Academic Procrastination, Cramming Behavior and Learning Styles of Grade 7 Students of Pacita Complex National High School

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ABSTRACT

Academic procrastination is a common challenge. High school is a critical period where students are introduced to more complex and demanding academic tasks. The transition from middle school to high school may bring about increased academic pressure, and students may struggle to manage their time effectively (Belmonte, 2019). Cramming behavior, often a direct consequence of procrastination, is a phenomenon that has become ingrained in academic culture, their efficacy in promoting long-term retention and understanding in the long run (Chew, 2021). People have diverse learning styles, and understanding these styles can enhance the effectiveness of education and training. One popular framework categorizes learners into four models which include the VARK model (Visual, Auditory, Reading/Writing, Kinesthetic), which adds a dimension for those who prefer reading and writing as their primary mode of learning. Findings revealed that there is no significant relationship between respondents' learning style and their academic procrastination. The respondents' cramming behavior does not significantly predict their learning style as well as the respondents' learning style does not depend on their cramming behavior. The following recommendations were made by the researcher based on the following findings. The Educators the researcher suggest incorporating structured study skills workshops focusing on time management and deep learning strategies tailored to the students' needs. Providing guidance on effective study techniques and promoting a growth mindset can empower students to adopt more efficient and sustainable approaches to academic preparation. The School Administrators, the researcher advocates implementing targeted interventions focusing on time management and deep learning strategies tailored to the needs of our STEM-P cohort. By addressing these findings collaboratively, we can support our students in developing more effective study habits and promoting deeper understanding of academic concepts

RESUMO

A procrastinação acadêmica é um desafio comum. O ensino médio é um período crítico onde os alunos são apresentados a tarefas acadêmicas mais complexas e exigentes. A transição do ensino básico para o ensino secundário pode provocar um aumento da pressão acadêmica e os alunos podem ter dificuldades em gerir o seu tempo de forma eficaz (Belmonte, 2019). O comportamento de estudar, muitas vezes uma consequência direta da procrastinação, é um fenómeno que se tornou enraizado na cultura acadêmica, na sua eficácia na promoção da retenção a longo prazo e na compreensão a longo prazo (Chew, 2021). As pessoas têm diversos estilos de aprendizagem e a compreensão desses estilos pode aumentar a eficácia da educação e da formação. Uma estrutura popular categoriza os alunos em quatro modelos que incluem o modelo VARK (Visual, Auditivo, Leitura/Escrita, Cinestésico), que acrescenta uma dimensão para aqueles que preferem a leitura e a escrita como principal modo de aprendizagem. Os resultados revelaram que não existe uma relação significativa entre o estilo de aprendizagem dos entrevistados e a sua procrastinação acadêmica. O comportamento de estudo dos entrevistados não prevê significativamente o seu estilo de aprendizagem, assim como o estilo de aprendizagem dos entrevistados não depende do seu comportamento de estudo. As seguintes recomendações foram feitas pelo pesquisador com base nas seguintes descobertas. Os Educadores, o pesquisador, sugerem a incorporação de oficinas estruturadas de habilidades de estudo com foco na gestão do tempo e estratégias de aprendizagem profunda adaptadas às necessidades dos alunos. Fornecer orientação sobre técnicas de estudo eficazes e promover uma mentalidade construtiva pode capacitar os alunos a adotarem abordagens mais eficientes e sustentáveis para a preparação acadêmica. Os Administradores Escolares, o investigador, defendem a implementação de intervenções direcionadas com foco na gestão do tempo e estratégias de aprendizagem profunda adaptadas às necessidades do nosso grupo STEM-P. Ao abordar estas descobertas de forma colaborativa, podemos apoiar os nossos alunos no desenvolvimento de hábitos de estudo mais eficazes e na promoção de uma compreensão mais profunda dos conceitos acadêmicos.

