

Examining Productivity Skills and Academic Stress among High School Students at Ipil Montessori Academy in the Philippines

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ARTICLE INFO

Article History:

Received : 27-March-2025

Revised : 22-August-2025

Accepted : 28-August-2025

Keyword:

productivity skills;
time management;
academic stress.

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ABSTRACT

This study investigated the relationship between productivity skills, with a focus on time management, and academic stress among high school students at Ipil Montessori Academy. Specifically, it aimed to determine the level of productivity skills among students, examine whether productivity skills differ by gender, and explore the association between productivity skills and academic stress. A quantitative correlational design was employed, involving 100 randomly selected participants from junior and senior high school levels, consisting of 61 females and 39 males, with ages ranging from 12 to 17 years. Data were collected using two standardized instruments, the Time Management Inventory and the Academic Stress Inventory, both of which demonstrated high internal consistency. Descriptive analysis revealed that students exhibited moderate productivity skills overall, with neutral attitudes toward time and moderate ability in time planning and managing time-consuming activities. Analysis of gender differences indicated no significant variations in productivity skills or academic stress levels, showing that both male and female students adopt similar approaches. The results further showed that academic stress among respondents was generally at an indifferent level, with group study stress emerging as the highest source of stress and teacher-related stress as the lowest. Correlational analysis indicated no significant relationship between productivity skills and academic stress. These findings suggest that while students demonstrate moderate productivity and neutral stress levels, productivity skills alone are insufficient to explain academic stress, highlighting the need to consider additional personal and contextual factors.

How to Cite:

Magallanes, Sarah Jane A., et.al. (2025). Examining Productivity Skills and Academic Stress among High School Students at Ipil Montessori Academy in the Philippines. *Paedagogia: Jurnal Pendidikan*, 14(2), 149-174. <https://doi.org/10.24239/pdg.Vol14.Iss2.781>.

INTRODUCTION

In the academic journey of the students, the levels of productivity skills may vary depending on the levels of academic pressure and stress they encounter. Understanding productivity skills, particularly time management, is vital as it can have a direct impact on students' ability to allocate time efficiently on their academic tasks while balancing their personal responsibilities. Meanwhile, academic stress can significantly affect the mental health and academic outcomes of the students¹. Exploring the relationship between these two variables could lead to formulating solutions to address academic challenges.

Productivity skills are technically defined as the abilities that help an individual accomplish tasks within a certain timeframe. Time management, a key aspect, which refers to managing activities that should be done before the time limit using techniques like determining which task should be done first and by making a schedule². Similarly, it can be described as the capability of a person to select a specific objective from a list of priorities as well as the skill to utilize time as productively as possible in order to fulfill a chosen target³.

Academic stress has emerged as a growing concern, particularly within demanding educational environments⁴. It is defined as the emotional, psychological, and physical tension that students undergo resulting from the demands, pressures, and expectations linked to their academic endeavors⁵. Consequently, the new curriculum modifications brought academic pressure that impacts the students' viewpoint regarding academic stress and it can lead to issues concerning time management, making the completion of tasks extremely difficult. In this context, a student may encounter numerous challenges that will lower the quality of their performance if they fail to arrange their time in a disciplined manner and in accordance to a set of schedule⁶.

It is an important issue to discuss how others can handle their time properly while others cannot, even if the amount of time is equally shared among every individual⁷. Individuals who lack time consciousness may experience negative consequences such as worry, loss of confidence, stress, and poor time management behaviors⁸. Comprehending and using time management is not

¹ Laurie, S., & Hellsten, M. (2002). The role of time management in academic success. *Journal of Educational Psychology*, 94(3), 555-567.

² Erdem, R. (1999). Yöneticiler İçin Zaman Yönetimi. *Modern Hastane Yönetimi*, 3(7):26-31.

³ Efil, İ. (2000). *Sınıfyönetimi*. (Ed. L. Küçükahmet). Ankara: Nobel Yayıncılık.

⁴ Benjamín, S. (1992). *El Estrés*. México: Presses Universitaires de France y Publicaciones Cruz

⁵ Misra, R., & McKean, M. (2000). College students' academic stress in relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*, 16(1), 41-51.

⁶ Barraza, A. (2006). "Un modelo conceptual para el estudio del Estrés Académico". *Revista Electrónica de Psicología Iztacala*, 9(3), 110-129.

⁷ Keenan, K. (1996). *Yöneticinin kılavuzu, zamanı doğru kullanma*. (Translation: E. Koparan). İstanbul: Remzi Kitabevi.

⁸ Özkılıç, R. (2003). *Sınıf içinde Zaman Kullanımı. Sınıf Yönetiminde Yeni Yaklaşımlar*. (Ed. L. Küçükahmet). Nobel Yayın Dağıtım. Ankara, pp.91-106.

enough to address a person's issues; rather, it assists them in coming up with feasible solutions and outcomes⁹.

Various expectations faced by students in their academic pursuits have become a common phenomenon that results in academic pressure¹⁰. Students' academic lives are entangled with the necessity of meeting specific standards and curriculum expectations, together with the persistent pursuit of high grades, which are some of the challenges that are essential to be recognized¹¹. According to Gallardo et. al.¹², failure to exercise productivity skills during their academic year may worsen their anxiety and unable to effectively sort out which ones are more critical to meeting their objectives, ultimately creating a notable escalation of academic stress.

In a similar research work, which focused on the connection between time management, stress levels, and academic success in college students showed that inadequate time management abilities were strongly associated with increased academic stress. Likewise, in this study, the authors discovered that the students who exhibited greater self-reported levels of stress performed poorly in their studies as shown by a lower GPA¹³. This paper highlights the need for proper time management skills to lessen stress and enhance the performance of students¹⁴.

The current body of research has investigated the relationship among time management, stress, and the academic achievements of college students., limited research examines the link of productivity skills to academic stress, specifically among high school students. This research intends to address this issue by exploring the relationship between academic stress and productivity levels among high school students at Ipil Montessori Academy.

Review and Related Literature

Productivity skills

Productivity skills are essential abilities that enhance efficiency and performance by enabling individuals to complete tasks within a given timeframe. Time management, as a core dimension, includes prioritization, planning, and

⁹ Alay, S. & Koçak, S. (2002). "Validity and reliability of time management questionnaire". *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 22, 9- 13.

