

THE CORRELATION BETWEEN MOTIVATION AND ACHIEVEMENT

The Correlation Between Motivation and Achievement

Goals in an AP Classroom

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The peer review process of this research paper was done by peers within my AP Research class. To peer review, we looked at each other's papers to provide constructive feedback. This was supervised by a trained AP Research paper.

Abstract

The present study investigated the correlation between achievement and motivation in high school advanced placement students. This study looked into the gap of how much motivation an AP student needs to reach achievement because of increased student involvement in an AP classroom. This study analyzes this correlation with a qualitative interview and field note observations. To search for this, the researcher conducted field note observations with 7 participants in a low, medium, and high stress leveled environment to cross examine student behavior with their interview answers. The findings of this study were that students need a high level of motivation to feel academically achieved, and this is predominantly through grades. This study ultimately examined the significance of how important it is to assess student involvement in a learning environment, to overall help further AP students to learn and succeed in their classroom. This study ultimately created a future pathway to examine other academic levels such as Honors, or College Prep (CP) students.

Key Words: achievement, advanced placement, students, learning, classroom

Introduction

In today's society, the increasing student involvement in Advanced Placement (AP) classes has grown significantly. Specifically in high school students, the involvement in AP classes has factored into the students' overall feeling of academic achievement. However, the correlation between their motivation and how these students feel that specific sense of achievement remains unidentified. These students factor in these AP classes with how they define their overall sense of achievement, and yet the question of how they motivate themselves to define their own sense of academic achievement remains unclear. In high-involvement AP classes, a large number of students take this specific class predominantly for the purpose of either getting a GPA boost or having an interest in a challenging course. Staying motivated throughout the year, in a class that lasts the entire school year with a major test in May, is the largest challenge with how an AP class functions; and the feeling of achievement gained by scoring well on the AP Exam factors into what almost all AP students want in order to succeed as seen in my study. Additionally, the academic success these students strive to attain affects students in an AP classroom. This is how the solution of finding how much motivation an AP student needs in order to reach their feeling of academic achievement comes into place within an Advanced Placement classroom.

Literature Review

Motivation is an incredibly important factor in how students succeed in an academic environment. Student “motivation is the single most important element of learning” (Filgona et al., pg 2, 2020). With the importance of student motivation, the possibility of a correlation between motivation and student academic success is abundantly clear.

Student Initiative in Classrooms

Students who actively engage more in a classroom, learn more material. In order for students to properly initiate in a classroom, a balance of discussion and instruction is key (Bergstrom et al., 2011). Jonathan Erwin adds to this statement by explaining that motivation is a big denominator in the classroom for student initiative. There is external motivation and internal motivation. External motivation is the most prominent, asking, reasoning, telling, challenging, reverse psychology, nagging, or shaming (Erwin, 2003). Velayutham and Aldridge (2013) agree, stating that “student motivation plays a massive role in classes, and the key to this is psychosocial learning. Psychosocial learning helps students increase efficiency-- if students are more motivated, they are more likely to learn” (p. 14). However, in order to better engage students in the classroom, teachers should learn how to better manage students' emotions, goals, and criticisms. Cognitive, social, and emotional methods for goals are all paths that enhance a student's learning capabilities (Jennings & Greenberg, 2009). Additionally, to enhance student initiative in classrooms, motivation plays an important role. All of these perspectives connect to form a bigger picture of the key factor on how students can thrive in a classroom environment pertaining to their motivation, however, there is no measure of actual motivation a student needs in order to properly engage within a classroom.

