation	Enjoyable	Interactive	Stress-Reduction	Behavior-Shaping	Increased classroom energy reduces stress, lightens the burden of work, focuses students, and encourages openness to task completion
	Motivating	Inspirational	Improved Focus	Goal-Setting	
	Encouraging, Thrilling	Driving, Investing	Task Completion	Career-Development	
Participative Environment	Supportive	Encouraging	Participation	Confident Speaker	Students gain confidence through in-class participation and develop skills to improve communication and idea-sharing
	Engaging	Self-Determination	Task Completion	Self-Efficacy	
	Motivating	Drive, Commitment	Confidence-Building	Active Learner	

Table 8: Thematic Assessment Model

6.5 Summary

This chapter has presented the results of 12 parent interviews that were conducted with parents of students enrolled in AP courses at RHS. These parents have provided storied responses to several targeted questions that focused on student experiences, educational support, and learner achievement. The findings reveal several significant opportunities for leveraging diverse, but overlapping, teaching strategies to motivate students and actively engage them as more productive, participative learners. Moreover, the following chapter will discuss these findings, drawing upon the conceptual and theoretical underpinnings from the literature review to contextualize these findings and analyze the potential opportunities for maximizing student benefits in future AP courses.

Chapter 7: Discussion and Analysis

7.1 Introduction

The parental insights analyzed in the preceding chapter have illuminated several important considerations relevant to AP courses with an emphasis on teaching strategies and student engagement. Through the critical and comparable assessment of the storied perspectives of parents based on conversations with their children, phenomenological evidence describes a range of positive and negative student experiences. The following sections contextualize these findings in accordance with the underlying theories and central concepts that were introduced in the literature review, outlining a pathway model targeting academic excellence and student resilience through improved motivation and engagement.

7.2 Student Motivation and Classroom Achievement

For AP students, there are two motivational benchmarks that were identified within the parental feedback, the initiating motivation (e.g., driving force) and the sustaining motivation (e.g., passion, enthusiasm). In motivation, expectancy theory (Vroom, 1964; Ramirez-Arellano et al., 2018) predicts an orientation of effort and commitment towards those goals or outcomes that offer sufficient student value and have a sufficient likelihood of achievement. Considering the data derived from the parent interviews, as an initiating motivational effect, students are introduced to several affective motivators, including the expected academic advantages of an AP course (e.g., career, college), the expected personal advantages of an AP course (e.g., identity, reputation), and the expected instrumental advantages of an AP course (e.g., learning, passion). Figure 13 distils these relationships into a visual representation of the affective weight of motivation on student achievement, highlighting the degree to which ungratified expectations in academic, personal, or instrumental areas can lead to diluting effects, reduced achievement, and potentially, course withdrawal. While students make personal determinations regarding expectancy and its role in shaping academic motivations, Geiger and Cooper (1995) propose that such determinations are moderated by a variety of external influences, including parents, teachers and peers. Evidence for these influences was introduced through the interviews in relation to a varying spectrum of student support factors. These include both direct and indirect support related to parent, teacher, and peer actions.

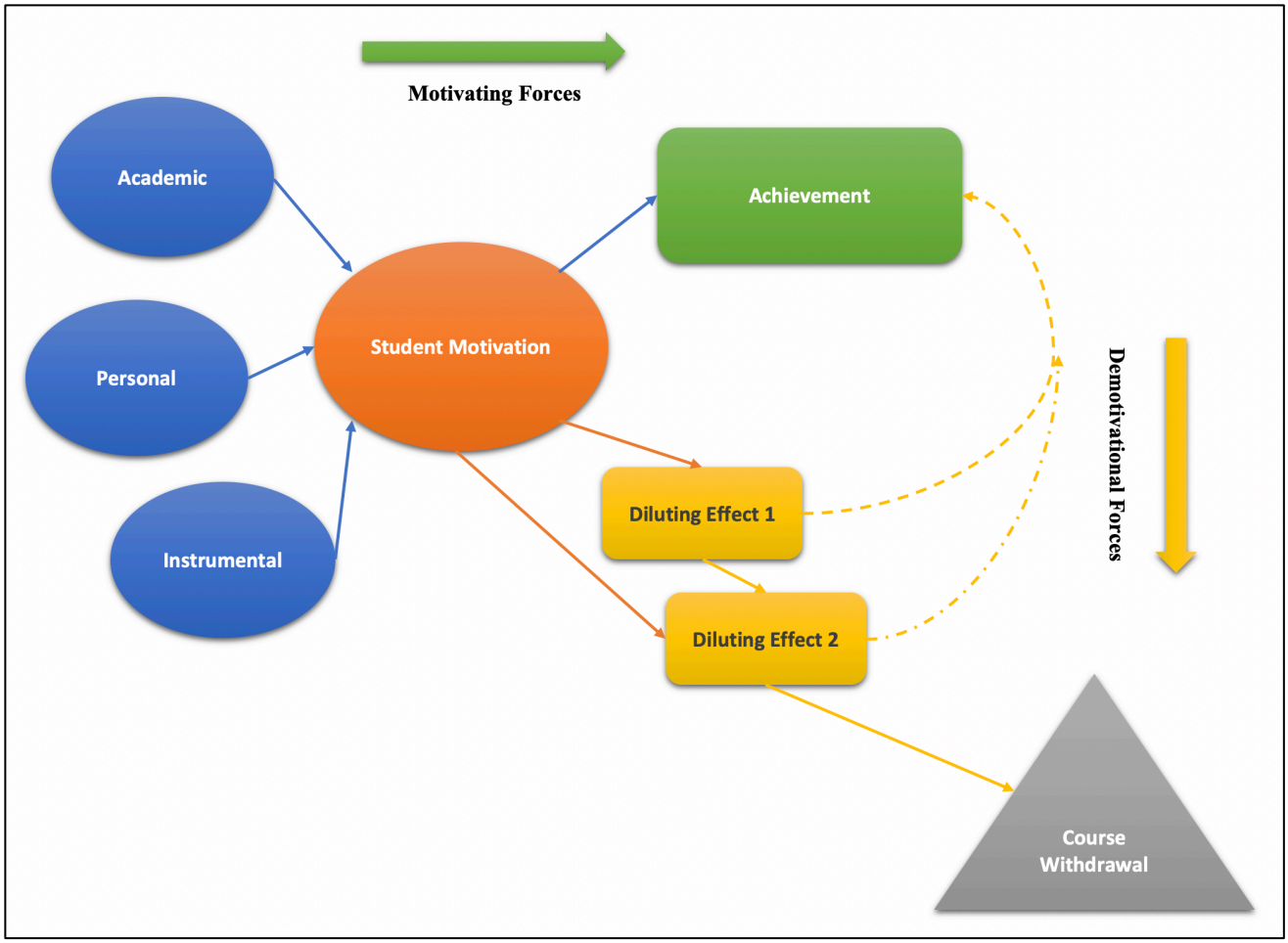

Figure 13: Visual Model of Motivational Effects on Student Achievement in AP Courses

An important finding revealed over the course of this interview process focused on the dissociative effects of ungratified expectations. For students at RHS, the pursuit of AP success is based upon a weighted interpretation of both personal capabilities and course expectations. Anderman and Patrick (2012) suggest that there is a distinction between expected and realized achievement in educational settings which involves teacher-moderated goal-setting and transitory student expectations. If, as reported by the majority of the parents, student expectations at the onset of a course are artificially elevated due to prior achievements or confidences based upon their academic career, then there is likely to be a disconfirmation effect between AP course performance and teacher-imposed goals or expectations (Anderman & Patrick, 2012). Parental responses during my interviews revealed that various students were unprepared for the weight of pressures and expectations placed on them in AP courses, and without teacher moderation and support, their ability to navigate these stressors and pressures was limited. Academic buoyancy, introduced by Martin and Marsh (2006) as an antecedent to student achievement, requires a variety of mediating, intermediary supports which include both intrinsic factors (e.g., self-efficacy, motivation, passion) and extrinsic influences (e.g., parent, teacher, peer). Students who

were reportedly successful in these AP courses conveyed to their parents both intrinsic and extrinsic buoyancy, which directly contributed to learner resilience and successful achievement outcomes. Students who were unsuccessful lacked support in one or more areas, and were thereby confronted with the disconfirmation effects of ungratified expectations across the academic, personal, or instrumental categories introduced in Figure 13.

A core finding from the parent interviews suggests that although teachers do have some degree of responsibility for supporting learner development and achievement, student capabilities as learners and competencies in a given course are critical to the successful realization of desired performance outcomes. Underscoring the affective value of learner motivation are a variety of strategies which Ramirez-Arellano et al. (2018) have attributed to three categories of learner proficiency, including cognitive, metacognitive, and learning. More effective learners utilize metacognitive preparation and skills-based awareness to shape in-classroom processes, which are in turn supported by cognitive awareness, active engagement, and the appropriate application of trained learning strategies (Ramirez-Arellano et al., 2018). While RHS utilizes a "standard curriculum foundation" (Lesack, 2020) to address the educational needs of the student population in regular and honors level high school courses, the distinct cognitive, emotional, and organizational factors (Harris, 2011; Virtanen et al., 2015) affecting learner confidence and competency at the AP level have not been adequately developed at RHS in ways that will moderate key stressors and performance pressures.

