

KIPIDAP: A MOBILE APP DESIGNED FOR MALAYSIAN UNIVERSITY STUDENTS TO OVERCOME PROCRASTINATION

Sharifah Shafiqah Syed Husni¹, Muhamad Fairus Kamaruzaman^{1*}, and
Novi Sri Wahyuni²

¹ Faculty of Art & Design, Universiti Teknologi MARA, Malaysia

² Faculty of Teacher Training and Education, Universitas Cordova Sumbawa Barat, Indonesia

ABSTRACT

***Corresponding author:**
Muhamad Fairus Kamaruzaman
muhamadfairus@uitm.edu.my

Received: 8 July 2023
Revised: 15 January 2025
Accepted: 19 January 2025
Published: 21 August 2025

Citation:
Husni, S. S. S., Kamaruzaman, M. F., & Wahyuni, N. S. (2025). Kipidap: A mobile app designed for Malaysian university students to overcome procrastination. *Humanities, Arts and Social Sciences Studies*, 25(2), 526–535. <https://doi.org/10.69598/hasss.25.2.265569>

Currently students at the Malaysian Institute of Technology (UiTM) Malaysia are having trouble getting their work done on time. This affects their health and grades. The Kipidap application created for android users was designed using the Pomodoro Technique, allowing users to accomplish tasks straight away rather than postponing them. Finding out how frequently UiTM students put off activities and assessing the results were the key objectives. The respondents were 100 UITM students. They were equally divided between men and women and comprised a broad spectrum across academic disciplines, particularly in regard to work completion speed and time management skills, the data revealed notable variations. There are useful tools in the Kipidap mobile app that assist with managing oneself and working more efficiently. These include an intelligent task management system, a Pomodoro timer for effective work sessions, and inspiring incentives such discount coupons to keep people interested. Of the participants, 98% stated they utilized the educational content on the mobile app, 95% said they loved how easy it was to use, and 97% said it was simple enough to navigate their way around. Kipidap is a handy, simple, and efficient tool for students who want to improve their performance in the classroom and create positive habits that will benefit.

Keywords: Kipidap; mobile application; UiTM students; procrastination; Pomodoro technique; mental health

1. INTRODUCTION

Procrastination is a pervasive challenge faced by university students globally, with Malaysian students exhibiting particularly high rates of delay in academic tasks. Procrastination has been extensively studied, revealing that it not only affects students' academic performance but also has broader implications for their mental health and well-being. Research indicates that a substantial proportion of students from Malaysian universities report habitual procrastination, which often correlates with elevated stress levels, reduced academic achievement, and deterioration in overall quality of life. According to Jalaluddin et al. (2016), Malaysian university students are not immune to this phenomenon, with many grappling with above-average levels of procrastination. The situation became even more critical during the Covid-19 pandemic as these students navigated the challenges of online learning amidst distractions in non-conducive environments, far

removed from the structured campus setting. Procrastination is often associated with adverse behaviors including late submission of assignments, heightened test and social anxiety, and reliance on self-handicapping strategies as well as fear of failure. These patterns of behavior contribute to academic underachievement and may lead to serious mental health such as depression and anxiety (Karakaya Özyer & Altinsoy, 2023).

Our study introduces Kipidap, the mobile application central to our research objectives. Designed specifically for Malaysian university students at Universiti Teknologi MARA (UiTM), Kipidap aims to combat procrastination. Our research highlights the widespread nature of procrastination among Malaysian university students and their unique challenges, particularly during the Covid-19 pandemic. This app integrates the Pomodoro Technique, a time management system that enhances productivity by breaking work into twenty-five-minute focused sessions, interspersed with ten-minute breaks. These consistent short breaks within work sessions have significantly boosted concentration and motivation. This research examines the urgent matter within the framework of SDG 4, which aims to guarantee inclusive and equitable access to quality education while fostering opportunities for lifelong learning for everyone. We recognize that procrastination often stems from a lack of motivation among students. To combat this, we advocate for an approach that actively cultivates motivation and fosters high productivity.

Currently, technology has a lot of advantages. One of them is to help students encourage themselves to learn. The objective of this study is to examine how common this is and what leads students at UiTM to put things off. As a focused solution, the Kipidap mobile app is designed and put into use. The Pomodoro Technique is built into the Kipidap app to help students be more productive, keep track of their work, and do better in school. Additionally, this study looks into how the Kipidap app can help students stop putting things off, improve their mental health, and form better more regular work habits. This helps reach SDG 4 by making sure everyone has the same access to lifelong education and learning pathways. It also helps reach SDG 3 by improving the mental health and general well-being of students.