Students Behavior in School-Related Goals

Attitudes in students looking to achieve a school-related goal are incredibly influenced by their approach. Students "stated expectations that his subsequent achievement efforts would eventuate in success rather than failure" (Crandall et al., p. 647, 1962). Hulleman, Senko, and Harackiewicz (2011) agree with this, stating that “achievement goals and emotions are crucial

determinants of students' learning processes and have an impact on academic outcomes" (p. 28). If a student has a negative attitude pertaining to how they will achieve their specific goal, they are more likely not to reach it. However, if a student has a positive attitude towards achievement, they are more likely to achieve the goal. The achievement goal theory is a predominant theory that includes two types of goal orientation sections referred to as learning goal orientation and performance goal orientation. The first half of the achievement goal theory is learning goal orientation, involving the student's prioritizing competence in the subject and focusing on learning, understanding, and mastering tasks. Performance goal orientation pertains to students demonstrating competence and managing the impression of others (Velayutham & Aldridge, 2013). This could be correlated with behaviors of how students reach to achieve their certain academic goals, such as mastery goals being positively related to positive activity-related emotions (enjoyment, interest) and negatively related to negative activity-related emotions (boredom, anger). When students are put in a stressful environment such as a test, or an exam, students can either react to these environments with performance-approach goals, which are positively associated with positive outcome-related emotions such as hope or pride, or on the contrary, performance-avoidance goals, which are associated with negative outcomes: further invoking students to maintain their goals due to emotions such as anxiety, hopelessness, or even shame (Pekrun, 2014).

Learning Styles in Students

All students learn differently, and psychologically there have been many studies pertaining to the learning styles of students within the classroom. In the classroom, teachers have three ways of teaching students so they can learn: "Emotional support, classroom organization and instructional support... previous studies have linked these types of classroom interactions to

students' academic learning" (Curby et al., pg. 4, 2013). In addition to this, When teachers instruct, it is important to observe through another perspective to see if the way an individual teaches is in relation to how children learn (Auerbach et al., 2021). Teaching students in correspondence to how they can learn a particular subject is key in order to understand the information, and still remember lessons. This leads into how students can productfully learn. Students can learn and engage in lessons in many ways, some being creating goals for themselves, communicating with their peers or teachers, regulating emotions properly, and getting feedback (Kılıç et al., 2021). There needs to be some kind of motivator in order for students to succeed within the classroom:

Extrinsic motivation such as a reward or praise refers to doing a task or activity because it leads to a separate and independent outcome outside of the learning objective itself. Intrinsic motivation is where a learner does not look for any personal or other benefit (Saeed & Zyngier, pg. 254, 2012).

Although this is a predominant factor into students' learning styles, there are very few studies that draw upon achievement goals in students. There is a large gap in the body of knowledge pertaining to high school seniors and the advancement of learning and performance goal orientations on those individuals through motivation.

Student Goal Gaps

There are many studies drawn upon the kinds of goals students can achieve. Many students look to attain their academic goals because they want to advance themselves or become better at the task. These goals are achieved through student initiative through motivation—however different kinds of students advance through staying motivated in different kinds of environments. This is directly addressed by researching the kinds of emotions students seem to

be having in these stressful environments, and those specific goal strategies are heavily researched, however, it is unclear as to how students look to achieve these goals based on their motivation, along with their own kinds of behavioral patterns to actually assess the matter.

With this clear gap, I plan to address the question: What is the correlation between motivation towards academic achievement for High School Seniors in an AP Classroom at a Coastal Suburban High School? Through the pre-research period of my study, I proceeded with the following hypothesis: Motivation needs to be higher in order for a high school senior in an AP Classroom to reach academic achievement.

Method

Method Overview

To answer this research question, I implemented a study to aim for two goals: 1. To understand behavioral patterns in AP high school students, and 2. Analyze how these patterns correlate to their overall motivation in a high-level class. To address both of these goals, I conducted qualitative interviews and field note observations. I chose this method because I could easily gain information regarding the analysis of their behavior through interview questions– and further my research during observations based on their answers during the interview process. I began this process by using an online randomizer which would select an AP teacher whose class I would conduct my research on. This ended up being an AP Literature classroom. When the teacher was selected, I sent the teacher an email describing my study (Appendix A), and if I could conduct research on their class, and if I could present my study to their students (Appendix B). If the students were interested, I would give them a consent or assent form, or they virtually signed up through a website named Jot-Form (Appendix C). Once these forms were turned in, I made a Sign Up Genius where they could sign up for a time best for them to conduct an interview. After the interviews were completed, I would go into the teacher's classroom and

observe the same students and their behavioral habits in correlation to their responses to the interview questions.