Across the interview results, the central theme described by those parents who felt that their students were receiving exemplary instruction and support was passion. From a teacher perspective, passion represented innovative pedagogical techniques such as humor, excitement, and interactive learning that were applied to classroom settings which may have otherwise become repetitive and demotivational in their structure. From a student perspective, passion for both the subject and the learning processes was identified as an important antecedent to classroom motivation and engagement. Reeve (2012) has demonstrated how passion plays a role in shaping intrinsic motivation, driving students towards aspirational outcomes and objectives that are compelling and capable of sustaining motivation over the course of their academic career. While Martin and Marsh (2006) have identified enjoyment of school as an important mediating influence for student engagement, the pathway to such enjoyment-based outcomes is often relegated to generalization and assumptions. For example, classroom participation may signal student engagement and suggest a level of enjoyment or motivation that is complementary to learner performance. However, repetition and predictability can create conditions which are demotivational and frustrating for under-challenged or under-supported learners (Lee et al., 2003; Martin & Marsh, 2006). For those parents in this study who conveyed mixed AP experiences, it was this conflicting fissure between teacher enthusiasm and passion and student performance outcomes that had remained unreconciled, and therefore, inhibiting of student achievement and performance.

It was evident that with the exception of two of the parents' set of responses in these interviews, teacher deficiencies were not the primary hurdle in AP course instruction. Instead, a key underlying challenge in AP education is the weight and scope of learning packaged into a single, high-pressure (e.g., needed for college, positive on record, demonstrates proficiency)

course. Reeve (2009) has demonstrated the need for autonomous learning in high school settings. Nonetheless, in the interview results, parents articulated top-down educational processes that fail to consider self-determination and learner autonomy in these environments. Losing control over self-regulated learning processes not only dilutes student achievements, but it potentially positions learners outside of the boundaries of the curriculum itself, diluting the value of autonomy and engagement in environments where teacher direction and authority form the basis for knowledge transfer (Reeve, 2009, 2012). Without autonomy and self-determination to support and drive student motivation, the evidence suggests that disengagement and demotivation are likely to lead to an inability to achieve desirable educational results. For this reason, these findings move beyond motivation as a singular predictor of student achievement, and instead focus on engagement and its critical and sustaining influences on the realization of high-performing and predictable academic outcomes.

7.3 The Antecedents to Student Engagement

At the foundation of the parent feedback was a sense of enthusiasm for those classes that actively engaged students in the learning process. From AP Chemistry to AP Human Geography, participation and learning engagement were identified as central support factors responsible for sustaining student motivation and driving student performance outcomes towards practical, instrumental goals. Empirical evidence introduced by Martin and Marsh (2008) revealed the positive effect of engagement on student confidence and self-efficacy as in-classroom participation, active learning, and teacher-student relationships were shown to increase academic buoyancy and resilience. At the same time, positive familial relationships, parent communication, and experience sharing were also identified as a supportive foundation for student motivation and the construction of those skill sets and confidences that ensure everyday resilience and academic consistency (Martin & Marsh, 2008). By increasing student engagement, expanding the teacher-student-parent communication cycle to reflect sustained motivation, and creating direct pathways for circular support through teacher-parent communication, it is predicted that RHS can develop educational systems which improve AP performance and student achievement.

In order for classroom settings to be engaging and support motivated student learning processes, Virtanen et al. (2015) argue that the classroom quality must be sufficiently high and ensure that students are receiving the organizational and instructional support needed to allow for motivated, emotional engagement in learning processes. Such findings are meaningful in the context of higher-level AP courses, because they suggest that without the strong and supportive foundations needed to engender a productive learning process, students will be left with unfulfilled needs or unreconciled anxieties that inhibit their active engagement in learning outcomes and self-actualization (Virtanen et al., 2015). For courses such as AP Calculus, AP Physics, or AP Spanish that depend on memorization and replication of specific formulas, models, and ideas, the parental feedback suggested that practical learning was critical to the reinforcement and engagement process. By deemphasizing or eliminating the traditional lesson-practice-perform teaching approach and engaging students in circular discussions, critical thinking, and passionate examples of learned concepts, AP courses can refocus their structure and objectives on a model that is complementary to university-level education systems.

Traditional top-down learning structures fail to yield the engaging outcomes that are needed to motivate student participation or active engagement in conceptual processing and applications (Frymier & Houser, 2015).

In order for students to avoid the disconfirmation effects of inconsistencies between expected and realized AP course experiences, it was evident from the parent feedback that there is a need for goals to be clearly defined and for student-teacher dialogue to inform and influence the architecture of the learning process. The achievement goal setting theory presented by Anderman & Patrick (2012) provides a valuable justification for transferring decision-making power and goal-driven autonomy to students in AP courses. In particular, the transfer of responsibility from an authority figure (e.g., teacher) to a student is both empowering and motivational, encouraging engagement at the psychological and academic levels, and precipitating long term academic responsibility and self-accountability (Anderman & Patrick, 2012). The model of student engagement introduced by Skinner et al. (2008) focuses on developing those self-determined constructs (e.g., autonomy, competency, confidence) that foster engagement and negate the likelihood of disaffection. The expectation is that by creating an environment in which students are passionate about the concepts, learning opportunities, and support systems available to them, they will be more likely to pursue a behaviorally and emotionally engaged learning outcome (Skinner et al., 2008).

According to Harris (2008, p. 60), while goal-setting theory may "instrumentalize" the process of purposive learning, it cannot be used as a default foundation for administering student behavior and imposing rigid boundaries or structures within the classroom. Harris (2008) argues that in order for educators to develop programs to support student engagement, they need to recognize the distinction between learning engagement and schooling engagement. Problematically, while prior research in this field conducted by Finn (1989), Nystrand and Gamoran (1991), and Linnenbrink and Pintrich (2003) has aspired to draw formal distinctions between the categorical range of engagement factors, a lack of continuity and definitive constructs has led to a misappropriation and misalignment of conceptual applications (Harris, 2008). As a result, many of these studies have emphasized engagement in schooling and its associated expectations (e.g., rule-following, goal-setting, classroom participation) without considering the intrinsic effects of impassioned and motivated student engagement.

By developing various teaching and learning solutions that prioritize engagement by leveraging student motivation to activate a spectrum of cognitive and emotional factors, engagement becomes a sustaining influence within the educational process that can be used to refocus students on goals and objectives when they experience disconnection or are overwhelmed by stress. Bryan et al. (2011) propose that there are three primary dimensions shaping student motivation in AP courses including intrinsic motivation, self-efficacy, and self-determination, each of which provides a critical dimension of the confidence-enhancing, resiliency-supporting foundation needed to facilitate active and committed pursuit of AP course success. As learner self-efficacy and capacity for academic achievement improve, other supporting factors, such as attitude and enthusiasm, will improve as well, positively orienting motivation towards sustaining and driving outcomes (McMillan et al., 1994). When translated into a self-directed, goal-driven pursuit of academic achievement, the AP course transitions away

from the traditions of curricular emphasis and towards a conceptual foundation that emphasizes learning involvement and student investment (Harris, 2011). By measuring student engagement against specific learning objectives, Harris (2011) proposes that there is a need for a purposeful dissociation between student engagement in simplified, behavioral or academic procedures and student engagement in real, tangible learning outcomes.

7.4 Participation and Student Engagement

Throughout the definitions of engagement, researchers such as Fredricks et al. (2004) have distilled this behavior into a form of participative response which considers the bounds of personal and instructional capabilities as they affect students in the classroom. Nonetheless, the parent feedback and stories based on student-shared experiences suggests that engagement is a function of both direct and indirect participation through intrinsic learning processes and extrinsic demonstration or communication. To operationalize such outcomes in high-engagement classrooms, Frymier and Houser (2015) challenge teachers to develop communicative solutions that encourage student participation without magnifying student anxieties or threatening personal comfort levels. With this in mind, it is also meaningful to consider that challenging academic conditions provide students with a motivational basis for actively engaging in the learning process, which includes developing critical thinking skills and solution-finding capabilities that can be leveraged to affirm and improve self-efficacy and productivity as a learner (Frymier & Houser, 2015). While AP courses are designed to inherently challenge student knowledge and competencies, they will continue to fail to meet their primary goals of university preparation and accelerated student learning if they neglect those techniques that improve resilient learning and passionate student participation.

Structurally, the top-down approach was confirmed by the parents in this study to conflict with student needs and create barriers to productive learning outcomes. Instead, the responsive classroom approach introduced by Baroody et al. (2014) offers a valuable foundation for improving student engagement through active participation and is characterized by multiple best practices ranging from the participative creation of classroom rules and goals (e.g., goal setting) to positive framing and discourse to guided discovery within the classroom. Importantly, this approach also considers the extracurricular support afforded to students by their families. Such support focuses on creating open dialogue to facilitate two-way communication that includes multiple layers of conflict management and teacher-student-family interactions (Baroody et al., 2014). By extending the boundaries of the classroom and learning ecosystem beyond the immediacy of the pedagogical processes, teachers can consider the level of support afforded to students at home and the likely role of homework and other course requirements (e.g., projects, reports) in supporting student learning processes.

