



Correlation Between Academic Procrastination and Extracurricular Activities on High School Students
Ramya Gannavaram



Abstract

This paper examines the correlation between academic procrastination and extracurricular activities on high school students at LHS. Extracurricular activities are a significant part of high schoolers' lives, as many students participate in sports, volunteering, and the arts. However, procrastination is common among students, with studies showing that a majority of students experience it. High academic pressure can influence procrastination behaviors; feeling fear of failure might motivate some students; 2,500 teens aged between 10-15 years old were found to have a parent-child conflict between academic pressure and adolescent problem behaviors (Husarova et al., 2022). Incorporating evidence from interviews and surveys completed by students and staff at LHS, this study aims to answer the question: How does procrastination affect students' academic performance in extracurricular activities at LHS? Students engaged in more extracurriculars are more likely to procrastinate due to time constraints and competing priorities. This shows that students taking more rigorous classes, and doing multiple extracurriculars are more likely to procrastinate because they are doing too much at once.



Introduction

Extracurricular activities are a large part of students' lives in high school, especially at high performing high schools like LHS. Many students at LHS not only manage a rigorous workload inside of school, but also outside, many of these students are part of extracurricular activities such as sports, volunteering, marching band, theater, etc. Extracurricular activities are considered any organized activities outside of the standard academic curriculum, including arts, clubs or volunteer work (Eccles & Barber, 1999). Procrastination has been seen in many students and not just those at LHS, the American Psychology Association (APA) found that 85-90% of students were found to procrastinate their school work. This shows that most students not just in high school, but also in college are very likely to procrastinate their work. Steel defines academic procrastination as a voluntary delay of intended tasks despite knowing there will be negative consequences (2007). Further proving this point, research done by Ahmed et al. in the article *Prevalence of Academic Procrastination and Its Negative Impact on Students* showed that students' personal lives had a great impact on their procrastination levels. Many students in high pressure environments outside of school will be less prone to procrastination because they are more likely to have fear of failure (Ahmed et al, 2023). However, students should not want to succeed because of a fear of failure, but instead, should strive to achieve their goals willingly. Husarova et al., professors at Xiamen University and Shanghai University wrote the article *The influence of academic pressure on adolescents' problem behavior: Chain mediating effects of self-control, parent-child conflict, and subjective well-being*, discussing how research they conducted and found 2,500 teenagers aged between 10-15 years old were found to have a parent-child conflict between academic pressure and adolescent problem behaviors. This leads to the question on the correlation between how procrastination affects students that are part of extracurricular activities of one specific high school. The goal of the research is to explore the correlation of extracurricular activities and procrastination on students at one specific high school.

Literature review

Extracurricular activities are a big part of students' lives. Not only is it needed for college applications, extracurricular activities make students more well-rounded. Many students find their extracurricular activities to be very exciting and stress relieving from all the constant school work they receive. However, it has been shown that students that are a part of too many extracurricular activities can face academic procrastination. Ahmed et al, department of biochemistry at the Ras Al Khaimah college of medical sciences, writes in the article *Prevalence of Academic Procrastination and Its Negative Impact on Students* define procrastination as failure to initiate a completed task within a given time frame (2023). This will cause something similar to a chain event causing students to do poorly in school and in the extracurricular they are a part of. Similarly in the article *Effects of academic self-regulation on procrastination, academic stress and anxiety, resilience and academic performance in a sample of Spanish secondary school students*, the authors found that 50% of students procrastinate in a consistent and chronic manner and 75% of those students consider themselves to be procrastinators, with 80-95% of high school and college students that actually do procrastinate (Ragusa et al, 2023). The combination of completing priorities and insufficient time management skills can foster habits that can contribute to procrastination negatively which can then impact students academic performance (Valente et al, 2024). Ahmed et al. also found there are many impacts from academic procrastination, some being stress, guilt, academic performance, and low self-esteem, which can cause test anxiety in the core subjects: math, reading, history, and