Introduction

Academic procrastination is a common challenge. High school is a critical period where students are introduced to more complex and demanding academic tasks. The transition from middle school to high school may bring about increased academic pressure, and students may struggle to manage their time effectively. Contemporarily, millennial students rely on the convenience given by the technology regarding to finishing schoolwork's. However, every student must be aware that using mobile gadgets while doing school business may risk it to not be finished.

According to Belmonte (2019), students get distracted by different forms of recreation and procrastinate instead. Cramming behavior, often a direct consequence of procrastination, is a phenomenon that has become ingrained in academic culture. The hurried and intensive study sessions before examinations may provide a temporary solution, but their efficacy in promoting long-term retention and understanding in the long run (Chew, 2021). The common issue surrounding cramming is that memories are often forgotten at a faster rate than memories from other strategies—resulting in poor long-term recall. While this is no surprise to cognitive scientists, they often assume that students value long-term learning more than immediate learning. One of these predicaments is the inevitable cramming on school-based requirements and activities.

Bermundo et al., (2021) argued that accompanied by the potential of students having mental health issues that can affect their overall well-being. People have diverse learning styles, and understanding these styles can enhance the effectiveness of education and training. While there are various models and theories about learning styles, one popular framework categorizes learners into four models which include the VARK model (Visual, Auditory, Reading/Writing, Kinesthetic), which adds a dimension for those who prefer reading and writing as their primary mode of learning. Ultimately, recognizing and respecting diverse learning styles can contribute to more inclusive and effective teaching practices. However, educators should also be open to employing a variety of instructional methods to address the diverse needs of their students.

The study of learning styles has been a growing educational trend, and it is believed that matching the learning styles of students with the mode of instruction aids in student learning as stated by Galvez et al., 2017. The primary concern of teaching Generation Z or any student is how well the pupils are learning the material. The distraction of electronics whether laptops, Ipads or phones creates a challenge to ensure if students are captivated by course material or from a recent text. E-distractions can affect the workplace environment also with supervisors disturbed by constant phone checking (Nicholas, 2020).

However, despite the numerous studies conducted about academic procrastination, cramming behavior and learning styles there are no such studies that link the cramming

behavior and learning style had been conducted particularly in a secondary school in the City of San Pedro, province of Laguna. For the reasons mentioned, the researcher took interest in this study to determine the respondents' academic procrastination, cramming behavior and learning style. Eventually, this study will serve as guide to School heads and educators. Likewise, it could provide data to school heads and fellow educators to deeply understand the behavior of the learners about academic procrastination, cramming and learning style. Through a thorough examination of existing literature, theoretical underpinnings, and empirical evidence, this research aims to contribute to the broader discourse on student success and well-being within educational settings.

By delving into the cognitive and behavioral aspects of academic performance, we seek to unravel the mechanisms that drive procrastination, the dynamics of cramming as a coping strategy, and the role of learning styles in shaping these phenomena. The respondents of this study were selected from Grade 7 STEM- P students of Pacita Complex National High School, City of San Pedro, Laguna. Lastly, by the time this study had concluded, the researcher came up with several recommendations and hopes that it would serve as a guide for the implementers in setting standards and making desirable changes and improvements for the school, students and educators to know more about academic procrastination, cramming behavior and learning styles of the students.

Methodology

Quantitative research was utilized to obtain the necessary data needed for the study, Likewise, descriptive-correlational method of research with the help of survey questionnaire as the main source of data was used in the study. In correlational research, two variables of a subject are researched to determine their relationship. It investigates the relationships between academic procrastination, cramming behavior and learning styles with no control or manipulation on the part of the researcher (Bongabong 2022).

Through the utilization of these methodologies, the researcher sought to answer the student's academic procrastination, cramming behavior, and learning style. Stratified random sampling technique was used in the study. 86 respondents were the respondentes of the study (43 students from Section A and another 43 student's from Section B). The research questionnaire for academic procrastination and cramming behavior had undergone reliability tests using cronbach alpha. Academic procrastination indicators has .733 and interpreted as acceptable internal consistency and Cramming behavior indicators with the result of .786 and interpreted as acceptable internal consistency.