Another critical insight provided by these RHS parents was the link between student enjoyment and the openness to participative and communicative classroom exercises. In this context, when applied to a classroom environment (e.g., science) in which there is limited emphasis placed on student participation or active theoretical engagement, Bryan et al. (2011) argue that the weight of affective intrinsic forces shaping student performance is positively aligned with motivational and commitment-based outcomes. Glover and Bodzin (2019) have

proven empirically that students who are intrinsically motivated towards achievement and participation in educational settings are more likely to achieve academic mastery than those who are motivated by extrinsic influences. Due to the weight and complexity of AP courses, the need for self-directed, self-determined motivational effects is a critical antecedent to a more successful student learning outcome, as key support factors, such as passion, enjoyment, and enthusiasm yield important intrinsic catalysts for participation (Bryan et al., 2011; Glover & Bodzin, 2019). When neglecting those influences which shape student motivation and sustain engagement over the long term, teachers are failing to acknowledge the spectrum of inspiring and resilience-enhancing stimuli that can be used to develop effective, passionate learners.

7.5 Framing and Classroom Structure

By framing AP courses alongside similar characteristics and demand structures to their collegiate counterparts, there is a direct potential for both supporting and restricting student engagement. Rocca (2009), for example, observed the degree to which instructor verbal aggression impacted student participation in college-level courses, highlighting the reductive effects of adverse and aggressive responses on student motivation to participate. Supplementing such research, Weaver and Qi (2005) highlighted the structural effects of classroom organization on collegiate participation, suggesting optimal and sub-optimal constructs of the physicality of the room when encouraging student sharing and communication. When applied to AP courses at an institution like RHS that has historically relied upon traditional classroom structures (e.g., linear, front to back teaching), limited participation, and top-down instruction, the potential restriction of participation and the motivation to participate can negatively impact engagement.

While parent-teacher relationships are frequently defined by traditional structures, consideration at RHS should be given to a revised learning proposition that considers a broader range of support and participation in the student motivation cycle. For high school students, evidence presented by Kandiko (2008) suggests that there are a range of variables (e.g., time, environment, experiences) shaping intra-period engagement which are likely to vary according to student experiences (e.g., first year, fourth year) and educational expectations (e.g., higher education, trade school). The arc of engagement introduced by Borup and Stevens (2015) in the literature review highlights the weighted influence of teacher, parent, and peer engagement in shaping and supporting student engagement. When applied to digital coursework or classroom environments which involve high levels of self-direction, the role of parental or peer engagement will either need to increase significantly (e.g., supporting students during COVID-19), or student engagement will need to increase autonomously to fill this gap in direct teacher support (Borup & Stevens, 2015). By creating alternative solutions, such as digital portals for peer discussion and support, it is proposed that students can leverage deeper classroom relationships to improve their proactive responses to personal challenges, gradually achieving improved knowledge outcomes through participative systems (Borup & Stevens, 2015).

Based on the findings ascertained during this study, it is likely that many high school students are under-prepared for the rigors of AP education and the challenges of autonomous or self-directed learning systems. Ouweneel et al. (2011) propose that student resilience is a combinative function of learned emotional, cognitive, and operational processing capabilities

within the context of an academic environment that is sufficiently supportive and conducive to engagement. Without sufficient experience and support to develop such resilience, it is likely that the demotivational effects of under-achievement and classroom challenges will lead to student dissatisfaction. When developing individual learning plans, teachers need to consider the potential consequences of unlearned or under-experienced characteristics and traits in inhibiting student achievement and restricting the potential for a more productive, effective outcome from goal-setting or classroom participation. In this way, discipline is as much about self-determination and self-governance as it is about classroom participation, elevating a standard of student agency beyond the normative limitations of traditional learning systems (Reeve, 2012).

7.6 The RHS AP Challenge

The fourth and final research objective involved proposing targeted pedagogical strategies that could be used to improve student motivation and engagement in AP classrooms. Based on these findings, it is evident that there are multiple strategic solutions which could be adopted by teachers in order to improve student engagement in AP courses, including pedagogical (e.g., enthusiasm, communication strategies), instrumental (e.g., participation, group work), and operational (e.g., training, procedure, feedback) techniques. Considering these findings, Figure 14 provides a revised visual representation of the AP performance cycle, a multi-dimensional model that includes two primary arcs of development:

- Driving Force and Achievement Orientation Curve: This is the initial directional curve which includes the underlying expectations and perceived value proposition, as well as the initiating drive that motivates students to enroll in an AP course (Vroom, 1964; Ramirez-Arellano et al., 2018; Glover & Bodzin, 2019).
- Reinforcement and Recovery Curve: This is a resilience-enhancing curve which leverages learned concepts, support structures, and classroom systems to reinforce student motivation and to support recovery of enthusiasm and value perceptions that will ultimately shape long-term engagement (Martin & Marsh, 2006; Baroody et al., 2014; Hafen et al., 2014).

Within this model, there are five tiers of intervention that can be organized into strategic and tactical solutions at the teacher, classroom, or parental level:

- External Forces: These are the initiating and sustaining forces that yield support for the student and create the conditions for self-efficacy and self-determination as an academic learner (Fredricks et al., 2004; Reeve, 2012).
- Moderating Forces: These are forces that support motivation and encourage students to actively commit cognitive, emotional, and organizational resources to the fulfilment of AP course objectives (Shaunessy-Dedrick et al., 2015; Virtanen et al., 2015).
- Resilience: These are the conditioning mechanisms which ensure a student's ability to recover confidence, self-efficacy, focus, and energy rapidly, including buoyancy, as coursework and expectations become transparent and academic

mastery is realized, or new stages of learning are required (Martin & Marsh, 2006; Bryan, 2011; Shaunessy-Dedrick et al., 2015).

- Continuity: This is the desirable state of active student engagement in an AP course which ensures that they are an active learner, are committed to the core objectives of the course, and are capable of performing at a level that will ensure positive outcomes (Fredricks et al., 2004; Weaver & Qi, 2005; Rocca, 2009; Reeve, 2012).
- Achievement: The desired end result of the AP experience which is likely subdivided into multiple stages during a semester of study, including quizzes, tests, reports, speeches, and other reinforcing and reaffirming assessment tools that can be used to provide student feedback (Geiger & Cooper, 1995; Skinner & Pitzer, 2012).

This model is indicative of a framework for pedagogical revision and improvement that relies heavily upon the feedback cycle which is created outside of the classroom in the form of peer, parent, and teacher interactions. The evidence presented based on the interviewing process confirms that parents at RHS are actively invested in their students' AP success. However, without student-driven communication at home, there is a lack of transparency in regard to the supportive and sustaining effects of existing teaching methods and environmental forces. Similarly, without some form of teacher-driven feedback cycle, students are unable to revise and refocus their own scholarship on more productive outcomes. As such, assessment-based feedback can be used strategically to reinforce and support student self-efficacy. Ultimately, these findings have confirmed the need for a more participative AP course engagement cycle at RHS that includes all stakeholders in the realization of students' academic objectives, regardless of the weight, style, or environment associated with the individual course.