science. Another group of authors, Clariana et al., professors of psychology at the Autonomous University of Barcelona, make a similar argument in the article *Typology of Extra-Curricular Activities and Academic Procrastination among Primary Education Students* that students that take too many extracurricular activities are more likely to face academic procrastination. They also make a similar claim when talking about why most students procrastinate, and they found that most students who start taking extracurriculars around the age of 13-16 are more likely to face academic procrastination because of the heavier workload (2014). Clariana et al. further brings this up by discussing how students that are part of more than seven extracurricular activities, and are taking heavy rigorous classes will face academic procrastination because of the large amount of things they will have to do outside of school (2014). Both of these further prove what Ahmed et al. stated previously when discussing the effects academic procrastination can have on students that are part of extracurricular activities. The American Psychological Association further identifies Ahmed et al., and Clariana et al.'s claims in the article *Procrastination or 'intentional delay* by stating the students that procrastinate school work are nine out of ten, affecting almost all highschool and college students, also stating that 86% of highschool and college students procrastinate schoolwork (Novotney, 2014). This means that about 85-90% from both college and high school are affected by academic procrastination. While students in high pressure environments outside of school will be less prone to procrastination, they are more likely to have fear of failure (Clariana et al, 2014). Research done in the article *Prediction of Academic Procrastination by Fear of Failure and Self-Regulation* found that most students in high pressure environments outside of school would play at least one sport and would volunteer, or have a job as well. In school, these students would also face a lot of pressure because they would take advanced classes such as Honors, AP or DE classes. All of this combined leads to students burning out and procrastinating more (Garcia et al, 2020). Additionally the large amount of pressure put on students can also lead to fatigue, depression, anxiety disorders, or high-functioning anxiety. High-functioning anxiety is a subset of generalized anxiety disorders that often will go unnoticed or undiagnosed (Valente et al, 2024). Clariana et al further discusses Valente et al. claim when they argue that while extracurriculars are beneficial for personal growth and social development, they are also the time available for academic tasks which can lead to procrastination (2014). This shows that while extracurricular activities are beneficial to students they can have negative impacts if a student focuses too much time on that and less time on their academics, which can then lead to larger problems like depression and anxiety. However, not all research suggests there is a negative impact. Many studies have actually shown that extracurricular activities like sports can enhance time management and reduce procrastination. Karaoglu et al., a group of professors at Bingol University in the school of physical education, further talk about this in the the article *Relationship between Learned Resourcefulness and Academic Procrastination in Students Studying in Sports Departments* saying they believe there is a positive correlation between sports and academics and students that play sports are less likely to face academic procrastination because of training they have from the sport they are a part of. Clariana et al. makes a similar claim talking about how male students improved their academic procrastination after playing a sport for 4 years straight, with female students improving with academic procrastination if they do more artistic sports. It was also found that most students that suffer from the problem of academic procrastination and are part of extracurriculars usually don't know strategies on how to prevent procrastination (Karaoglu et al, 2020). Researchers at Penn State University found in the article *Procrastination and Academic Performance* some possible ways

to prevent academic procrastination can be to develop efficient time management skills, which will give them a positive view of the importance of their studies. However, many students still face the treachery of procrastination even with these habits, because of the extensive list of extracurriculars that students do in the present. Based on this my goal is to research if students in extracurricular activities are more prone to face academic procrastination, when they are unable to have a set schedule to follow. While there is a significant amount of research done regarding how extracurricular activities affect students' procrastination habits, there is a gap in my research that exists in the correlation between extracurricular activities and procrastination at one specific high school. This leads me to the question I choose to research: How does academic procrastination affect students' academic performance in extracurricular activities at LHS? This research is important and relevant because the high school I am looking at not only fosters rigor academically but also physically. This research will answer the question of how extracurricular activities affect students' academic performance. My hypothesis for the results of this study is that students who are part of more extracurricular activities are more likely to procrastinate their work.

Methods

To test this hypothesis, two methods of research were applied: survey and interview research. This research focused on collecting data from students and staff at LHS and both surveying and interviewing students at LHS. The student surveys consisted of qualitative and quantitative questions that help gather information about students' procrastination levels, as well as the perceptions of staff at LHS. The results from the interviews and surveys were then compared to determine what are the possible effects of procrastination and do extracurricular activities have an impact on students academic performance. The content of this research was approved by the institutional review board (IRB). All survey questions and interview questions were reviewed and approved. No emails were collected in the student surveys and all interviews were only known to my advisor and I, therefore making responses completely anonymous, and identities of the students and staff during interviews will remain disclosed information. All procedures are by the ethical standards as set by the American Psychological Association. *Guidelines for Ethical Conducts of Behavioral Projects Involving Human Participants by High School Students.*

Interviews

Interviews were conducted as part of this research to collect data and information about the possible ways extracurricular activities will be impacting the students at LHS. The interview questions were obtained from the source written by C.H Lay article titled, *At last, My Research article on Procrastination published in the Journal of Research in Personality*, because it allow me to see what can be affecting student procrastination levels and how it correlates with extracurricular activities. A semi-structured interview was created for this portion of the research. Tegan George, an author for scribbr defines a semi-structured interview as an in-depth interview where respondents are able to answer questions in an open-ended manner (2022). Questions were prepared before the interview, and were asked like a structured conversation. The goal of the interviews was to get a more in depth response from the students at LHS, and to get a better understanding of what the staff thinks. All content for this research was approved by the institutional review board including survey and interview questions. Students' names are only known to my advisor and I and stayed anonymous throughout this paper. The results of the anonymous survey remained online in a Google Drive and were confidential. The selected interviewees were some students and staff at LHS. For the sake of confidentiality the school

was abbreviated throughout this paper as LHS. All interviews consisted of two different sets of questions, one set for students and one set for staff. All student interview questions consisted of the same 20 questions regarding students' classes, what current extracurricular activities they are involved in, and a set of questions asking about procrastination levels. All staff interview questions consisted of the same ten questions regarding their students, and their high school experience with extracurricular activities. Once consent was received, interviews were recorded to accurately compile data. These questions were asked to students and staff in order to gain more information that could be compared to the other student surveys.