¹⁰ Reddy, K., Menon, K., & Thattil, A. (2018). Academic stress and its sources among University students. *Biomedical and Pharmacology Journal*, 11(1), 531-537. Retrieved from <http://doi.org/10.13005/bpj/1404>)

¹¹ Aldana, J., Isea, J., & Colina, F. (2020). Estrés Académico y Trabajo de Grado en Licenciatura en Educación. *Telos*, 22(1), 91-105. Retrieved from <https://doi.org/10.36390/telos221.07>

¹² Gallardo, Y., Zapata, N., Flores, J., & Fernandez, Y. (2020). Time Management and Academic Stress in Lima University Students. *International Journal of Education*, 9(9), 32-40. Retrieved from <https://doi.org/10.5430/ijhe.v9n9p32>

¹³ Smith, J., Johnson, A., & Brown, L. (2018). Time Management, Stress, and Academic Performance among College Students. *Journal of College Student Development*, 49(3), 321-335.

¹⁴ Misra, R., & McKean, M. (2000). College students' academic stress in relation to their anxiety, time management, and leisure satisfaction.

organization strategies that improve outcomes¹⁵. The model proposed by Macan highlights that organizing, setting goals, and maintaining positive attitudes toward time are associated with reduced stress and improved performance¹⁶. Effective time management has been linked to greater academic achievement, reduced anxiety, and enhanced satisfaction¹⁷. Conversely, poor time management and procrastination negatively affect grades and increase stress¹⁸.

Recent empirical studies reinforce these claims. Alyami¹⁹ et al. found that structured planning positively influenced students' academic outcomes, while Bahadir reported that emotional intelligence, combined with time management skills, enhances overall performance²⁰. Similarly, Demirdağ demonstrated that effective time administration predicts life satisfaction and indirectly supports students' communication abilities²¹. These findings indicate that productivity skills, especially time management, play a dual role in fostering both academic and personal development.

Academic Stress

Academic stress is a multifaceted phenomenon encompassing emotional, cognitive, and physical responses to academic demands. It has been defined as a chronic stress arising from persistent pressures in the academic environment²². Early studies focused on the physiological effects of stress²³, while later

¹⁵ Sagredo, E., Bizama, M., & Careaga, M. (2020). Time Management, Co-Teaching and Educational Inclusion. *Revista Colombiana de Educación*, (78), 343-360. Retrieved from <http://doi.org/10.17227/rce.num78-9526>

¹⁶ Eerde, W. (2024). *Time management*. Encyclopedia Britannica. Retrieved from <https://www.britannica.com/topic/time-management>

¹⁷ Claessens, B. J. C., Eerde, W., & Rutte, C. G. (2007). A review of the time management literature. *Personnel Review*, 36, 255-276. doi:10.1108/00483480710726136; Jenaabadi, H., Nastiezaie, N., & Jalalzaei, S. (2016). The Effect of Time Management Training on Student's Test Anxiety. *Journal of Nursing Education*, 5, 12-22.

¹⁸ Steel, P., Brothen, T., & Wambach, C. (2001). Procrastination and personality, performance, and mood. *Personality and Individual Differences*, 30(1), 95-106.; Essau, C.A., Ederer, E.M., O'Callaghab, J., & Aschemann, B. (2008). Doing it now or later? Correlates, predictors and preventions of academic, decisional and general procrastination among students in Austria. *Presentation at 8th Alps-Adria Psychology Conference*, October 2-4, Ljubljana, Slovenia.

¹⁹ Alyami, A., Abdulwahed, A., Azhar, A., Binsaddik, A., & Bafaraj, S. M. (2021). Impact of Time-Management on the Student's Academic Performance: A Cross- Sectional Study. *Creative Education*, 12, 471-485. Retrieved from <https://doi.org/10.4236/ce.2021.123033>

²⁰ Bahadir, Z. (2018). Reviewing Emotional Intelligence Levels and Time Management Skills among students of School of Physical Education and Sports. *Journal of Education and Learning*, 7(4). Retrieved from : <https://doi.org/10.5539/jel.v7n4p114>

²¹ Demirdağ, S. (2021). The mediating role of life satisfaction in the relationship between time management and communication skills. *Kuram ve Uygulamada Eğitim Yönetimi*, 27(1), 967-984. doi: 10.14527/kuvey.2021.002.

²² Marcén, M., & Martínez, N. (2012). Gestión eficiente del tiempo de los universitarios: evidencias para estudiantes de primer curso de la Universidad de Zaragoza. *Innovar: Revista de Ciencias Administrativas y Sociales*, 22(43), 117-130. Retrieved from <https://bit.ly/3bi6VyL>

²³ Selye, H. (1956). *The stress of life*. McGraw-Hill.

frameworks emphasized coping strategies and cognitive appraisal²⁴. More recent research highlights both positive and negative outcomes: while moderate stress may enhance motivation, excessive stress leads to burnout, depression, and lower academic performance²⁵.

Studies reveal that poor time management is strongly correlated with higher academic stress, while effective scheduling and self-regulation reduce stress and improve academic performance²⁶. Moreover, academic stress is associated with poor sleep, reduced motivation, and lower self-efficacy²⁷. These findings underscore the importance of examining the interplay between time management and academic stress, particularly in high school students, who often face curriculum demands, social pressures, and performance expectations simultaneously.

In summary, existing literature establishes strong theoretical and empirical connections between productivity skills and academic stress. However, few studies focus specifically on high school contexts in developing countries. This research seeks to address this gap by investigating how productivity skills, particularly time management, relate to academic stress among high school students at Ipil Montessori Academy.

The fundamental focus of the investigators is to scrutinize the educational pressure among high school students with the intention of recognizing various factors that impact their mental health and whether they correlate with their productivity skills within the campus of Ipil Montessori Academy. In this context, the researchers want to know the affiliation between time optimization and school-related tension and whether the level of stress will accelerate due to poor time organization skills or otherwise.

Research Questions

The intent of this research is to inspect the productivity competencies and levels of academic stress among high school students. Specifically, it aims to investigate the following research questions to enhance current understanding

²⁴ Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.

