

All Nighter: A Graphic Novel on the Impact of Technology on Student Productivity and School Burnout

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Abstract

Students become more prone to stress and exhaustion with increasing school tasks and deadlines. Often, this leads to burnout when students fail to manage both their workload and stress. Burnout is common among both college students and people in the working industry, and technology is often integrated into both schools and work settings. Technology can either be a factor or be the solution to this problem. This research intends to identify if technology, specifically digital organization, provides efficiency to help manage student productivity and academic burnout among college students. For the project output, I will create a graphic novel that tells the story of a student struggling with burnout. The genre of the story is a slice-of-life, making the story meaningful and relatable to the target audience. In the graphic novel, I will use Cal Newport's philosophy of Digital Minimalism as I tell the main character's story of managing their productivity and burnout. The graphic novel will be digitally illustrated using Clip Studio Paint ver. 2.0 and will then be printed into a book. The project output aims to show how technology affects student productivity and how it may be a possible way to address factors such as work management before leading to school burnout.

Keywords: *Digital Minimalism, digital organization, graphic novel, slice-of-life, student productivity*

Introduction

Storytelling is one of many ways to inform and communicate a message. According to Kate Hurst (n.d.), stories are influential to one's development, both cognitively and emotionally. Stories help people to understand ideas and allow people to problem-solve and think of possible solutions that may result in different outcomes. Stories are a way to tell life experiences. Meaningful learning allows people to apply what they've learned to their situations (Drew, 2023). It is possible that when a person finds a story with a good outcome to be meaningful and relatable, there is a possibility that readers are moved by the story and be influenced in their course of action.

As artists, we create art to express our ideas, feelings, and stories through an art medium. These may come in illustrations, graphic novels, movies, and even music. In this project, a graphic novel format will be used to communicate my story while discussing a topic that's relatable among students which is technology and its effects on student productivity and burnout.

A study conducted by Ninaus et al. (2015) discussed technology and its effects in the work setting. Technology is found to be impeding the workers' productivity through interruptions and distractions. And because technology is integrated into the employees' work, such as emails and phone calls, work tends to overlap outside working hours, which ultimately causes stress. However, in the same study, technology was shown to bring benefits to workers' productivity, such as providing easier and faster communication and allowing complete control over the flow of information and task management.

In the academic setting, when students advance with their studies, so do school demands increase. An increase in task difficulty affects student engagement and performance (Lynch et al., 2013). With increasing tasks and deadlines, students become more prone to exhaustion and stress, especially if there is difficulty with management. Failure to address this could lead to exhaustion and then burnout. According to the World Health Organization (2019), burnout results from stress in the occupational context, which an individual fails to manage. In a report and a survey conducted by Deloitte in 2022, among the Gen Z and millennial participants, there are more than 4 out of 10 who feel burned out due to work demands. Around 400 participants in this survey are from the Philippines (Deloitte Global, 2022).

Management intervention is recommended to alleviate exhaustion and burnout (Aguinis and Gabriel, 2022). There are several ways to do this, and in this study, intervention through task management and digital organization will be looked into. Tiago Forte (2022) discussed that by combining notetaking and technology, all information that the brain consumes is then organized and stored for us. In a book he authored, Forte listed methods that can help prevent information overload and help boost productivity. This could be a way to help students as the younger generation, specifically those belonging to Gen Z, are more adept with technology and are referred to as 'digital natives' (Francis and Hoefel, 2018).

Through thorough research, information will be provided on whether technology used as an organizational tool can help address student burnout. Through digital organization, students would be able to manage their heavy workload. Burnout has been common among college students, especially on the busiest weeks in school. People may be under constant stress and burnout when they fail to manage and do not address these.

In line with this, storytelling through a graphic novel format is chosen to provide the information. I chose this as my medium as graphic novels are engaging even to reluctant readers (Winnick, n.d.). Providing visuals also allows for a better understanding and creates more impact for storytelling (Roothman, 2018).

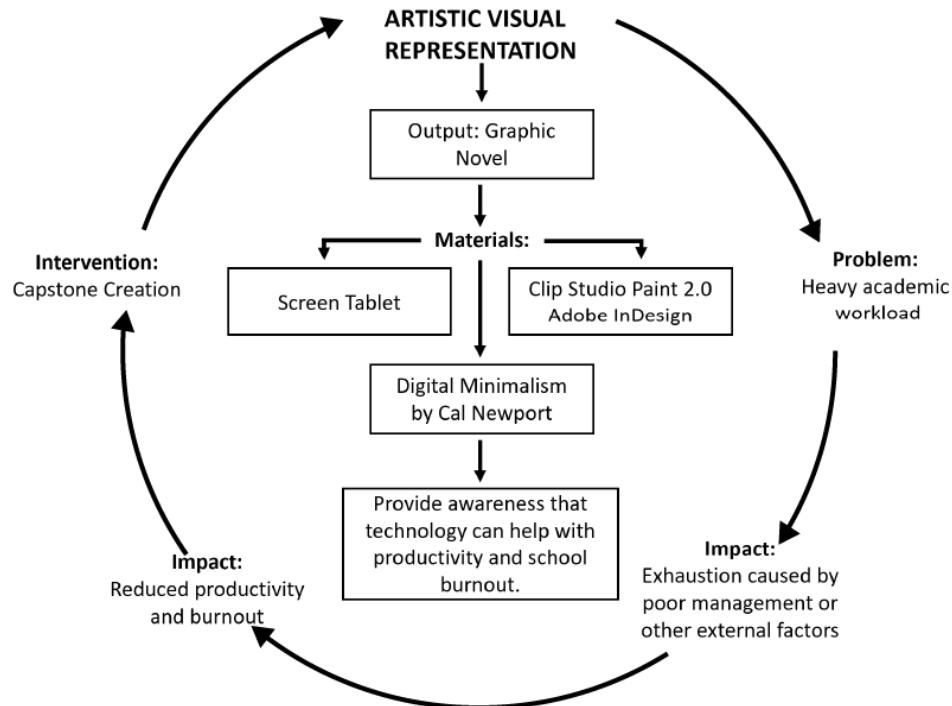


Figure 1 Framework of the Visual Representation of *All Nighter: A Graphic Novel on the Impact of Student Productivity and Burnout*

This project started with the question, “Is technology an effective solution to managing student productivity and school burnout”? This initial concept further developed as I identified the problem I ultimately aimed to address, which is burnout. Then, I researched factors that affect student performance and lead to the problem. According to a study, school stress and heavy academic burden are some factors that lead to academic burnout (Hwang and Kim, 2022). These heavy school requirements result in exhaustion among students. According to Hwang and Kim, relationships, health, and environmental factors are also among the other causes. Additionally, burnout is also defined by The World Health Organization (2019) as “resulting from chronic workplace stress that has not been successfully managed.”

With the problem identified, my next step is to gather as much relevant literature and sources as possible to connect my initial question to the problem. Makarova (2023) lists technology’s pros and cons in connection with productivity. It is acknowledged that technology harms productivity by providing distractions and information overload. However, technology also helps speed up jobs and offers tools that help with management tasks, thereby boosting productivity. To combat distraction and information overload, Forte (2022) uses technology as an extension of his mind. He does so by utilizing digital tools and apps to take notes and organize information, thus uncluttering the mind.

Moreover, this paper is anchored on Cal Newport's Digital Minimalism. In general, Minimalism is when people focus only on what is essential (Clear, n.d.). People can concentrate on the basics when eliminating anything unnecessary to their goals. This does not only apply to material possessions. According to Wright (2010), Minimalism is a "reassessment of your priorities." When applied to people's lifestyles, this philosophy allows them to focus only on what's important. Furthermore, unnecessary things take away more time than what people are aware of (Becker, n.d.). In Digital Minimalism, this philosophy is applied to the use of technology. Newport (2022) defines it as "a philosophy of technology use in which you focus your online time on a small number of carefully selected and optimized activities that strongly support things you value...", making it beneficial to people's productivity.