2. LITERATURE REVIEW

Many factors contribute to procrastination, including how someone feels and what is going on around them. For many students, the issue extends beyond inadequate time management; it frequently arises from underlying psychological challenges. Individuals who often procrastinate may experience diminished self-esteem, insufficient self-confidence, or an overwhelming fear of failure. Touloupis and Campbell (2024) demonstrate that these variables may generate mental barriers that impede engagement with academic responsibilities. Emotional states, including anxiety, depression, and persistent worry, are significantly associated with procrastination. Additionally, character traits such as neuroticism, impulsivity, and low conscientiousness intensify it. In addition, the characteristics of academic tasks, particularly those perceived as monotonous or devoid of immediate benefits, may lead to avoidance behavior. Numerous students frequently underestimate the duration required for tasks, resulting in delays and increased last-minute pressure. In a nutshell, procrastination is an indication of a lack of self-regulation, or cognitive control, affective responses, and attitudes over an extended length of time.

The Kipidap app is a significant intervention aimed at mitigating procrastination among students at Malaysian universities. The characteristics relating to Kipidap play a crucial role in facilitating self-regulation, which is an essential ability for effective time management and the reduction of procrastination trends. Studies indicate that interventions focused on self-regulation strategies contribute significantly to the reduction of procrastination levels (Steel, 2007). Kipidap design incorporates elements that encourage self-monitoring and reflection, allowing students to take the ownership of their academic responsibilities. This feature aligns the results of van Eerde's (2003) research, which states that the improvement of self-regulation through structured approaches can produce a marked reduction in procrastination behaviors.

Students' study habits have changed dramatically due to the COVID-19 pandemic. Many UiTM students experienced emotional distress, overload, and alienation as a result of all classes being moved online. According to studies like Dimaano's (2023), students who are switching to online distance learning are experiencing higher levels of stress, anxiety, and depression. Tasks that seem frightful makes them procrastinate. It is also noted that students' ability to stay focused reduces due to poor time management. This is due to the interference of lots of social media (Uopasai et al., 2022). Students need systematic assistance to improve their ability to develop self-control.

2.1 Principles of mobile application design

The expansion of mobile application technology has had a significant influence on educational aids, providing specialized answers to long-standing difficulties like procrastination. The key success to the development of a mobile app is to understand the functionality, usability and practicality of a user-centred

design (UCD) methodology. It is also noted that by synchronizing user needs and preferences during the process development of UCD, it will ensure the application will probably create engagement and deliver significant results to the end users. During the development of a mobile app, simplicity and user feedback are crucial for iterating on the design during the mobile app establishment. These factors will ensure the navigation will get easier and have fewer distractions. Hence, it will allow the end users to stay focused on their objectives. Personalization allows the end users to customize their needs and preferences, such as task management and goals. A motivational approach, such as physical rewards, will create loyal end users. Live performance tracking and feedback systems will assist the end users in determining their level of achievement. All of these design components perform well to create a mobile app that is not limited to end user perspectives but also effective in addressing behavioural issues such as academic procrastination.

2.2 Educational mobile apps and procrastination

Educational mobile applications play a vital role in mitigating procrastination, particularly within academic settings. By incorporating structured workflows, reminders, and motivational strategies, these tools equip users with practical means to manage their time and tasks more effectively. The Kipidap application, for instance, applies the Pomodoro Technique to help students break down tasks into smaller, more manageable units by reducing cognitive overload and enhancing focus. Studies have highlighted that features such as cross-platform functionality, integration with personal calendars, and offline access are key factors influencing user engagement and adoption, especially in diverse learning environments (Ryan & Deci, 2011; Sweller et al., 2011). Kipidap's design reflects these findings, offering a robust and accessible solution to support UiTM students in overcoming procrastination, particularly in the context of navigating online learning challenges.

2.3 Pomodoro Technique

The Pomodoro Technique, which has been developed by Francesco Cirillo, is a well-established and effective method for managing time and combating procrastination (Cirillo, 2018). This structured approach aids individuals in sustaining focus and enhancing productivity, especially in academic environments. The Pomodoro Technique fundamentally consists of segmenting work into concentrated intervals, usually lasting 25 minutes, referred to as "Pomodoros," during which individuals concentrate exclusively on one task. This deliberate emphasis cultivates a condition of deep work, enabling students to achieve significant advancement in academic tasks or projects. Each Pomodoro is succeeded by a brief 5- to 10-minute break, functioning as a mental refresher and aiding in the prevention of cognitive fatigue. These short intervals serve as micro-rewards, enabling individuals to relax, stretch, or momentarily disengage before continuing with the subsequent task. To facilitate mental recovery and reflection prior to commencing another work cycle, it is advised to take a prolonged break of 15 to 30 minutes after four consecutive Pomodoros (Amit et al., 2021). The cyclical pattern of concentrated work and restorative breaks underpins the effectiveness of the Pomodoro Technique.