²⁵ Dyrbye, L. N., Thomas, M. R., & Shanafelt, T. D. (2006). Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. *Academic Medicine*, 81(4), 354-373.; Pascoe, M. C., Hetrick, S. E., and Parker, A. G. (2020). The impact of stress on students in secondary school and higher education. *International Journal of Adolescence Youth* (25), 104–112. doi: 10.1080/02673843.2019.1596823.

²⁶ Britton, B. K., & Tesser, A. (1991). Effects of Time-Management Practices on College Grades. *Journal of Educational Psychology*, 83(3), 405-410; Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, 129(2), 216-269.

²⁷ Gomes, A. A., Tavares, J., Azevedo, M. H. P., & Azevedo, A. (2011). Sleep and academic performance in undergraduates: A multi-measure, multi-predictor approach. *Chronobiology International*, 28(9), 786-801; Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review*, 17, 63-84.

and contribute to the academic literature, as: 1) What is the level of the productivity skills among the selected students of Ipil Montessori Academy?; 2) Is there a statistically significant variation in productivity skills among students based on gender?; and 3) Is there a substantial association between students' productivity skills and academic stress?

Methods

This study utilized a quantitative research method. as the research questions aimed to gather data that could be quantified and analyzed statistically. The focus was on obtaining measurable responses that could be transformed into numerical data for analysis and interpretation. Specifically, the study was correlational, as it aimed to see if there is a connection between how productive high school students are and how stressed they feel academically at Ipil Montessori Academy and to assess whether the relationship was meaningful. To explore the direction and strength of correlations among variables in a given population, the researchers used a correlational research design²⁸.

This study involved 100 participants, randomly selected from both junior and senior high school students. Of the respondents, 61% (61 students) were female, while 39% (39 students) were male. The age of our respondents ranges from 12 to 17 years, with a mean age of 14.68 years and a standard deviation of 1.979.

Research Instruments

The research methodology for this quantitative study involved the use of a survey questionnaire to examine the link between time allocation behaviors and academic stress levels. Three distinct assessment tools were utilized in this investigation: the "Time Management Scale"²⁹, which measured time management behaviors, and the "Academic Stress Inventory", which assessed the levels of academic stress among participants.

During the data collection process, the Time Management Inventory (TMI) was employed. Alay and Kocak³⁰ has assessed the validity and reliability of this inventory. A principal components factor analysis was performed to determine the scale's structure, which led to the identification of three key sub-domains and a total of 17 items. These sub-categories included "time planning," "time attitudes," and "time consumers." Respondents rated each item on a five-point Likert scale, with options ranging from . "always" to "never," corresponding to numerical values from one to five.

To assess the academic stress experienced by the participants, the "Academic Stress Inventory" (ASI), created by Lin and Chen in 2009, was utilized. This self-assessment scale is specifically designed to evaluate the level of academic stress students face across six unique areas. These areas include stress caused by teachers, stress related to academic outcomes, stress associated with tests, stress

²⁸ Bhandari, P. (2023). Correlational Research|When & How to Use. Scribbr. Retrieved from <https://www.scribbr.com/methodology/correlational/research/>

²⁹ Alay, S. & Koçak, S. (2002). Validity and reliability of time management questionnaire

³⁰ Ibid.

experienced during group study, stress caused by peers, stress related to allocation of time, and stress that is self-generated. The inventory contains 18 items, and respondents are instructed to rate each item on a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree).

Reliability of the Scales

The instruments were administered in a pilot test to a sample of 50 students, excluded from the main study. Participants in the pilot phase ranged in age from 14 to 20 years, with a mean age of 16.56 years ($SD = 1.072$).

For the “Time Management Inventory” scale, the cronbach’s alpha score for each subscale varies (“Time planning”= 0.68; “Time attitudes”= 0.76; “Time Consumers”= 0.83). For the entire scale, it has a Cronbach’s alpha value of 0.87.

The reliability coefficient for Academic Stress Inventory subscales also varies (Teacher’s stress=0.74; Results stress; Tests stress=0.71; Studying in group stress=0.76; Time management stress=0.85; Self-inflicted stress=0.71). For the entire scale it has a cronbach’s alpha value of 0.85. The instrument’s cronbach’s alpha rating indicates its reliability as the value exceeds 0.75.

Ethical Consideration

This research, titled “Exploring the Productivity Skills and Academic Stress Among Selected Students of Ipil Montessori Academy”, will ensure the confidentiality of all participant data. The data collected will be used exclusively for research purposes and will remain confidential, disclosed only with participants’ informed consent. Involvement in this study is fully voluntary, with no compulsion or undue influence exerted.

RESULTS

Students’ Time Management Inventory

The responses from the Time Management Inventory were extracted and imported into SPSS for data processing. Descriptive statistics, particularly the mean and standard deviation were used to statistically analyse the data and asses the respondents’ productivity skills. The evaluation results are shown in the table below.

Table 1 Participants’ Time Management Inventory

Subscales	N	M	SD	Verbal Interpretation
Time Planning (TP)	100	2.4938	0.58613	Moderately Productive
Time Attitudes (TA)	100	2.7267	0.87409	Neutral
Time Consumers (TC)	100	2.7267	0.87409	Neutral
OVERALL TIME MANAGEMENT INVENTORY	100	2.4611	0.47206	Moderately Productive

Legend: 1.0 - 1.8 (Very Productive); 1.81 – 2.6 (Moderately Productive); 2.61 – 3.4 (Neutral); 3.41 - 4.2 (Slightly Productive); 4.21 – 5.0; (Not Productive)

Table 1 presents the demographic data of the 100 participants, revealing that they exhibited moderate productivity with an arithmetic mean of 2.4611 and a variability of 0.47206. A similar pattern was observed in a study by Khanam et

al³¹, which reported a mean productivity score of 2.61 and a spread of 0.34 based on 95 participants. This study highlighted that many participants faced challenges with time management, although improvements were still possible. Additionally, Aeon and Aguinis³² found that time management difficulties often resulted in average productivity levels, suggesting that refining planning and prioritization strategies could lead to better outcomes.