To inform the target audience of the message, I chose to do it in a storytelling manner, and the story will be told in a graphic novel format. Storytelling is an effective communication tool and has the potential to create impact (Kemp et al., 2023). Visual storytelling also engages readers (Markham Public Library, 2022). A slice-of-life genre is considered to make the reading material more meaningful and relatable to the target audience. The slice-of-life genre involves storylines, characters, and scenes that connect with the audience (Crawford, n.d.).

According to Francis and Hoefel (2018), Gen Z are considered digital natives. Their generation is most likely to use technology and has integrated it into their everyday lives (Dorsey, n.d.). With this information, the **target audience** of my graphic novel is mainly Gen Z students who are 15-25 years of age and are of all genders. The psychography target audience is students who most likely have an interest in reading, are experiencing academic stress and burnout, feel unmotivated, and feel exhausted from school requirements.

I began the **design process** by doing character designs. I created a board where I gathered and compiled photos of hairstyles and outfits that fit the personality and story of each character. The story and the characters' backgrounds and personalities had already been written at this point. Next, I did several character sketches until I narrowed down the options. Once character designs had been finalized, I created character design sheets that I will also use as a reference for when I start creating the graphic novel.



Figure 2 *Character Designs for All Nighter*

The graphic novel will be illustrated in Clip Studio Paint ver. 2.0. All panels will also be in full color. The art style, in terms of line art and coloring, will take inspiration from the works of Sara Kipin, Xiao Tong Kong, and Chan Chau. Figure 4 features the artworks of the respective artists. The line art will have a combination of black and colored lines. For the colors, cel shading will be applied. Since the graphic novel will feature captions and dialogues, various speech balloons will also be used depending on the characters' expression. With this, the font Digital Strip will be used for captions, speech, and thought balloons.



Figure 3 *Art Style to be applied to the Graphic Novel*

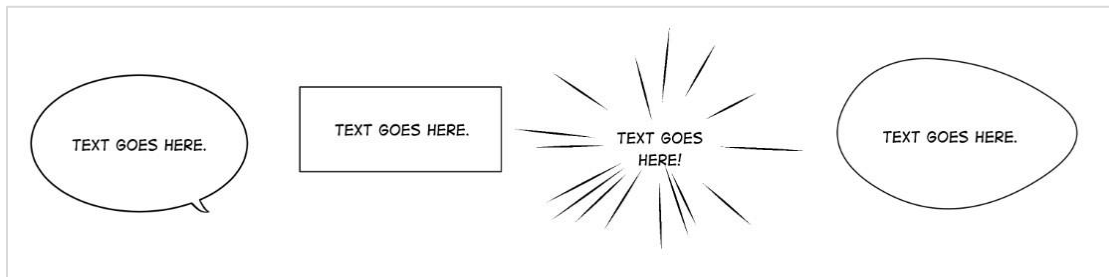


Figure 4 *Speech Bubbles*

Note. The speech balloons used are available on Clip Studio Paint ver. 2.0

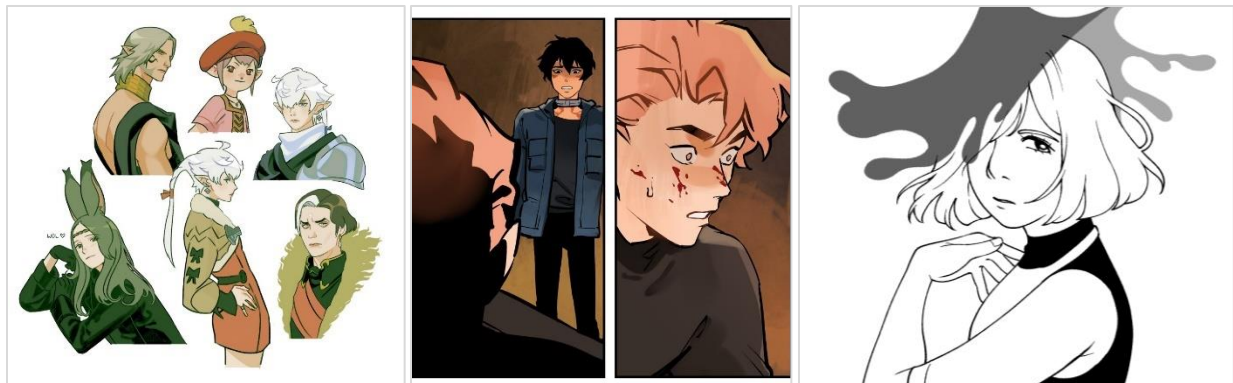


Figure 5 *Artworks from Various Artists*

Note. (From left to right) FFXIV Fanart by Sara Kipin, CTC by Xiao Tong Kong, Illustration by Chan Chau.

The graphic novel's title is All Nighter. The idea behind the name is that students mostly pull all-nighters on weeks when there is a lot of schoolwork. The story aims to show the readers how technology affects our discipline and productivity as students. While there are disadvantages, there are also a lot of benefits that technology brings to boost our productivity. The story revolves around June, a young adult granted a scholarship and temporarily moving into the city to study at her dream university. Far away from her home and family, she learns to be responsible for herself. She meets friends during her university life. In the story, technology plays a big role in her student life. She risks losing her scholarship, also caused by the temptations and distractions around her and the overwhelming pile of work. Despite the countless sleepless nights, there seems to be no end to her list of things to do. For fear of failure, she attempts to redeem herself by organizing her work using her gadgets and putting her focus back on track.

Pre-Production Stage

The project output is a printed graphic novel. This project aims to inform the target audience, mainly college students, of ways to manage school workload and address burnout through the efficient use of technology. During the pre-production stage, the researcher wrote a story related to the research topic. The professor oversaw

the development of the story, and it has been read and reviewed by other students taking the same scriptwriting class. Revisions were made according to the comments received. A 47-page storyboard format script that details each scene and individual panels was written before making a storyboard. Table 1 shows the introduction of the graphic novel that details the first five pages.

Table 1

The First 5 Planned Pages of Scene 1 from All Nighter

SCENE 01 – June moves into the city (Pages 01-10)				
PAGE / PANEL	PANEL DESCRIPTION	DIALOGUE	TIME / LOCATION	PROPS
PG. 01 Panel 01	Establishing shot of a city. Daytime. POV from above.	-	Noon EXT	
PG. 01 Panel 02	June (sideview) stares at the view from inside a train.		Noon / Inside a train, by the window	Backpack, phone
PG. 02 Panel 01	June glancing up as a voice from the train's speaker is heard.	Sound effect: announcement bell June: ?	Noon / Inside a train	Backpack, phone
PG. 02 Panel 02	Corner of the train	Announcement: We are arriving at ... station. Please gather your belongings before leaving your seat.	Noon / Inside a train	
PG. 02 Panel 03	Extreme closeup to June's eyes. June looks below.	Action word: Glances down	Noon / Inside a train	
PG. 02 Panel 04	A shot of June's hand holding her phone. The city's name matches the train's next destination.		Noon / Inside a train	Phone
PG. 02 Panel 05	Close up to June's face smiling. POV from the phone below. June starts to reminisce.		Noon / Inside a train	
PG. 03 Panel 01	<i>[Flashback]</i> June's family is surprising her with a gift. POV from a door frame.	Everyone in unison: Surprise!!!	Daytime INT / Dining room	Gift- wrapped box

