BACHELOR OF ARTS IN MULTIMEDIA STUDIES

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BACHELOR OF ARTS IN MULTIMEDIA STUDIES

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EXPLORING THE GAMIFICATION OF COMBINED POMODORO STRATEGY AND EISENHOWER MATRIX IN ASSISTING THE LEARNING PRODUCTIVITY OF UPOU STUDENTS

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5 September 2024

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This paper prepared by **DANNIEL D. DIMAANO** with the title: **"*EXPLORING THE GAMIFICATION OF COMBINED POMODORO STRATEGY AND EISENHOWER MATRIX IN ASSISTING THE LEARNING PRODUCTIVITY OF UPOU STUDENTS*"** is hereby accepted by the Faculty of Information and Communication Studies, U.P. Open University, in partial fulfillment of the requirements for the degree Course.

September 9, 2024

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Biographical Sketch

Danniel D. Dimaano was born in Laguna, Philippines. He displayed an interest in troubleshooting mechanical objects and in technology at a very young age. Using these as motivation, Danniel graduated with a second place award from competing in a Lego-Robotics competition at his primary school — Mayondon Elementary School — in 2014 .

A newfound interest born from the previous competition has emerged; creativity and the power of imagination. Danniel developed his creative skills in photography, photo enhancing, videography, and video editing while pursuing secondary education at Los Baños National High School - Batong Malake. Danniel graduated with a second place award from competing in an e-poster making contest in his secondary school in 2018.

Danniel further explored videography and video editing during his senior high at Los Baños Senior High School. Before graduating, Danniel, together with his schoolmates, created a promotional video meant to serve as their final project. With enough recognition, the school used the students' video as their promotional material during A.Y. 2021-22 enrollment period. Danniel graduated with a first place award from competing in the Robotics Line Tracing contest in 2022.

After two additional years in his secondary education (K-12), Danniel pursued his higher education at the University of the Philippines Open University. He enrolled under the Bachelor of Arts in Multimedia Studies program in hopes of getting employment in the field of film industry after his graduation.

Acknowledgement

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Dedication

To my hardworking father who has crossed the bridge of life during my pursuit of this special project, and to my mother who showered me with her unconditional love, the longest patience, and heart-touching encouragement, I dedicate this milestone to both of you.

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Abstract

Distance learning currently faces many challenges that directly affect the learning productivity of the students. Research has shown that using time management strategies and gamified interventions improve the attitudes of students towards academic learning. This study aims to explore the gamification of two different time management strategies and its contribution towards improving the learning productivity of distance learners.

Based on the literature on time management and the theory of gamification, an app prototype was created followed by the distribution of an online survey questionnaire. Respondents from UPOU were asked to respond to time management-related questions and their feedback on the app prototype as well.

The results revealed that the practice of time management has an effect on the learning productivity of the students. The gamification of two different time management strategies improved the attitude of students towards productivity, and positively anticipates the completion of the app prototype. Further research is needed to identify other factors that could improve the user experience of the application.

Keywords: *Eisenhower Matrix; Pomodoro; Gamification; Productivity*

I. INTRODUCTION

Background of the Study

Distance learning provides access to high quality educational contents at any place with an internet connection or simply at the comfort of the learner's home. However, distance learning poses difficult challenges especially for students who might be coming from a traditional, face-to face learning setup. These challenges include—but are not limited to—ineffective time management and distractions at home (National University, 2024). In the study conducted by Adams and Blair (2019), they found that when time management is properly executed, student's academic performance increases and anxiety levels decrease. However, in the same study, they also found that these learners were having difficulties in balancing between academic tasks and their day-to-day life.

Role conflict can emerge when the learner shuffles from multiple academic tasks and household chores at the same time. Compounding academic stress with the roles and responsibilities at home may provide negative results on the individual's physical, emotional, and mental well-being. Pascoe et al. (2020) agrees to the statement and mentioned that academic stress may lead to reduced motivation, obstructed academic achievements, and increase the likelihood of dropping out. Role conflict can also threaten proper time management of the students. Poor time management can lead to unfinished academic deliverables and affect the motivation of the students. However, there are ways to reduce the effects of these problems.

Casual gaming gained popularity in 2020 when classroom and home merged into one setup (Pedersen, 2021). Most of the students took advantage of the situation and played the game of their choices alongside their academic

responsibilities, and became one of the student's gateways of relieving stress. Desai et al. (2021) believe in the thought of students getting exposure to casual games may prove similar stress-relieving effects as to mindfulness-meditation. Kishimoto et al. (2021) added that engagement to casual games increases the student's sense of satisfaction for accomplishing objectives of the game. Playing casual games has the potential to improve the well-being of the student. However, engaging in casual games for a prolonged period can cause more negative effects than good. Therefore, using a time management strategy to plan the day increases the likelihood of accomplishing both important tasks and playing any games at the same time (McLean Hospital, 2024).

The University of the Philippines-Open University is a pioneering institution for distance education and open learning in the Philippines (UP Open University Helpdesk, 2023). The institution explores and utilizes modern technologies to perform academic tasks. Their students are given time to familiarize themselves with how distance education works. However, incoming students may still have difficulties in adapting to the changes in the learning environment; coming from a traditional education system into an online learning environment. These learners are prone to academic stress, anxiety, and procrastination. Transitioning from traditional learning to remote education inflicts stress and mental burden to the students (Mosleh et al., 2022).