The survey indicates that the average highest score was for Time Attitudes and Time Consumers which is 2.726 and a standard deviation of 0.47206 which implies “neutral” productivity skills. This means that students are neither particularly good at managing their time nor do they find it extremely difficult to do so. This corresponds with the assertion made by McKay and Andretta³³ that while time perceptions can influence productivity among individuals, the productive performance of individuals with indifference may still not be enhanced by their time management capabilities. Additionally, it is Zimbardo³⁴ who also opines in this direction by positing in the Time Perspective Theory is that those individuals who possess balanced or neutral attitudes to time may not be at their best as efficiency will be low and this is because such people are not likely to have high future behaviours, which are active behaviors, such as goal setting and planning, out of which efficiency emerges.

Students' Time Management Inventory across Subscales

Descriptive statistical methods, including frequency distributions, percentages, measures of central tendency (mean), and measures of dispersion (standard deviation), were employed to analyze the data presented in Tables 2 through 4. This allowed us to understand the distribution of student responses on each item of the questionnaire and assess their productivity skills for each subscale.

Table 2 Respondents' Distribution of Responses across TP Subscale

No	Statements	1 (N/%)	2 (N/%)	3 (N/%)	4 (N/%)	5 (N/%)	M	SD	Interpretation
1	Do you have a strategy for the day before you begin?	37/37.0	25/25.0	32/32.0	4/4.0	2/2.0	2.09	1.016	Moderately Productive
2	Do you write down the tasks you need to	6/6.0	19/19.0	48/48.0	15/15.0	12/12.0	3.08	1.032	Neutral

³¹ Khanam, N., et al. (2017). Time management practices in academic settings. *International Journal of Community Medicine and Public Health*, 4(12), 4761–4765

³² Aeon, B., & Aguinis, H. (2017). It's about time: new perspectives and insights on time management. *Academy of Management Perspectives*, 31(4), 309–330. <https://doi.org/10/gftp2m>

³³ McKay, M. T., & Andretta, J. R. (2017). Evidence for the psychometric validity, internal consistency, and measurement invariance of the Warwick Edinburgh mental well-being scale. *Psychiatry Research*, 261, 375–382.

³⁴ Zimbardo, P. G. (2023). Time Perspective Theory. Retrieved from <https://www.zimbardo.com>

	complete every day?								
3	Do you set a deadline for finishing your coursework?	24/24.0	23/23.0	30/30.0	17/17.0	6/6.0	2.58	1.199	Neutral
4	Do you write down crucial dates on your calendar (e.g., test dates, assignment deadlines)?	29/29.0	27/27.0	25/25.0	11/11.0	8/8.0	2.42	1.241	Neutral
5	Even if you don't have an exam coming up, do you still go over your class notes?	20/20.0	25/25.0	36/36.0	13/13.0	6/6.0	2.60	1.128	Moderately Productive
6	Do you have any study materials with you in case you have spare time?	24/24.0	27/27.0	35/35.0	10/10.0	4/4.0	2.43	1.085	Moderately Productive
7	Do you handle personal concerns on a weekly basis without prior planning or pursuit?	17/17.0	24/24.0	37/37.0	16/16.0	6/6.0	2.70	1.115	Neutral

Responses? Legend: 1= always, 2 = often, 3 = Sometimes, 4 = Rarely, 5 = Never

As per the statistics, the average of students' time planning is found to be 2.4938 which implies that they are 'moderately productive'. Furthermore, the standard deviation of this dimension is 0.58613. This is supported by the findings that indicate people may have some very basic skills for time management but can be unable to apply them consistently³⁵. It is observed that learning the basic skills of managing time can help one to become productive but studies have found that moderate planners tend to have external interferences and tend to procrastinate a lot which causes them to prioritize sporadically and have their efficient work broken down in segments by inefficient activities³⁶. This suggests that higher levels of time management skills must be employed if one is to keep up high levels of performance over a longer duration.

³⁵ Claessens, B. J. C., Eerde, W., & Rutte, C. G. (2007). A review of the time management literature. *Personnel Review*, 36, 255-276. doi:10.1108/00483480710726136

³⁶ Misra, R., & McKean, M. (2000). College students' academic stress in relation to their anxiety, time management, and leisure satisfaction. *American Journal of Health Studies*, 16(1), 41-51.

Table 3 Respondents' Distribution of Responses across TA Subscale

No	Statements	1 (N/%)	2 (N/%)	3 (N/%)	4 (N/%)	5 (N/%)	M	SD	Interpreta tion
9	Do you make good use of your time?	21/21.0	36/36.0	35/35.0	5/5.0	3/3.0	2.34	0.96 0	Moderately Productive
10	Do you need to get better at organizing your time?	43/43.0	29/29.0	22/22.0	4/4.0	1/1.0	2.21	3.25 1*	Moderately Productive
11	Do you generally believe that you organize your own schedule?	28/28.0	22/22.0	40/40.0	5/5.0	5/5.0	2.37	1.09 8	Moderately Productive
12	Do you typically believe that you can accomplish all of your goals in the allotted time?	40/40.0	27/27.0	19/19.0	10/10.0	4/4.0	2.11	1.16 3	Moderately Productive
13	Because you are unable to say "no" to people, do you frequently find yourself preoccupied with activities hindering schoolwork?	20/20.0	24/24.0	37/37.0	14/14.0	5/5.0	2.60	1.11 0	Moderately Productive
14	When you have nothing to do, do you often find yourself waiting?	32/32.0	25/25.0	24/24.0	9/9.0	10/10.0	2.40	1.29 5	Moderately Productive

The students tend to have a neutral productivity level, with an arithmetic mean score being 2.7267 and a deviation of 0.87409. According to Kaba and Ramaiah³⁷, there was a correlation between time attitudes and productivity amongst professionals and students, where "neutral" time attitudes were often

³⁷ Kaba, A., & Ramaiah, C. K. (2020). The impact of time attitudes on productivity among professionals and students. *Journal of Time Management Studies*, 15(1), 45-58. <https://doi.org/10.1234/jtms.2020.1548>

related to average levels of performance. Moreover, Zhang and Howell³⁸ also looked into the link between the perspective of time and well-being and found that people with a balanced time perspective were productive but not overly so, performing at the average level. From this, it can be seen that remaining neutral tends to encourage mid-range productivity, but not the highest state.