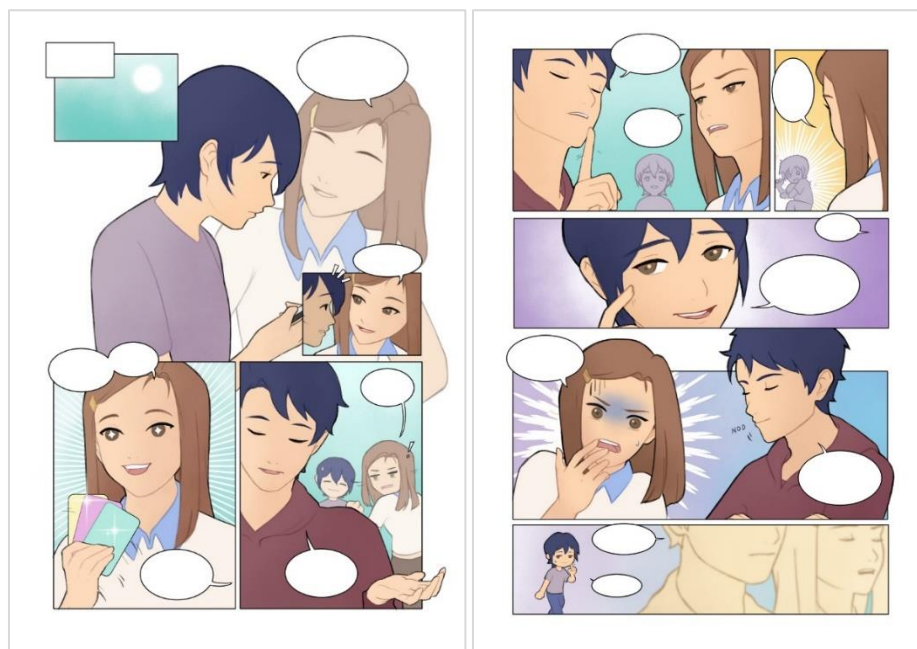
Table 1*The First 5 Planned Pages of Scene 1 from All Nighter*

PG. 03 Panel 02	<i>[Flashback]</i> <i>June is shocked and confused.</i>	June:? June: What's all this for...?	Daytime INT / Dining room, by the door	
PG. 04 Panel 01	<i>[Flashback]</i> <i>June's dad and mom in the frame</i>	Mom: A celebration! We know how much you want to get in [university name] Mom: It's your dream university after all!	Daytime INT / Dining room	
PG. 04 Panel 02	<i>[Flashback]</i> <i>June with a happy-shy expression, scratches her head.</i>	June: Oh! You didn't have to do this m-	Daytime INT / Dining room	
PG. 04 Panel 03	<i>[Flashback]</i> <i>Roan (June's younger sister) cuts her off.</i>	Roan: Did you like our surprise?! It was so hard to keep everything hidden from you!	Daytime INT / Dining room	
PG. 04 Panel 04	<i>[Flashback]</i> <i>View of the room with simple decorations and food.</i>	Roan: You did take your time coming here so I already helped myself with the cake!	Daytime INT / Dining room	Decor: Banner on the wall Food: Cake
PG. 04 Panel 05	<i>[Flashback]</i> <i>Roan continues eating her slice of cake</i>	Action word: Bite	Daytime INT / Dining room	Cake
PG. 05 Panel 01	<i>[Flashback]</i> <i>June is surprised as his father hugs her.</i>	Father: We really are so proud of you! We got you this for when you live in the city next month.	Daytime INT / Dining room	
PG. 05 Panel 02	<i>[Flashback]</i> <i>June's father reveals a gift to her.</i>	Father: We couldn't get the latest model, but this should be as good! June: !!!	Daytime INT / Dining room	Box and smartphone

Table 1*The First 5 Planned Pages of Scene 1 from All Nighter*

PG. 05 Panel 03	<i>[Flashback]</i> <i>June is touched, stares at the box, and slowly takes it.</i>	June thinking: How did they afford this?	Daytime INT / Dining room	Box and smartphone
PG. 05 Panel 04	<i>[Flashback]</i> <i>June is on the verge of tears and hugs her father again.</i>	June: Thank you, I love this so much!! I'll take care of it.	Daytime INT / Dining room	Box and smartphone
PG. 05 Panel 05	<i>[Flashback]</i> <i>Roan faces her mom.</i>	Roan: Do I get to have her old phone now? Mother, Action word: Nods	Daytime INT / Dining room	

Studies have been conducted during this stage as well. Figure 6 shows pages of selected scenes from All Nighter. This study explores visual storytelling through character expressions, art style, and arrangement of panels. Figure 7 shows an illustration done for the Scenography class. It is based on a scene from Studio Ghibli's (1995) animated film, "Whisper of the Heart". During this activity, I illustrated my version of the scene with my research topic and story in mind. Figures 8-10 are illustrations that show selected scenes from the story. I experimented with what art styles, lines, and coloring styles I aim for the project output.

**Figure 6** *Studies Using a Selected Scene from All Nighter*

Note. Figure 6 is only a study that explores the style and some aspects of visual storytelling and does not represent the final project output



Figure 7 *Illustration Referencing a Scene from Whisper of the Heart*

Note. Various elements have been changed from the reference to the illustration to better fit the story's setting. Props such as a marked calendar, cork board with notes, and coffee have been included that could depict things that may be found in a college student's room.



Figure 8 *Color Study*

Note. This illustration experiments with colors and environment setting. The color palette intends to show the graphic novel's warm and happy scene. Various objects around the setting were illustrated to contextualize the scene's setting.



Figure 9 *Color and Lighting Study*

Note. This illustration experiments with lighting, color, and environment setting. It is also a study of space and lighting sources. The scene depicts the main character accomplishing schoolwork in the middle of the night.



Figure 10 *Space and Character Study*

Note. This is a scene that portrays how the characters in the graphic novel interact.

Production Stage

For the production stage, I will illustrate the project digitally using a screen tablet and Clip Studio Paint ver. 2.0 as the main drawing program. For a smooth flow of work, sketching all scenes will be done first to plan panels accordingly. At this stage, scenes are still subject to changes. Once the panels have been finalized and approved, then I will proceed to finalize the line art. I will first aim to finish the line art for the entirety of the story before proceeding to color. At this point, I will have made sure that all panels and pages are final. Coloring will then be followed by inputting all texts. Once this is done, all panels will be arranged in Adobe InDesign for formatting and to prepare for printing.

I first created a prototype of my graphic novel. In this prototype, I planned out the panels of each page with rough sketches and notes for specific details and plans I had for the illustrations. The speech balloons are also included in the planning. As a prototype, it also uses the same dimensions and scaling as the actual project output. Figure 11 shows some selected pages from the initial draft.

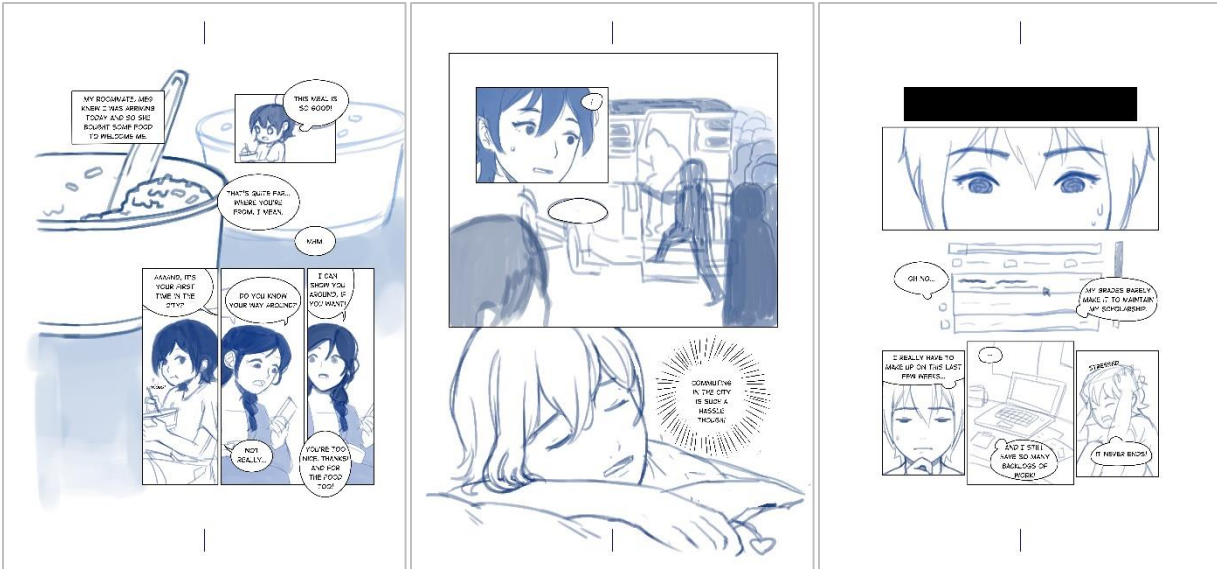


Figure 11 *Initial Draft of the Project Output*

Upon the completion of the initial draft, I asked seven people to read and give feedback on my work. I created an online feedback form via Microsoft Forms so all responses that I collect are organized and easier to read. In this form, I asked their opinions on the pace and writing and how the story relates to them as a student. I also gathered feedback regarding the art style. All respondents said that a full-colored graphic novel is more appealing than a monochromatic one. I also received suggestions on improving character expressions and overall composition, such as the arrangement of panels and the placement and length of dialogues. It took less than a week for the seven people to read and review my work. Once I gathered all the responses, I used these to make the necessary changes to my initial draft. Once my initial draft had been approved, I then proceeded to do line art. While I was doing the line art, I also did thumbnail sketches for the graphic novel's cover. Figure 12 shows some selected pages that have been lined up, and Figure 13 shows some of the thumbnail sketches that I have in mind for the front cover.