One of the most popular time management strategies is the Pomodoro strategy for being easy to use (Collins, 2020). The Pomodoro strategy contributes to the increase in productivity of the student by producing progress. Using the Pomodoro strategy as an intervention provided an adequate result in the completion and submission rate of highschool student's online coursework (Cuje, 2022).

While the student's task completion rates are favorable, the Pomodoro strategy alone cannot answer questions pertaining to the student's work efficiency.

The Eisenhower Matrix is another time management strategy that can assist in sorting tasks according to its urgency and importance (Spinetti, 2020). The Eisenhower Matrix provides a systematic plan for prioritizing tasks. ProductPlan (n.d.) mentions that people may tend to spend more time accomplishing tasks with low impact. The Eisenhower Matrix provides assistance to reduce its occurrence.

In this light, the study aims to improve the learning productivity of distance learners by exploring the application of gamification to time management strategies, specifically, the Pomodoro Strategy and the Eisenhower Matrix.

Statement of the Problem

This study will focus on the exploration of the gamification of the combined Pomodoro Strategy and Eisenhower Matrix, and its effectiveness to the learning productivity of the UPOU students.

Specifically, it seeks to answer the questions:

1. What is the importance of the gamification of the two time management strategies in the learning productivity of UPOU students?
2. What will be the advantage/s or possible benefit/s of the gamification of the two time management strategies with regards to the learning productivity of UPOU students?
3. How will the combined time management strategies improve the learning productivity of UPOU students?

Objectives

This study is conducted in order to:

1. Have a documentation of the current time management techniques utilized by the UPOU students.
2. Identify if suggesting the use of the gamified combined Pomodoro Strategy and Eisenhower Matrix as time management strategies for managing academic tasks were beneficial.
3. Identify if the gamification of the combined Pomodoro Strategy and Eisenhower Matrix can make time management strategies more approachable to students.

Significance of the Study

Time management in increasing the student's learning productivity can be difficult to approach especially when the student is faced with an overwhelming number of tasks. This study aims to shed light and uncover other reasons for student's reluctant approach to time management, at the same time, provide information on gamification to help researchers in the development of educational tools and interventions to support the learning productivity of distance learners.

Scope and Limitations

This study will focus on the two time management strategies (Pomodoro Strategy and Eisenhower Matrix) and the idea of gamification to identify the concept's potential contribution in increasing the learning productivity of the distance learners in UPOU. The participants will interact with the prototype prepared by the researcher using the Figma link sharing feature. A high-fidelity prototype will showcase the concept of the combined Pomodoro Strategy and the Eisenhower Matrix. The participants will only interact with the prototype; it will constraint participants from performing unprecedented actions, and better focus on the concept of combining two time management strategies through gamification.

II. REVIEW OF RELATED LITERATURE

Theoretical Framework

This paper is anchored to the Theory of Gamification by Landers (2015). The theory of gamification refers to the nine game attribute categories described by Bedwell and colleagues (2012): action language, assessment, conflict/challenge, control, environment, game fiction, human interaction, immersion, and rules/goals. According to Landers, all of the aforementioned can be found at the core of any educational game — only varying in magnitudes. However, in gamification, one game attribute category or a meaningful combination of multiple game attribute categories is/are identified, applied, and explored.

Effects of Gamification

In the report of GoodUX (n.d.) entitled “Nike Run Club's gamified approach to fitness training,” Nike’s introduction of time-bound challenges and unique trophies allows their users to frequently do fitness exercises. Nike – a business focused on fitness – created a mobile application with a vision of making fitness exercising more accessible. After incorporating two of the game attribute categories – assessment and rules/goals – to the Nike Run Club app, the business have observed a positive relationship towards their users. GoodUX reported that the download rate of Nike Run Club application has spiked to an overwhelming 45 percent increase compared to global competition of only 10 percent.

Added by Daniels (2024), the gamification of Nike’s app is a success – resulting in high retention rate in terms of the service.

In the paper conducted by Surdo (2023) entitled, “Community College Psychology Students’ Use of Gamification as a Motivator for Improved Learning,” the college utilized Kahoot! – a game-based learning platform – for their academic learning. By introducing the game attribute category “conflict/challenge” through Kahoot!, the study has succeeded in their goal of increasing engagement and motivation of their students towards academic learning.

A similar study by Lin et al. (2018) supports the use of Kahoot! as reinforcement for higher education learning. Kahoot! have successfully improved the engagement and motivation of 51 students towards academic learning.

Another study by Li & Liu (2023) entitled, “An Examination of Influential Factors on Gamification in Higher Education: A Content Analysis” started with the dilemma students are facing in higher education. The study exposed that the students are having a hard time in pursuing higher education because of

intimidation, and that ultimately resulted in demotivation. Research found that introducing gamification strategies to their curriculum can lead to positive results. Overall, the students had better engagement and a positive outlook to their education after introducing a new gamified curriculum.