Dealing with procrastination needs a strategy that goes beyond a modest application which relies on physical time management practices. Complementary approaches, which include goal setting, will increase output. Selecting projects and assignments will also help the students understand the difference between urgent and important tasks. This will ensure all valuable content has been stored accordingly, which reduces the possibility of procrastination. The use of the SMART approach offers the students a comprehensive framework for realizing the educational objectives. It helps by breaking various aims into achievable steps. Hence, it makes things easier for every student to stay focused and end their task on time.

The physical and digital environments in which students operate are significant factors. A dedicated workspace that is free of clutter improves concentration and reduces distractions. Additionally, digital tools like website blockers and productivity applications help students stay focused during Pomodoro intervals. Positive reinforcement enhances these initiatives. Students can develop habits that link productivity to positive outcomes by rewarding themselves after completing tasks, such as taking breaks or receiving small incentives (Dizon et al., 2021). The simultaneous application of the Pomodoro Technique, task prioritization strategies, SMART goal setting, an optimized study environment, and reinforcement techniques establishes a thorough framework for effective time management and procrastination reduction. These approaches enhance academic success and promote mental well-being by alleviating stress and anxiety. The Pomodoro Technique is a practical and adaptable method for higher education students, promoting discipline, increasing productivity, and facilitating sustained academic engagement.

2.4 Factor and outcome of procrastination

Extensive research has linked procrastination to many contributing factors and outcomes. Research indicates that around 75% of students regularly postpone their academic duties (Steel, 2007). Academic procrastination is associated with adverse effects, including depression, increased stress, anxiety, and reduced academic performance. These results imply that procrastination is a complex behaviour with important

ramifications for their academic and psychological well-being, going beyond simple inefficiency in time management. Recent academic discourse presents a refined interpretation, suggesting that procrastination may serve as a complex psychological defence mechanism. It is frequently employed as a coping strategy that temporarily protects individuals from the emotional distress linked to challenging academic tasks, rather than being solely an act of avoidance. Barel et al. (2023) contend that deferring tasks offers temporary psychological relief by enabling individuals to evade the anxiety or discomfort associated with immediate engagement in those responsibilities. According to Chaturapanich (2023), this behavior reflects a deeper emotional regulation strategy, specifically an effort to manage internal stress via temporary withdrawal.

Research indicates that procrastination may function as a self-protective mechanism to maintain fragile self-esteem, as suggested by Koppenborg and Klingsieck (2022). From this perspective, avoidance is not merely an issue of laziness but rather a strategic reaction to expected failure or self-criticism. Delaying engagement with challenging tasks allows individuals to evade circumstances in which their abilities may be evaluated, thereby diminishing the likelihood of perceived inadequacy. Uopasai et al. (2022) support this perspective, indicating that procrastination may serve to protect the self from negative assessments and preserve a sense of personal value amid academic stressors. Procrastination must not be regarded as a minor concern stemming from inadequate time management. It is a multifaceted behavior rooted in psychological principles, indicative of attempts to regulate self-perception and emotional distress. Understanding the underlying mechanisms is crucial for creating effective interventions that assist students in overcoming procrastination, thus enhancing both academic performance and psychological well-being.

2.5 Theory of Temporal Motivation (TMT)

Following the introduction of the Pomodoro Technique, it is necessary to investigate both its real-world uses and the psychological theories that provide insight into the fundamental causes of procrastination. The Temporal Motivational Theory (TMT) is one such theory that provides insightful information about it and its results. The foundation of TMT is the idea of hyperbolic discounting, which is very pertinent when considering the Pomodoro Technique. According to hyperbolic discounting, people tend to devalue rewards as they take longer to receive. Knowledge why people frequently choose instant pleasure for more substantial, delayed rewards requires a knowledge of this psychological phenomenon. It essentially highlights the pervasiveness of a "present bias," in which people prefer smaller, more immediate rewards than larger, delayed ones. Because it favors the temporary respite that task avoidance provides over the possible long-term advantages of task completion, this inherent present bias is a major contributing factor. Furthermore, the Pomodoro Technique's inclusion is consistent with TMT's observations. The problems caused by hyperbolic discounting are immediately addressed by the planned periods of concentrated labor (Pomodoros) interspersed with breaks. The Pomodoro Technique accommodates people's need for instant pleasure while promoting progress on crucial tasks by dividing work into manageable, time-bound chunks. By providing frequent, brief rewards (breaks) within the context of a longer activity, this method takes advantage of the present bias. TMT takes one step further by presenting the idea of the "dual self," which is consistent with the technique's underlying dualism. The immediate emphasis on shorter intervals is equivalent to the "present self" in TMT. On the other hand, the "future self" represents the longer-term objectives that people want to achieve through these planned work sessions. The crux of procrastination often lies in the imbalance between these two selves, where the present self's preference for immediate relief overshadows the future self's goals. From a practical standpoint, TMT's discoveries provide crucial implications for comprehending and dealing with procrastination, particularly when considering the Pomodoro Technique. The goal of these treatments is to close the gap between the future self's pursuit of long-term objectives and the present self's need for immediate gratification. Implementing the Pomodoro Technique's structured work intervals precisely achieves this balance by offering regular, immediate rewards (breaks) within a framework that ultimately serves long-term productivity. By recognizing the cognitive processes and biases at play, individuals can harness the power of the Pomodoro Technique to develop personalized strategies that counteract procrastination tendencies. In doing so, they make choices that not only enhance productivity but also align with their long-term academic goals and overall well-being. People can learn time management skills, overcome procrastination, and maximize their academic success by combining the Pomodoro Technique with TMT-informed strategies.