The accomplished questionnaires were collected right after answering by the respondents and the gathered data were tallied, tabulated, analyzed, and interpreted. Statistical tools such as weighted mean, ranking and Pearson r were used for the analysis of

data and interpretation of results. Ethical considerations were also practiced on the utilization, confidentiality and removal of all details after analysing the data.

Results and Discussion

Table 1.

Respondent's Academic Procrastination

Indicators	Weighted Mean	Verbal Interpretation	Rank
Self-regulation			
1. Delay started doing assignments until the last minute.	2.69	Agree	
2. Find it challenging to stay focused and resist distractions when doing academic tasks.	2.29	Disagree	
3. Struggle to meet deadlines due to procrastination.	2.58	Agree	
Weighted Mean	*2.52*	*Agree*	*2.5*
Skills			
1. Believe that time management skills can contribute to the ability to avoid procrastination.	1.57	Strongly Disagree	
2. Procrastination hinders the development and application of effective study skills.	1.99	Disagree	
3. Procrastinate when a task seems overwhelming or too challenging.	2.47	Disagree	
Weighted Mean	*2.01*	*Disagree*	4
Motivation			
1. Procrastinate on tasks that are not immediately rewarding or enjoyable.	2.89	Agree	
2. Tend to procrastinate more when the motivation for a task is low.	2.40	Disagree	
3. Find it challenging to remain motivated when prioritizing academic tasks.	2.27	Disagree	
Weighted Mean	*2.52*	*Agree*	2.5
Social Factors			
1. Social pressure from peers often leads to procrastinate on academic tasks.	2.55	Agree	
2. Feel influenced by the procrastination habits of friends, which negatively impacts academic performance.	2.92	Agree	
3. Social distractions, such as social media or social events, frequently contribute to academic procrastination.	2.13	Disagree	
Weighted Mean	2.53	Agree	1
Overall Weighted Mean	**2.39**	**Disagree**	

Table 1 presents the respondents' academic procrastination, as seen in the table, social factors indicator, the respondents feel influenced by the procrastination habits of friends, which negatively impacts academic performance obtained the highest weighted mean of 2.92. Moreover, in the Motivation indicator, the respondents procrastinate on tasks that are not immediately rewarding or enjoyable obtained the second highest weighted mean of 2.89 and Self-regulation indicator, the respondents delay started doing assignments until the last

minute obtained the third highest weighted mean of 2.69 which had both general weighted mean of 2.52.

Furthermore, social factors indicator, the respondents' social distractions, such as social media or social events, frequently contribute to academic procrastination obtained a weighted mean of 2.13. Additionally, skills indicator respondents' procrastination hinders the development and application of effective study skills got an average mean of 1.99 they believe that time management skills can contribute to the ability to avoid procrastination which obtained a weighted mean of 1.57. To sum up, an over-all weighted mean of 2.39 revealed that the respondents disagreed to procrastinate in terms of academics. This means that in terms of self-regulation, motivation, and social factors, respondents agreed to procrastinate in terms of academics while in skills, the respondents disagreed to procrastinate in terms of academics.

The result supports the study conducted by O'Sullivan (2020) in which majority of the college students described their reason for procrastination as being a form escape from the stress and anxiety they feel due to college and life.

Table 2.

Respondent's Cramming Behavior

Indicators	Weighted Mean	Verbal Interpretation	Rank
Last-minute preparation			
1. Cramming often leads to completion of tasks at the last minute.	2.37	Less manifested	
2. I often wait until the last minute to start major assignments.	3.04	Manifested	
3. I believe that working is better under pressure and perform well when completing tasks at the last minute.	2.83	Manifested	
Weighted Mean	*2.75*	*Manifested*	1
Skimming			
1. Skimming is an effective way to prepare for exams or assignments.	2.05	Less manifested	
2. Skimming contributes to a lack of depth in comprehension of academic concepts and topics.	2.49	Less manifested	
3. I find it challenging to retain important information through skimming academic readings.	2.70	Manifested	
Weighted Mean	*2.41*	*Less manifested*	3
Rote memorization			
1. I find it challenging to retain information for the long term when cramming and rely on rote memorization.	2.27	Less manifested	