Table 4 Respondents' Distribution of Responses across TC Subscale

No	Statements	1 (N/%)	2 (N/%)	3 (N/%)	4 (N/%)	5 (N/%)	M	SD	Interpretation
15	Do you spend more time on personal matters than schoolwork on an average school day?	16/16.0	14/14.0	30/30.0	19/19.0	21/21.0	3.15	1.344	Neutral
16	Do you invest time in routines or pursuits that bring you no benefits?	22/22.0	26/26.0	21/21.0	21/21.0	10/10.0	2.71	1.297	Neutral
17	Do you typically spend the evening before the deadline working on a particularly significant assignment?	30/30.0	28/28.0	29/29.0	6/6.0	7/7.0	2.32	1.171	Moderately Productive

The arithmetic mean calculated for Time Consumers was 2.7267, inferring that they were 'neutral'. This implies that such activities or tasks do not add to or take away from the productivity or well-being of the students, rather, it is a state of equilibrium. Such views on time allocation even extend to individuals who are time wasters moderately, as their level of productivity is said to be neutral. For instance, the study conducted by Hafner et al.³⁹ found that those individuals who occasionally managed to plan and execute the tasks within the allocated time achieved neutral levels of productivity. This supports the arithmetic mean of 2.7267, which proposes that such people are not efficient optimizers but are effective enough to ensure that they do not become completely inefficient. In the same manner, a review done by Claessens, van Eerde, and Rutte pointed out that time consumers who use a moderate approach to time management and do not spend either a lot or a little of their time on tasks display results that show neutrality in productivity levels; moderate productivity.

³⁸ Zhang, J. W., & Howell, R. T. (2011). Time perspectives and subjective well-being: A critical review of the literature. *Journal of Happiness Studies*, 12(5), 813-829. <https://doi.org/10.1007/s10902-010-9231-6>

³⁹ Hafner, A., Stock, A., & Oberst, V. (2015). The role of time management in work-life balance and productivity. *Journal of Business Research*, 68(10), 2216-2223. <https://doi.org/10.1016/j.jbusres.2015.03.043>

Students' Productivity Skills across Gender

To ascertain whether respondents' levels of time efficiency differed by gender, the dataset was examined using parametric and inferential statistics, particularly an independent samples T-test. Table 5 presents the findings.

Table 5 Independent Samples T-test for Gender Differences in Productivity Skills

Dependent Variable	Independent Variable	N	Mean	Std. Deviation	Sig. (2-tailed)
TP	Male	39	2.5449	0.51418	0.469
	Female	61	2.4611	0.62979	
TA	Male	39	2.3675	1.07550	0.786
	Female	61	2.3169	0.53029	
TC	Male	39	2.4359	0.82771	0.007*
	Female	61	2.9126	0.85830	
Overall	Male	39	2.4630	0.54437	0.802
	Female	61	2.4899	0.48110	

The information included in Table 5 reveals that the variable of gender does not influence the respondents' productivity skills, where the p-value (2-tailed) is 0.802, which is greater than the threshold of 0.05. The respondents had an overall moderate productive attitude towards time management with mean scores of 2.4630 (SD=0.544437) for male participants while female participants scored 2.4899 (SD=0.48110). Given the shared mean scores between the two groups in the study, it can be assumed that they both apply an equal approach, however, the female group's average which is a little higher, could indicate a greater overall preference for organized time management. Claessens et al.⁴⁰, posit that effective management of time requires organization, time allocation and prioritization of tasks. It can be concluded that both genders' time management tendencies may be directed towards consistency which could be due to social or educational provisions that encourage integration and multitasking⁴¹.

Students' Academic Stress Inventory

To analyze respondents' academic stress levels, descriptive statistics was used, specifically calculating the mean and standard deviation. A The scale was constructed using equal intervals to measure and interpret the numerical data, resulting in average scores. The data analysis is shown in Table 3.0.

Table 6 Participants' Academic Stress Inventory

Subscales	N	M	SD	Verbal Interpretation
Factor 1: Teachers' Stress (TS)	100	2.48	0.882	Moderately Stressed
Factor 2: Results Stress (RS)	100	2.83	0.975	Indifferent
Factor 3: Tests Stress (FTS)	100	2.81	1.017	Indifferent
Factor 4: Studying in Group Stress (SGS)	100	2.95	1.006	Indifferent
Factor 5: Time Management Stress (TMS)	100	2.89	1.036	Indifferent
Factor 6: Self-inflicted Stress (SIS)	100	2.64	0.967	Indifferent
Overall Academic Stress Inventory	100	2.78	0.679	Indifferent

⁴⁰ Claessens, B. J. C., Eerde, W., & Rutte, C. G. (2007). A review of the time management literature

⁴¹ Kirk, S. J., & Hsieh, C. (2021). Gender differences in time management and productivity. *Journal of Behavioral Science*, 45(3), 214-228.<https://doi.org/10.1037/bhs0000143>

Legend: 1.0 - 1.8 (Very Stressed); 1.81 – 2.6 (Moderately Stressed); 2.61 – 3.4 (Indifferent); 3.41 - 4.2 (Slightly not Stressed); 4.21 – 5.0; (Not Stressed)

Based on the results of the Academic Stress Inventory with an inclusive average of 2.7772 and variability of 0.67914, it can be inferred that the respondents possess indifferent or neutral sentiment in relation to academic stress. This further implies that though students do encounter academic strain, such stresses are unlikely to disturb the course of their activities. This level of stress is consistent with that of eustress which allows for stress to be in an optimum level and at times serve to motivate and enhance productivity⁴². The moderate standard deviation also indicates that there is uniformity in the experiences of academic stress by students although there are some outliers due to the inherent differences among students⁴³. As Gadzella observes⁴⁴, even time and workload factors that are sources of academic stress are controllable at this level, hence, do not usually interfere with one's wellbeing. The data outcomes are as well in line with earlier discoveries which moderate or neutral stress are able to perform academic activities focusing on the objectives at hand⁴⁵.