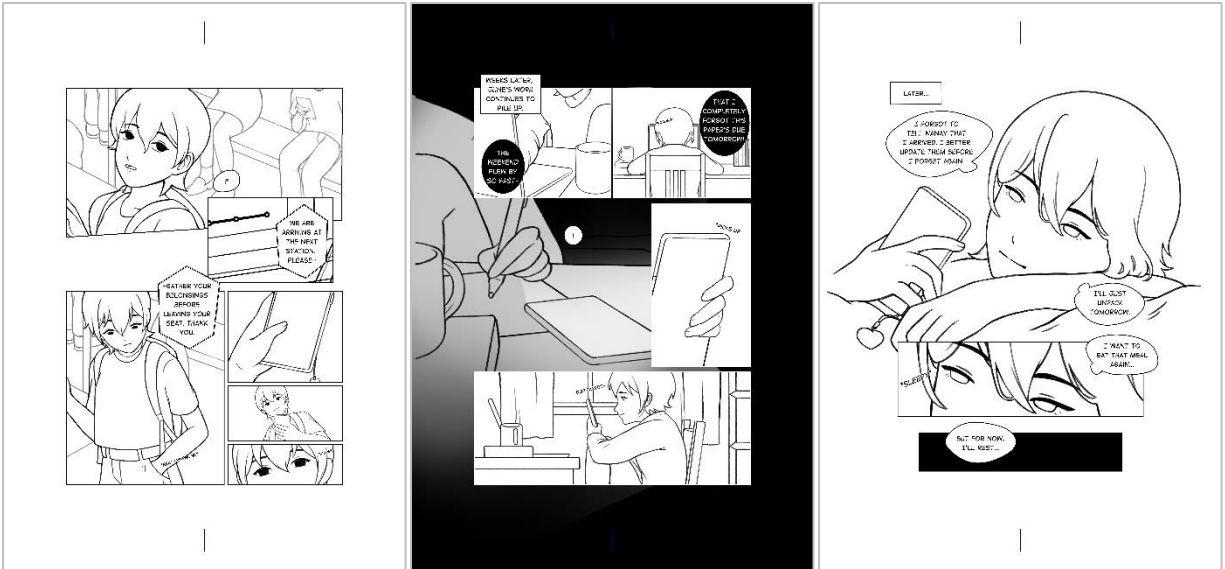


Figure 12 Selected Pages with Line Art



Figure 13 Thumbnail Sketches for the Front Cover

Post-Production Stage

The post-production stage will consist of the following tasks: flattening, rendering, editing, and printing. After doing the line art for the entire story, I started laying the flat colors for the entire novel. My goal is to first fill the entire novel with colors and separate the elements from one another. During this process, applying the correct color palette is not important yet, but keeping the colors close enough or different per element to make the coloring process easier later. Figure 14 shows a process during the flattening process.

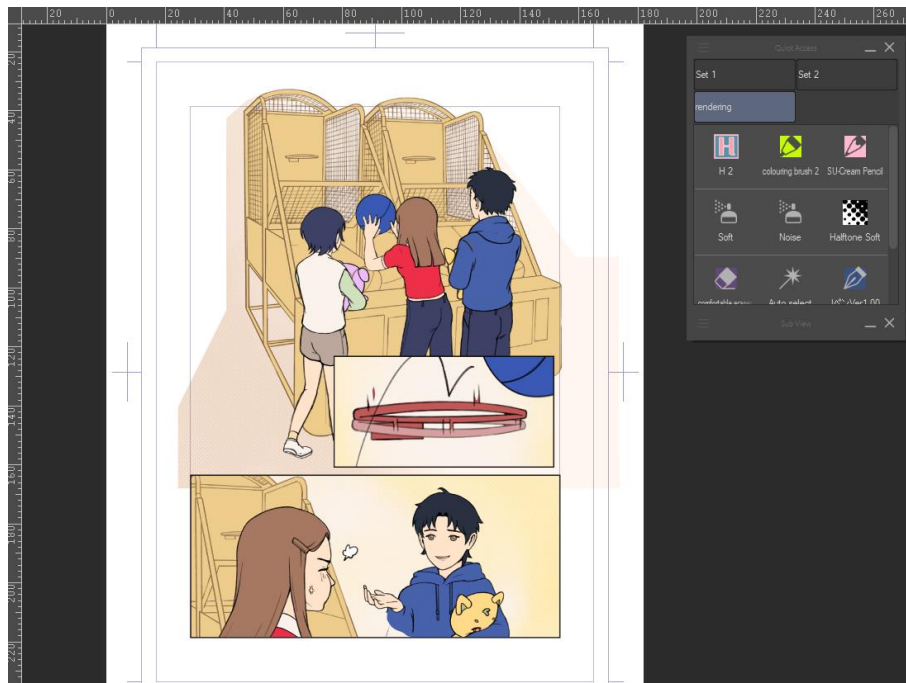


Figure 14 *Flattening Process*

Once the flat colors have been laid out, I started the rendering process. During this step, I pay attention to the color palette and make certain corrections. I apply my usual coloring process from the characters to the background. Figure 15 shows the rendering process of a selected panel.



Figure 15 Rendering Process

Once the inner pages are all rendered, I proceeded to finalize the cover page. The output is planned to have a perfect binding and so I included a spine with about 6-10mm in width. The final width is determined by the printing services once the inner pages are printed out.