The Two Time Management Strategies

In the study conducted by Dizon et al. (2021) entitled “The Effects Of Pomodoro Technique On Academic-Related Tasks, Procrastination Behavior, And Academic Motivation Among College Students In A Mixed Online Learning”, Dizon et al. used the Pomodoro Strategy as their intervention in hopes of improving the prevailing procrastination behaviour of the students situated in a mixed online learning environment. According to their findings, they have observed an improvement in the learner’s procrastination behavior. Although the increase is not statistically significant, this is a step forward into developing new interventions for improving the learning productivity of distance learners.

In the paper of Monsalve et al. (2020) entitled, “Assessment on Effectiveness of Eisenhower Matrix in Improving Time Management of Selected Grade 12 ABM Students”, Monsalve et al. found that students were having difficulties to progress academically and suffers on balancing between academic and family time. After using the Eisenhower Matrix as intervention, the study yielded a positive output from the students reporting the improvement of the students towards their attitude on academic activities, improved priority management, and found a way to help them balance their time between academic and personal life.

Existing research uses time management strategies as a stand-alone tool for interventions. However, combining the two management strategies has not yet been

further explored. A blogpost by Douglas Melvin (2016) directly suggests the use of the two mentioned time management strategies together. While the blog posts of Pritchard (2017) and Ang (2024) indirectly suggest and support the use of the two. This study will explore the concept of combining two mentioned strategies (Pomodoro Strategy and Eisenhower Matrix) using gamification, and how the concept can assist students in increasing their learning productivity.

Operational Definition of Terms

For better understanding of the study, the following terms are conceptually and operationally defined.

Casual game. An electronic game enveloped with simple instructions and requires little effort to play through.

Eisenhower Matrix. A time management tool that helps in systematically categorizing tasks according to priority.

Figma. A collaborative online platform that helps in designing, prototyping, developing and collecting feedback from people for the people.

Gamification. A process of applying elements of games into a non-game context to increase engagement. Some concepts of gamification include rewards system, interactive indication for the progress of completion of the user, and the like. Incorporating game elements into concepts not related to games can increase engagement, focus, and attention retention.

Learning Productivity. “The student’s engagement in educationally purposeful activities, and the gains they make in the desired outcomes.” (Kuh & Hu, 2001)

Pomodoro Strategy. A time management tool based on a twenty-five-minute intensive productivity work followed by a five-minute break (Sheldon & Wigmore, 2022).

Role Conflict. A phenomenon where an individual has difficulty perceiving and managing their social roles.

Time Management. The individual’s ability to divide time to accommodate different tasks in an efficient way.

Two Time Management Strategies. Refers to the Pomodoro Strategy and the Eisenhower Matrix.

III. METHODOLOGY

Research Design and Analysis

This study employs a mixed method of quantitative and qualitative research. Questions about the experiences of the respondents are necessary to fulfill the objectives of the study. In the same light, generating quantitative data is equally necessary for the study. Thematic analysis is adopted to discuss the information gathered using the research instruments.

Respondents of the Study

This study uses the purposive sampling method for its respondents. Purposive sampling will help the researcher to better understand the respondents' lived experiences in relation to time management, productivity, and distance learning. Purposive sampling method will help the researcher to extract in-depth responses from the targeted population.

The inclusion criteria for the respondents of this study are the following: respondent is a distance learner. The respondent is pursuing her/his higher education at the moment. The respondent must be enrolled at the University of the Philippines Open University.

Instruments

An app prototype of the gamified combined Pomodoro Strategy and Eisenhower Matrix is made by the researcher using Figma. The app prototype features four slices of tomato for the logo that represents the Pomodoro technique used and the four quadrants that the Eisenhower Matrix uses to segregate tasks according to importance and urgency. The app prototype consists of four main panels for the user to interact. The first panel is the home screen that contains a button to initiate a Pomodoro timer, add new tasks, and an overview of pending tasks. The second panel consists of detailed information of all the user's tasks—pending and not yet initiated. The third panel consists of leader board placement and scores. And the fourth panel consists of the user's recently obtained

badges and detailed information about the user's current level and needed points to attain a higher level.

A link redirecting to the Figma app prototype was shared to the respondents. After exploring the app prototype, a survey questionnaire was sent to the respondents to gather information about their insights on the gamification of the combined two time management strategies, together with their insights on learning productivity in relation to their experiences as a distance learner.

Data Collection Procedure

After creating the app prototype in Figma, an online survey questionnaire made in Google Forms is distributed for the respondents to answer. The survey questionnaire will collect information with regards to the following: respondent's demographics, preferred device to use, main purpose of using the preferred device, and the duration of engagement in the preferred device. Questions that explore the respondents' experiences in using time management strategies were also included. And the final part of the survey consists of questions related to their experience after using the app prototype of the gamified combined Pomodoro Strategy and Eisenhower Matrix. The respondents were asked for suggestions to improve the user experience of the app prototype.