2.6 Synopsis: Students in higher education institutions frequently struggle with procrastination, which has a negative impact on their general well-being and academic performance

This literature review explores practical methods for overcoming procrastination in an effort to address this problem, concentrating on two noteworthy strategies: the Pomodoro Technique and the Temporal Motivational Theory (TMT). Complementing the Pomodoro Technique, the TMT brings valuable insights into understanding the decision-making processes of individuals, particularly in scenarios involving delayed

rewards. TMT highlights the idea of hyperbolic discounting, which shows how people tend to reduce the value of future rewards as the time until they are received increases. This leads to a present bias, which encourages procrastination by making people prefer instant gratification over longer-term but more significant rewards. TMT presents the fascinating concept of the "dual self," emphasizing that the future self is focused on long-term objectives, while the present self is prone toward instant gratification and desires (Odaci, 2011). TMT has important practical ramifications for creating interventions that close the gap between the present and future selves. These tactics include the establishment of short-term, instantaneous incentives for completing tasks and the use of outside frameworks, such as deadlines, that are intended to help people get over their current prejudice. The integration of the structured work intervals offered by the Pomodoro Technique with TMT-informed strategies empowers students to not only manage their time effectively but also enhance motivation. This combination equips them with the capacity to make choices that are better aligned with their long-term academic aspirations and personal development goals (Amran & Zulkifli, 2020). In conclusion, combating procrastination in college students necessitates a multidimensional strategy. The Pomodoro Technique and the insights derived from the Temporal Motivational Theory furnish valuable tools for improving productivity, refining time management skills, and enhancing motivation. As a result, these strategies can empower students to confront procrastination effectively, ultimately fostering greater academic achievement and promoting their overall well-being, thereby contributing to the pursuit of SDGs 3 and 4.

3. RESEARCH METHOD

This study examines the procrastination pattern among students in institutions of Higher Learning, specifically at Universiti Teknologi MARA (UiTM). UiTM has been chosen for this study due to its higher number of students, which furnishes a diverse academic sample and offers various patterns of procrastination within the Malaysian higher education environment. A set of questionnaires has been established to gather the primary data, guided by findings aiming to grasp the procrastination in the academic setting. A total number of 100 students from a wide range of academic programs are involved in this study, which consists of 50 male and 50 female. This is in order to make sure there is gender balance, allowing the study to explore the variation and similarity in the procrastination model among genders. The major respondents in this study are undergraduate students. This study adopts a dual approach to data analysis. The initial phase involves a comprehensive statistical analysis to explore the correlation between procrastination and various associated factors. Structured interviews with psychologists have also been conducted. These interviews furnish valuable information toward the psychological characteristics of procrastination. The data that has been collected from the interviews will undergo the thematic analysis process. This will also enhance the result. In addition, this study has been approved by the Research Ethics Committee at the College of Creative Arts, UiTM. Figure 1 displays all the processes in this study.