2. Cramming for exams often leads in relying on rote memorization rather than deep understanding.	2.25	Less manifested	
3. Rote memorization during cramming hinders the ability to critically think and apply knowledge.	2.20	Less manifested	
Weighted Mean	*2.24*	Less manifested	2
Overall Weighted Mean	2.47	Less manifested	

Table 2 presents the respondents cramming behavior, last -minute indicator, respondents' often wait until the last minute to start major assignments with a weighted mean of 3.04. Additionally, a weighted mean of 2.83 the respondents believe that working is better under pressure and perform well when completing tasks at the last minute verbally interpreted as "manifested". Under the Skimming indicator, they find it challenging to retain important information through skimming academic readings, with a weighted mean of 2.70 verbal interpreted as "manifested". They tend to have last-minute cramming rather that cramming with a weighted mean of 2.75 and 2.47 verbally interpreted as "manifested", and less manifested respectively.

To sum up, an over-all weighted mean of 2.47 revealed that the respondents had less manifested cramming behavior. The results imply that they had manifested last-minute preparation while skimming and rote memorization was less manifested. It corroborates with the study conducted by Lina & Meryem (2024) which suggest that most of the students have noticed a negative effect of cramming on both of their academic achievements (grades) and well-being.

Table 3 shows the respondents' learning style, it indicates that the respondents' learning style is Kinesthetic with a total score of 670 was ranked 1, followed by Auditory with a total score of 571 was ranked 2, Reading/ Writing with a total score of 484 was ranked 3 and lastly Visual Learning style with a total score of 335 was ranked 4.

Table 3.

Respondents' Learning Style

Groups	Total Scores	Rank
1.Visual	335	4
2.Auditory	571	2
3.Reading/Writing	484	3
4. Kinesthetic	670	1

To sum up, the respondent's learning style with a total score of 670 was Kinesthetic, this only shows that the respondents can learn when they are doing it.

Galvez et al., 2017 note that the study of learning styles has been a growing educational trend, and it is believed that matching the learning styles of students with the mode of instruction aids in student learning.

Table 4.

Relationship Between the Respondents' Academic Procrastination in terms of Self-Regulation and Cramming Behavior

Academic Procrastination: Self-Regulation	Statistical Treatment (Pearson r)	p-value	Decision	Interpretation
Last-minute preparation	.495 (moderate correlation)	.000*	Null Hypothesis Rejected	Significant
Skimming	.195 (negligible correlation)	.078	Null Hypothesis Not Rejected	Not Significant
Rote memorization	.060 (negligible)	.593	Null Hypothesis Not Rejected	Not Significant

*Significant @ 0.01

For the relationship between respondents' academic procrastination in terms of self-regulation and their cramming behavior in terms of last-minute preparation (r=.495), a probability value of .000 was obtained which was lower than the test of significance at .01, suggesting that there is enough statistical evidence to reject the null hypothesis, showing significant relationship between the variables. This means that the respondents procrastinate academically in terms of self-regulation, the more they manifest camming behavior in terms of last-minute preparation may be because while rote memorization may be utilized as one learning strategy among many, its use or avoidance is unlikely to have a significant direct relationship with academic procrastination.

However, no significant relationship was noted between self-regulation and skimming (r=.195) and rote memorization (r=.060) with both p-values of .078 and .593 which were higher than the test of significance at .05. This means that respondent's academic procrastination in terms of skimming and rote memorization had nothing to do with their cramming behavior.

The result supports the study of Fuertes et.al (2020) which explains the tendency of students to procrastinate and has less effect on the relationship between reading strategies and information avoidance and the tendency to procrastinate.

Table 5.