Interview

The purpose of this interview was to collect qualitative data regarding the correlation of the meaning of achievement and motivation in an AP classroom. Interviews lasted about 5 minutes, and I hoped to gather both possible answers to my goals for my research and pre-observational knowledge before studying their habits in the classroom. The research questions I asked first began with a pre-developed definition of academic achievement (Appendix D). The statement was, “Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school” as stated by (Steinmayr et al., para. 1, 2014). The students were then asked if they agreed or disagreed with the statement, and they could be as vague or blunt as they saw fit. This was to obtain any pre-bias to the word ‘achievement’ and gave students an opportunity to speak their opinion. I then asked the participants what their personal description of academic achievement was. The purpose of asking this question was to gain a broader understanding of what my participants thought about when the word ‘achievement’ came to mind and to link this definition to how they performed in class from their behavioral patterns. The last question I asked was how they feel their motivation affects their definition they had given me previously in their AP class. The purpose of this question was to see if there was a trend in the correlation between motivation and academic achievement in my participants and to gain pre-observational qualitative data before my class observation period. The interview questions provide reasoning and guidance as to why they behave the way they do in the classroom, and by granting them open-ended questions, this

provides students the opportunity to answer questions about how they truly feel and provides avoidance of social desirability bias on what they thought others would want to hear.

Participants

I decided to limit my study to Juniors and Seniors in an AP Class at a large coastal suburban high school. I chose Juniors and Seniors because of their transition into graduation and they had a deeper focus on GPA along with grades, and most specifically in an AP Class because I wanted a higher leveled class of students due to the correlation between achievement and motivation in my study overall benefitting my results. Initially, I was going to do 2 AP Classes, but I ultimately decided to just focus on one because of how deep my observational patterns had to be. If I had chosen two classes, I would have had to focus on too many students at the same time; and my research would not have been as thorough as it ended up being.

Procedure

To begin I acquired a list of all possible AP teachers from the coastal suburban high school and consolidated them into an online randomizer to randomly select one. I did this to maintain non-biased research, and to maintain a diverse sample. From there I emailed the selected teacher, explaining my study, and asked if I could present, and ask the students to participate (Appendix A). If the teacher responded, I would email them a time that works, and go into their class to give a quick summary of my research study (Appendix B). From here, I would ask the students if they would like to participate in my study. All of my participants were under 18, so they were given an assent form (Appendix C). I would come by the classroom for the next 7 days, to both remind and gather the forms. After this, I created a Sign up Genius to curate times students could come in during their lunch period for a pre-observational interview (Appendix D). Interviews were conducted in person in an empty classroom while being recorded on my phone.

The recordings were kept secure, and not shared with anyone. After gathering interviews for about 2 weeks, I went in for the classroom observations to assess student anxiety through their behavioral patterns to see if different environments would affect student motivation. I did this by observing my participants in a low, medium, and high-stress environment. This would assess the overall correlation between motivation and achievement, especially by cross-examining participants' behaviors with their interview questions. I thought that observing how their behaviors differentiated in different settings would help me measure out how motivated they were to achieve different class assignments: a major test, going over a test and reading afterwards, and just reading. Based on their interview question answers, I looked for how they acted the way they did in these environments which ultimately led me to measure how motivated an AP student needs to be in order to reach “achievement.” This was gathered over the course of 3 weeks. Observations were kept in a notebook which was also secured in a safe environment, and not shared with anyone.

Ethics

This study was approved by an Institutional Review Board (IRB) after I added multiple ethical considerations for this study. During all sessions of research, participants were given informed consent and made known that they could withdraw at any given time. They were free to ask questions, or not partake in answering them on the interview, and could opt out of the observations. Non-monetary incentives were offered for their participation. All data was kept confidential, anonymous, and secured.

Results

From the beginning of my study, my first qualitative set of data was conducted through a series of pre-observational interviews. First, I researched a definition of the meaning of “academic achievement,” written below. Each section of data will be labeled as tables.