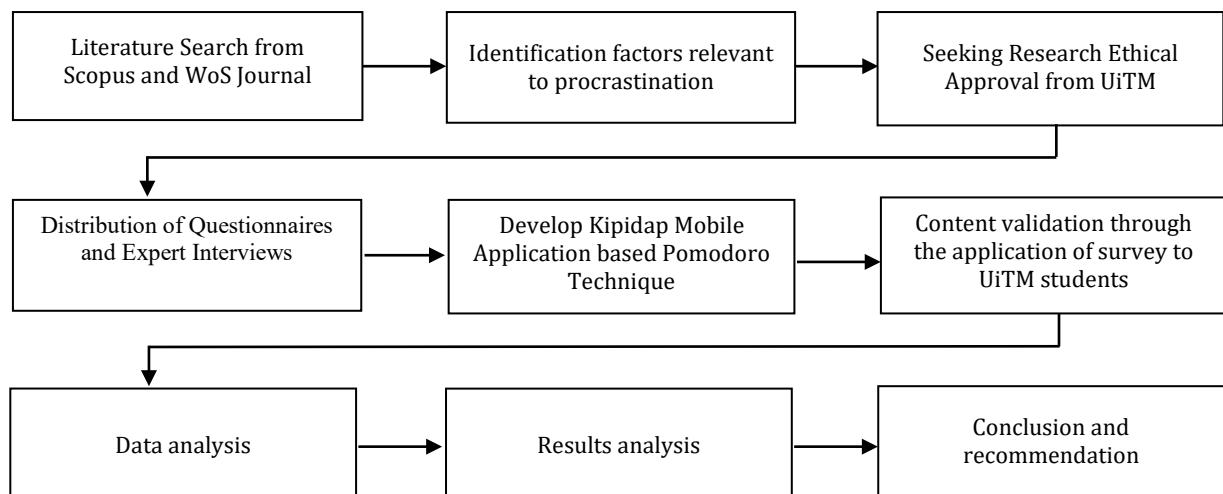


Figure 1: The research framework

The Kipidap application goes through several stages. Its main goal is to raise UiTM students' awareness of procrastination and its effects by using interactive tests and instructional resources to encourage introspection and the recognition that change is required. Figure 2, illustrate the UI for Kipidap app. Utilizing

this knowledge, the application aids students in developing precise academic objectives and priorities, underlining the need to split projects into manageable components and set reasonable deadlines. The Kipidap app provides students with a comprehensive task management system, enabling the formulation of to-do lists, the establishment of deadlines, and the tracking of progress. Time-tracking features allow students to evaluate the effectiveness of their time management (Figure 3).

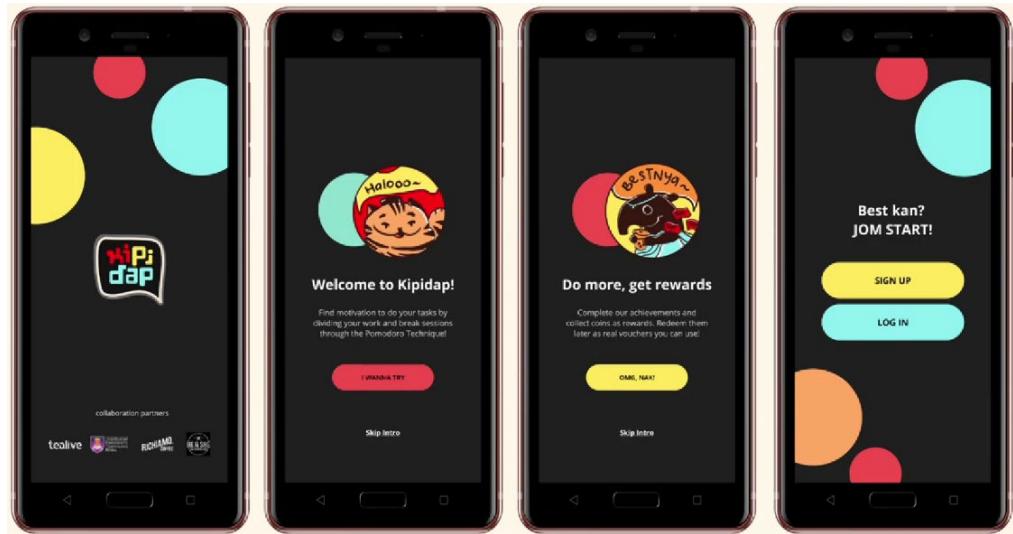


Figure 2: User interface design of the Kipidap application

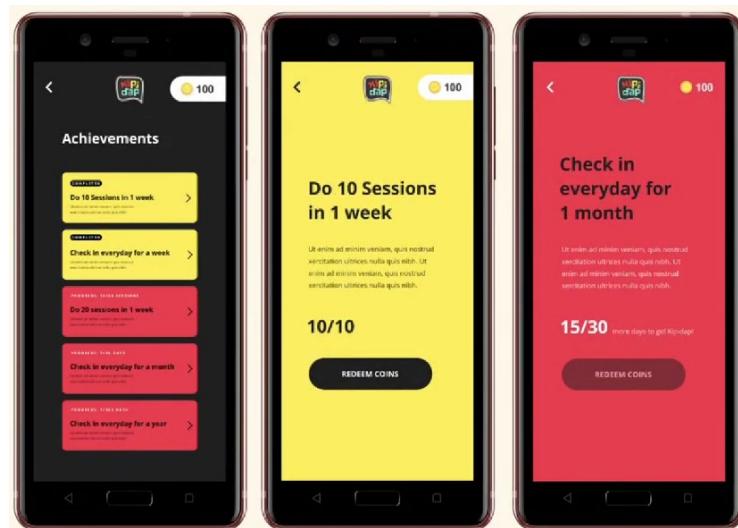


Figure 3: To-do list interface in the Kipidap application

The program effectively incorporates the Pomodoro Technique, an established time management strategy. It allows students to participate in concentrated 25-minute work intervals (Pomodoros) followed by brief breaks. This method enhances focus, reduces distractions, and develops effective work practices. Furthermore, pupils who employ the Kipidap app can obtain concrete prizes as a motivational incentive to maintain engagement. The prizes, consisting of discount certificates for Malaysian retailers, are obtained by achieving objectives within the application. Kindly refer to Figure 4.