Relationship Between the Respondents' Academic Procrastination in terms of Skills and Cramming Behavior

Academic Procrastination: Skills	Statistical Treatment (Pearson r)	p-value	Decision	Interpretation
Last-minute preparation	.168 (negligible correlation)	.128	Null Hypothesis Not Rejected	Not Significant
Skimming	.166 (negligible correlation)	.133	Null Hypothesis Not Rejected	Not Significant
Rote memorization	.116 (negligible)	.296	Null Hypothesis Not Rejected	Not Significant

Significant @ 0.05

For the relationship between respondents' academic procrastination in terms of skills and their cramming behavior in terms of last-minute preparation (r=.168), skimming (r=.166) and rote memorization (r=.116), probability values of .128, .133 and .296 were obtained respectively. All these p-values were higher than the test of significance at .05, suggesting that there is not enough statistical evidence to reject the null hypothesis. This means that the respondents' manifestation of cramming behavior does not depend on their academic procrastination in terms of skills may be because some overlap between the skills involved in cramming behavior and academic procrastination, they are distinct phenomena influenced by various internal and external factors.

The study of Miyake & Kane (2022) argued that in order to achieve a holistic approach in reducing academic procrastination, an approach to developing effective classroom interventions for academic procrastination should be based on the complex behaviors of Every student that requires a holistic, multipronged approach and intervention research.

For the relationship between respondents' academic procrastination in terms motivation and their cramming behavior in terms of last-minute preparation (r=.326), a probability value of .003 was obtained which was lower than the test of significance at .01, suggesting that there is enough statistical evidence to reject the null hypothesis, showing significant relationship between the variables. This means that the less the respondents

academically procrastinate in terms of motivation, the less they manifest cramming behavior in terms of last-minute preparation.

Table 6.

Relationship Between the Respondents' Academic Procrastination in terms of Motivation and Cramming Behavior

Academic Procrastination: Motivation	Statistical Treatment (Pearson r)	p-value	Decision	Interpretation
Last-minute preparation	.326 (low correlation)	.003*	Null Hypothesis Rejected	Significant
Skimming	-.039 (negligible correlation)	.133	Null Hypothesis Not Rejected	Not Significant
Rote memorization	.195 (negligible)	.296	Null Hypothesis Not Rejected	Not Significant

*Significant @ 0.01

However, no significant relationship was noted between motivation and skimming (r=-.039) and rote memorization (r=.195) with both p-values of .133 and .296 which were higher than the test of significance at .05. This means that cramming behavior of the respondents in terms of manifestation of skimming and rote memorization do not depend on their academic procrastination in terms of motivation the manifestation of skimming and rote memorization may be influenced by factors other than procrastination, such as learning styles and instructional approaches. It supports tha the study of Qasim, S. H. (2022) which reveals that academic procrastination of urban students is high than that in rural. The individual factors that predisposes for academic procrastination in urban area is may be due to the fact that the students pay less attention to studies as they are more exposed to social media and thir motiovation become less.

Table 7.

Relationship Between the Respondents' Academic Procrastination in terms of Social Factors and Cramming Behavior

Academic Procrastination: Social Factors	Statistical Treatment (Pearson r)	p-value	Decision	Interpretation
Last-minute preparation	.158 (negligible correlation)	.153	Null Hypothesis Not Rejected	Not Significant
Skimming	.218 (low correlation)	.048*	Null Hypothesis Rejected	Significant
Rote memorization	.184 (negligible)	.096	Null Hypothesis Not Rejected	Not Significant

*Significant @ 0.05

For the relationship between respondents' academic procrastination in terms social factors and their cramming behavior in terms of skimming (r=.218), a probability value of .048 was obtained which was lower than the test of significance at .05, suggesting that there is enough statistical evidence to reject the null hypothesis, showing significant relationship between the variables. This means that the less the respondents academically procrastinate in terms of social factors, the less they demonstrate cramming behavior in terms of skimming may be because cramming behavior and rote memorization do not solely depend on academic procrastination in terms of social factors, as they may be influenced by a range of social dynamics that operate independently of procrastination tendencies.