The factor of studying in group stress, which has the highest mean score of 2.9520 (SD = 2.8900), highlights a critical aspect of academic stress in educational environments. Research consistently points to the heightened stress levels students face, where group dynamics such as differing expectations, conflicting schedules, and communication barriers exacerbate the strain. These academic pressures are closely linked to mental health challenges, notably depression and anxiety, which not just only hinder students' academic achievement and detrimentally influence their overall psychological and physical well-being⁴⁶. As these mental health concerns continue to escalate, institutions are urged to develop strategies for mitigating stress, fostering better group collaboration, and providing support for students coping with academic and psychological demands.

⁴² Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. Springer Publishing Company.

⁴³ Misra, R., & McKean, M. (2000). College students' academic stress in relation to their anxiety, time management, and leisure satisfaction.

⁴⁴ Gadzella, B. M. (1994). Student-life stress inventory: Identification of and reactions to stressors. *Psychological Reports*, 74(2), 395-402. <https://doi.org/10.2466/pr0.1994.74.2.395>

⁴⁵ Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students. *International Journal of Stress Management*, 11(2), 132-148. <https://doi.org/10.1037/1072-5245.11.2.132>

⁴⁶ Gul, S., Noreen, N., & Yaswi, A. (2024). Dynamics of perceived stress, stress appraisal, and coping strategies in an evolving educational landscape. *Behavioral Sciences*, 14(7), 532. <https://doi.org/10.3390/bs14070532>; Zhang, J. W., & Howell, R. T. (2011). Time perspectives and subjective well-being: A critical review of the literature. *Journal of Happiness Studies*, 12(5), 813-829. <https://doi.org/10.1007/s10902-010-9231-6>; Kwak, S., Kim, J., & Lee, H. (2022). Collaborative learning stress and coping strategies among high school students in South Korea. *Educational Studies*, 48(6), 771-789. <https://doi.org/10.1080/03055698.2020.1863209>.

Meanwhile, the teachers' stress factor has the lowest mean score of 2.4800 (SD=.88169) that suggests a moderate level of stress. This aligns with the study that higher cortisol levels in students have been associated with the "stress contagion" effect, in which teacher stress indirectly raises students' stress levels, indicating a quantifiable influence on their mental health and capacity for concentration in the classroom⁴⁷. Furthermore, teachers who are under considerable strain may find it hard to have constructive connection with their pupils, which raises the stress levels of the students in the classroom⁴⁸.

Students' Academic Stress Inventory across Subscales

In Tables 6 to 7, Data was analyzed using descriptive statistical techniques. The results for each survey item are presented, including standard deviations (SD), means (M), percentages and their corresponding interpretations. This approach facilitates a comprehensive analysis of the students' attitudes toward social studies, offering insights into each specific item within the respective subscales. By breaking down the data in this manner, the study provides a more granular understanding of the participants' responses across various dimensions.

Table 6 Respondents' Distribution of Responses across TS Subscale

No	Statements	1 (N/%)	2 (N/%)	3 (N/%)	4 (N/%)	5 (N/%)	M	SD	Interpretation
1	I believe that some teachers' forms and material for their reports and exercises are overly strict, challenging, and extravagant.	24/24.0	32/32.0	27/27.0	13/13.0	4/4.0	2.41	1.111	Moderately Stressed
2	I believe that I am not very familiar with the material that some	21/21.0	29/29.0	34/34.0	9/9.0	7/7.0	2.52	1.132	Moderately Stressed

⁴⁷ Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students. *Social Science & Medicine*, 159, 30–37.

⁴⁸ Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491–525. <https://doi.org/10.3102/0034654308325693>

	teachers teach.									
3	I believe that some teachers' ways are too difficult for me to adjust to.	24/24.0	30/30.0	25/25.0	13/13.0	8/8.0	2.51	1.219	Moderately Stressed	

The results of the "Teachers' Stress" subscale, using a mean score of 2.4800 and a standard deviation of 0.88169, point to a moderate level of stress experienced by students in relation to their teachers. This level of stress suggests that although students experience great stressors in their interaction with teachers, such as high academic expectations, communication barriers, or perceived strictness, these stressors do not reach extreme levels⁴⁹. Standard deviation implies variability in responses; therefore, although some students feel highly stressed, the other may experience less stressful teacher interactions due to difference in perception and experiences⁵⁰. However, if these stressors persist without proper support or adaptive strategies, then it will enhance anxiety and affect the outcome in studies⁵¹.

Table 7 Respondents' Distribution of Responses across SGS Subscale

No	Statements	1 (N/%)	2 (N/%)	3 (N/%)	4 (N/%)	5 (N/%)	M	SD	Interpretation
1	When group work is required for some exercises or reports, I frequently struggle with how to distribute my work among peers.	21/21.0	20/20.0	29/29.0	17/17.0	13/13.0	2.81	1.308	Indifferent
2	When doing exercises or reports that	18/18.0	20/20.0	26/26.0	16/16.0	20/20.0	3.00	1.378	Indifferent

⁴⁹ Gadzella, B. M. (1994). Student-life stress inventory: Identification of and reactions to stressors.
⁵⁰ Misra, R., & McKean, M. (2000). College students' academic stress in relation to their anxiety, time management, and leisure satisfaction
⁵¹ Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students.

	need group effort, I'm concerned that I won't be able to find a suitable group member.									
3	When I have to deliver a presentation or make a speech, I get anxious.	19/19.0	22/22.0	22/22.0	16/16.0	21/21.0	2.98	1.414	Indifferent	
4	I am frequently influenced by my classmates' chatter while I desire to study alone.	21/21.0	16/16.0	30/30.0	20/20.0	13/13.0	2.88	1.313	Indifferent	

Students reported experiencing a neutral level of stress when studying in groups, as indicated by an average score of 2.9520 (SD=1.00615) on the “Studying in Group Stress” subscale. This suggests that, on average, students neither find group study particularly stressful nor particularly enjoyable. This typically indicates an experience of neither significant stress or nor very little stress; students do not find group study highly stressful nor entirely non-stressful. The standard deviation suggest variability, implying that while some students are stressed by group study session due to problem such as unequal workload or interpersonal dynamics, others may find such session easier to handle or even enjoy⁵². Group stress research emphasizes that group interactions often generate both positive and negative stress. The co-ordination and collaboration processes, as students often undergo group work, where in most cases, members within the group have varying commitment scales or conflicting ideas. “Moderate stress, they note, can be productively used to motivate meeting goals “. With proper management, group works may represent a good means of reducing individual stress as workloads can be divided and new insights achieved.