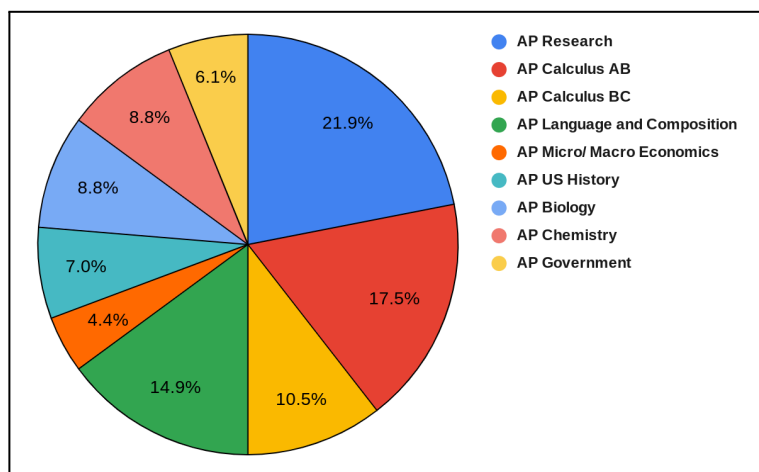
Student Surveys

The second part of the data collection, surveys, were used to gather information from students participating in extracurricular activities at the selected school. The goal of the surveys was to obtain information about student extracurricular activities and their procrastination levels. Survey research is a common tool used in many studies, the questionnaire was created using an article written by Clarry H Lay a York University Professor in the department of Psychology, called *At last, My research article On Procrastination published in the Journal of Research in Personality*. After consent was given by parents and assent was given by students they received a link to a Google Forms. The survey will be given out exclusively to students as part of extracurricular activities at LHS. The questions developed for this questionnaire were to help determine what causes students to procrastinate, and how extracurricular activities affect their academic performance. Students were asked to complete this survey during their personal time after consent was given. Each student was privately emailed the survey link to ensure confidentiality, but questions were the same for every student. No emails were collected in the student surveys therefore making responses completely anonymous, and identities of the students and staff during interviews will remain disclosed information. In the first section students were asked to give consent once again before continuing with the survey. The next section was a likert scale about procrastination. The third section of this survey is agree or disagree questions, and free response questions. Student survey and interview results were directly compared and analyzed. Specific questions that were the same on both interview questions and survey questions were analysed. The researcher was then able to extract the main themes and findings from this comparison and analysis in order to determine if extracurricular activities impact students academic performance.

Results

There were a total of 37 student survey responses, 10 interviews were completed, and five teacher interviews were conducted. There were three categories I was looking to achieve with this research: do students procrastinate, how many extracurriculars are students apart from, and is there a correlation between extracurricular activities and procrastination levels. All categories tie back to an increase in course rigor and an increase in extracurricular activities that lead to an increase in procrastination levels.

Figure 1: *Common classes taken by Students (Survey and Interviews)*



At this specific high school about 47 students were interviewed or surveyed. From the interviews and surveys, the graph above shows the most common classes taken by students. Most commonly students were taking AP Research, AP English Language and Composition, AP Calculus BC, and AP Calculus AB. This shows the variety of classes students take at LHS not only STEM based classes but humanities classes as well. Along with this 50% of the students taking one of the classes in the chart at least take two to five more AP classes, and one to two Dual Enrollment (DE) classes. The heavy course taken by many students at LHS shows their ambition and drive for academic achievement. However, this created difficulty in terms of both time management and stress. Students juggling such high demanding schedules can find it hard to maintain a healthy balance between academic commitments and extracurricular activities, leading to academic procrastination, which can then lead to poor academic performance.