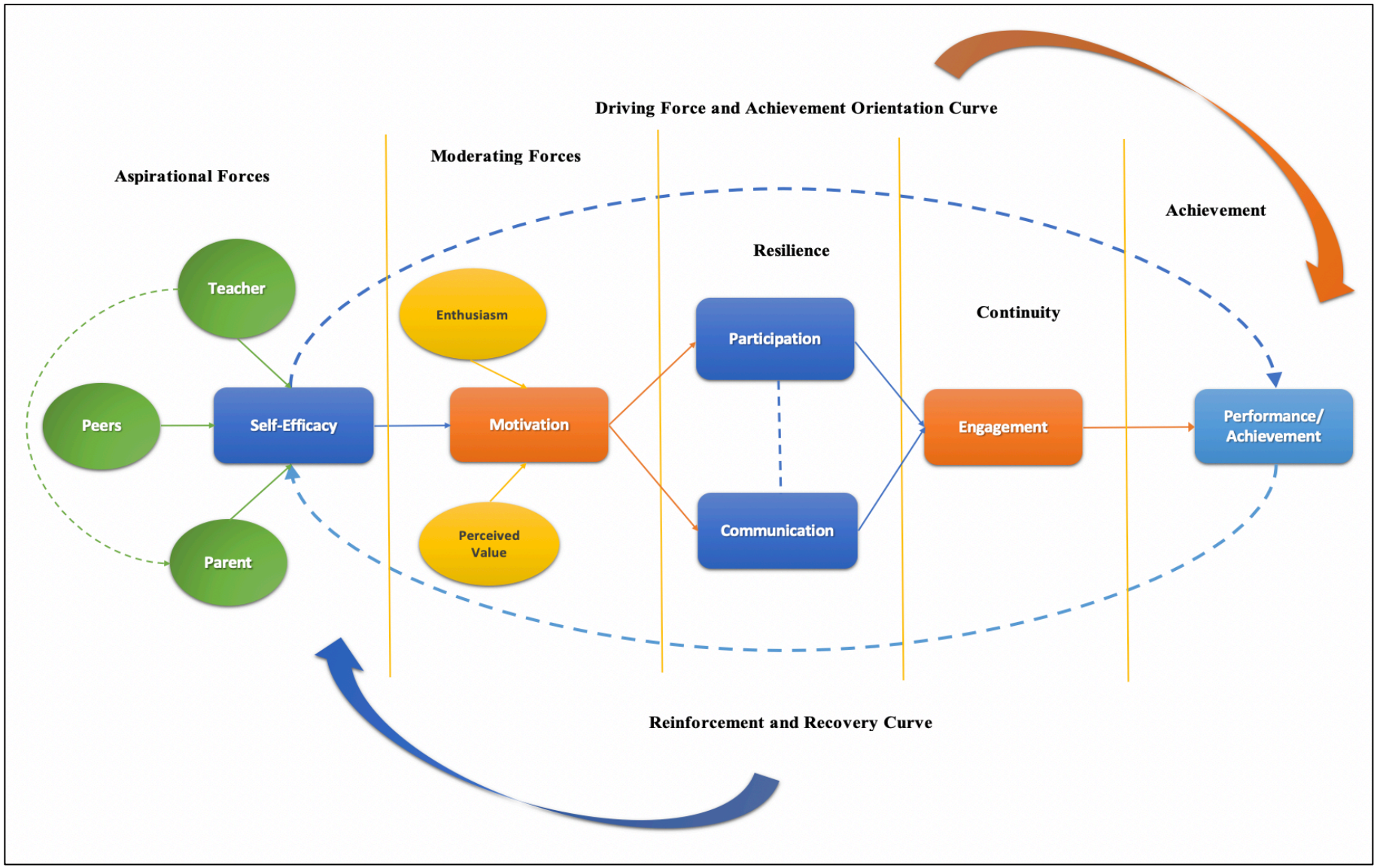

Figure 14: Revised Model of AP Student Engagement and Excellence

7.7 Summary

This chapter has contextualized the empirical findings within various academic theories and models introduced in the literature review. By drawing connections between student motivation and classroom engagement, the antecedents to successful AP course completion have been introduced, outlining several targeted strategies that could be utilized by RHS to meet the challenge of successful student achievement. Although the revised conceptual model introduced in this chapter requires testing and assessment in future real-world applications, the evidence collected from these parents has confirmed that without support, students are faced with a potential demotivational gap between intrinsic and extrinsic motivational forces. By applying these pedagogical solutions and expanding the scope of parental influence and support, this model seeks to moderate the significant pressures and stress of AP coursework against the underlying value and academic benefits motivating student participation and achievement within this AP program. The following chapter will conclude these findings, addressing the main contributions of the research to this field of study, and outlining several recommendations for immediate program improvements at RHS.

Chapter 8: Conclusions, Limitations, and Recommendations

8.1 Conclusions

At RHS, the AP program has been broadly supported by students across multiple disciplines since its introduction. The result of these varied experiences is, however, sub-optimal, with both student and parent frustrations voiced at student-parent-teacher conferences, which occur twice per school year, and at other occasional curriculum strategy meetings at RHS which are open to parents (Lesack, 2020). While teachers of these classes have developed a range of alternative interactive and participative strategies designed to increase student motivation and improve the learning experience in AP courses, the topic-specific, short-term nature of these educational investments have led to discontinuities and inconsistencies across AP courses at RHS. For this reason, the primary aim of this investigation was to critically assess the antecedents to student motivation and engagement in AP classrooms, in order to identify support strategies that can be adopted and implemented by key stakeholders, including parents and teachers, to improve student success at RHS. Through an in-depth review of the literature in this field and a critical, comparative analysis of parent storytelling, reflections, and interpretations based on conversations with students, this research has revealed several opportunities for shaping the future effectiveness of the AP program. This includes developing support systems that strategically improve student motivation and course engagement.

The first two research objectives that were achieved during this research focused on those factors which contribute to student motivation and the ways in which student motivation impacts engagement in AP courses. A central conclusion of this study was that student motivation is a function of both the initiating and sustaining effects related to a range of academic, personal, and instrumental influences. In order for students to remain motivated, there is a tenuous relationship between expected and realized achievements that must be moderated, either by improvements in student performance or the reorientation of learning objectives and goals according to student-teacher agreements. While traditional academic systems place weighted emphasis on curricular discipline and replication, the advanced characteristics of these AP courses require critical thinking and innovative problem solving to not only inspire enthusiasm and passion, but to support academic progression from high school to college (Fenty & Allio, 2017).

As motivation itself is subject to volatility and a spectrum of declining and sustaining effects, this study has also concluded that engagement is vulnerable to changing motivational influences, and a disconfirmation gap between expected and realized course activities and performance. For example, regarding AP Physics and AP Calculus, students are confronted with a problem of intentionality which is shaped by the capacity to replicate taught methods and techniques, while also introducing critical thinking and independent problem-solving capabilities into procedural outcomes. For AP English Literature and Composition, alternatively, the subject-based flexibility affords additional layers of creativity and self-determined outputs that not only motivate students to execute tasks effectively, but to engage in classroom exercises and

discussions in order to communicate a point of view or perspective that is both defensible and uniquely personal. Based on these findings, the initial conceptual framework derived from the literature review has been modified to position stakeholder support at the foundation of the aspirational forces which trigger student motivation to participate in AP courses, and then applied continuously over the "classroom lifecycle" to improve resilience, continuity, and ultimately achievement.

The feedback provided by parents revealed important insights that have direct implications for reshaping teacher-student dynamics in the future. First, parents are active, but frequently excluded, supporters of their students. As such, they will rigorously defend their students' sentiments and concerns regarding their experiences in AP courses. While the feedback captured over the course of this study was structurally reliable, the findings also suggest that without direct interactions between teachers and parents, there is a likelihood that communication is unidirectional and not circular in its path through this stakeholder network. The underlying self-efficacy and confidence that students exhibit when enrolling in AP courses can be rapidly diminished if they encounter demotivational forces or their independent learning needs are not met. As moderating influencers, both parent and teacher supports are a part of this "academic contract" that should be leveraged more effectively at RHS to improve the chances of student success.

A range of theoretical models of motivation and engagement were introduced and evaluated over the course of this study without any direct comparability or replication. Within this context, the literature review referred to eight different models, explaining these weighted relationships without generating a unified or normative understanding of how these forces interact within the complexities of AP courses. In reviewing literature related to the challenges of advanced coursework and higher-level student participation, it became evident that both the weight and influence of classroom-based variables and the embedded and metacognitive effects of a student's academic career are likely to shape their responsiveness to pedagogical strategies. This finding reflects a challenging proposition for teachers, as they are confronted with the potential burden of incongruity and a range of inconsistent learning outcomes that are linked to considerations outside of their immediate control. For this reason, the multi-dimensional model of self-determined goal-setting proposed in the preceding chapter will assist teachers in working with individual students, creating targeted learning plans that still fulfill the course curriculum, and support the unique and varied communication needs of these independent, but community-influenced learners. By adopting techniques that encourage critical thinking and motivate peer-driven classroom participation, motivate higher levels of parent-teacher dialogue and storytelling, and student-driven self-determination exercises, these findings can serve as a pragmatic intervention for immediate implementation in the RHS AP program and other similar advanced educational courses in the future.

8.2 Limitations

This study drew its empirical foundations from parental storytelling based on student experiences in recently enrolled AP courses. Even though alternative approaches, including student and teacher interviewing, had been initially considered, the decision was made to interview parents. I made this decision in part because of the parents' accessibility, their value as experiential reporters and interpreters, and their value as storied beings. There were several limitations of this study which were difficult to avoid. First, it is a limitation that students were not interviewed directly, and future research would be useful in gathering more everyday experiences of engagement rather than the particular events shared with parents. Second, because of the sudden, intense stress, anxiety, and uncertainty of the COVID-19 pandemic, I had a very limited amount of time to conduct phone interviews before the full onset of the pandemic, and completed only 5 interviews prior to the onset, with 7 interviews conducted after the onset. Even though I was able to follow up with the 5 parents that I spoke with before the onset of the pandemic, the amount of qualitative data is more limited than would have likely occurred under more typical circumstances. While various key insights were gleaned from this research, I am left with more questions than answers. Hence, it is more effective to utilize the data as a way to more incisively frame questions for future research than draw definitive conclusions. It is also meaningful to note that not all students are as likely to disclose experiences to parents, or only tell self-serving stories.