IV. RESULTS AND DISCUSSION

Ignorance vs Inability

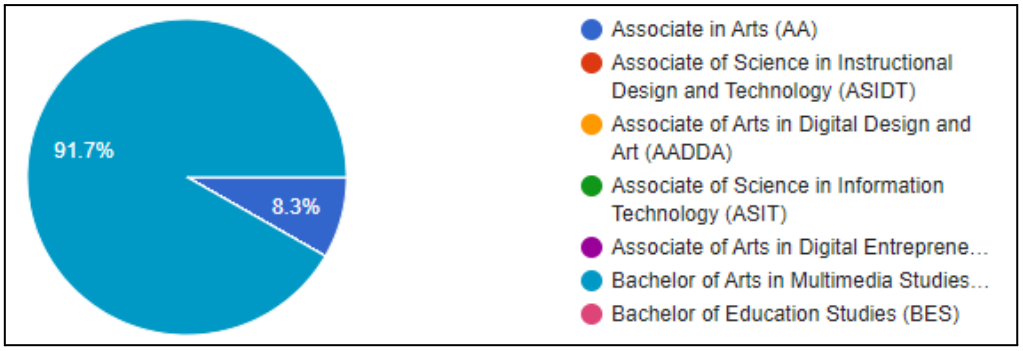

Figure 1. Respondent's Demographics

12 UPOU students were asked to respond to questions regarding time management and the gamified combined Pomodoro and Eisenhower Matrix app prototype. 1 or 8.3% of the respondents came from the Associate in Arts program and 11 or 91.7% came from the Bachelor of Arts in Multimedia Studies program. All of them are full-time students .

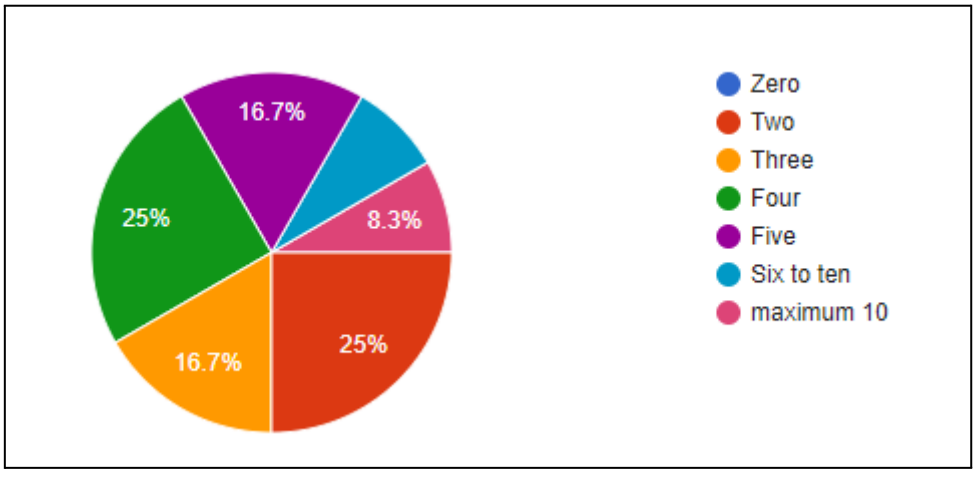

Figure 2. Average amount of tasks the students have in a day

As shown in figure 2, 1 or 8.3% of the respondents answered that they have ten tasks a day that needs to be completed, 1 or 8.3% mentioned that they have six to ten tasks, 2 or 16.7% have five tasks, 3 or 25% have four tasks, 2 or 16.7% have three tasks, and 3 or 25% mentioned they have two task a day that needs to be completed.

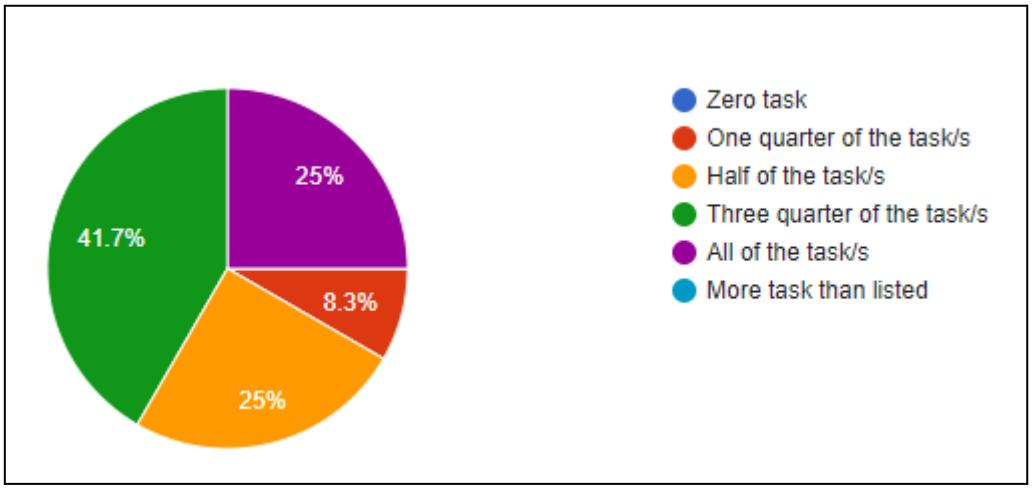

Figure 3. Rate of task completion

As shown in figure 3, only 3 or 25% of the respondents were able to complete all of the tasks they have listed by the end of day, 5 or 41.7% were at three quarters done from completing their tasks by the end of the day, 3 of 25% were halfway finished by the end of the day, and 1 or 8.3% of the respondents were only at the one quarter mark from completing their list of tasks by the end of the day.