Table 1

Definition of Achievement

Definition	“Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school” (Steinmayr et al., para. 1, 2014).
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Table 2

Interview Questions and Responses

Interview Questions	Agrees or disagrees with definition	What is your own personal definition of academic achievement?	How do you feel your motivation affects your overall achievements in your AP classroom?
Participant A	-Agrees - “School: it’s more about the outcome than anything. If I spend time on something, I’d expect to do well on it and if I don’t then it’s just discouraging.”	“Getting as high of grades as you can with your personal ability.	“I generally stay motivated enough to keep up with everything, but I could definitely see that I’m pretty tired usually by that class. That’s my last class but I still dont think it harms all that much because I think I still get everything done.”

Participant B	<p>-Agrees - Not content if they try hard for something and they don't get a good grade</p>	<p>“Academic achievement is demonstrating an understanding of the material and proficiency in the content. Making good grades, but also understanding why.”</p>	<p>“When I’m more motivated, I perform better. My motivation is lower at the end of the day because I’ve used it up in my other classes. “</p>
Participant C	<p>-Disagrees - “I would be disappointed ... I’m not a morning person at all so I do better in my classes later in the day which is helpful.”</p>	<p>“I feel like being able to learn something and know something isn't always shown in test grades. I also think that it’s important to get good grades for academic achievement to get to better colleges and have a better education so a letter grade does help for things like that.”</p>	<p>“I feel like I have pretty good motivation. I definitely need extra help with AP Lit, so I go in for extra help with multiple choice and I do all the practice. I feel like if I didn’t have motivation, I definitely wouldn’t do as good in the class as I do. I think motivation is important in getting good grades.”</p>
Participant D	<p>-Disagrees - “That doesn’t include any thoughts or feelings of one’s person. I feel like that matters a lot because yeah, I did the assignment, I did what I was told, what was I supposed to do? Do I feel good about what I did? If I don't it’s kind of just like ‘eh, okay,’ and I feel the same about getting bad grades.”</p>	<p>“Usually I just want to be proud of my work and get a good grade on it. It can’t be one or the other. It has to be both.”</p>	<p>“I have terrible motivation. Whenever we have an assignment that we were supposed to do at home, I will usually wait till the last day at like 6:00 in the morning when it’s due at 8:30. That’s not something I try to do, I wanna work on it, but I just don't have the motivation to. I feel like that really affects the effort that I put into it. I want to be the best that I can, but I feel like not being able to do that is bad. Because I’m not proud of it.”</p>

Participant E	<p>-Agreed - "Sometimes I study and don't expect a good grade, if I study and think I'm going to do well and I don't, then that isn't great."</p>	<p>"Getting good grades and understanding the material to the best of my ability."</p>	<p>"My motivation affects my achievement in AP Lit a lot. In a lot of my classes, I have zero motivation and I have to force myself to study, but if I'm interested in the subject I'm much more able to study and get interested in the material. Even though AP Lit is at the end of the day, my motivation doesn't differ because it's a short class."</p>
Participant F	<p>-In the middle - "If I tried my best and then got my best, that's also an achievement. I would definitely be disappointed. Just because I did try, and I expected a better outcome than what I got, but at the end of the day it's one test and you did try. So it isn't something to be ashamed of."</p>	<p>"Academic achievement is knowing where you stand on your knowledge of something and being able to know what you need to do to reach whatever goal you've set, and if you reach that goal then you've achieved something."</p>	<p>"I think because our class is pretty small compared to the other Lit classes, I think that makes it easier to put your own thoughts into it and then you can get more one-on-one feedback because it is a smaller class. That makes it easier to do things like a test by yourself or an essay by yourself because there's not so many people."</p>
Participant G	<p>-Disagrees - "I wouldn't say that's the definition that should be for everyone."</p>	<p>"Just doing the best I can. Knowing I put effort in, I'm gonna feel however, but if I know I put the effort in, if I don't reach [my goal], it's disappointing, but I know I didn't completely fail."</p>	<p>"By the time I'm there it's the end of the day, so I'm kind of brain dead. So I have no motivation at that point. So I'm kind of just going on nothing."</p>

Interview Results and Discussion

In my interview questions, following the definition of “academic achievement,” 5 of my participants agreed, and 2 of my students disagreed. The students in particular who disagreed had the commonality of focusing more on if they learned something from the topic: then they would mainly feel ‘achieved.’ This was stated in the next question, which was defining their own personal definition of “academic achievement.”