The Kipidap app consistently evaluates students' progress, offering critical insights into their procrastinating behaviors, hence supporting a data-driven methodology that allows for customized feedback and specific recommendations.

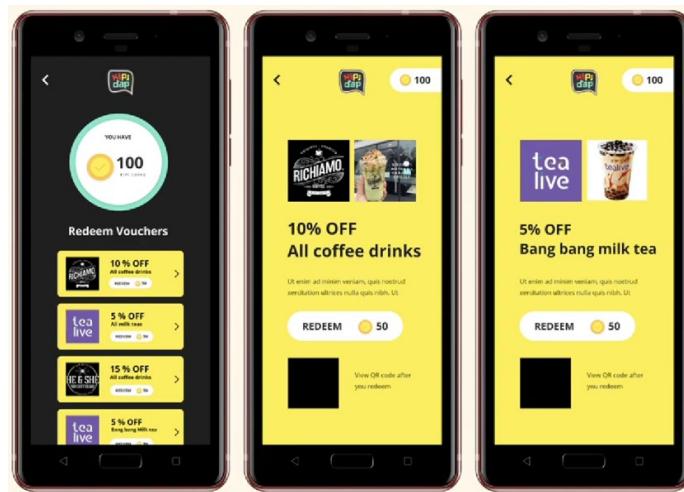


Figure 4: Rewards vouchers interface in the Kipidap application

4. RESULTS AND DISCUSSION

4.1 The students' perspective

The findings show the contribution factors associated with procrastination among UiTM students. These elements can be characterized, each contributing to the intricacy of procrastination in academic situations. It is also noted that psychological factors have a significant effect on it. Students who lack desire, have unfavorable attitudes, or are insecure about their talents are likelier to procrastinate. This desire is raised by psychological aspects such as tension, tediousness, and addictive behaviours (Karakaya Özyer & Altinsoy, 2023). Social dynamics were also found to be essential in our analysis. Parental factors, including parental support and social influences, substantially impact students' procrastination inclinations. Factors within the social dimension that were significant include personal problems, a lack of social network support, involvement in household tasks, and interpersonal interactions. A variety of factors cause procrastination in academic settings. This encompasses the educational model utilized, lecturer performance, student study habits, the efficacy of administrative-academic management at the university, the calibre of academic training, personal interest in academic endeavours, the weight of academic overload, and the university environment itself (Amit et al., 2021).

Jalaluddin et al. (2016) observed that time management is a crucial factor associated with procrastination. Students who experience difficulties with time management, characterized by ineffective time allocation, unclear prioritization, last-minute task execution, and task overload, often display tendencies toward procrastination. The leisure dimension emphasizes the impact of recreational activities, technological devices, social media, internet usage, and the distribution of spare time on procrastinating behavior. The ease of access to leisure-related distractions in today's digital age can contribute to procrastination. Economic, academic, technical, and transportation resources are aspects within the resource dimension that influence it. Restricted access to these tools can impede students' capacity to manage their activities and obligations efficiently. Environmental conditions can either promote or obstruct productivity. Students encountering contrasting settings, accessibility challenges, adverse conditions, unsuitable study places, or distracting components are more prone to procrastination. The previously described stages are summarized in Table 1.

Table 1: Factors that contribute to procrastination

Factor	Associated factors
Psychological	Lack of motivation, attitude, personal skill insecurity, psychological factors, tension, boredom, and addictions.
Social	Family factors, socialization, socio-cultural level, personal problems, lack of support, home activities, and love relationships
Academic	Educational model, lecturer performance, study habits, administrative-academic management of the university, academic training, interest in the task, academic overload, and university environment
Time management	Lack of time, definition of priorities, task planning, doing everything at the last minute, and task overload
Leisure	Recreational activities, technological devices, social media, browsing the Internet, and leisure time
Resources	Economic resources, academic resources, technological resources and transportation
Environment	Conflicting environment, accessibility, environmental conditions, inappropriate study space, and distracting elements

Respondents were questioned about their everyday task-handling routines, with a particular emphasis on procrastination tendencies, as part of the background material. Respondents were asked to choose the statement that best reflected their strategy. The results are shown in Table 2. Out of a total of 100 responses, 50% of participants predominantly identified themselves with the statement "I prioritize my tasks." Meanwhile, 20% indicated a preference for "I work on tasks whenever I find time." Another 10% associated most with "I prioritize tasks depending on their priority in the queue," and an equal 10% reported, "I tend not to tackle any tasks." Additionally, 10% leaned towards "I only complete tasks that I can manage to accomplish."