Figure 2: Likert Scale and Personality Questions

I do not do assignments until just before they are due.
a. 1-5 scale (1= never, 5= always)

I find myself often performing tasks that I had intended to do days before.
a. 1-5 scale (1= never, 5= always)

I usually have to rush to complete a task on time.
a. 1-5 scale (1= never, 5= always)

I am a type A personality(goal oriented, organized, perfectionist, high-achieving, easily stressed)
a. Agree
b. Disagree
c. I don't know

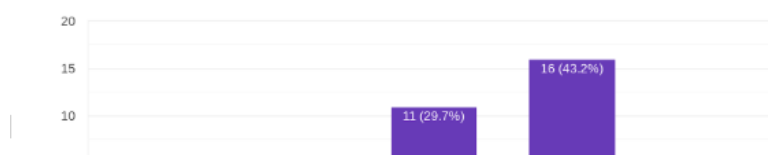
I am a type B personality(not as structure related, laid-back, easy going, not as easily stressed)
a. Agree
b. Disagree
c. I don't know

Refer to Appendix D for Figure 3

Figure 2 demonstrates the questions from the student survey that cover a procrastination likert scale. Question 1 is analyzing quantitative data. The average

Figure 3: Question 1: Procrastination within assignments

I do not do assignments until just before they are due.





student believes they do not get assignments done until just before they are due. Is three out of five, which means they somewhat agree with the statement, but do not always procrastinate their work. The average student at LHS takes two to three Advance Placement (AP) classes, and does two to three extracurricular activities. Most students however (43.2%) stated that they procrastinate assignments, and do not get them done till just before they are due is four out of five. 13.5% of the respondents state they rarely ever procrastinate assignments until just before their due (Figure 3). Within this data most students at least procrastinate their work a little believing their a three on the likert scale. 53.1% of the students believe they almost always procrastinate their work until just before it's due. Such results conform to the assumption that most students taking more AP/ DE and honors classes are more likely to procrastinate their work than the average student. Furthermore a majority of the respondents stated that they procrastinate their work at least a few times per week. This is also seen across the other two likert scale questions (Appendix E & F).

Figure 4: Questions from Student Survey Associated with Course Rigor and Extracurricular Activities

What grade are you in

- a. 9th
- b. 10th
- c. 11th
- d. 12th

How many extra curricular activities are you a part of?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5
- f. Other

Are you currently taking any Honors, AP or DE Classes?

- a. Yes
- b. No

Free response (FRO)

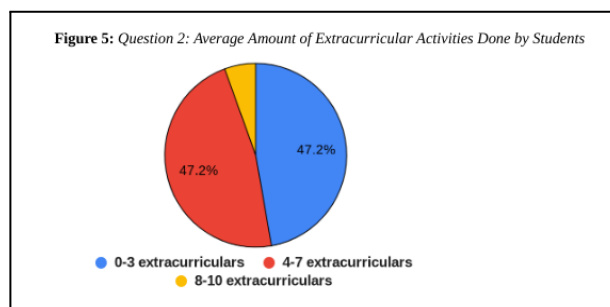
Please state all extra curricular activities you are a part

If so, how many and which Honors, AP or DE classes are you taking?

Refer to Appendix H for Figure 5

Figure 4 demonstrates the questions from the Student Survey associated with “course rigor” and extracurricular activities. Question two is analyzing this qualitative data. Most students that took this survey take zero to seven (94.4%) extracurricular activities (Figure 5). Additionally from those students about 60% of them also take a rigorous course load with Honors, AP and DE classes. 5.6% of students take more than 7+ extracurricular activities. Majority of students taking more than 3 extracurricular activities are procrastinating more and believe they procrastinate more, rather than being a three on the likert scale they are a four or five (Figure 5).

Figure 6: Questions from Teacher Interview



1. Did you take any Honors/AP/DE classes in high school
2. Were you part of any extracurriculars in high school, if so which ones?
3. Do you teach any Honors/AP/DE classes?
4. On average how many of your students are in an extracurricular activity
5. How many of these students procrastinate?
6. What do you think causes Academic procrastination in students?
7. How do you think Academic procrastination affects students here at LHS?
8. How many AP/DE classes should a student take?
9. How many extracurricular activities do you think a high school student should manage with Ap and DE classes vs how many a student should manage in academic or honors classes?
10. What is one way you think students can prevent academic procrastination?

Refer to Appendix G for Figure 7

Figure 6 demonstrates the questions from the teacher interviews that cover how academic procrastination affects students in high school and at LHS, along with discussing their high school experience. Most teachers took between three to five AP classes, no DE classes, and between five to ten Honors classes. 100% of teachers interviewed did extracurriculars all throughout high school (Figure 7). Figure 7 also shows the teachers interviewed believe the acceptable amount a student should manage at LHS between two to four AP classes, and two to five extracurriculars. They also all believe that the best way for students to not procrastinate is to ask for help/communication, use a calendar or planner, create a study plan, or checklist (Appendix G).