Further, since as of this writing, we are still in the midst of the pandemic, there are numerous circumstances where we do not know what we do not know (i.e., unknown unknowns) relevant to future factors and challenges which will have profound impacts on organizational decision making and educational practices. While the data collected provides a wide range of insights, it is difficult to ascertain the best use of the data for decision-making processes until the pandemic subsides. Whenever that might transpire, it is hoped that more types of organizational and educational factors will become known and clarified germane to their influence on the learning process, experience, and environment at RHS.

This study has presented the narratives and insights from a limited sample of parent interviews who, based on their conversations with students, have conveyed positive, mixed, and negative experiences with the traditional formatting and classroom environments offered by AP courses at RHS. Future research should consider assessing the specific dimensions within the circular model of student motivation and engagement from student and teacher perspectives. Such an approach would help to create a comprehensive analysis of the ways in which student resilience and learning continuity can be used to facilitate achievement over the course of these high-demand academic experiences. Additional research will also need to consider the consequences of changing academic formatting as students navigate either online or traditional classrooms over the coming 2020-21 school year.

8.3 Recommendations

The final research objective emphasized recommending targeted pedagogical strategies that could be used to improve student motivation and engagement in the AP classroom. Based on the evidence derived from parent interviews and the model developed in the preceding chapter, there are five immediate recommendations that can be made to facilitate this transition from fragmented and traditional educational systems to an inclusive and interactive standard of AP course excellence.

Recommendation 1: Conduct a Day-1 Assessment of Student Expectations and Establish Interim Goals for Achievement. A key demotivational effect in AP courses is the lack of alignment between student expectations and class workload or performance demands. Accordingly, teachers should interview their students and determine what they expect from the course, and then outline the reality of what is being offered in order to clarify any unrealistic or uncharacteristic goals that might be affecting student expectations. Once this determination has been made, then clearly defined, attainable interim goals can be established for the first part of the course, allowing for adaptation and evolution as new experiences, challenges, and objectives are uncovered.

Recommendation 2: Establish a Peer Support Portal. To extend the scope of student support, it is essential for administrators to create a student support portal for each AP course on which students can ask questions, discuss ideas, and plan study groups. This portal should be independent of teacher involvement as much as possible and only require intervention if there are disputes or allegations of misuse. The students ought to be encouraged to not only discuss existing concepts, but to use these posts to improve understanding of theories or concepts that might be lacking in their academic toolkit, thereby extending the engagement in the learning process beyond the immediacy of classroom lessons.

Recommendation 3: Develop Group Rules and Communication Guidelines that are based on Student-Created Goals and Expectations. While engagement in entertaining or creative classroom environments may be a natural function of the teacher's enthusiasm, sustaining student motivation and engagement entails a firmly defined learning process that requires students to commit to a higher level of participation than they might have expressed in prior courses. This approach will not only improve student commitment to classroom policies and best practices, but it will unify all students in a given class regarding their willingness to speak openly and participate robustly in the learning process. As a cultural foundation, this group-developed model of rules will ensure that students buy-into a program which is designed to support both personal and group educational objectives.

Recommendation 4: Recognize and address challenging subject matter. Related to pedagogical processes, teachers need to become more effective at addressing the stress, anxiety, and uncertainty experienced by students when the subject matter is challenging, particularly in classes such as AP Calculus, AP Chemistry, and AP Physics. This includes greater availability

of teachers outside of class. Even though each of the AP teachers reserves one hour per week for office hours, because of the pandemic, parents would like more access for students to certain teachers. Parents mentioned hiring tutors for some classes, and felt that Rosenblatt teachers should be more available for support.

Recommendation 5: Teachers' pacing of instruction. Teachers are felt to be focusing their pace of instruction on the smartest students who comprehend the subject matter most quickly and effectively, and not allowing time during class for students who are confused and unable to find their footing with the materials. This occurs most often with the AP Calculus, AP Chemistry, and AP Physics courses, which are to some extent designed to move quickly because there is a significant amount of material to cover. Given that the data suggest that in-class questions and discussions proved to be an instructional and organizational strategy that affected student engagement, it may be important to attend to pacing within classes.

Of note, I spoke with both Principal Lesack and the Vice Principal Eckstein twice in July 2020, during joint phone conversations on July 28 and July 30, about the aforementioned recommendations. They were strongly supportive and indicated that they will actively encourage the AP teachers to begin implementing the recommendations when the academic year begins in late August. Another positive factor is that the AP Chemistry teacher has already made herself available to students during the Summer in order to help them improve their quantitative skills for Chemistry at the AP level, which has led to positive results. As part of this endeavor, my daughter, who is enrolled in AP Chemistry for the 2020-2021 academic year, worked with the AP Chemistry teacher during June and July to assess her expectations, establish plausible interim goals for achievement, and address particularly challenging subject matter. All of these actions encourage increased amounts of student engagement and higher quality engagement.

After speaking with Principal Lesack and Vice Principal Eckstein about various ways to make these recommendations effective, they consider the recommendations important for all AP teachers and non-AP teachers to be aware of and reflect upon. Hence, they have asked all AP and non-AP teachers to attend a professional development seminar in late August 2020 for a couple of days before school starts, in order to discuss each of the recommendations and how they might be useful for improving their teaching practices. While Principal Lesack and Vice Principal Eckstein would ideally prefer for this seminar to occur in-person, due to the current risks of COVID-19, it will most likely happen though Zoom sessions. No definitive decision has been made yet about whether classes will be held in-person or conducted online via Zoom at the start of the academic year.

8.4 Summary

This research began with a recognition of need by the administration at RHS based on parent, student, and teacher reports of varying experiences within the challenging curriculum of an increasing number of AP courses. As critical resources and pathways for academic career development and the realization of higher education goals, AP courses offer an attractive advantage over the more traditional high school curriculum. However, they also carry a much greater weight and the expectations imposed on students are often incompatible with their prior experiences in the same academic system. These findings have demonstrated the critical role which student motivation plays in encouraging active participation and communication in classroom exercises. There is also substantial value to an open discussion of challenges and concerns with core stakeholders, including teachers, parents, and students, as part of future research. In addition, the affective and sustaining influences of student engagement in AP learning processes has been affirmed, highlighting the improvements in resilience and enthusiasm that evolve out of student engagement in the AP learning process. By applying the proposed recommendations and adapting the conceptual model that has been introduced in this study to future classroom transformations, it is predicted that students in the RHS AP courses will experience greater sustained successes and higher levels of academic achievement.

Chapter 9: COVID-19 as a Post Hoc Analysis

9.1 An Unexpected Public Health Crisis with Immediate Academic Impacts

A key point is that I started my research on Rosenblatt High School in January 2019, and have primarily considered student engagement from an in-person/in-classroom perspective. While Rosenblatt has offered online AP courses for several years, their pedagogical and strategic emphasis has been on in-person courses. Hence, even though COVID-19 had a substantial impact on my research process, since it occurred in the midst of my interviewing parents, it was not intended to be the main focus of my study.

What it led to was a "natural experiment," where 5 of my 12 interviews with parents primarily occurred before the COVID-19 pandemic, and 7 of my 12 interviews were conducted after the pandemic became a highly disruptive factor. While this is not the main goal of my research, I will be discussing a few intriguing themes that emerged.

Given that there was significant upheaval and a sense of chaos in almost every aspect of life during the most intense moments of the pandemic, as the United States economy and nearly all public and private institutions were shut down due to quarantines and social distancing, a pivotal factor to consider is the role and impact of sense making within such chaos (Xiao & Cao, 2017; Weick, 1993).

Just as important, is to contemplate the influence of organizational resilience in the context of sudden and acute stress, anxiety, and uncertainty. Only as time goes on will the nature of organizational resilience and its impacts related to COVID-19 fully emerge. As such, the following reflections and analysis are a preliminary exploration of ideas, and primarily lead to suggestions for subsequent research.

9.2 The Familiar versus The Unfamiliar

One factor that I noticed pertinent to interviews conducted prior to the onset of COVID-19 and those conducted after the onset of COVID-19 is the role and nature of familiar knowledge and accustomed behavioral patterns versus unfamiliar knowledge and unaccustomed behavioral patterns. Specifically, prior to COVID-19, based on interviews with 5 parents regarding their conversations with their children, the teachers were able to rely on familiar and effective practices of sharing knowledge. They also relied on accustomed behavioral dynamics of interacting in the classroom to facilitate academic progress. For example, P7 referred to the importance of humor:

> *The AP Human Geography teacher was able to rely on various references to the Marx brothers' movies to make some of the drier material such as the Industrial Revolution more relatable, interesting, and easier to remember for students. This humorous and lighthearted approach relied on a lot of non-verbal cues and comedic timing which really benefited from the in-person class experience.*

Following the onset of the pandemic, using humor online through Zoom was more challenging, particularly in the midst of a surging pandemic filled with significant stress, anxiety, and uncertainty.