However, no significant relationship was noted between social factors and last-minute preparation (r=.158) and rote memorization (r=.184) with both p-values of .153 and .096 which were higher than the test of significance at .05. This means that cramming behavior of the respondents in terms of manifestation of last-minute preparation and rote memorization do not depend on their academic procrastination in terms of social factors.

It supports the study conducted by Daroedono et.al, (2024) which reveals that students, particular female students score better when they did not cram during exam and get a slightly higher mean score than male students who fail the exam and did not cram. Moreover, he phenomenon of cramming is quite common, especially among students.

Table 8.

Relationship Between the Respondents' Academic Procrastination and Learning Style

Learning Style	Statistical Treatment (Pearson r)	p-value	Decision	Interpretation
Self-regulation	-.015 (negligible correlation)	.894	Null Hypothesis Not Rejected	Not Significant
Skills	-.136 (negligible correlation)	.222	Null Hypothesis Not Rejected	Not Significant
Motivation	-.107 (negligible correlation)	.336	Null Hypothesis Not Rejected	Not Significant
Social factors	-.047 (negligible correlation)	.670	Null Hypothesis Not Rejected	Not Significant

Significant @ 0.05

For the relationship between respondents' academic procrastination in terms of self-regulation (r=-.015), skills (r=-.136), motivation (r=-.107), and social factors (r=-.047) and their learning style, probability values of .894, .222, .336 and .670 were obtained respectively. All these p-values were higher than the test of significance at .05, suggesting that there is not

enough statistical evidence to reject the null hypothesis. This means that the respondents' learning style does not depend on their academic procrastination, maybe because learning style does not depend on academic procrastination, as they operate independently and are influenced by diverse factors.

It supports the study of Gündüz (2020) which reveals that academic procrastination behaviors of students and some sub-dimensions of parental behaviors does affect the learning styles of students. Moreover, students' academic procrastination behavior is explained by poor parental follow-up behaviors

Table 9.

Relationship Between the Respondents' Cramming Behavior and Learning Style

Learning Style	Statistical Treatment (Pearson r)	p-value	Decision	Interpretation
Last-minute preparation	.038 (negligible correlation)	.733	Null Hypothesis Not Rejected	Not Significant
Skimming	.110 (negligible correlation)	.322	Null Hypothesis Not Rejected	Not Significant
Rote memorization	.123 (negligible correlation)	.053	Null Hypothesis Not Rejected	Not Significant

Significant @ 0.05

For the relationship between respondents' cramming behavior in terms of last-minute preparation (r=.038), skimming (r=.110) and rote memorization (r=.123) and their learning style, probability values of .733, .322 and .053, were obtained respectively. All these p-values were higher than the test of significance at .05, suggesting that there is not enough statistical evidence to reject the null hypothesis. This means that the respondents' learning style does not depend on their cramming behavior.

It contradicts the study by Theobald et.al, (2021) which reveals that students in-class meeting and deadlines did not prevent cramming and less conscientious students with lower general academic competences need further support in applying efficient learning strategies.

Action plan to enhance the relationship between academic procrastination, cramming behavior and learning style

Rationale

The action plan is proposed to enhance the relationship between academic procrastination, cramming behavior and learning style of the Grade 7 students under STEM-P at Pacita Complex National High School.

This would support the efficient and effective strategies among the learners to stems from the recognition of the detrimental impact of academic procrastination and cramming behavior on learning outcomes, coupled with the understanding that learning styles play a crucial role in shaping study habits. By addressing the interplay between these factors, the aim is to create tailored interventions that promote effective learning strategies and time management skills. Ultimately, this endeavours to empower students to adopt proactive learning strategies that enhance academic performance and cultivate lifelong learning habits.

Table 10.