Discussion

Comparing my survey and interview data there is a clear trend regarding student procrastination. The majority of students from the surveys and interviews procrastinate more because of an increase in course rigor from AP and DE classes. This study was designed to examine the correlation between extracurricular activities and procrastination, on academic performance within students at LHS, thus addressing the gap in the research associated with LHS. After examining results, it can be concluded that 95% of students procrastinate their assignments until just before they are due (Figure 3), confirming that students at LHS are more prone to procrastinate their work on a day to day basis. After comparing the concepts from the student interviews and surveys and teacher interviews, a clear connection was found between extracurricular activities and procrastination habits. Students that procrastinate their work have an increase in two categories: extracurricular activities and course rigor (Figure 1). Students taking more Honors, AP and DE courses, 94.4% of students take between zero and seven extracurricular activities during the school year. The

Figure 7: Teacher Interviews Summarized

Teacher	High School Experience	Acceptable amount to manage in High School	Ways to prevent Procrastination
A	Took 4-5 Advance Placement (AP) all through high school No Dual Enrollment (DE) 5-6 Honors Classes 6-7 total extracurriculars Only did 3 all through high school	Varies student to student for both rigor and amount of extracurriculars On average take 3-4 AP classes each year On average do 4-5 extracurriculars, but if you play a sport focus on that	Creating study plans - Having a planner or calendar
B	Took 4 Advance Placement (AP) all through high school 1 Dual Enrollment (DE) 8 Honors Classes 6-7 total extracurriculars Only did 3 all through high school	Varies student to student for both rigor and amount of extracurriculars	Meet with teacher if you need an extension Communicate Use a calendar or planner
C	Took 3-4 Advance Placement (AP) all through high school No Dual Enrollment (DE) 5-6 Honors Classes 6-7 total extracurriculars Only did 3 all through high school	Varies student to student for both rigor and amount of extracurriculars On average take 2-3 AP classes each year 2-3 extracurriculars each year	Communicate if you need help Peer help Write down important dates in a calendar/planner
D	Took 5 Advance Placement (AP) all through high school No Dual Enrollment (DE) 4 total extracurriculars Did all of them through high school	Varies student to student for both rigor and amount of extracurriculars On average take 2-3 AP classes each year 3-5 extracurriculars each year. If you play a sport or have a rigorous workload 2-3 is good.	Communicate Create a checklist or have a planner



average school year is nine months (180 days school days), students that take three to four AP or DE classes and four to seven extracurricular activities are more prone to procrastination because they are doing too much at once (Figure 3). Teachers believe between 95-100% of all students at LHS procrastinate their assignments and work, for various reasons some can include, not understanding the assignment, procrastinating, too much in other classes, or too much going on outside of school like extracurricular activities. The most common ways to prevent academic procrastination include: using a planner/calendar, communicating when you need help, encouragement from peers, and studying in locations outside of school and your house. Teachers also believe students at LHS on average should take two to four AP and DE classes and should do one to five extracurricular activities (Figure 6). LHS fosters a rigorous environment for students to succeed not only academically but also outside of school. Many students expressed feeling overwhelmed by the pressure to do good not only academically but also in extracurricular activities. Students' perspectives are one of the most important to note because they are the ones experiencing it first hand. Many students discuss in interviews the lack of time management skills and feeling a sense of isolation when struggling with their course load. Future studies should focus on exploring the emotional and social factors that contribute to procrastination in high school students.

Limitations

While this study did provide valuable insight to the correlation between extracurricular activities and procrastination at LHS, there are still many limitations that should be considered when looking at the findings. Some may include self reported data, sample size, participation error, and the focus of one specific high school. This data heavily relies on self-reported information from students in surveys and interviews. This creates the possibility of bias because of social bias or inaccurate memory. Students may not always be honest about their study habits and the time they dedicate to various activities. Dishonesty within the data collection can lead to skewed results. Sample size is another limitation, the total sample size was 52 respondents, with 47 of those consisting of student survey and interview responses. While this provides an idea of the procrastination at LHS, it does not factor in the entire student population. A larger sample size would decrease bias and could increase the validity of the findings. Another limitation is the participation errors, some participants misunderstood or provided inaccurate responses to survey questions, many participants answered the two part question Are you currently taking any Honors, AP or DE Classes? a. Yes b. No . If so, how many and which Honors, AP or DE classes are you taking? Answering the question with only the number of Honors, AP or DE classes and not the number and which ones they are currently taking. This introduced a chance for errors in the data, and could have affected the accuracy of the results. This study also only focused on a single high school (LHS), which limits the accuracy of findings from other schools. LHS has its own unique set of demographics with it having students from all ethnicities to fostering a more rigorous environment inside and outside the classroom. These factors can influence procrastination patterns, in ways that are not always applicable to other schools.