Students set a high amount of goals in a day as seen in figure 2, and eventually end up failing in completing all tasks written in their list as seen in figure 3. This results tells that a handful of students does not have an effective time management

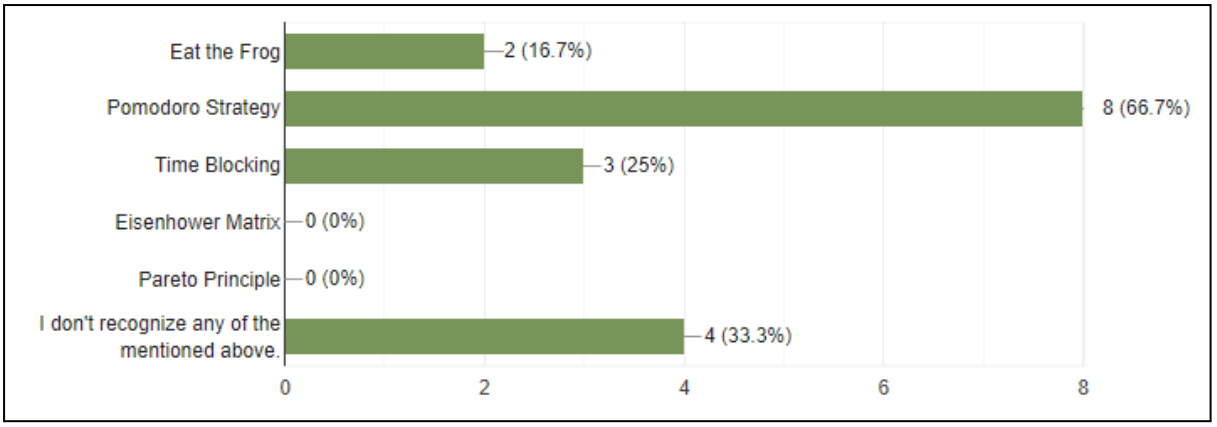

Figure 4. Recognition of UPOU students to popular time management techniques

As shown in figure 4, the Pomodoro Strategy was recognized by 8 or 66.7% of the respondents, followed by Time Blocking with 3 or 25%, Eat the Frog with 2 or 16.7%, while the Eisenhower Matrix and Pareto Principle was not been recognized by any of the respondents. Among the respondents, 4 or 33.3% of them answered that they do not recognize even one time management technique in the list.

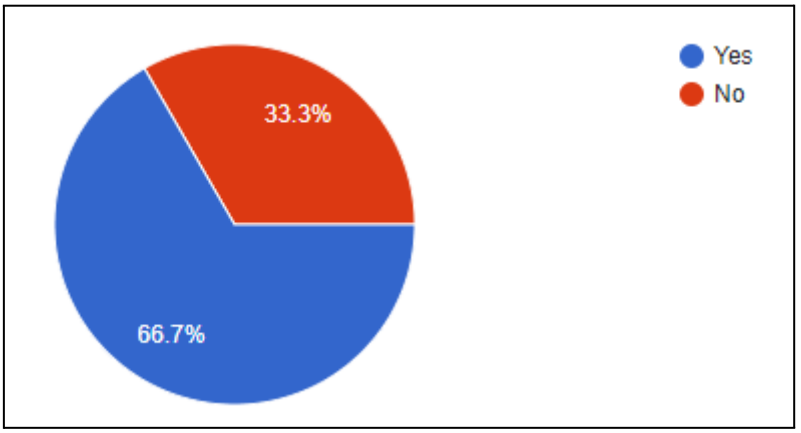

Figure 5. UPOU Students' use of Time Management Strategy

As shown in figure 5, 8 or 66.7% of the respondents reported that they use time management strategy to deal with their tasks. Meanwhile, 4 or 33.3% of them do not use time management.

Figures 4 and 5 suggest that recognizing the existence of time management techniques have an effect on whether students practice and integrates them to their routines or not.