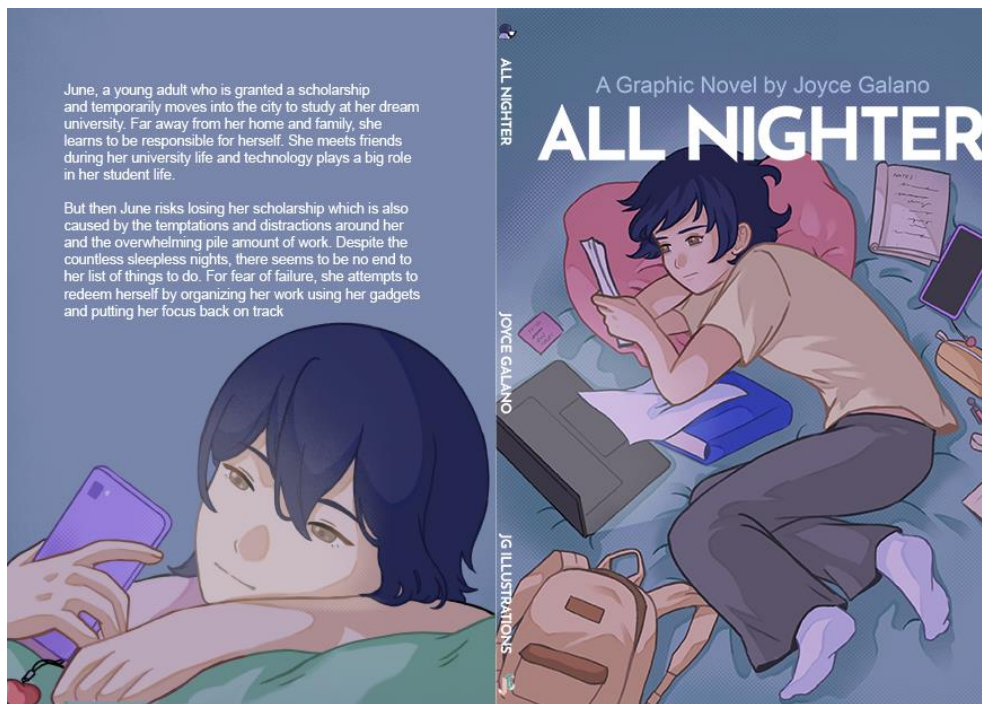


Figure 16 Cover Page and Spine

Once I finished the rendering process, I made some final edits before preparing the file for printing. Before the final process, I did test prints of selected pages from various printing companies: Dexact Printing Services in Malate, Manila, Yza Digital Printing Services in UP Diliman and Katipunan, and D&M Press in Quezon City. Upon comparing the test prints, the finalized file was sent to Dexact Printing Services for printing and binding. The specifications of the final output are in full color, A5 sized, and is in soft and perfect binding. The cover page is printed in 300GSM paper with a matte finish and the inner pages are printed in 160GSM paper. Figure 17 shows the final output.

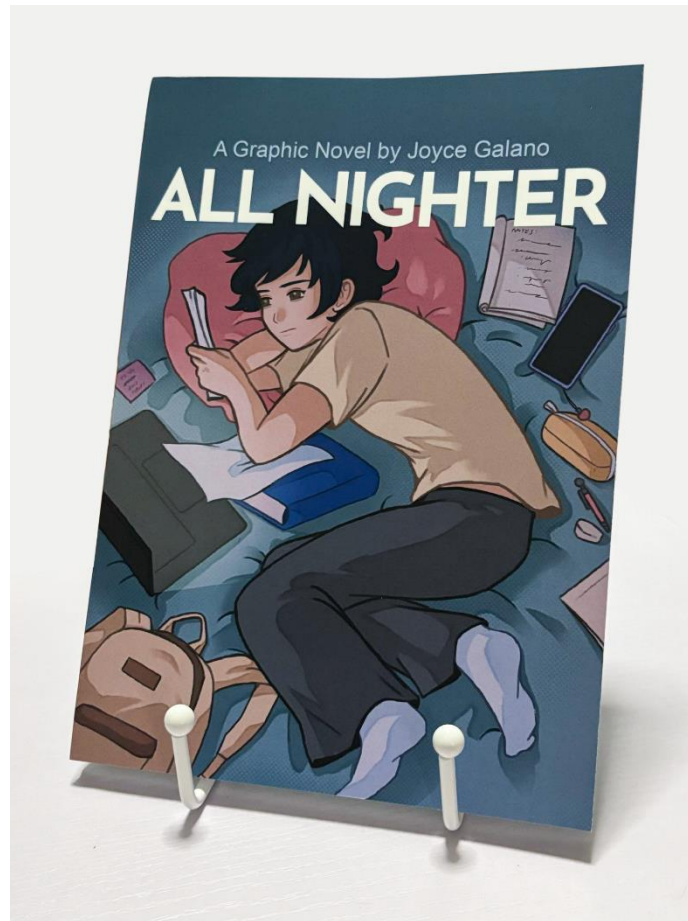


Figure 17 *Final Printed Output*

The graphic novel is part of the Sugat Kamay exhibition held in June 10-11, 2024 at Thombayan Art Space. This exhibition is also part of the EXDES final requirement. Aside from the graphic novel, A3 and A4 sized sintra boards were mounted to walls to showcasing the front cover, selected panels, and character designs. These selected panels show an overview of the story. A table and a lamp is setup to represent a study desk. On the table features the actual graphic novel, stickers sheets, and a mini comic for giveaways. Figures 18-23 show the overall setup including the print collaterals.

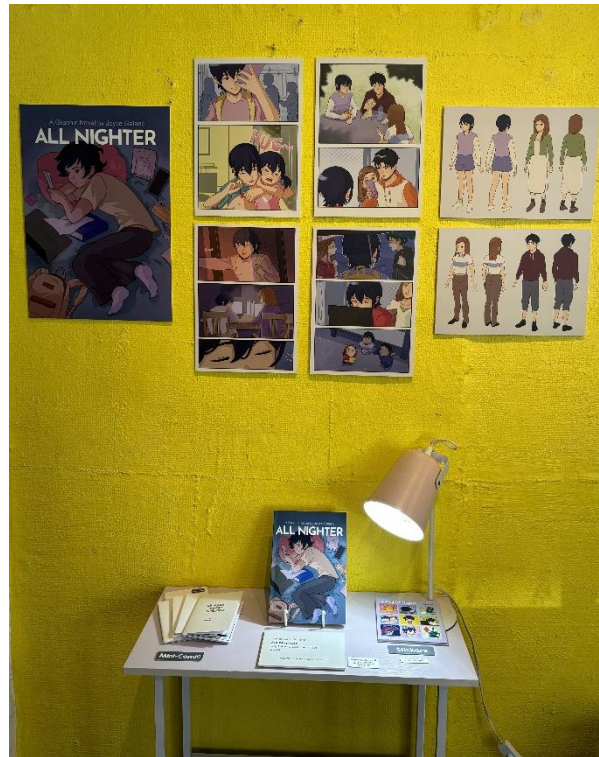


Figure 18 Overall Setup



Figure 19 Cover Page and Illustrations Printed on Sintra Boards



Figure 20 Table Setup



Figure 21 The Graphic Novel and Print Collaterals for Giveaways



Figure 22 Sticker Sheet



Figure 23 Layout of the 8-Page Mini Comic

One of the printed collaterals given away during the exhibition was a mini comic of my behind-the-scenes while working on All Nighter. The mini-comic is entitled, “all nighter during All Nighter”. The entire comic is printed on one side of an A4 sized paper. The central part is partially cut and the entire paper is folded until all pages are arranged

in order. Aside from print collaterals, a video teaser is made to promote the work and the exhibition. The entire teaser is 45 seconds long. All assets are illustrated in Clip Studio Paint and animated in Adobe After Effects.



Figure 24 *Selected Scenes from the Video Teaser*

Review of Related Literature

This section of the research paper will present my analyses regarding the articles and works that discuss Graphic Novels. I have also included readings that discuss burnout and its bearing on society. Various studies and articles about technology and its

integration into the school and work setting are also looked over. Additionally, books on task management and digital organization are reviewed in relation to burnout.

Visual Narratives and Its Effectiveness

Storytelling through pictures has long been around. One of the oldest records on this are the cave and rock carvings and paintings dating back to more than 30, 000 years ago (The British Museum, 2019). In present, this has evolved into more than just cave drawings. Visual Narratives now come in different forms of medium such as photographs, graphics, videos, and drawings (McDonald-Roberts, 2020).

According to Cohn and Magliano (2019), visual narratives are stories formed from a sequence of images. Comics, pictures stories, and even storyboards are forms of visual narratives that are drawn. When storytelling involves the use of visuals, it is more effective in communicating and maintaining the viewers' attention (We are Cognitive, 2021). In a study conducted by Bobek and Tvesky (2016), students are shown to benefit from lessons and explanations that are visualized. Visuals help bring more understanding to a subject matter and therefore bring great effect when used to convey a message, express feelings, teach, or tell a story.

There are more advantages that visual narratives such as graphic novels bring especially to students. According to Crawford (2004), graphic novels are not only appealing but also motivate reluctant readers. Graphic Novels also help students develop their reading competency (Frey and Fisher, 2004).

The Differences Between Graphic Novels, Comics, and Manga

Graphic Novels, Comics, and Manga are forms of visual narratives. The difference between these three is that Graphic Novels usually tell a complete story with a beginning, middle, and end part. Comic Books on the other hand are serialized (MasterClass, 2021). Similarly, manga is released in volumes. Manga is another form of visual narrative that originated in Japan. Unlike Comics and Graphic Novels, manga is read from right to left (Pagan, 2018). With the differences cleared, I can conclude that a graphic novel is the ideal format to use for this project.