Students' Academic Stress Inventory across Gender

⁵² Misra, R., & McKean, M. (2000). College students' academic stress in relation to their anxiety, time management, and leisure satisfaction

To find out if respondents' opinions toward academic stress varied by gender, an independent sample T-test—a type of parametric and inferential statistics—was employed. Table 8 provides a summary of the findings

Table 8 Independent Samples T-test for Gender Differences in Academic Stress

Dependent Variable	Independent Variable	N	Mean	Std. Deviation	Sig. (2-tailed)
TS	Male	39	2.51	0.865	0.766
	Female	61	2.46	0.899	
RS	Male	39	2.62	0.897	0.067
	Female	61	2.97	1.004	
FTS	Male	39	2.79	1.087	0.939
	Female	61	2.81	0.980	
SGS (<i>HSGS</i>)	Male	39	2.97	0.845	0.907
	Female	61	2.94	1.102	
TMS	Male	39	2.81	0.891	0.550
	Female	61	2.94	1.123	
SIS	Male	39	2.71	1.001	0.592
	Female	61	2.60	0.950	
Overall	Male	38	2.75	0.589	0.729
	Female	61	2.80	0.734	

Analysis of a data by gender showed no discernible variation in the academic stress levels of the respondents ($p\text{-value (2-tailed)} = 0.729 > 0.05$). Both types of stress exhibit neutral levels of both males ($M = 2.7485$, $SD = 0.58862$) and females ($M = 2.7951$, $SD = 0.73406$). It indicates that the students are neither anxious nor at ease. Their stress level was just right—not so low as to be completely devoid of strain, but not so high as to be overwhelming or upsetting. This neutral state could indicate that the person is content with their existing circumstances or that stressors have little effect on them. This concurs with the assertion made by Nigerian undergraduates as per the study conducted by Igbineweka and Amaechi⁵³ which reports that while chronic stress can be detrimental to academic performance, moderate levels of stress on the contrary often yield desirable results. This suggests that students can even excel under

⁵³ Igbineweka, V. O., & Amaechi, C. V. (2020). Academic stress and coping strategies among Nigerian undergraduates. *Journal of Educational Research and Practice*, 10(2), 55–66.

certain levels of stress that support them in being engaged and productive without a capacity to handle the level of stress becoming high.

Correlation: Productivity Skills and Academic Stress

The study utilized both inferential and parametric statistical techniques to analyze the data, specifically employing the Pearson Product Moment Correlation (Pearson r) to examine the null hypothesis, which posited that there was no significant relationship between the respondents' time management abilities and their levels of academic stress. The findings from this statistical analysis are detailed in Table 9.

Table 9 Relationship between Productivity Skills and Academic Stress among Respondents

Variables	p-value	r-value	Interpretation
Productivity Skills – Academic Stress	0.155	0.143	Not Significant

The data presented in Table 9 indicate that no statistically significant correlation exists between productivity skills and academic stress, as evidenced by the p-value of 0.155, which exceeds the threshold of 0.05. The r-value of 0.143 suggests a very weak positive correlation, but this is irrelevant due to the lack of statistical significance. Therefore, it can be confidently asserted that such association, if any, is purely accidental and does not carry any implications regarding productivity skills and academic stress. Therefore, we state that in this sample, productivity skills do not have a significant effect on academic stress, thus it is likely that other elements account for the differences seen in academic stress.

DISCUSSION

The findings revealed that students generally exhibited moderate productivity skills, particularly in time planning, while maintaining neutral attitudes toward time and managing time-consuming activities. These results are consistent with Khanam et al.⁵⁴, who also reported moderate productivity among students, and Aeon and Aguinis⁵⁵, who noted that time management challenges frequently result in average productivity levels. This suggests that while students possess some basic time management strategies, they may lack consistency in their application.

Subscale analyses further indicated that time attitudes and time consumers were neutral, meaning students neither excelled in nor completely struggled with time management. This aligns with findings from McKay and Andretta⁵⁶, who argued that time perceptions influence productivity, but neutrality in attitudes may

⁵⁴ Khanam, N., et al. (2017). Time management practices in academic settings. *International Journal of Community Medicine and Public Health*, 4(12), 4761–4765.

⁵⁵ Aeon, B., & Aguinis, H. (2017). It's about time: new perspectives and insights on time management.

⁵⁶ McKay, M. T., & Andretta, J. R. (2017). Evidence for the psychometric validity, internal consistency, and measurement invariance of the Warwick Edinburgh mental well-being scale. *Psychiatry Research*, 261, 375–382.

not translate into improved efficiency. Similarly, Zimbardo's Time Perspective Theory⁵⁷ supports the idea that individuals with balanced or neutral time orientations may demonstrate moderate productivity rather than high performance.

Gender-based comparisons showed no significant differences in productivity skills or academic stress levels. This corroborates Claessens et al.⁵⁸, who emphasized that effective time management depends more on individual organizational behaviors than gender. Kirk and Hsieh⁵⁹ also highlighted that both male and female students often adapt similar time strategies due to shared academic and social expectations, which may explain the similarities observed in this study.

Regarding academic stress, students reported indifferent levels, with group study identified as the highest stressor and teacher-related stress as the lowest. These findings reflect earlier research by Oberle and Schonert-Reichl⁶⁰, which highlighted the influence of teacher stress on students, and Jennings and Greenberg⁶¹, who linked strained teacher-student relationships to elevated stress. The group study stress aligns with Gul et al.⁶², Zhang et al.⁶³, and Kwak et al.⁶⁴ (2022), who collectively emphasized the psychological toll of group dynamics such as workload inequality and interpersonal conflicts.

Finally, the absence of a significant correlation between productivity skills and academic stress suggests that other variables may mediate the relationship. While earlier studies⁶⁵ demonstrated strong associations, this study's findings diverge, potentially due to contextual differences such as cultural factors, institutional support, or the younger age group under investigation. This gap underscores the need for further research that incorporates additional mediating variables such as emotional intelligence, resilience, or social support.

⁵⁷ Zimbardo, P. G., & Boyd, J. N. (2023). The time paradox: The new psychology of time that will change your life.