As noted by P7 regarding the AP Human Geography teacher during a follow up conversation on March 26, 2020, nearly two weeks after classes went to an online format:

> *He could make any situation funny no matter the anxiety and challenges. However, without the ability to use physical movements for humor, it just wasn't as funny. The students appreciated the effort. But humor on Zoom is harder, you need a lot of verbal wit.*

Ironically, during the darkest days of the pandemic, humor could potentially be quite effective (i.e., a form of "comic relief" from stress and anxiety). However, it demanded a different approach and mindset than typical circumstances, which considered numerous other psychological and emotional stresses that students were experiencing.

When reflecting on the interviews with parents after the onset of COVID-19, technology was a salient factor, since all of the courses at Rosenblatt were moved to the high school's digital platform on March 12, 2020 (accessed via Zoom). Nonetheless, the most interesting questions often went beyond the technology. For instance, the abrupt disruption of all aspects of life during the midst of the pandemic led to extreme stress, anxiety, uncertainty and a chaotic sense of the unfamiliar. Being a direct observer of these circumstances, since my daughter, then a Sophomore at Rosenblatt High School, was taking her classes online, I noticed a sense of confusion by teachers and students in terms of how to utilize Zoom effectively for knowledge sharing. My interpretations and perspectives were supported by the insights conveyed to me from P4, P8, and P9 during parent interviews in late March 2020.

P4 mentioned:

> *Since the classes were happening online at home, I got a better sense of things. Zoom is hard enough without stress, but with all the stress going on the teachers and students had a lot of awkward moments trying to bring it together.*

P8 emphasized:

> *I figured that the students at least were pretty tech savvy, since they practically spend all day online. However, the Zoom classes took a lot of getting used to. From what I could tell, the teachers felt out of their element and needed a couple of weeks to really know what they were doing.*

P9 conveyed:

After kind of getting an idea about the first few classes on Zoom, I wasn't sure it was going to work. My son was disappointed and really down about it. Many of the teachers had spotty internet service, and it was hard for him to follow the lessons. Luckily, the teachers did not give up. After two weeks or so, things seemed a lot better.

For the teachers to be able to respond meaningfully to this sudden instability and chaos – beyond specific issues of technology – they needed to be more expansive and creative in their thought processes and conceptualizations of effective teaching via Zoom. This entailed teachers being able to make sense out of the chaos and confusion, then be able to engage in sense giving to students related to getting through the lesson plans and classwork (Gioia & Chittipeddi, 1991; Bartunek et al., 1999; Weick, 1993). Such endeavors served the purpose of bringing order and structure to the virtual classroom learning experience.

From a broader perspective and more systemic viewpoint, this involved the teachers bringing a sense of organizational coherence, cohesiveness, and resilience to the virtual classroom (Xiao & Cao, 2017; Bartunek et al., 1999). A meaningful example is the following circumstance where a teacher adjusts their pedagogical approach in light of the unfamiliar challenges engendered by the chaos of COVID-19, as conveyed by P6 based on conversations with their daughter:

The AP Psychology teacher spends the first 10 minutes of each Zoom session asking the students how they are doing in general and what types of challenges they are facing – or their families are dealing with during the COVID-19 pandemic. This is more time than the teacher used to give for asking students about their lives and has helped to relax students and make them feel cared for as people. And, by getting anxieties and stressful feelings "off their chest," the students were able to focus more clearly on topics such as Cognitive, Developmental, and Experimental Psychology. This has helped to increase participation.

This is an intriguing situation since the teacher is acknowledging the nature of stress, anxiety, and uncertainty that students are experiencing in various aspects of their lives, and how this might influence their perceptual and learning experiences, as well as attitudes and cognitions, both inside and outside of the classroom (Leander & Ehret, 2019). By actively listening to the students' responses and carefully conveying empathy, the teacher becomes more attuned to the nature of students' day-to-day experiences in several facets of life (Leander & Ehret, 2019; Muilenburg & Berge, 2005), and becomes more adept at sense making based on insights gleaned from the students, as well as sense giving to the students (Gioia & Chittipeddi, 1991; Bartunek et al., 1999).

9.3 Conclusion

A pivotal benefit of teachers changing their pedagogical practices in order to take time to carefully relate to students regarding the effects of COVID-19, is that the teachers can gradually help to make an unfamiliar, chaotic, confusing and daunting circumstance more manageable, plausible, comfortable, and (perhaps) relaxing. Such an approach by a teacher could also help to make an unfamiliar and chaotic circumstance seem more familiar in terms of finding resilience by placing certain elements of the situation into a broader, interrelated context and tapestry of the students' lives (Leander & Ehret, 2019; Muilenburg & Berge, 2005). If the teacher is effective at this endeavor through sense giving and positive responses by students, then such dynamics can become the underlying elements of resilience in the classroom, as well as a more cohesive sense of organizational resilience at Rosenblatt, please see Figure 15 below (Xiao & Cao, 2017) for a potential theoretical framework. Eventually, this empathy, responsiveness, and sense giving by the teacher can facilitate a sense of psychological safety and comfort among students, as well as optimism, confidence, faith, and inspiration towards the road ahead (Xiao & Cao, 2017).

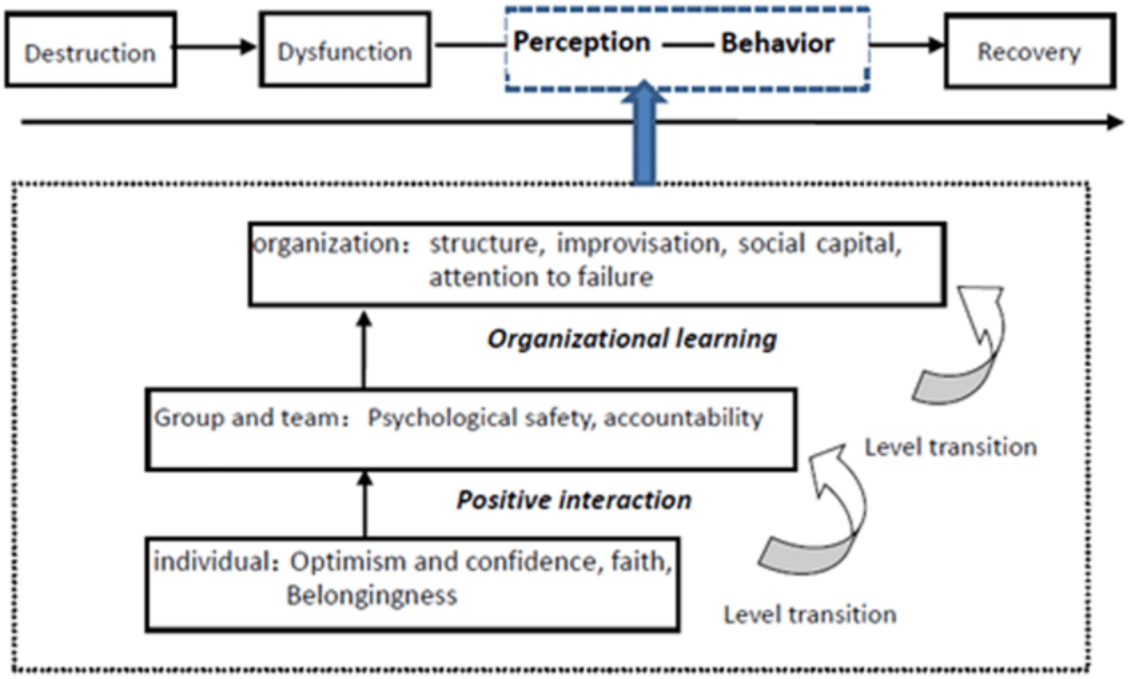

Figure 15: Model of Organizational Resilience. (Source: Xiao & Cao (2017). Organizational Resilience: The Theoretical Model and Research Implication. ITM Web of Conferences, 12, 2017)

Intriguing questions for future research are:

How do the prior mentioned dynamics relate to increased motivation, focus, and engagement for students?

How do factors such as psychological safety, as well as the ability to deal with stress, anxiety, and uncertainty affect teaching and learning processes and strategies over the long-term?

As we transition from the sudden, traumatic sense of stress, anxiety, and uncertainty associated with the onset of the pandemic to a more chronic sense of stress, anxiety, and uncertainty, until the pandemic eventually subsides, how does this affect decision-making strategies by teachers, pedagogical practices, and student responses and engagement?

What is the role of parents, administrators, and peers in these processes and dynamics of engagement?

Given that students taking online courses during the pandemic often do so at home, based on insights from parent interviews, a question is how do parents and other family members impact attitudes, cognitions, perceptions, the ability to focus, and social dynamics for students taking courses online? How do such factors influence motivation and engagement in classes?

Each of the aforementioned questions has potential implications for the Revised Model of AP Student Engagement and Excellence referred to in Figure 14.

Reflecting back to several research questions discussed pertinent to this study, further data would be needed to assess the ongoing, longer-term impacts of the pandemic on the answers to these kinds of questions:

1. How do students experience engagement in their AP classes?

2. What direct (internal, pedagogical) and indirect (external, constructive) strategies can be used to improve student engagement and motivation in AP classrooms?