This presented a negative correlation between achievement and motivation in an academic setting because of the 5 students who ended up agreeing with the definition as most of the AP students only felt motivated if they got a “good,” grade on their assignments.

In the last interview question, students had varied answers to their differing amounts of motivation in the classroom. The last interview question was predominantly used on how they presented themselves in class while being observed based on their answer to the question.

Observations Results

From the observations I made within the classroom, results ended with qualitative data. During these observations, I observed within a high-stress environment: with both a multiple choice and an essay. Within this environment, I observed students' most frequent behaviors— which followed within a medium stress environment: reviewing the essay, and reading the novel from their curriculum. Lastly, I observed my participants in a low-stress environment: which was just reading from the same novel. Due to the wide variance of behaviors I had to observe from 7 participants total, They are listed out in a chart, separating them by a letter.

High-Stress**Table 3***High-Stress (Multiple Choice)*

Participant A	Elbow on knee, slouched over, legs uncrossed and leaned into the paper, bouncing leg.
Participant B	Rubbing left hand fingers together, hunched over into the paper, 5 writing utensils.
Participant C	Legs crossed with one shaking, touching face, good posture.
Participant D	Legs crossed, finicky right hand, good posture.
Participant E	Crossed legs, elbow on desk with hand on face, finicky with pencil, hunched over desk.
Participant F	Hand on face, legs crossed, hunched over desk, shaking back and forth, finicky with hair.
Participant G	Straight posture, pen to mouth, relatively still, legs crossed.

Table 4*High Stress (Essay Portion)*

Participant A	Read first, hand on mouth, lean heavily into the desk, then move hand to face, look around the room, bouncing leg periodically, done at 3:20pm.
Participant B	Shaking foot playing with hands, extra time so did not finish.
Participant C	Low stress, same behaviors from multiple choice patterns, done at 3:32pm.
Participant D	Shaking foot, constantly erasing, done at 3:20pm.
Participant E	Bites lip, shaking foot, waves pen back and forth, done at 3:15pm.
Participant F	Made faces at the paper, Hunched heavily over desk, hand on forehead, stress behaviors, signals hand when confused, looks around the room, done at 3:32pm.
Participant G	Asks questions, hunched over, relatively still, done at 3:34pm.

Table 3 and 4

From first observing the AP participants, students, on average, all had noticeable stress indicators. From Figure 3: Students noticeably had some form of playing with their hands. From Figure 4: Writing an essay after a multiple choice portion of the test made students start to bounce their leg, or shake their foot.

Table 5*Medium-Stress (Reviewing Essay)*

Participant A	Shaking leg.
Participant B	Relatively calm, Read pretty fast.
Participant C	Playing with hands.
Participant D	Shaking leg, hunched over while reading.
Participant E	Scratching arms.
Participant F	Danced when waiting for feedback.
Participant G	Asked questions, made a couple side comments, and relatively good posture.

Table 6*Medium-Stress (Transition to Book Reading)*

Participant A	Tapped both legs at the same time, cracking knuckles, consistently held up the novel.
Participant B	Followed words with a pen, hunched over.
Participant C	Shaking leg.
Participant D	Shaking leg, hand fidgeting, looking at hands and not at the book.
Participant E	Head on hand, shaking leg, not looking at the book.
Participant F	Shaking leg, head on hand, playing with shoes, consistently held up novel.
Participant G	Completely still, usually facing away from the desk, relatively good posture.

Tables 5 and 6

From observing AP Students in the classroom, during the medium stress period in Figure 5 which was reviewing the essay, students noticeably had more finicky movements than the other figures. From Figure 6, multiple students were noticeably shaking their feet, and behaviors seemed to indicate that they were not paying attention to the novel.

Table 7*Low Stress (Reading the Book)*

Participant A	Head in hands, tapped feet back and forth.
Participant B	Book on desk, very still.
Participant C	Shaking leg.
Participant D	Hunched over, tapped foot, book on desk.
Participant E	Head in hands, visibly spaced out.
Participant F	Book in hands, shaking leg, plot twist happens-- visibly surprised.
Participant G	Not here today.