Conclusion

This research highlights how being super involved in extracurriculars impact the tendency to procrastinate at LHS. After completing data collection it was seen that students at LHS, who are often balancing many challenges like AP and DE classes, with a full plate of extracurriculars like sports, are more likely to struggle with procrastination. The findings show that while



extracurriculars often have many benefits, like leadership skills, becoming more sociable and can even strengthen college applications, they can also create a sense of pressure and can cause burnout when they are not balanced properly. Many students believe that they feel overwhelmed and struggle with time management, especially during busy times. This stress can then lead to academic procrastination, not because of laziness, but because they feel so mentally drained and exhausted. Teachers have also noticed the problems that arise from students overworking themselves. Through interviews, many teachers discussed the many ways to help students prevent academic procrastination, with things like planners, setting deadlines, and communicating. Many teachers also discussed how being more flexible and understanding help students do better without feeling overwhelmed and pressured. This shows the shared responsibility for students and teachers to help manage academic procrastination.

Implications

The implications of this research are important for not only students but also teachers. It offers insight and validation on students that are struggling with their workload and course rigor; it also shows that procrastination can be correlated with overcommitting rather than laziness. For teachers this research allows them to re-evaluate how to support their students. By understanding that procrastination comes from students feeling overwhelmed by rigorous course loads, rather than laziness, teachers can then help students learn time management skills, and help them face their overload in academic pressure. By recognizing there is a link between overcommitment and academic procrastination, teachers can then foster a learning environment that prioritizes both academic rigor and student well-being which can then help students prioritize mental health, and reduce burnout in the long run.

New Understandings and Future Research

One of the key takeaways from this research is that it is important to find a balance between activities inside and outside of school. Students should not need to sacrifice their mental health or academic performance to be involved in the community. This research allows for more personal reflection on how success is viewed. This research has helped me understand that stress and pressure are a big part of students' lives, especially at LHS, and has allowed me to better understand how to identify academic procrastination. Looking ahead, future researchers could go deeper into both the emotional and social causes of procrastination; it could also be beneficial to explore certain concepts like perfectionism, fear of failure or societal causes behind what causes students to face academic procrastination. Research should also look into how schools can help students with time management or procrastination, and how to reduce stress. This research shows that balance is key and with the correct tools students can stay involved and succeed academically, while taking care of their mental health.

References

- Ahmed, I., Bernhardt, G. V., & Shivappa, P. (2023). Prevalence of Academic Procrastination and Its Negative Impact on Students. *Biomedical and Biotechnology Research Journal (BBRJ)*, 7(3), 363. https://doi.org/10.4103/bbrj.bbrj_64_23
- Clariana, M., Cladellas, R., Gotzens, C., Badia, M., & Dezcallar, T. (2014). Typology of Extra-Curricular Activities and Academic Procrastination among Primary Education Students. *Electronic Journal of Research in Educational Psychology*, 12(2), 419–445. <https://eric.ed.gov/?id=EJ1039287>
- Eccles, J. S., & Barber, B. L. (1999). *Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters?* *Journal of Adolescent Research*, 14(1), 10–43. <https://doi.org/10.1177/0743558499141003>
- Garcia E., Paixao M., Zarrin S. (n.d.). *Prediction of Academic Procrastination by Fear of Failure and Self-Regulation*. ERIC. Retrieved November 25, 2024, from <https://files.eric.ed.gov/fulltext/EJ1261814.pdf>
- George, T. (2022, January 27). Semi-Structured Interview | Definition, Guide & Examples. Scribbr. Retrieved December 17, 2024, from <https://www.scribbr.com/methodology/semi-structured-interview/>
- Helping Students Overcome Procrastination. (n.d.). National University. Retrieved November 19, 2024, from <https://www.nu.edu/blog/helping-students-overcome-procrastination/>
- Husarova, D., & Šafárik, P. J. (2022, September 21). The influence of academic pressure on adolescents' problem behavior: Chain mediating effects of self-control, parent–child conflict, and subjective well-being. Retrieved November 19, 2024, from <https://pmc.ncbi.nlm.nih.gov/articles/PMC9534181/>
- Karaoglu, B., & Yalçın, I. (2020). Relationship between Learned Resourcefulness and Academic Procrastination in Students Studying in Sports Departments. *International Education Studies*, 13(7), 88–94. <https://eric.ed.gov/?id=EJ1259079>
- Lay, C. H. (1986). At last, My research article on procrastination. *Journal of Research in Personality*, 20(4), 474–495. [https://doi.org/10.1016/0092-6566\(86\)90127-3](https://doi.org/10.1016/0092-6566(86)90127-3)
- Novotney, A. (n.d.). Procrastination or 'intentional delay'? American Psychological Association. Retrieved November 21, 2024, from <https://www.apa.org/gradpsych/2010/01/procrastination>
- (2023, March 23). Procrastination and Academic Performance | Applied Social Psychology (ASP). Retrieved October 18, 2024, from <https://sites.psu.edu/aspsy/2023/03/23/procrastination-and-academic-performance/>
- Ragusa, A., González-Bernal, J., Trigueros, R., Caggiano, V., Navarro, N., Minguez-Minguez, L. A., Obregón, A. I., & Fernandez-Ortega, C. (2023). Effects of academic self-regulation on procrastination, academic stress and anxiety, resilience and academic performance in a sample of Spanish secondary school students. *Frontiers in psychology*, 14, 1073529. <https://doi.org/10.3389/fpsyg.2023.107>
- Steel, P. (2007). *The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure*. *Psychological Bulletin*, 133(1), 65–94. <https://doi.org/10.1037/0033-2909.133.1.65>