Proactive learning strategies that enhance academic performance and cultivate lifelong learning habits

Activity	Objectives	Time Frane	Persons Involved	Expected Outcomes	Budget Allocation	Success Indicators
1. Conduct a needs assessment survey among students to understand their procrastination tendencies, cramming behavior, and learning styles	To pinpoint specific challenges and barriers students face in managing their time and study habits.	1 month	Admin, Guidance Counselor, Students	Identification of priority areas for intervention based on survey results.	None	Clear insights into the specific challenges and needs of students regarding time management and study habits.
2. Organize workshops and seminars on time management and study skills tailored to different learning styles.	To raise awareness about the detrimental effects of academic procrastination and cramming behavior.	2 months	Admin, Faculty members, and students	Increased awareness and adoption of proactive study habits among participants.	35,000 (Meals, Certificates, facilitator honorarium)	Observable improvements in time management behaviors and study habits among workshop attendees
3. Implement a peer mentoring program to provide ongoing support and accountability for students struggling with procrastination and cramming.	To establish a supportive network for students to share experiences and strategies for overcoming procrastination.	3 months	Admin, Guidance Advocates, Guidance Counselor, Peer Facilitators	Enhanced sense of community and camaraderie among participants, leading to increased motivation and self-efficacy	None	Demonstrated improvements in time management skills and reduction in procrastination tendencies among mentored students.
4. Implement mindfulness and stress-reduction techniques to mitigate procrastination and improve focus.	To teach students mindfulness practices for managing stress and anxiety and increase awareness of how mental states affect study habits to promote a	2 months	Admin, Guidance Counselor, Guidance Advocates, Peer Facilitators	Reduction in stress levels and improvement in focus among participants.	None	Positive feedback regarding the usefulness and applicability of mindfulness techniques.

	more balanced approach to academic work.					
5.	Establish accountability groups or study partnerships among students.	To create a sense of accountability and mutual support among peers to encourage regular study habits and progress tracking. which foster a collaborative learning environment.	2 months	Admin, Supreme Student Government, Faculty Members.	Increased motivation and sense of responsibility among participants.	None	Positive feedback regarding the supportive and motivating environment of accountability groups.

Conclusions

The Grade 7 STEM-P students' academic procrastination in terms of self-regulation, motivation, and social factors, respondents agreed to procrastinate in terms of academics while in skills, the respondents disagreed to procrastinate in terms of academics. In terms of cramming behavior, they had manifested last-minute preparation while skimming and rote memorization was less manifested. The inherent characteristics of STEM subjects, which prioritize hands-on exploration and problem-solving, and recognize the relative emphasis on kinesthetic learning over visual learning in these disciplines. The students procrastinate academically in terms of self-regulation, the more they manifest camming behavior in terms of last-minute preparation. The respondents' manifestation of cramming behavior does not depend on their academic procrastination in terms of skills. Additionally, the less the respondents academically procrastinate in terms of motivation, the less they manifest cramming behavior in terms of last-minute preparation. Moreover, the less the respondents academically procrastinate in terms of social factors, the less they demonstrate cramming behavior in terms of skimming. The study finds no significant relationship between respondents' learning style and their academic procrastination. The respondents' cramming behavior does not significantly predict their learning style as well as the respondents' learning style does not depend on their cramming behavior.

It is recommended that the students and educators should focus on implementing holistic approaches to address procrastination, such as promoting time management skills, fostering intrinsic motivation, and providing support systems tailored to individual student needs. Moreover, the Parents, the researcher advises to attend the orientation and quarterly parents and teachers conference in order know how they could encourage their children to promote self-awareness and provide resources for effective studying and empower their children to thrive academically and develop lifelong learning skills. Future researchers to duplicate this study for further investigation by exploring skill development strategies, explore how educators can adapt instructional methods to accommodate diverse learning preferences and promote engagement and retention of material which evaluate the effectiveness of

interventions aimed at reducing academic procrastination, improving study skills, and promoting adaptive learning behaviors. By providing more hands-on experiences, we can create a more immersive learning environment that caters to diverse learning preferences and fosters deeper comprehension of STEM concepts. Students are advised to leverage high self-regulation and motivation and utilize the strengths to their advantage such as setting clear goals, create schedules, and engage in effective time management to optimize their learning outcomes, adopt effective study habits, such as spaced repetition and regular review, to reduce the need for cramming.

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