Slice-of-Life Genre

Slice-of-life is a genre in storytelling that shows the ordinary life and experiences of characters. It usually features relatable characters that go through mundane and real-life activities that we normally do daily. Slice-of-life also includes stories that are simple and dialogues that reflect real-life conversations (Crawford, n.d.).

This genre is not only seen in graphic novels and movies but it is used in advertisements as well. A slice-of-life advertisement can connect the audience to the product by portraying the advertised product to be essential to everyday necessities. In

terms of advertisements, the genre is effective in connecting with the viewers. (Cabaluna, 2021).

Understanding Stress and Burnout

To effectively deal with the problem, the definitions of stress and burnout must first be understood and both terms must be distinguished. Stress and burnout are not the same. Stress is a “response to a perceived threat” (McDonald, 2022). And according to Pipperpuolos (2016), “Stress is our body’s normal reaction to sudden environmental demands.” Stress develops not only from negative causes but also from positive ones and is different for each person. Some people become stressed because of surrounding factors while other people’s source of stress comes from within themselves. Experience also varies. For some, it lasts for a short time. In other cases, it can be persistent for a long period of time.

Stress differs from burnout as the ICD-11 defines this as “a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed.” The International Classification of Diseases is a list of medical classifications the World Health Organization manages. According to the ICD-11 burnout is not a medical condition rather, it occurs in a work-related situation. It is specified that burnout occurs in the working setting and not anywhere else. When experiencing burnout, a person will experience exhaustion, will feel negativity and distance from their job, and their efficiency will decrease. These are the three dimensions that describe burnout (WHO, 2019).

With both terms distinguished, the research paper will also be referencing the definition of burnout from the IDC-11. Having a clear and updated definition is essential to the research as the definition was updated by the World Health Organization in 2019. This is also important to refute possible burnout misconceptions that people had before the change in the definition occurred. As the output for this research is a graphic novel, it is also critical that the story presents only reliable and accurate information about burnout.

Stress and Burnout in Our Society

To understand the urgency of burnout and how it possibly affects people, this study will refer to a recently conducted survey. In 2022, Deloitte released a report from The Global 2022 Gen Z and Millennial Survey. The survey was conducted among Gen Z’s and Millennials from 2021 until the following year and the Philippines was among the 46 participating countries (Deloitte, 2022).

The respondents were surveyed to measure their views and opinions regarding the environment, financial situation, businesses’ societal impact, economic situation, and social/political situation. According to the report, stress and anxiety are common among Gen Z’s. In relation to burnout, both Gen Z’s and Millennials showed high rates of 46% and 45% respectively. This is due to the heavy demands of their workplaces. And 44% of Gen Z’s and 43% of Millennial respondents have quit their jobs because of

this. Burnout is mentioned among the top reasons why the respondents have left their jobs (Deloitte, 2022).

This is confirmation that burnout is an issue that should be addressed as it makes a big impact on one's daily life. Filipino Gen Z's and Millennials are among the participants, and this shows that this is common among the Filipino youth.

Academic Stress

Stress and burnout in the academic setting must also be understood. Academic stress is caused by factors such as school requirements and grades (Chua et al., 2018). Either eustress or distress may result depending on how an individual interprets and responds to stressors. Eustress refers to positive stress that results from positively facing a stressor. Distress, however, refers to negative stress and when an individual negatively reacts and deals with a stressor. The authors inform that students with a high level of eustress are found to have outstanding academic performance.

A similar study discusses the effects of eustress on the work-life balance of employees in South India. Workers who can balance both work and non-work matters have a higher sense of fulfillment and display fewer signs of stress. Results from this study show that eustress also has positive effects on the work-life balance of workers (Pavithra and Sivakumar, 2021).

The information from both studies and their implications is necessary to understand how to address stress and burnout in the academic and work environment. This study recognizes that a motivating factor is also important in increasing student productivity and performance quality.

Technology and Its Effects in the Work Setting

This section examines how technology impacts students and employees when the use of gadgets is integrated into their work. Both the advantages and disadvantages that technology causes in the work setting will be reviewed and compared. According to Ninaus et al. (2015), the expectations of being available to respond even outside work hours were a common response to why Information and Communication Technology or ICT is a stressor. Technology causes work time to overlap with the employees' personal or free time. Therefore, work-related stress can be felt even beyond work hours. Additionally, because of availability, phone calls, text messages, and emails constantly interrupt one's workflow and cause employees' attention to move from one task to another (Ninaus, et al., 2015). Technology overload is also an effect of the integration of gadgets in the work setting. Rasool et al. (2022) describe this as when people feel the "physical and mental burden to use a technology during their everyday life." The authors suggest adopting strategies to overcome this as it has negative impacts on workers' productivity. Examples of interruption overload are smartphone notifications such as beeps and buzzes that take away a worker's attention by interrupting their current activity and having consequences on employees' efficiency.

However, there were also responses that deemed ICT to be beneficial at work. The efficiency and productivity of employees are improved because there is technology to assist them. Technology provides ease of communication and control over the flow of information. Instant messaging apps play an important role in enabling easier communication between employees and clients. This is especially helpful when employees do not have to consider both location and time when communicating through work. Being in control over the flow of information meant checking work-related emails can be done anytime and anywhere. This prevents information overload and allows them instead to organize and spread the amount of work that must be done throughout the day (Ninaus, et al., 2015).

Both studies suggest that technology can be a source of distraction. And because technology makes communication fast and accessible, the job-related stress that employees feel stretches outside of their work hours. On the other hand, others look at it as an advantage. The use of technology has allowed people to have control over their workload and prevent overwhelming themselves. This implies that technology benefits people through the management and organization of tasks.

Addressing Burnout

According to Newport (2022), people seem to have no control over their compulsive use of technology. Smartphones and social media changed how people live in the present by tempting people to be always on their phones more than necessary. This often happens at the cost of other important activities. Newport emphasizes that people are losing control and even successful and disciplined people still fall into the temptation of prolonged screentime. However, he argues that laziness is not the reason but instead, it is because these gadgets and applications have been designed to be used for as often and as long as possible.

With this, the author creates a guide on how to retake control and how technology can be put to more productive use. And so, Newport introduces Digital Minimalism. This is not the rejection of technology. The idea is that people's engagement with technology should be with purpose and priority should be placed on more important digital activities so that people can devote their attention to work or more important things instead. To prevent succumbing to the prolonged and inefficient usage of smartphones, Newport suggests three principles of digital minimalism. The first principle is that "clutter is costly." Applications and services that are deemed unnecessary and excessive distract users from the small and more essential benefits that a single application offers. The second principle is "Optimization is important." The gadgets people own should be able to support something they value. With this principle in mind, people may decide how to use their gadgets. And the third principle is, "Intentionality is satisfying." People's interactions with technology should be intentional. This way, people would find it more meaningful (Newport, 2022).

Aagaard (2019) argues that multitasking and distraction are the same. Multitasking diverts one's attention to another activity rather than dividing it into several tasks at once. With this, one could presume that multitasking hinders the quality of

work. However, this depends on whether the tasks being performed simultaneously are correlated to each other or not. The author also uses the idea of media multitasking, a subtype of multitasking that is described as using several media at the same time. For example, in the school setting, students multitask by listening and taking notes at the same time. This does not hinder the student's ability to learn. When combined with Digital Minimalism's intentional use, this could help students in managing their school tasks.

Good Habits as Reinforcements

To ensure that technology use is always productive, good discipline must also be practiced. Clear (2018) talks about how small, good habits will result in success. To achieve successful outcomes, the focus should first be on improving the self, instead of setting goals. Small but good habits make a big difference, especially in the long run. A big goal doesn't always require an equally grand action. The same could be said about poor habits. Repetition of poor habits only leads to unwanted results. Small, positive habits aren't seen immediately. Thus, people find it hard to appreciate. This is because people always look for immediate changes and so they end up going back to their old habits.