Table 7

From the third day of observing AP students within the classroom, students in Figure 7 seemed to be more relaxed but still continued similar movements as when they were in a medium-stress environment: noticeably from their shaking feet or legs.

Observations Discussion

In my data collection, 7 students were analyzed in a singular classroom of high school AP students. I first conducted an interview with four main questions, and their responses determined how I analyzed them in the tiered stress levels. The way I decided to research the measure of motivation was to separate them and cross-examine the participants based on their answers in the interview. By observing different behavioral patterns based on their answers to the interview questions, I found a correlation between motivation and academic achievement with respect to senior high school students in an AP classroom. The question of “What is the correlation between motivation towards academic achievement for High School Seniors in an AP Classroom at a Coastal Suburban High School?” Helped me to understand that about half of the seven

participants I analyzed focus on either letter grades, or just want to try their best. With the behavioral patterns, students exhibited more stress behaviors in higher-stress environments, however, it was indicated while observing my participants that if reviewing a high-stress topic and going into a low-stress topic, they would still be exhibiting signs of high-stress behaviors due to their focus of academic achievement.

Participant A

When asking Participant A the interview questions, it was clear by the second interview question that they were grade-focused. Spending time to create a “better outcome” helped them not be discouraged. Although they stay relatively motivated; it seems as though they get tired by the class being at the end of the day. This is what led me to focus on their movements in class. One common movement they did in all Tables was bouncing or shaking their legs. This was my indicator that they were stressed, however their movements gradually decreased as the stress environments got lower. This was an indicator to me that they were focusing heavily on their grades in higher-stress environments, but as the environments became less stressful they became less focused on their grades.

Participant B

Participant B was focused on both getting a good letter grade, but also understanding the topic. This leads to their less motivation in the AP class at the end of the day, because they focus heavily on understanding the material in all of their other classes. They were very prepared when observing: they had multiple utensils in the high-stress environment and also fidgeted with their hands. Although these were common behaviors this participant exhibited, they increasingly got more still as stress levels decreased. This was an indicator to me that when they weren't anxious,

and completely still; they were focusing on trying to understand the material better: correlating with their personal definition of achievement in the interview.

Participant C

Participant C was one of the participants who disagreed with the definition. Their belief of test grades not defining their achievement was clear in the interview process, however, they did believe that it would be helpful for future plans such as college. They do get extra help in the class I observed, and seemed less stressed in all Tables. This is indicated by their stillness, and compared to the other participants: less fidgety. The only time they indicated stress levels was in Table 5: playing with their hands. This is backed up by their answers during the interview, being that they had to be motivated in order to succeed in the class. This heavily correlates with my research question following that AP students need to be more motivated to succeed in the classroom.

Participant D

Participant D also disagreed with the definition. Their overall consensus was that if they got a bad grade, they would move on. This participant stated that they had motivation problems, and if they are not motivated, it is hard for them to put effort into the assignments. When observing this participant in the classroom, their behaviors indicated that they were focused while in high-stress environments, but as they lessened into lower-stress environments (Table 7) their overall focus was obstructed. This was a strong indication that they want to be proud of their overall achievement (Shown in interview question 2), however their focus seems to stray when given material that isn't graded.

Participant E

This participant was similar to participant B. They wanted to understand the topic and get a good grade as a result of that. If they are interested in the topic, they are more likely to be motivated to focus on understanding the material. When observing this participant, they indicated that they were heavily focused on high-stress levels due to behaviors such as shaking their utensils or shaking their legs/feet. In lower-stress situations, they kept their head on their hands and were visibly spaced out. This was a strong indicator of their uninterest in the novel; therefore lessening their overall motivation- which would in turn affect their personal definition of academic achievement.

Participant F

Participant F was in the middle in context to the definition of achievement. If they tried and did not succeed, they would be disappointed but still proud of themselves if they tried their best. Setting goals for themselves and reaching them academically would be their indicator of achievement. When observing their behavior in the classroom, they exhibited higher-stress behaviors than the other participants: looking around the room, playing with their hair, or even making faces when confused by a question (Tables 3 & 4). Interestingly, they indicated lower stress behaviors in Table 5, a medium-stress environment, than Tables 6 & 7. This suggests that they weren't trying to focus on being disappointed if they got a negative grade, and they knew that they did their best- correlating with their interview questions.