3. What teacher behaviors seem to affect student engagement?

4. What teacher behaviors are associated with improved student engagement? Student motivation?

5. Are there emotional support strategies that especially meaningful to students?

6. Are there instructional strategies that appear impactful to students?

7. Are there organizational strategies that seem to influence students?

9.4 Summary

As of this writing, no definitive decision has been made by the Rosenblatt High School administration whether classes for the 2020-2021 academic year will be in-person, fully online, or a hybrid approach of both in-person and online options. The RHS administration is still seeking input from students and parents in order to make this decision. It will be intriguing to glean insights on how the eventual decisions and format of learning influence the central themes in this research of communication, motivation, and engagement by students.

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Appendices

Appendix A

Sample Interview Responses

Parent 2 (P2), Son, AP Chemistry

1. **What are some of the notable narratives or stories about classroom experiences in AP classes which your daughter or son has shared with you?**

   I think the most interesting stories are those where failures became learning opportunities. My son was telling me about a mixture of acids that shattered a beaker on the teacher's presentation table. He acted out this silly response of the teacher running around like a confused chicken, and then laughed so hard that I felt like I was there too. Then, the teacher showed them exactly why the experiment failed and illustrated the chemical breakdown on the projector. It was a good learning experience.

   At least the way the AP Chemistry teacher approaches the class by being herself and bringing out the passions of students, and encouraging students to be self-directed, is an evolution of modern education that should have happened decades ago.

2. **Did your son or daughter ever come home and tell you about some lesson or class they thought was really great? What did they say about it? Did they talk about the teacher and what the teacher did?**

   My son talked about this big upcoming experiment for weeks. He was learning how to mix chemicals and create this amazing chemical reaction and they were going to do it on a huge scale in the commons area. His teacher put up signs warning of some impending biohazard and everyone dressed up like zombies for the actual experiment. I've never really seen him get into something like this, but he tells me all the time that AP Chemistry was "awesome". He says his teacher is "really cool" and as long as they stay safe, she 'lets them try things out.' He always says 'For Science' in this big voice which tells me that he is parroting something from class.

3. **What seemed to matter to your daughter or son about their teacher's actions, attitudes, emotions, and (perhaps) inspirations in these experiences?**

I think that the energy of the classroom was really important. Even when the teacher was handling some dull material or they were memorizing the periodic table or something basic like that, there was some form of interactive component, a rhyme, a song, something to keep them active in the classroom. These kids are using their brains to push through all these hard concepts, so they need something to break up the monotony of learning. The teacher was particularly good at making the learning something to actually look forward to. I would call it an active approach to teaching. My son just loves his AP Chemistry teacher; he talks about her like she's a superhero or something. It must be the energy and active approach. He can't wait to go to class.

4. **Based on their stories, did anything stand out for your daughter or son regarding their specific interactions with the teacher? Did they mention any classmates' interactions with the teacher?**

There are a lot of complex procedures in chemistry, and a knowledge base that means that the students need to figure out the sequence or combination in advance before they blow up the classroom. His teacher walked them through the procedures, then challenged them to do it on their own, then reinforced the expectations over and over again. Now things are structured and focused. I have seen him actually work his way through a baking recipe at home as though he was in his class. Everything measured out and prepared, the counter was 'prepped,' as he stated proudly.

5. **In general, what kinds of AP teachers are your son's or daughter's favorites? How do they describe them? What classes seem to cause the biggest issues for them?**

The teacher's own passion and commitment to the topic is very motivational. My son is not very interactive at school. He is pretty quiet, but from what he has told me, he has no problem going up in front of the class in his AP Chemistry course. He also likes working alongside other people now, something I never thought he would do. He has made friends because of the social parts of the class.

Chemistry is not always fun, and in fact, it's a lot of work. So you have to find a way to keep the kids interested and entertained. This means active lessons and participative dialogue that encourages students to open up and actually get invested in the lessons.

6. **Was your daughter or son interested in the subject matter to start? Have you noticed that they are exploring more on this subject on their own?**

   My son has always talked about Chemistry more than a lot of other subjects and seems to get actively interested whenever there's something about Chemistry in the news. This class was the clincher. He needed to find that special kind of teacher to get more actively involved with Chemistry on a really advanced level. This course was really hard, but I don't think I've ever seen him more satisfied to do well in a course. I think it's a safe bet that he will be exploring this more on his own and might follow his passion in college.

7. Have you met the teacher? If so, what was your overall impression of the teacher?

   Yes. I have to laugh because I think it can be really difficult to be the parent of a high school student. You really need something for the student to care about and be passionate about so they are more focused and self-directed. When I met the teacher at the beginning of the year, I had a good feeling about things and my son's first impression seemed positive. I really think she has brought out the best in students. She certainly has for my son.

Parent 7 (P7), Daughter, AP Human Geography

1. **What are some of the notable narratives or stories about classroom experiences in AP classes which your daughter or son has shared with you?**

   We've talked at length about her experiences with the interactive activities that her teacher has used to make learning fun. She really enjoys the humor and the enthusiasm that her teacher uses to keep things light in the classroom. She told me about how he used a specific example of ritual ceremonies used by medicine men in tribes in Equatorial Guinea to protect against illnesses and death. Then the next day, they came into class and he was dressed up as a medicine man and stayed in character almost the entire class. Not only was it informative, but she hasn't forgotten the information at all. I feel like those activities where she gets to participate, or where things are very interactive, she is much more invested in the lessons.

2. **Did your son or daughter ever come home and tell you about some lesson or class they thought was really great? What did they say about it? Did they talk about the teacher and what the teacher did?**

She left the house afraid and apprehensive and came home excited and energized. She talked about how her AP Human Geography teacher had used the Marx Brothers as a comedic approach to liven up dry and bland material on the Industrial revolution. Instead of just reciting facts, he used humor to keep the class interested. She laughed really hard as she described his physicality and his interaction with the students, like he was a showman or a circus performer—just immune to the self-consciousness that makes teachers seem cold and distant. More importantly, she actually recited the information and talked about how she was already planning a final report on the same topic because she was just so connected to the stories and people of the period. I don't think I've ever seen her so excited about any subject or class or teacher.

3. **What seemed to matter to your daughter or son about their teacher's actions, attitudes, emotions, and (perhaps) inspirations in these experiences?**

She is very proud to be in this AP course, so she takes performance seriously. I think when she didn't do well on several quizzes in a row at the middle of the semester, she started getting very discouraged, and we had to talk it out. She went in and got extra help and basically figured out what she was lacking information wise. She actually learned some new study skills that she has used since then and they are helping a lot. It was really important that her teacher showed emotion and empathy and didn't just reject her quizzes as another failure. He even gave her an opportunity to earn extra credit and build up her grade later.

4. **Based on their stories, did anything stand out for your daughter or son regarding their specific interactions with the teacher? Did they mention any classmates' interactions with the teacher?**

I've heard a lot about the role of humor and the participation of students in the learning process. It's very effective and engages the students in the learning. When they are at home, working on projects from class, the same type of positive attitude brings sanity to the workload, and it is a powerful effect. She actually talks about how she and her friends will discuss things from this class later at lunch or even, god forbid, after school. I think that any time you have your kid excited to learn, then the teacher is demonstrating excellence in the classroom. Overall, the personal support and direct interaction really helped her to excel in this challenging, but fun course.

5. **In general, what kinds of AP teachers are your son's or daughter's favorites? How do they describe them? What classes seem to cause the biggest issues for them?**

Beyond simple things like humor and energy, I think that there is a humanity in teaching that is demonstrated by those who our kids value the most. My daughter's teacher, for example, has gotten so passionate about a topic that he's practically broken down and cried in the classroom. Although some students might be turned off by the teacher's emotions, he's talked about these deep social issues with the kids like they are his peers, and most students respect him for it.

6. **Was your daughter or son interested in the subject matter to start? Have you noticed that they are exploring more on this subject on their own?**

She didn't really know whether she was or not. I mean, she had always enjoyed history and geography, but here was this big idea class and she was going to be learning about cultures and their meaning to different groups of people. So, I think that she was interested in the idea of human geography, but there was a lot of memorization and learning at the beginning that didn't seem to gel with what she was expecting. Since she completed this course, I have seen her very enthusiastic about human studies and she has actually talked about pursuing a career in sociology or some form of counselling and human development field. She is very interested in the human experience now. My daughter has visualized a future in this field, even developed long-term research plans that are based upon the learning she has done during the course; it is inspiring to see.

7. Have you met the teacher? If so, what was your overall impression of the teacher?

I have met the teacher and was impressed by his kind and reassuring demeanor. He gave me solid eye contact and reassured me that my daughter would have an excellent learning experience. He told me that he expected her to work hard, as he does of all his students. But he had no doubt she could succeed. My overall impression is that he cares a lot about the students' enjoyment of learning and reinforces realistic but hopeful expectations.