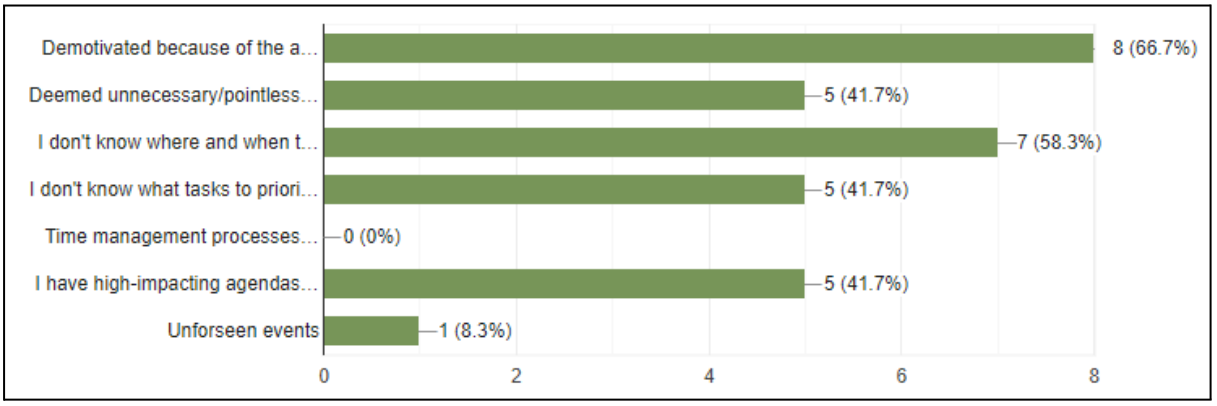

Figure 6. Hindrances for Approaching Time Management According to UPOU Students

As shown in figure 6, 8 or 66.7% of UPOU students agreed that they are reluctant to approach time management due demotivation that stems from the overwhelming feeling from the amount of tasks to be accomplished, 7 or 58.3% were confused where and when to start, 5 or 41.7% were confused as to which tasks to prioritize, 5 or 41.7% mentioned that they have high-impacting agendas that precedes over organizing their calendar, 1 or 8.3% says they were reluctant due to unforeseen circumstances, while 5 or 41.7% deemed time management is unnecessary, pointless, or waste of extra effort.

Table 1. Prioritization of the students for their tasks

Dependent to the events within the day	Based on the deadline	Gauging the difficulty of tasks	Based on whether the task is work or academic-related	No particular technique
"It depends on how the day goes. Even though I plan the schedule of the tasks, there will always be one task that will take longer to finish than expected. For example, tutoring my brother depends on how fast he can finish the activities I will give him. Tutoring him needs "active supervision because he has specific learning needs. So, multitasking while tutoring him is nearly impossible.	"Based on the deadline."	"I check the deadlines of each task and I also gauge how long will i take to finish the task."		
	"Depending on the due date."			
	"Depending on the due of each task."	"I consider the set deadline and complexity of the task."	"If it is related to work or academic requirements."	"I focus on one subject per day, but if I finish early, I move on to the next task. That's why I often complete all my work in just two days."
"It all comes down to the time of day. While I have important tasks I have to accomplish throughout the day and evening, by 5:30 pm, my main focus shifts to preparing dinner. Being alone at home, I need to ensure dinner is ready, especially when my parents return late from "work. It is also my duty to check in with my sister during that time, making sure she has returned to her dorm after class and has dinner ready.	"task that is almost due"	"Those that have to be submitted the earliest and and those activities that I deem wih high level difficulty"		
	"If the deadline of a certain task is nearer than other tasks."			
2 or 16.7%	**5 or 41.7%**	**3 or 25%**	**1 or 8.3%**	**1 or 8.3%**

As shown in table 1, 2 or 16.7% of the students prioritize completing their tasks depending on how the events of the day unfolds, 5 or 41.7% prioritize their tasks based on the nearest deadline, 3 or 25% of them gauge the difficulty of the tasks and prioritize accordingly, 1 or 8.3% base their prioritization on whether the task is academic or work-related, and 1 or 8.3% of the students have no particular technique for prioritizing tasks.

The App Prototype: Gamification of the Combined Pomodoro Strategy and Eisenhower Matrix

Table 2. Student's opinion about the app prototype

Mixed Opinion	Fun	Helpful	Look Promising	Innovative and Creative	Inspiring
I think I wasnt exactly at the right state of mind, so I find using both program hard	it was fun	It's somewhat helpful because it helps me organize the tasks I need to do and how I can do them.	I think it looks really promising. I especially like that you can divide the tasks into categories. It's also helpful that you can just click the tasks as you wish to start doing it. The timer begins and immediately pushes you to "work" mode. The reward after a cycle also makes it more fun. It's like you're competing with yourself somehow, pushing yourself to do task after task.	It is an innovative and creative means to be productive.	Honestly, it inspired me how to better organize my tasks.
Effective for people good time management and efficiency and diligence. Lazy people wouldnt care anyways.			The layout and colors are nice! I like that I can immediately see what urgent and non-urgent tasks are. What I don't like is the leaderboard because if I see my rank I get anxious that other players might judge me for my rank. However, I may not choose to look at the leaderboard.		
I don't know. I just feel like I can just use the timer on my phone.		I belief this would be helpful for all students and freelancers because it makes it easier to divide tasks according to their urgency and importance. It being a potential phone application is also a huge benefit because using Pomodoro on the computer often clogs one screen.	It can be highly effective		
I think it's nice. It manages to integrate the two techniques together to both aid prioritization and focus.					
4 or 33.4%	1 or 8.3%	2 or 16.7	3 or 25%	1 or 8.3%	1 or 8.3%

As shown in table 2, 4 or 33.4% of the students have mixed opinions about the app prototype—ranging from no opinions to getting confused about the purpose of the app prototype, 3 or 25% said that the app prototype looks promising, 1 or 8.3% said that it was fun to use, 1 or 8.3% appreciated the innovativeness and creativity of the app prototype, and 1 or 8.3% became inspired to improve task organization skills.