Participant G

Participant G overall disagreed with the definition. Their main priority was putting effort into the work, and trying to reach an overall goal. Their motivation was low at the time of the class, because of it being at the end of the day. This was strongly indicated in their observation

because of their consistency of staying extremely still. This suggested to me that because they were tired from the class at the end of the day: they were trying to put in as much effort as they could while feeling that way. They asked a lot of questions in the high-stress environment: suggesting that they needed more guidance: overall possibly relating to motivation being deterred because of class time at the end of the day affecting their overall achievement in the classroom.

New Understanding

Overall, my original hypothesis of motivation needing to be higher in order for a high school senior in an AP Classroom to reach academic achievement proved to be correct. Although I did prove this hypothesis, I would like to note that other factors I did not consider, such as grades, were a huge factor in students feeling like they academically achieved. This is a possible factor to assess in further studies, and ultimately my new understanding concludes that motivation is an incredibly important factor in how AP students feel academically achieved.

Conclusion

Limitations

One main limitation in my study was that I had to assume because students were in an AP Classroom, that they were “high-achieving.” To overcome this limitation, I focused on their motivation levels within the classroom, and decided not to center my study on “high achievers,” but rather just “participants,” or “AP students.” This also correlated to the uncertainty of if they were taking the specific class I was researching for fun, or for a higher GPA.

Because of the small sample size, this study may not be generalizable to a higher number of participants. I had a small sample size because of the low participant involvement, however,

the decision to make my research into a case-by-case study with my small sample size was beneficial to gaining more insight on my overall research.

Delimitations

When factoring in which AP class I would be observing for this study, I had to choose a class within the class period of my AP Research class. I gathered data on which AP Classes were taking place based on a random wheel picker, and this decided which class I would observe during my class period. The impact of my decision to only pick AP classes during my class periods affected a broader range of AP classes happening during other school periods and minimized the number of classes taking place. If I had not just selected classes during my AP Research period, there would have been a broader range of AP classes to examine.

Another delimitation was my decision to choose AP students specifically. I picked AP students because I wanted to explore the motivations behind reaching academic achievement, and the most likely student population to be directly affected by this was AP students. This is why I decided to focus on just AP classes. This affected my study because of the exclusivity to other academic levels such as honors or core classes, therefore only making my study conclusive in the context of AP students.

Future Directions

For this study, I only examined one AP class. When conducting further research, examining more AP classes would be directly beneficial in the research of the correlation between motivation and academic achievement in AP classes. Another beneficial factor in further investigation of this study would be to examine a larger student population, as this may bring more behaviors to research and help correlate the research more thoroughly to motivation and achievement levels due to behaviors of the participants in this study being the ultimate factor

in studying the correlation. This could also benefit multiple assessments of grade levels, as this would help the general population and broaden the research to a larger student body.

Extensions to this study may entail the correlation of College Prep (CP) classes between Advanced Placement (AP) classes. Honors classes may be a way to further compare motivation between levels, with a way to differentiate students taking both types of academic leveled courses. This may help further the understanding of motivation specific students have within the classroom: further examining the correlation between academic achievement and motivation within the classroom.

Implications

My initial hypothesis, which claimed that “motivation needs to be higher in order for a high school senior in an AP Classroom to reach academic achievement” remained partially inconclusive because of the different variations of each participant that exhibited behavior correlated with their interview responses. Though there have been studies measuring stress levels and achievement levels with students such as the study done by Saeed and Zyngier (2012), the gap in their behavioral patterns was present. There are few studies done in the context of AP students within the classroom, and although there are few of them, the gap lies in focusing on their behavior to determine their overall motivational factor in their personal definition of academic achievement. Overall, In this study, I focused on high school seniors in an AP class, their personal definition of academic achievement, and their motivation in the AP class, and focused on their behavior within 3 tiers of stress leveled environments. Although this study was conducted, my findings indicate that further research is necessary to recognize the correlation between motivation and academic achievement with future studies conducted on more participants. Behavioral patterns with the participants I conducted this study on were vital in

helping me recognize the motivational factors in their academic achievement and is a gap that needs to be further explored by researchers to employ the amount of motivation an AP student needs to reach academic success within their AP class.