Appendix B

Institutional Review Board Approved Application

Study Type and Performance Site Information

Type of study:

[ ] Standard or Expedited

[x] Exempt

[ ] Umbrella Review for funds release

[ ] Comparative Effectiveness Research [ ] Non-Human Subject Determination

[ ] Quality Improvement/Non-Research Determination [ ] Request review by another IRB

[ ] Coordinating Center ONLY

Please indicate which Committee is most appropriate to review your project:

[x] Social and Behavioral Sciences

[ ] Health Sciences

Are there any international sites involved in this study in which the PI is responsible?

[ ] Yes

[x] No

Is this project cancer-related?

[ ] Yes

[x] No

Study Purpose and Description

Provide a brief abstract of the study in lay language. The IRB Committees are comprised of scientists with varied backgrounds, non-scientists, and community members.
This study will examine stories students tell about their most exciting learnings and the conditions in which they occurred. A key area of curiosity pertinent to Rosenblatt High School in Boca Raton, Florida is how to improve engagement in the classroom, especially advanced placement (AP) courses. The parents of students enrolled in AP courses will be asked to discuss during a brief phone interview any stories which are vivid regarding what their son or daughter has talked about with them relevant to AP courses.

Does your study fit into one or more of the listed categories of exemption (45 CFR 46.104)?
[ ] (d)(1) Research involving normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction such as: (1) Most research on regular and special education instructional strategies; or (2) Research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management.

[ ] (d)(2) Research that only includes interaction involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior (including visual or auditory recording) if at least one of the following is met: (1) Information obtained is recorded by the investigator in such a manner that the identity of human subjects cannot be readily ascertained; or (2) Any disclosure of the human subjects' responses outside of the research would not reasonably place the subjects at risk or; (3) The information obtained is recorded by the investigator in a manner that could identify the human subjects directly or through identifiers linked to the subjects.

[x] (d)(3): Research involving benign behavioral interventions in conjunction with the collection of information from an adult subject through verbal written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collected and at least one of the following is met; (1) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot be readily ascertained; (2) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk; or (3) The information obtained is recorded in a manner that could identify the human subjects directly or through identifiers linked to the subjects. Note: Children may not be included in research under this exemption.

[ ] (d)(4): Secondary research for which consent is not required: Secondary research uses of identifiable private information or identifiable biospecimens, if at least one of the following criteria are met: (1) The identifiable private information or biospecimens are publically available; or (2) Information, which may include information about biospecimens, is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, the investigator does not contact the subjects, and the investigator will not re-identify subjects; or (3) The research involves only information, collection, and analysis involving the investigator's use of identifiable health information when that use is regulated under HIPAA for the purposes of "health care operations" or "research", or for "public health activities and purposes" under HIPAA; or (4) The research is conducted by, or on behalf of a Federal department or agency using government-generated or government-collected information obtained for non-research activities.

[ ] (d)(5) Research and demonstration projects which are conducted by or subject to the approval of federal department or agency heads, and which are designed to study public benefit or service programs for federally supported projects and most appropriately invoked with authorization by the funding agency, procedures for obtaining benefits or services under those programs, possible

changes in or alternatives to those programs or possible changes in methods or levels of payment for benefits or services under those programs.
[ ] (d)(6) or 21 CFR 56.104(d) Taste and food quality evaluation. [ ] No category fits what I want to do.

Will you be recording or keeping any of the 18 HIPAA identifiers?
[ ] Yes
[x] No

Describe any procedures to be used during the study:
I will be conducting 20-minute phone interviews with parents of students in advanced placement courses. The parents of students who are enrolled in AP courses and are classified as 9th through 12th grade will be invited via email to participate in an interview. During all phone interviews, the emphasis will be on complete confidentiality of data, including no use of parent or student names as identifiers.

Will children be the subjects of your study?
[ ] Yes
[x] No

Recruitment

Will the study provide compensation to research participants?
[ ] Yes
[x] No

PHI/Consent

Are you requesting a waiver of authorization to use/record protected health information?

[ ] Yes

[x] No

Does this research disclose Protected Health Information (PHI)?

[ ] Yes

[x] No

Conflict of Interest Disclosure

Is there a potential conflict of interest for the Principal Investigator or key personnel? • The PI is responsible for assuring that no arrangement has been entered into where the value of the ownership interests will be affected by the outcome of the research and no arrangement has been entered into where the amount of compensation will be affected by the outcome of the research. • Assessment should include anyone listed as Principal Investigator, or other research personnel on page 1 of this application. Please note that ownership described below apply to the aggregate ownership of an individual investigator, his/her spouse, domestic partner and dependent children). Do not consider the combined ownership of all investigators.

[ ] Yes

[x] No

Appendix C

Institutional Review Board Approved Informed Consent Form

This informed consent applies to adult educators in public schools.

Name of participant: Age:

The following information is provided to inform you about the research project and your participation in it. Please read this form carefully and feel free to ask any questions you may have about this study and the information given below. You will be given an opportunity to ask questions, and your questions will be answered. Also, you will be given a copy of this consent form.

Your participation in this research study is voluntary. You are also free to withdraw from this study at any time. In the event new information becomes available that may affect the risks or benefits associated with this research study or your willingness to participate in it, you will be notified so that you can make an informed decision whether or not to continue your participation in this study.

1. What is the purpose of this study?

This study will examine stories students tell about their most exciting learnings and the conditions in which they occurred. A key area of curiosity pertinent to Rosenblatt High School in Boca Raton, Florida is how to improve engagement in the classroom.

You are being asked to participate in this study because you are the parent of a high school student who has knowledge of their learning experiences.

2. Procedures to be followed and approximate duration of the study:

If you choose to participate, you will be asked to participate in a 20-minute phone interview that asks questions about your knowledge of your son's or daughter's experiences in advanced placement classrooms. All notes will be typed electronically and researchers will remove any information that would personally identify you and will assign you a numeric identification code.

3. Expected costs:

There are no costs associated with this study.

4. Description of the discomforts, inconveniences, and/or risks that can be reasonably expected as a result of participation in this study:

There are no serious risks that can be reasonably expected as a result of participation in this study. The main inconvenience is the time required for participating in the interview.

5. Good effects that might result from this study:

a) The benefits to science and humankind that might result from this study. This research will contribute to our understanding of how students might have more fulfilling learning experiences in classrooms.

b) The benefits you might get from being in this study. The findings from this research could be used to create more enjoyable and interesting experiences for your son or daughter in AP classes.

6. Compensation for participation:

There is no compensation for your individual participation.

7. What happens if you choose to withdraw from study participation?

If you choose to withdraw after your participation has begun, the interview will end and no further questions will be asked. Any information you have provided up to the point of withdrawal will be maintained as described below.

8. Contact Information. If you should have any questions about this research study or possibly injury, please feel free to contact Michael Baron at 561-703-5689 or my Faculty Advisor, Chris Quinn Trank at 615-875-9196.

For additional information about giving consent or your rights as a participant in this study, to discuss problems, concerns, and questions, or to offer input, please feel free to contact the Institutional Review Board Office at (615) 322-2918 or toll free at (866) 224-8273.

9. Confidentiality:

Diligent efforts will be made to ensure that your participation in this study and your responses remain confidential. Your name will never be used in either data entry to research products that result from the study. Results will be presented so that no person is individually identifiable. Researchers will remove any personally identifying information, assigning a numeric code to identify participants and schools. Only key study personnel will have access to the coding system. Artifacts and research records, will be stored securely and only researchers will have access to these records, for up to 10 years, at which time it will be destroyed.

10. Privacy:

All efforts, within reason, will be made to keep your personal information in your research record confidential but total confidentiality cannot be guaranteed. Your information may be shared with Vanderbilt or the government, such as the Vanderbilt University Institutional Review Board or the Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

STATEMENT BY PERSON AGREEING TO PARTICIPATE IN THIS STUDY

I have read this informed consent document and the material contained in it has been explained to me verbally. All my questions have been answered, and I freely and voluntarily choose to participate.

Date Signature of participant

Consent obtained by:

Date Signature

Printed Name and Title

Appendix D

Institutional Review Board Approved Interview Questions

Phone Interview Questionnaire

To the parent: Thank you for your willingness to participate in this interview. I am interested in learning more about student engagement in advanced placement classrooms.

Questions:

1. What are some of the notable narratives or stories about classroom experiences in AP classes which your daughter or son has shared with you?

2. Did your son or daughter ever come home and tell you about some lesson or class they thought was really great? What did they say about it? Did they talk about the teacher and what the teacher did?
3. What seemed to matter to your daughter or son about their teacher's actions, attitudes, emotions, and (perhaps) inspirations in these experiences?
4. Based on their stories, did anything stand out for your daughter or son regarding their specific interactions with the teacher? Did they mention any classmates' interactions with the teacher?
5. In general, what kinds of AP teachers are your son's or daughter's favorites? How do they describe them? What classes seem to cause the biggest issues for them (need not mention a particular teacher or class).

6. Was your daughter or son interested in the subject matter to start? Have you noticed that they are exploring more on this subject on their own?

7. Have you met the teacher? If so, what was your overall impression of the teacher? (If relevant, what was your impression of the teacher in terms of relatability to students and knowledge of the subject matter?)