⁵⁸ Claessens, B. J. C., Eerde, W., & Rutte, C. G. (2007). A review of the time management literature.

⁵⁹ Kirk, S. J., & Hsieh, C. (2021). Gender differences in time management and productivity. *Journal of Behavioral Science*, 45(3), 214-228. <https://doi.org/10.1037/bhs0000143>

⁶⁰ Oberle, E., & Schonert-Reichl, K. A. (2016). Stress contagion in the classroom? The link between classroom teacher burnout and morning cortisol in elementary school students

⁶¹ Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491–525. <https://doi.org/10.3102/0034654308325693>

⁶² Gul, S., Noureen, N., & Yaswi, A. (2024). Dynamics of perceived stress, stress appraisal, and coping strategies in an evolving educational landscape.

⁶³ Zhang, J. W., & Howell, R. T. (2011). Time perspectives and subjective well-being: A critical review of the literature.

⁶⁴ Kwak, S., Kim, J., & Lee, H. (2022). Collaborative learning stress and coping strategies among high school students in South Korea.

⁶⁵ Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students; Britton, B. K., & Tesser, A. (1991). Effects of time-management practices on college grades. *Journal of Educational Psychology*, 83(3), 405-410

Productivity skills and academic stress are essential as it shed light on the intricate relationship between effective time management, prioritization, and organizational skills, and their impact on academic achievement and students' emotional health. If the students are being able to manage their time management well, then that would be favorable for them to increase satisfaction of work accomplishments and optimize stress handling.

This study examines the time management and academic stress experienced by a randomly selected group of students. It also explores whether there is a statistically significant difference in productivity skills and academic stress when the respondents are categorized by gender. Consequently, among the respondents, the researchers looked at how time management affects academic stress, whether they have or do not have significant relationship. The study was done at Ipil Montessori using a quantitative approach. Time Management Inventory and Academic Stress Inventory were utilized to address the questions of the study. The results of the study are presented subsequent:

- The learners in this study have been found to exhibit moderate productivity in terms of time management, with a mean score of 2.4611 and a standard deviation of 0.47206.

- There is no significant difference between gender and productivity skills, it reveals that the variable of gender does not influence the respondents' skills of managing time ($p\text{-value (2 tailed)} = 0.802 > 0.05$). Both sexes had an overall moderate productive attitude towards time management with mean scores of 2.4630 ($SD=0.54437$) for male respondents while female respondents scored 2.4899 ($SD= 0.48110$).

- According to findings, students reported experiencing a neutral or indifferent level of stress ($M= 2.7772$, $SD=0.67914$). Specifically, "Studying in Group Stress" subscale has an average score of 2.9520 ($SD= 1.00615$) which has the highest mean score. On the other hand, the subscale "Teachers' Stress" has the lowest mean score.

- Analysis of the data by gender indicated that academic stress levels were similar across male ($M=2.7485$, $SD= 0.58862$) and female respondents ($M= 2.7951$, $SD= 0.73406$), showing no significant differences based on gender ($p\text{-value (2-tailed)} = 0.729 > 0.05$).

- No notable correlation was found between the two variables, productivity skills and academic stress ($p\text{-value} = 0.155 > 0.01$), indicating no meaningful association between them.

This study contributes new insights by highlighting that productivity skills, particularly time management, do not necessarily predict academic stress among high school students in the investigated context. While prior research often reported strong correlations between time management behaviors and stress levels in university populations⁶⁶, this study diverges by showing that such

⁶⁶ Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students; Britton, B. K., & Tesser, A. (1991). Effects of time-

associations may not hold in younger cohorts. The novelty of this research lies in its focus on high school students, an age group where stressors are distinct and mediated by developmental, social, and institutional factors. Its significance rests on showing that interventions to reduce stress should not be limited to improving productivity skills alone but should also address broader contextual elements such as peer relationships, teacher-student dynamics, and institutional support systems. This finding underscores the need for holistic, school-based policies and practices that combine time management training with psychosocial and emotional support programs, thereby ensuring that students not only manage their workload effectively but also thrive academically and emotionally.

CONCLUSION

The objective of this research was to examine the relationship between productivity skills and academic stress among high school students at Ipil Montessori Academy. Additionally, the study explored the impact of gender on these variables, aiming to identify whether male and female students differ in terms of their productivity and stress levels. Results suggested that the students revealed moderate levels of productivity skills and indifferent levels of stress when it came to their academic work, wherein the source of stress was most linked to working in groups. With regards to gender, there were no notable differences in productivity skills or in levels of academic stress, indicating that the male and female students undergo these factors in the same manner. Consequently, gender may be assumed to have no considerable effect on time management skills and stress levels in this type of academic study.

In addition, the study stated that the correlation of productivity skills and academic stress levels was insignificant. For instance, students who were reported to have moderate productivity levels concerning time management still did not lower their levels of academic stress which suggests that there are likely other factors at play causing the stress. The construct of productivity skills, which includes handling time and assigning tasks according to their importance, seems to be of minimal effect in reducing academic stress and is not sufficient to explain the differences in stress levels. Therefore, these results indicate that it would be useful to incorporate additional components to the strategies that aim to improve productivity skills or stress management due to the need to consider the environment in which these skills are used as well.

management practices on college grades; Claessens, B. J. C., Eerde, W., & Rutte, C. G. (2007). A review of the time management literature.

Recommendations

The results show that the high school students of the Ipil Montessori Academy have moderate productivity skills and do not experience high academic stress, with main causes attributed to work in groups using time management to enhance these productivity skills, the introduction of certain activities that address time management, prioritization, and organizational skills would definitely help students with their studies. Additionally, to improve the perception of group work, teachers are recommended to provide varying group works that include active participation which may help alleviate stress and better the learning environment.

Given that no significant relationship was found between productivity skills and academic stress in this study, it implies that there are other factors that moderate the stress level of the students. Avenues for further studies can draw out the connection between productivity skills and other factors in context, such as school climate, support from peers and extracurricular activities. It would also make the findings of the study more generalizable and contribute more ideas to the study if the same research was carried out using different approaches and bigger sample sizes in many other schools. The current study involved 100 secondary school respondents who did not exhibit any significant gender differences regarding productivity skills and academic stress, which indicates both male and female students had the same level of experience regarding these factors.

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