Table 3. Opinion of students about the usefulness of the app prototype

Mixed Opinion	Useful	Not Useful
I am not certain about their benefits to me as I am not familiar with the programs	Yes, although I'm currently in the "last" term of my schooling, I think this can benefit me for my career.	Not really. I already have strategies that work for me.
Somewhat yes because like I said earlier it provides a better avenue where I can organize the tasks I will be doing for the day. However, somewhat no because in the first place I am already fine with how I am doing my own tasks without said techniques. That's why adding and implementing said techniques can be a burdensome but yeah ig through this app it can help me be more enthusiastic in adding them in how I operate and do things.	Yes, they can improve time management, reduce procrastination, and ensure that high-priority academic tasks are completed efficiently	
I think so, maybe if there would be more features added on the app.	This strategy will be incredibly beneficial for me. To be honest, despite my efforts to plan out my daily tasks the night before, I find it challenging to complete them all in a day. The struggle lies in deciding which task to tackle first, especially as I study and work from home where distractions are plentiful due to the environment not being conducive to studying or working. With this method, I can prioritize my tasks within a specific timeframe or even in advance.	
	Yes, it will help manage my task and be able to see which one I already accomplished	
	Yes. It'll give me something to follow and guide as I study.	
	I think so. I struggle with organizing my tasks. Although I use Notion to plan what I need to do each week, I believe that having a task organizer integrated into the app, using the Eisenhower Matrix, would be more helpful for me. It would allow me to better segregate tasks that require immediate action from those that can wait.	
	I think it will help that I have an app that focuses solely on helping me manage my tasks instead of using my notes and timer on the phone. In addition, I think if the app would be launched to the public, the gamified combination of both strategies will be extremely helpful to my brother. My brother has poor focus if not supervised. I do set time like the one on the app for him and it does help him finish a task. But unlike the app, I don't have a reward system for him. Only words of encouragement and acknowledgement. Using the app while tutoring my brother could enhance his focus and interest in academics better than usual. All in all, I would definitely use it for my academic tasks as well. Especially during very busy academic weeks when I tend to go off course.	
	Yes! I find that earning extra rest time as a reward for completing tasks really helps keep me motivated. It's a great way to push through and stay on track	
3 or 25 %	7 or 66.7%	1 or 8.3%

As shown in table 3, 7 or 66.7% of the respondents found the app prototype useful, 3 or 25% of the respondents have mixed emotions about the app prototype, and 1 or 8.3% mentioned that the app prototype is not particularly useful as the respondent already has another technique that already works.

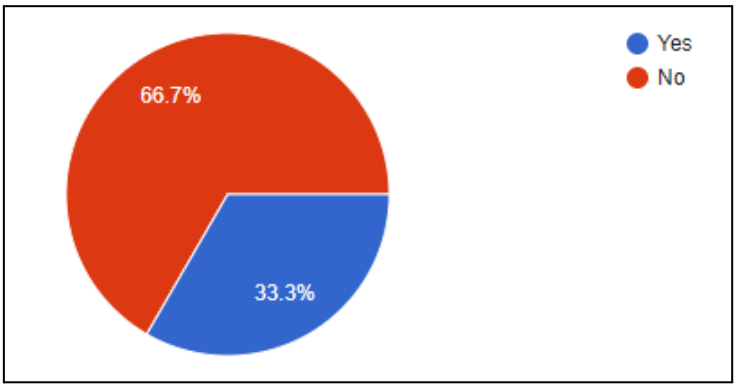

Figure 7. Number of respondents who felt exhausted after using two time management strategies in succession

As shown in figure 7, 8 or 66.7% of the respondents did not feel any exhaustion after using two time management strategies in succession. Meanwhile, 4 or 33.3% of the respondents said they feel exhausted after using two time management strategies in succession.

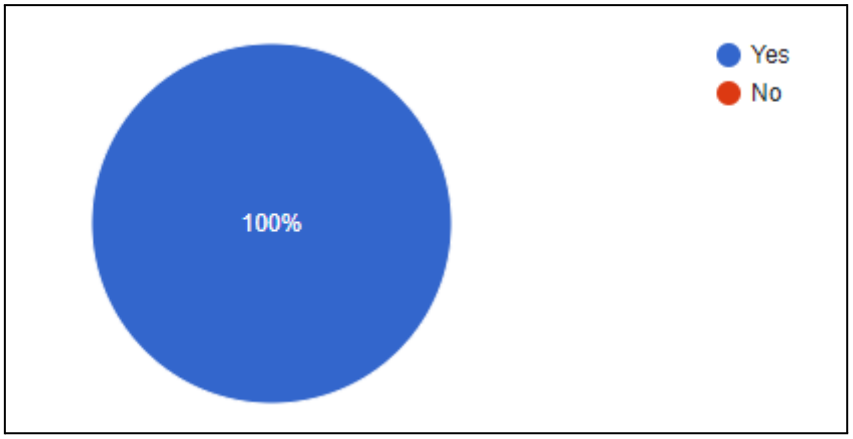

Figure 8. Respondent's willingness to see the accomplished Gamified Combined Pomodoro Strategy and Eisenhower Matrix

As shown in figure 8. all of the respondents wished to see the final application of the gamified combined Pomodoro Strategy and Eisenhower Matrix. Despite the number of students that became exhausted after using two time management techniques in succession, they remained positive on the potential of the app prototype.