According to Clear, there are three layers of behavior change: outcomes, process, and identity change. Outcomes, the first layer, is about altering the results. The second layer is process, and this refers to changing one's lifestyle and behavior. The last is identity, and this corresponds to changing one's beliefs, perspective, and mindset. When people are continuously upgrading themselves, they will be led to their own best versions (Clear, 2018).

Lastly, good discipline is easier to keep when actions are directed toward a goal. According to Phipperpuolos (2016), setting goals in relation to managing time is given emphasis as it helps one's concentration and aligns one's attention to a desired direction. Making a list of things to do is also given importance as this helps people remember things, helps with organization, and helps people stay on track. The author notes that lists being integrated into phones, tablets, and other gadgets help people in terms of time management.

Review of Related Works

This section focuses on creative works that either connect to the research topic or creative works whose art style relates to the output that the artist envisions. Various mediums such as animated videos, graphic novels, webcomics, and illustrations have been compiled and reviewed in order to inform the researcher of ways to approach visual storytelling.

Burn Out by Pichaya Laphwilai

Burn Out is a 2D animated short film by Pichaya Laphwilai in 2020. Despite having no dialogue, the animation's storytelling and message were clear through the visuals. The character's feelings and exhaustion are depicted through gestures and

expressions. The space and setting give enough context to where the character is and what they are doing. These insights can also be applied to my own project.



Figure 25 A Scene From *Burn Out* by Pichaya Laphwilai

Note. Burnout is about a girl who continuously worked outside her working hours. Her inability to refuse extra work caused her tasks to pile up and extend her work hours until late into the night, causing her to be hospitalized. The story ends as she eventually realizes to find a balance between life in and outside of her work.

Like and Follow by Tobias Schlage and Brent Forest

Like and Follow is a 3D animated short film by Tobias Schlage and Brent Forest. The animated film tells a story about people's obsession with smartphone use and prolonged screen time where a boy becomes increasingly consumed by an animated smartphone. His constant attention to his phone has made him oblivious to his surroundings and he was put in danger several times. A group of kids invited him to play by throwing a water balloon at him and only then was his attention peeled away from the phone. The story ends as he decides to finally shut his phone down despite the phone's attempt to distract him again.

The story relates to my research paper's concept as I intend to analyze technology's impact on productivity when meeting heavy school or work demands. While the story sends a message opposite to my research paper, it is helpful to know both the advantages and disadvantages that technology brings as I write my story.



Figure 26 *Like and Follow by Tobias Schlage and Brent Forest*

Countdown to Countdown by Xiao Tong Kong

Xiao Tong Kong, also known as Velinxi on their social media accounts, is known for their webcomics, graphic novels, and illustrations. Some of their works include Countdown to Countdown, DPS Only!, and Daughter of a Thousand Faces. The lines and composition in Velinxi's artworks are some aspects the research project take inspiration from. The lines and details are simple yet are not underwhelming. Because the chosen output for this project is in a graphic novel format, Velinxi's artworks are ideal to study for the project output.



Figure 27 Countdown to Countdown by Xiao Tong Kong

Daughter of a Thousand Faces

Daughter of a Thousand Faces is a recently released webcomic of Velinxi. As a webtoon, it follows a format that differs from graphic novels. Most graphic novels are read by flipping the pages if printed. A webcomic also tells a story through dialogues and sequential art. However, it follows a vertical format and is read by scrolling down through the phone or the laptop. This webcomic shows how visual storytelling can be told through a different way of arranging the panels which is something important to consider for visual storytelling.



Figure 28 A Panel From *Daughter of a Thousand Faces* by Xiao Tong Kong

The Baby-Sitters Club

The Baby-Sitters Club is a graphic novel series based on the novel by Ann M. Martin. The series' covers served as inspiration and reference for my project's cover page.

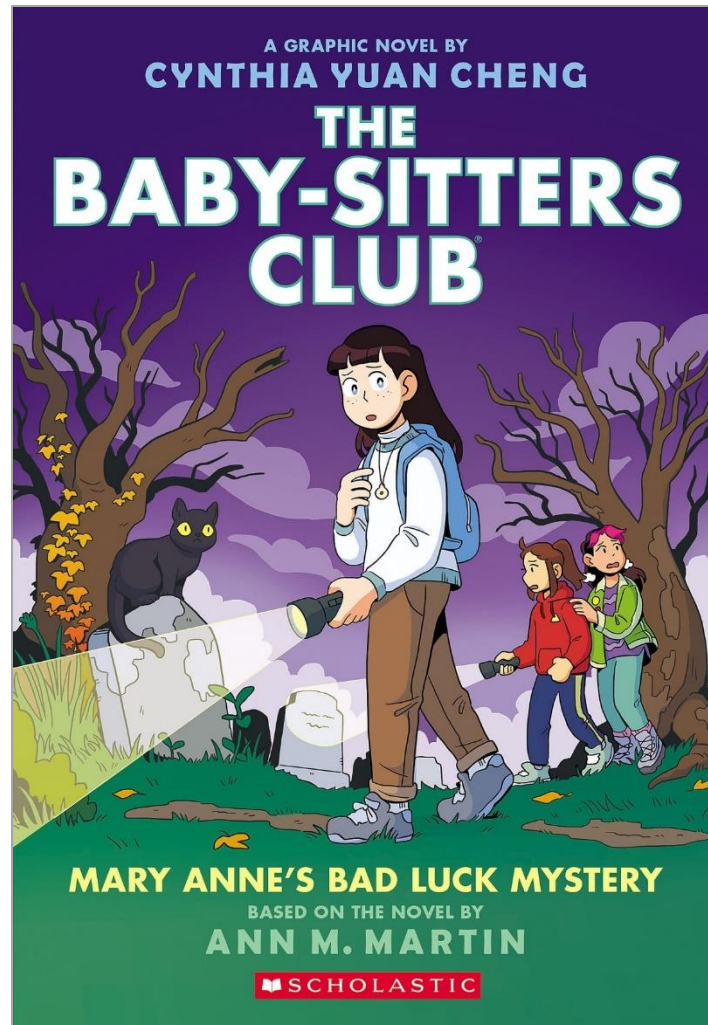


Figure 29 *The Baby-Sitters Club* by Cynthia Yuan Cheng

Sara Kipin

Sara Kipin is an illustrator and a visual development artist. Their art style, especially their line work is simple and minimal. Characters with complex designs are still well illustrated and the artist can translate those designs to still fit her style.



Figure 30 Comic by Sara Kipin

Chan Chau

Chan Chau is a cartoonist who has worked on several graphic novels and short comics. Analyzing their paneling and techniques will help in enhancing my own project.



Figure 31 *The Things We Carve* by Chan Chau

Rodski Patotski Ang Dalagang Baby

"Rodski Patotski: Ang Dalagang Baby" is a comic by Arnold Arre and Gerry Alanguilan. After examining physical copies of various comics and graphic novels, I found the printing quality and binding method of this book particularly suitable for my own project.