Table 2: Respondents' results on how they deal with tasks

Items	Responses
I prioritize my tasks	50%
I work on tasks whenever I find time	25%
I prioritize tasks depending on their priority in the queue	10%
I tend not to tackle any tasks	5%
I only complete tasks that I can manage to accomplish	10%

Table 3 presents a comprehensive overview of the Kipidap mobile app's design and features, considering user experience (UX), user interface (UI), and content curation. The app's user-centered design prioritizes a seamless and intuitive user experience, ensuring effortless navigation for all users. Its user interface combines visual appeal with functionality, presenting information in an organized and aesthetically pleasing manner. The Kipidap body of knowledge has been customized to educate the UiTM students towards preventing procrastination. Besides the informative materials, the user interface (UI) has been carefully designed to offer emotional support for end users. The design iteration is based on feedback from 100 respondents, ensuring the Kipidap app fulfills their requirements and preferences.

Table 3: Kipidap mobile app responsiveness assessment

Factor	Associated factors	Percentage
User Experience	Ease of Navigation. The app's user-friendliness and the ease with which users can move through its features.	97%
User Interface	Layout and Organization. How information and features are arranged on the app's interface for intuitive use.	95%
Content	Educational Value. Providing informative and educational materials that empower users.	98%

It is worth noting that the effectiveness rate displays high percentages, with content at 98%, the UI at 95%, and User Experience (UX) at 97%. This indicates that Kipidap app follows the user-centered design principles. In particular, the high UX scores suggest that the Kipidap smooth navigation reduces cognitive load (Sweller et al., 2011). With a 95% score for UI, the significance of aesthetic allure is coupled with functional organization. The 98% content score shows the Kipidap app excels in delivering educational materials to the end users. Hence, it aligns with Self-Determination Theory (Ryan & Deci, 2011), which suggests that significant contents foster intrinsic motivation. The results align with the Technology Acceptance Model (TAM), indicating that perceived value and ease of use contribute to the acceptance of the Kipidap app. Besides that, the Kipidap app consists of all components to manage procrastination among UiTM students, such as a Pomodoro timer and motivational awards. This features is directly related to Temporal Motivational Theory (TMT), which highlight the satisfaction in reducing procrastination behavior. The end result indicates that the UX, UI and the total content of the Kipidap app meet the end users' criteria and expectations, therefore improving their overall experience.

4.2 Insights from expert interviews

Interviews with the psychology experts, which were conducted in the initial phase was aimed mostly to gain better understanding of the end users learning environment. It is noted that the panel of experts emphasized the unexpected shift in the learning environment due to the Covid-19 pandemic, which disrupted the usual practices for every student to manage their time well. The absence of a physical classroom and the distraction from the social media were found to be the major reasons for the upward trend in procrastination among students. Besides that, experts observe that in the virtual learning setting, problems regularly happen when students fail to attend, and this raise concerns on both ethics as well as accountability. This change made students deem isolated which led to more procrastination in their learning environments. Experts do recommend by applying systematic time management, such as the Pomodoro Technique, to help students

recover their concentration and motivation. The suggestions sincerely help to design the Kipidap app properly. The experts' findings explain the sources of procrastination during the pandemic and validate the Kipidap app as a capable method for supporting students in virtual learning environments.

5. CONCLUSIONS AND RECOMMENDATIONS

To conclude, this study has provided a solution for UiTM students on procrastination. It also offered a deep understanding of this complex issue. It signifies not only the factors that contribute to procrastination but also the emotional, social, and academic well-being. Most of the end users discovered that the Kipidap app is inventive in assisting and reducing procrastination. This app also furnishes them with the necessary instruments to overcome it and support lifelong learning. Hence, this effort contributes to the achievement of SDGs 3 and 4 by fostering emotional well-being and improving the educational experience of every student.

To improve the value of the findings, it is suitable to integrate the Kipidap app into academic assistance programs at other higher education institutions, in tackling procrastination issues across various academic backgrounds. Training sessions must be organized to assist students' efficient adoption of the Kipidap application. Policymakers and educators should investigate how to integrate digital tools such as Kipidap into educational frameworks to enhance productivity. For future research, it is recommended to examine the Kipidap app long term effects on academic achievement. Additionally, scholars could also investigate the feasibility of integrating AI technology.