In the instance that future researchers hope to experience the gamified combined Pomodoro and Eisenhower Matrix app prototype, the link provided will redirect them to the Figma app prototype.

https://www.figma.com/proto/ZAFKk3ofnqYQpn4YOylDVf/POM-EZ-original?node-id=0-1&t=FSO7P1c7dkR9Tstl-1

V. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary and Conclusions

Students set up a high amount of tasks for themselves to fulfill despite having insufficient practice of time management. Only three students were able to complete all of the tasks they have listed. The findings indicate that the students have difficulties in gauging their tasks that inevitably result in unfinished tasks

Students with prior experience of using time management techniques had no difficulties in using the Pomodoro Strategy and Eisenhower matrix in succession. Meanwhile, students with no prior knowledge and practice in using time management strategies had a hard time and began to be confused on how to use the app prototype. Despite feeling exhausted after using the two time management strategies in succession, all students have high hopes and see the potential of the app prototype as a companion to their learning productivity.

Recommendations

Improvement to the app

Future researchers are encouraged to polish the UI of the app prototype. This may yield in more positive reactions from the users and make time management more approachable though the app.

Future researchers are also encouraged to add features to the prototype such as improved leader boards with chatting systems to add more engagement between users.

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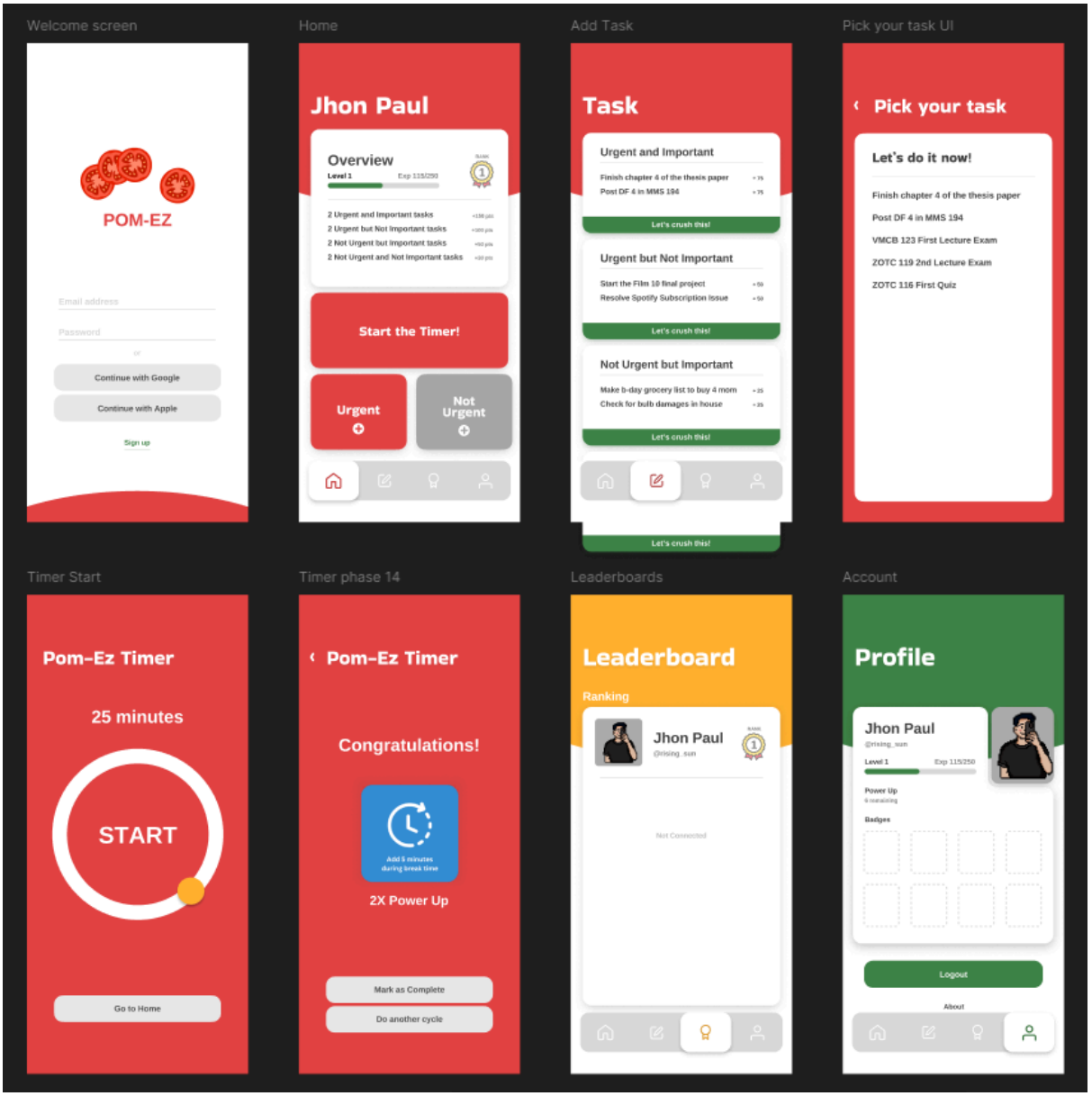
Appendices

APPENDIX A

User Flow for the App Prototype



Login Interface → Home Screen → List of Tasks → Picking of a Task to Complete → Start Timer → Rewards after completing a Pomodoro Timer → Leaderboard → User Profile → Logout

APPENDIX B

Wireframe of the App Prototype