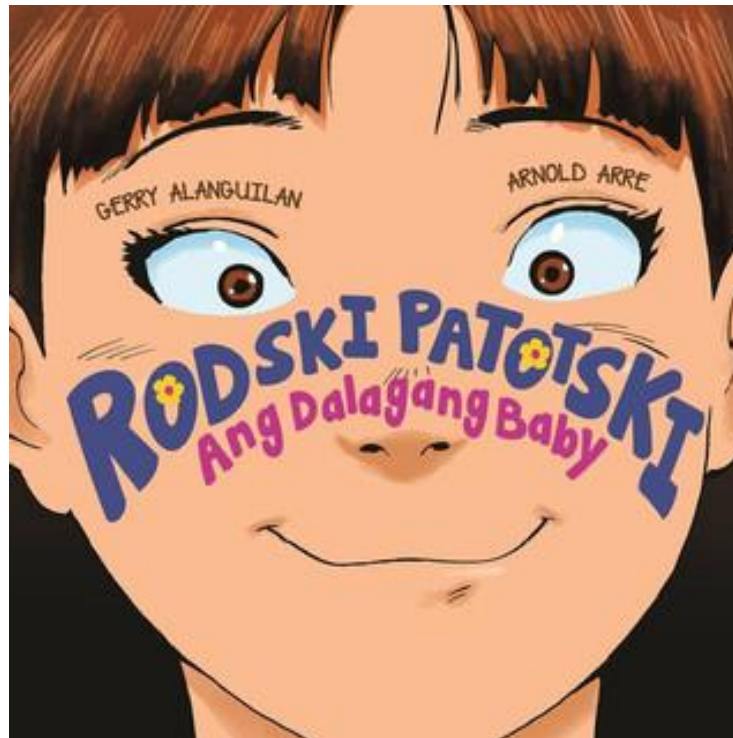


Figure 32 *Rodski Patotski Ang Dalagang Baby* by Gerry Alanguilan and Arnold Arre

Results and Discussion

In this study, the results on the subject matter have been gathered through various related literature and have been the basis for the content of the graphic novel. Technology can either be a factor for work distraction and a tool used for work management. It is with people's awareness, habits, and discipline with their gadget usage affects whether work is affected by technology positively or negatively.

On the results of the Design Process, I have evaluated the materials and methods used in the production of the graphic novel. The following materials, including the software, used in the production process of this project are as follows: (1) display graphic tablet and laptop, (2) iPad pro for backup, (3) Clip Studio Paint Pro ver. as the main drawing program, and (4) Adobe InDesign for arranging the book.

The tools used were enough to finish the whole project. For the software used, Clip Studio Paint Pro helped speed up the process in planning and illustrating the project as it has certain tools that are intended for comic creation. Adobe InDesign was the perfect software to also prepare the project for printing. However, CSP EX version

would have been the better program to use in this project. CSP EX ver. features more tools than CSP Pro that are meant for comic creation and has tools and features for arranging the book, like InDesign. It has both the features and tools I used in both programs.

During production, I also asked selected participants to read the initial draft of graphic novel and give their reviews on the story, art style, design, and overall composition. The purpose of this survey is to help make further improvements to the development of the graphic novel. A total of 7 participants read and gave their feedback on the initial draft of the graphic novel. All responses and suggestions were taken into consideration before proceeding to the next step of the project.

Table 2.1

Participants' responses on the story

1. What are your opinions on the story? Was it relatable to you as a student?	
Response 1	Very relatable, especially for someone like me that relies on smartphone for their hobbies.
Response 2	I think it's very relatable, I think the pacing is just right. The story seems to be linear without much drama to it but I kind of like it that way, as it reflects more of how real life works, especially as a college student.
Response 3	The story is very relatable to me, it's like me during this time. The story is just right for me and it is very entertaining to read.

2. What coloring method would be more appealing to you?

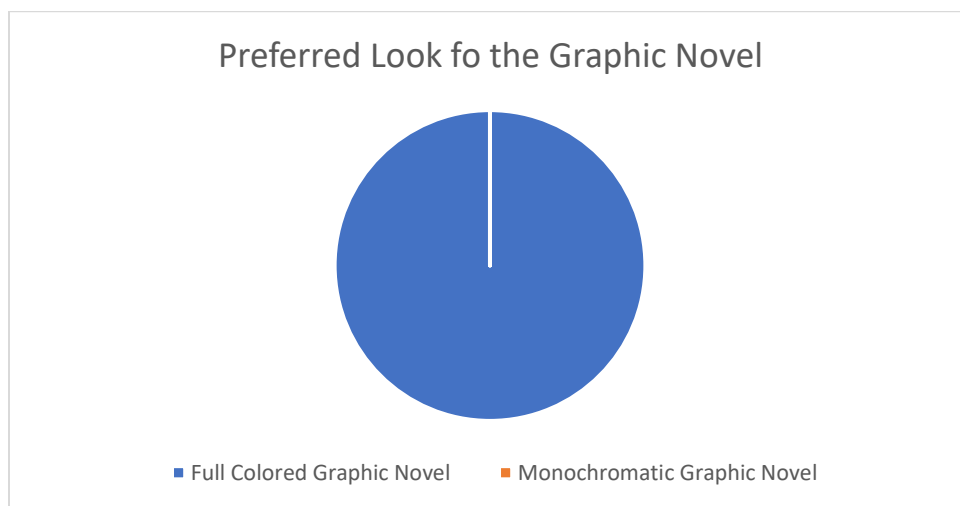


Figure 33 *Participants' responses on their preferred coloring method*

Table 2.2*Participants' responses on the sketches of the first draft*

3. What are your opinions on the first draft?	
Response 1	I really liked how you executed the scenes - Some of the characters expression was spot on but some were bland -if you're planning on monochromatic style for your book its good but I think coloring it would be much more interesting and please the readers a lot.
Response 2	THE ART STRYLE IS SO CUTE <3. For anything else to improve, there are some panels that are bit too small (eg. page 23) na nakakahadlang para maramdaman yung progression nung scene.
Response 3	The overall art is great! You managed to express the characters' expressions, the blockings between characters are spot on!

Table 2.3*Participants' responses on the project's composition and readability*

4. What are your opinions on the overall composition and readability?	
Response 1	I read a lot of webtoons and manga so it really wasn't a problem for me -The speech bubbles used were spot on as well -the dialogues weren't really lengthy -font style and size are good.
Response 2	Not at all confusing yung flow ng dialogues. Though I noticed that there are some long sentences na naka-cut in the middle tapos separated sila ng speech bubble, it kinda stops my momentum while reading. Yung sa font and size is just right for a graphic novel, para lang akong nagbabasa ng manhwa ehhe
Response 3	It's just right for me. If I had to nitpick, the thought bubbles and narrative bubbles should look different to each other to avoid confusion.

Table 2.4*Participants' suggestions for improvement*

5. Do you have other suggestions for the improvement of the project?	
Response 1	OVERALL, for me it's very relatable and maganda yung story (kinda bias here since I'm a fan of slice of life). I also like the art style and progression nung scenes. For suggestion, I think you should add more panels na nagpapakita ng environment para lang mas ma-feel yung ibang scenes (Ex: yung itsura nung building ng school or apartment)
Response 2	So far the graphic novel itself is good. Looking forward to see and read the finished output.

Response 3

The book is good, if anything it's just I would really prefer to see it colored though I know that it would take much more time.

Conclusion and Recommendation

Based on my findings from reading various articles and studies, with technology being integrated to school and work settings, technology influences people's work habits, but the impact differs for each person. Technology brings both positive and negative effects to work productivity. This impact is dependent on students' usage of their gadgets. For technology to be beneficial to one's work efficiency, students' engagement with their gadgets should have a clear purpose. When gadgets and productivity applications are used, reinforcement with good habits is important to make productivity even more successful. The discipline of each individual is an important factor whether technology can be considered a distraction or beneficial to our productivity and in helping to lighten school burnout. This result has been factored during the development of the story.

Recommendations**Research Topic**

As technology will constantly evolve, people's way of engaging with it will also change over time. And so, this research topic will be open for improvements. The findings in this paper may or may not be applicable in a few years. Future researchers may also look into the way students' engagement with technology changed over the years and how this affected productivity then and now. A more detailed comparison of how productive students were versus now could give a clearer picture of how technology impacted students' academic performance.

Creative Process

The creative process for this project can further be improved with the use of a software that is more catered to creating comics and graphic novels such as CSP EX version. While the ones used for this project were still adequate, the mentioned program would save more time and effort because of its main features. There are also various tools and assets available online for free and with payment that may help in completing similar projects more efficiently. Using 3D assets, photo references, and a coloring tool are examples of these.

On the production of the graphic novel, better planning and setting realistic goals would help the process. Setting a weekly goal such as having a specific number of pages to be rendered for the week helped me progress through my project much quicker. This was with the guidance of my thesis mentor. Researching and learning from other artists' process also helped in giving me ideas on what works efficiently for me.

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