Valente S, Dominguez-Lara S, Lourenço A. Planning Time Management in School Activities and Relation to Procrastination: A Study for Educational Sustainability. Sustainability. 2024; 16(16):6883. <https://doi.org/10.3390/su16166883> (2023, March 23). Procrastination and Academic Performance | Applied Social Psychology (ASP). Retrieved October 18, 2024, from <https://sites.psu.edu/aspsy/2023/03/23/procrastination-and-academic-performance/>



Appendices

Appendix A: Validated Survey Questions given to students at LHS

Note: The survey was sent in the form of a Google Form. These questions were provided in the IRB and were the same questions on the survey.

Section One: Likert Scale & Personality Questions

I do not do assignments until just before they are due.

- a. 1-5 scale (1= never, 5= always)

I find myself often performing tasks that I had intended to do days before.

- a. 1-5 scale (1= never, 5= always)

I usually have to rush to complete a task on time.

- a. 1-5 scale (1= never, 5= always)

I am a type A personality(goal oriented, organized, perfectionist, high-achieving, easily stressed)

- a. Agree
- b. Disagree
- c. I don't know

I am a type B personality(not as structure related, laid-back, easy going, not as easily stressed)

- a. Agree
- b. Disagree
- c. I don't know

Section Two: Questions associated with “Course Rigor” and Extracurricular activities

What grade are you in

- a. 9th
- b. 10th
- c. 11th
- d. 12th

How many extra curricular activities are you a part of?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5
- f. Other

Free response (FRQ)



Please state all extra curricular activities you are a part

Are you currently taking any Honors, AP or DE Classes?

- a. Yes
- b. No

Free response (FRQ)

If so, how many and which Honors, AP or DE classes are you taking?

Appendix B: Validated Interview Questions Asked to Students at LHS

Note: The interview questions were asked to those that sign consent forms. These questions were provided in the IRB and were the same questions that were asked.

Interview Questions
<p>Student Interview questions:</p> <ol style="list-style-type: none">1. What grade are you in?2. What extracurriculars are you a part of?3. In total how many extracurriculars do you think you're a part of?4. How many Honors/DE/AP classes are you taking?5. On average what time do you get home from your extracurricular activities?6. On average how many hours of homework do you get each day?7. I do not do assignments until just before they are due.8. I find myself often performing tasks that I had intended to do days before.9. I usually have to rush to complete a task on time.10. I am a type A personality(goal oriented,organized,perfectionist, high-achieving, easily stressed)11. I am a type B personality(not as structure related, laid-back, easygoing,not as easily stressed) <p>Students with leadership positions:</p> <ol style="list-style-type: none">1. How many leadership positions do you have?2. What are they?3. What do you do in this position?4. On average how long do you spend working on this activity as leadership?

Appendix C: Validated Interview Questions Asked to Staff at LHS

Note: The interview questions were asked to those that sign consent forms. These questions were provided in the IRB and were the same questions that were asked.

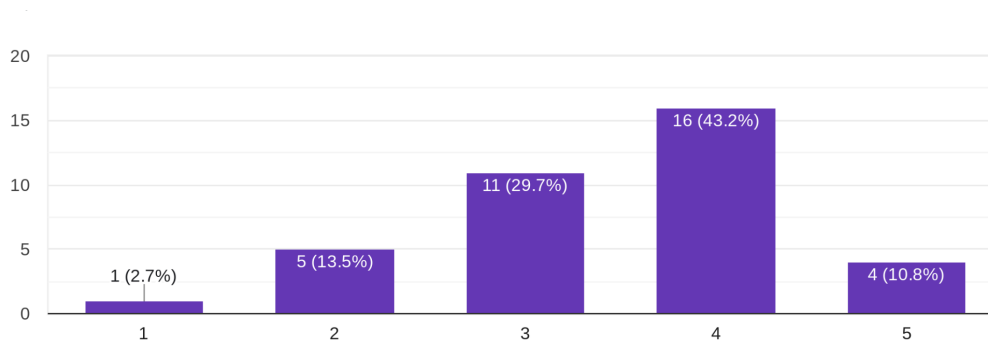


Interview Questions

1. Did you take any Honors/AP/DE classes in high school
2. Were you part of any extracurriculars in high school, if so which ones?
3. Do you teach any Honors/AP/DE classes?
4. On average how many of your students are in an extracurricular activity
5. How many of these students procrastinate?
6. What do you think causes academic procrastination in students?
7. How do you think Academic procrastination affects students here at LHS?
8. How many AP/DE classes should a student take?
9. How many extracurricular activities do you think a high school student should manage with Ap and DE classes vs how many a student should manage in academic or honors classes?
10. What is one way you think students can prevent academic procrastination?