REFERENCES

Amit, A. J., Gautam Shankararam, S. R., Pradeep, P., Perumalraja, R., & Kamalesh, S. (2021). Framework for preventing procrastination and increasing productivity. In *2021, 3rd International Conference on Signal Processing and Communication (ICSPC)* (pp. 228–232). IEEE. <https://doi.org/10.1109/ICSPC51351.2021.9451773>

Amran, A. S. B., & Zulkifli, M. B. (2020). Index developing and modelling the factors of academic procrastination among university students. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 5(9), 63–75. <https://doi.org/10.47405/mjssh.v5i9.482>

Barel, E., Shahrabani, S., Mahagna, L., Massalha, R., Colodner, R., & Tzischinsky, O. (2023). State anxiety and procrastination: The moderating role of neuroendocrine factors. *Behavioral Sciences*, 13(3), Article 204. <https://doi.org/10.3390/bs13030204>

Chaturapanich, T. (2023). The influence of coping strategies on resilience among undergraduate students: The mediating role of trait mindfulness. *Humanities, Arts and Social Sciences Studies*, 23(2), 264–272. <https://so02.tci-thaijo.org/index.php/hasss/article/view/263575>

Cirillo, F. (2018). *The pomodoro technique: The acclaimed time-management system that has transformed how we work*. Currency.

Dimaano, G. M. (2023). Self-concept and social mobility of female faculty in higher education institution. *Humanities, Arts and Social Sciences Studies*, 23(1), 114–122. <https://so02.tci-thaijo.org/index.php/hasss/article/view/261098>

Dizon, R. J., Ermitanio, H. D., Estevez, D. M., Ferrer, J., Flores, S. J., Fontanilla, K. M., Frias, A., Galang, E., Guei, N. F., & Sugay, J. (2021). The effects of Pomodoro technique on academic-related tasks, procrastination behavior, and academic motivation among college students in a mixed online learning environment. *Globus: Journal of Progressive Education*, 11(2), 58–63. <https://doi.org/10.46360/globus.edu.220212009>

Jalaluddin, N. I., Bakeri, N. S. M., Nasir, K. M., Rani, N. M., & Kamaruzaman, M. F. (2016). Managing stress among adolescents by using digital visual schedule. In S. Z. Abidin, R. Legino, H. M. Noor, V. V. Vermol, R. Anwar, & M. F. Kamaruzaman (Eds.), *Proceedings of the 2nd International Colloquium of Art and Design Education Research (i-CADER 2015)* (pp. 241–250). Springer. https://doi.org/10.1007/978-981-10-0237-3_25

Karakaya Özyer, K., & Altinsoy, F. (2023). Academic procrastination of university students: The role of problematic internet use, self-regulated online learning, and academic self-efficacy. *Malaysian Online Journal of Educational Technology*, 11(1), 77–93. <https://doi.org/10.52380/mojet.2023.11.1.459>

Koppenborg, M., & Klingsieck, K. B. (2022). Social factors of procrastination: Group work can reduce procrastination among students. *Social Psychology of Education*, 25(1), 249–274. <https://doi.org/10.1007/s11218-021-09682-3>

Odaci, H. (2011). Academic self-efficacy and academic procrastination as predictors of problematic internet use in university students. *Computers and Education*, 57(1), 1109–1113. <https://doi.org/10.1016/j.compedu.2011.01.005>

Ryan, R. M., & Deci, E. L. (2011). A self-determination theory perspective on social, institutional, cultural, and economic supports for autonomy and their importance for well-being. In V. I. Chirkov, R. M. Ryan, & K. M. Sheldon (Eds.), *Human autonomy in cross-cultural context. cross-cultural advancements in positive psychology* (Vol. 1, pp. 45–64). Springer. https://doi.org/10.1007/978-90-481-9667-8_3

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, 133(1), 65–94. <https://doi.org/10.1037/0033-2909.133.1.65>

Sweller, J., Ayres, P., & Kalyuga, S. (2011). *Cognitive load theory*. Springer. <https://doi.org/10.1007/978-1-4419-8126-4>

Touloupis, T., & Campbell, M. (2024). The role of academic context-related factors and problematic social media use in academic procrastination: A cross-sectional study of students in elementary, secondary, and tertiary education. *Social Psychology of Education*, 27(1), 175–214. <https://doi.org/10.1007/s11218-023-09817-8>

Uopasai, S., Bunterm, T., Tang, K. N., & Saksangawong, C. (2022). The effect of meditation on metacognitive ability, working memory ability, academic achievement, and stress levels. *Humanities, Arts and Social Sciences Studies*, 23(1), 217–226. <https://so02.tci-thaijo.org/index.php/hasss/article/view/242786>

van Eerde, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences*, 35(6), 1401–1418. [https://doi.org/10.1016/S0191-8869\(02\)00358-6](https://doi.org/10.1016/S0191-8869(02)00358-6)