Summary

Between academic achievement and motivation, AP students are directly affected. This entailed the study of conducting interview questions relating to the students' motivation within the classroom, along with a three day period of studying each participant's behavior in a low, medium, and high-stress environment. Many of these students felt that they did not feel achieved if they did not receive a high grade, which was noted in an older study done by Pitt and Norton (2016). While observing them during the three stress environments, each student exhibited a mix of different behaviors. To distinguish between the results of both the interviews that I conducted and the participants' behavior in these environments, I cross-examined both methods to come to the overall conclusion that the correlation between motivation and academic achievement based on my findings is inconclusive because of further investigations that need to be conducted. Although the limited number of students I conducted my research on further helped me explore the cross-examination of the interviews and their behaviors in the classroom, a bigger population of students is needed to further examine the correlation. When conducting my research on my participants, I found that nearly half of the students were concerned about their letter grades in the class, and this directly correlated with whether they felt academically achieved. Students did exhibit more stressful behaviors in the classroom when in higher-stress environments, but overall the motivation behind reaching their overall academic achievement was based on letter grades. The critical purpose of an AP class is to further challenge students in an academic environment, and get further knowledge on a subject they may excel in. With this new understanding of

academic achievement and motivation, AP students continue to benefit and overall create a focus on how students react in these challenging environments to further enhance their education overall.

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Appendix A

Dear (teacher name),

Hello! I am currently researching achievement and motivation in high school AP students, and from a wheel generator, I landed on your class as a possibility to observe during various stressful environments (low, medium, and high). I was wondering if you would be willing to help with my study?

Thank you so much!

Appendix B

Hello (Teacher name),

Thank you very much for allowing me to observe your class for my research study. Is there a good time that works for you that I could come by your classroom to ask your students to participate?

Thank you!

Appendix C

Parent Consent Form / Minor Assent Form for Participation in a Research Study X High School

Title of Study: Motivation and Achievement Goals in AP Classrooms

Researcher: Clarice Calhoun

Course: AP Research Student

Introduction

- Your child is being asked to be in a research study about the correlation between motivation towards academic achievement for High School Students at a Coastal Suburban High School
- Your child was asked to be a participant because this study measures motivation and achievement of High School Seniors in a coastal suburban high school, and is a perfect candidate.
- We ask that you read this form and ask any questions that you may have before allowing your child to participate in this study.

Purpose of Study

- The purpose of this study is to find out the correlation between students achievement and motivation and the effect of this in AP Classrooms.
- Ultimately, this research may be published but your child's information will remain anonymous.

Description of the Study Procedure

- Your child will be asked if they agree with the following definition of achievement by Steinmayr et al., 2015, “Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school.”
 - They will also be asked how they feel their motivation affects their overall achievement in the AP classroom.
- From there, your child will be observed in their Advanced Classroom, based on their answers to the interview questions.

- Lastly, the researcher, Clarice Calhoun, will then follow with an interview pertaining to the correlation of motivation and achievement in an Advanced Placement Classroom setting.

Promises and Benefits Within the Study

- Your child's information and anything they report throughout the study will be kept confidential.
- Participation in this study will be extremely beneficial to the researcher, a fellow student at X High School in completing her academic research paper.
- Your child has the right to withdraw at any time.
- You and your child both have the right to ask any questions about the study and results.
- Your child will receive a half hour in AP Academy for both interviews taken in this study. If they are not in AP Academy, they will receive cookies as an incentive.

Appendix D

Interview Questions for Procedure Step 1

According to Steinmayr et al., (2015), “Academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school.”

- Would you say you agree or disagree with this statement? Why or why not?

- How do you feel your motivation affects your overall achievement in your AP Classroom?

*(These are core questions, but are not limited to the only ones I will be asking if I come up with one during the interview)