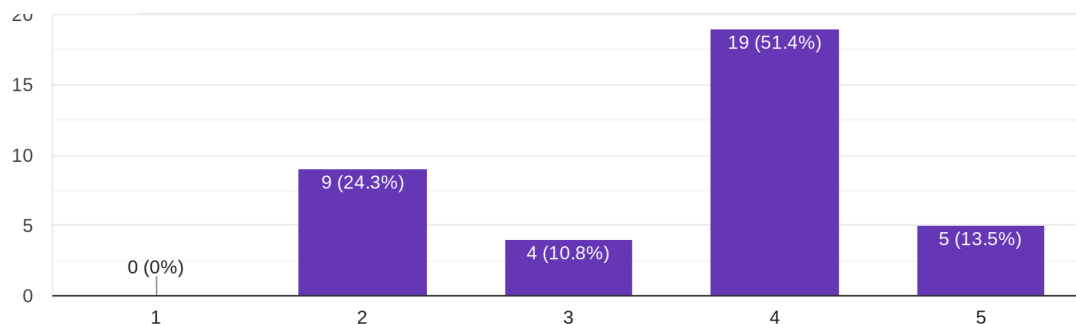
Appendix D: Question 1: Procrastination within assignments

I do not do assignments until just before they are due.



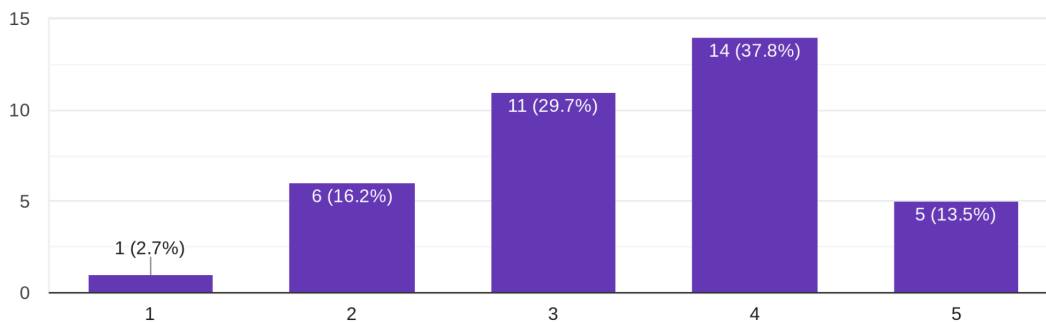
Appendix E: Question 2: Procrastination towards tasks

I find myself often performing tasks that I had intended to do days before.



Appendix F: Question 3: Procrastination towards completing task on time

I usually have to rush to complete a task on time.



Appendix G: Teacher Interviews Summarized



Teacher	High School Experience	Acceptable amount to manage in High School	Ways to prevent Procrastination
A	Took 4-5 Advance Placement (AP) all through high school No Dual Enrollment (DE) 5-6 Honors Classes 6-7 total extracurriculars Only did 3 all though high school	Varies student to student for both rigor and amount of extracurriculars On average take 3-4 AP classes each year On average do 4-5 extracurriculars, but if you play a sport focus on that	Creating study plans - Having a planner or calendar
B	Took 4 Advance Placement (AP) all through high school 1 Dual Enrollment (DE) 8 Honors Classes 6-7 total extracurriculars Only did 3 all though high school	Varies student to student for both rigor and amount of extracurriculars	Meet with teacher if you need an extension Communicate Use a calendar or planner
C	Took 3-4 Advance Placement (AP) all through high school No Dual Enrollment (DE) 5-6 Honors Classes 6-7 total extracurriculars Only did 3 all though high school	Varies student to student for both rigor and amount of extracurriculars On average take 2-3 AP classes each year 2-3 extracurriculars each year	Communicate if you need help Peer help Write down important dates in a calendar/planner
D	Took 5 Advance Placement (AP) all through high school No Dual Enrollment (DE) 4 total extracurriculars	Varies student to student for both rigor and amount of extracurriculars On average take 2-3 AP classes each year	Communicate Create a checklist or have a planner



	Did all of them through high school	3-5 extracurriculars each year. If you play a sport or have a rigorous workload 2-3 is good.	
--	-------------------------------------	--	--

Appendix H: Question 2: Average Amount of Extracurricular Activities Done by Students

