Time Scheduling and Finance Management: University Student Survival Kit

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Abstract - With plenty of opportunities for new social interactions, events, and other perspectives, it may be a challenge for students to balance both time and money simultaneously. Even though there is a variety of planning and budgeting application in the market to help students in terms of education and personal life, students ought to download multiple applications that only have a particular function. With this multifunctional application - StuLogger, it aims to improve student knowledge and promotes self-reflection, which may encourage students 'perception of their time spent and allow them to track their financial activity efficiently. It allows users to set up income and expense from various options such as food, transportation, bills, and others. Besides that, the app comes with a calendar, notes and reminder to allow users to organize their daily activities. The study employed a mixed-method approach in which both survey and interview were conducted online by students from private university.

Keywords: multifunction application, students, time planning, finance managing, money, note-taking, reminder, countdown timer, planner, tracker, time expenditures, financial behaviour

I. INTRODUCTION

Applications, also understood as apps are computer programs produced precisely for Internet-based mobile devices such as smartphones, smart TVs and tablets. This software provides a unique function for the user, usually by a touchscreen interface. Mobile applications, especially smartphones, are growing in demand over the last decade [1-3]. Currently, there are more than 12 billion internet-connected devices, and this amount is expected to grow past 14.2 billion in 2019. At every second, another 125 devices are connected to the internet. By 2025, there are suspected to be more than 75 billion IoT devices worldwide [4]. There are so many software developers who want to develop a new mobile app to complete the requirements of the users and currently in high demand in the industries of technology. Therefore, it's no surprise there was more than 205 billion apps installation within the Apple App Store and the Google Play Store by the year 2020.

Before the development of mobile applications, students were to use a personal organizer or a piece of paper to mark down their daily and monthly expenses, timetable, important dates, and notes. Nevertheless, a personal organizer or a piece of paper will not remind the users about the important dates or the amount of money that had been used. Therefore, in this era of technology, the need for investment in new technology is essential for students, especially in university. Smartphones are very popular with students from the Millennial and Generation Z. Many students were born with their lives being influence by technology. Young adults seem to have more regular use of the device than grown-ups.

A university environment' freedom and flexibility can hinder students who have not mastered time-management skills. In university, students will be challenged with many competing demands in their time. Consequently, many students simply choose to give up and let the situation takes its course. Without interference from a lecturer or parents, the student is unlikely to succeed and will end up with low academic results [5]. Based on a survey conducted by Cengage Learning, the majority of students say that they do find that it's harder to manage their time in university. By becoming better at time management, students are to become more systematic, more confident, and learn more productively. Good time management can prevent students from the dreaded procrastination problem that can also lead to pressure, disappointment, guilt, and higher-level of anxiety [19]. Besides that, these matters can worsen the condition of a student to have depression, negative thoughts and even create a fall-off point for academic grades. When students enter university, they need to bear with more tasks and exams. Knowledge in time management skills also plays a crucial role among university students because it allows them to keep them on track and reduce the burden while they take on more jobs.

Financial stress and responsibilities have been identified as one of the reasons students leave university. Many university students are living on the verge of the financial crisis and many of them do not possess the understanding needed to manage their money. A study had found 43% of students don't track their spending while 58% said they aren't saving money each month. It is a fact that this is a common problem among university students. High school students are less likely to worry about their financial problems because they can easily get their pocket money from their parents or guardians. However, in university, students ought to face more financial difficulties as most university students live far away from their homes. They need to concern whether they don't have enough money to pay for their tuition fees or monthly expenses including food and groceries. Financial problems led some students to make tough choices. Students tend to reduce their class load because of the amount they

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owed. Some took a break from their studies to earn money, others transferred to a different institution that is lowlier budget [17].

StuLogger, short for student logger, is a multifunction mobile application that is developed to help students from in university to manage both time and money wisely. The app includes notes, reminder, and calendar. It aims to improve student's time management which will lead to the betterment of student performance in academics and promote students to trace money on daily, monthly or semester basis [20].

Problem Statement, Question & Objective

In the attempt to identify the student's activity and perspective regarding time management and the connection of money management, three research objectives were to be answered via the research questions.

Table 1: Research Questions

RQ1: How does the mobile application significantly improve students academically and financial?
RQ2: How to promote student to use the mobile application to utilize their time?
RQ3: What impact does the mobile application have on the student's spending?

There are 3 research questions determined to evaluate the value creations. The research will be carried out at a private university to reduce the scope area. Each research question will be answered by each research objective in Table 2.

Table 2: Research Objective

R01: To study the impact of time management on education on the personal life of university students.
R02: To develop a user-friendly mobile application for students to do their tasks.
R03: To test the effectiveness of a finance management application for a student to learn to manage money.

Based on Table 3, this study is aimed to create a mobile application to promote students to take note of how they utilize their time and money daily.

R01: To study the impact of time management on education, and financial planning on the personal life of university students. Students will know what/when to do their task to avoid last-minutes and how much money they had spent base on the daily, weekly, semester.

R02: To develop a user-friendly mobile application for students to do their tasks. The interface of the application should be simple to ease the student while using it. With the reminder feature provided in the app, users will not forget to do their appointed duty.

R03: To test the effectiveness of a finance management application for a student to learn to manage money. Students will know their responsibility with their money, therefore, reduce the burden of the money they owe.   From the

objectives acquired, below are the hypotheses for each point of it and summarized in figure 1 below.
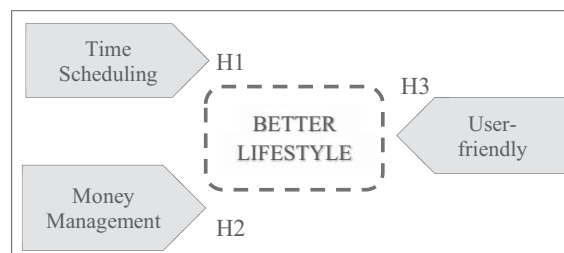

Fig. 1: Research Model

H1: Time scheduling will help to increase students' performance in academic.

Students who just enrol in college can be quite hectic when it comes to time management. Unlike in high school, there are loads of assignment and presentation in college. Hence, students who do not know how to organise their time well will cause a downgrade in their academic. Students need knowledge of the time schedule to plan their current and future task, which leads them to achieve higher grades in their academic [18].

H2: The user-friendly application will help to promote student's development.

The interface of the application should be user friendly and attractive to students. It should be eye-catching yet less complicating as-in without having too much pop-up advertisement. Furthermore, it will reduce the trouble of students to download multiple application with several functions.

H3: Money management skills will allow the user to log their weekly income and expenses

Individuals who showed higher stress rates were more likely to feel like their debt burden would make it difficult for them to complete their degree [16]. Therefore, students need to log their income and expenses to avoid overspending.

Value Creations

With all features provided in the app, users will know how to plan their tasks and how they spend their money. Hence, students can avoid last minutes doing assignments and prevent overspending.

II. LITERATURE REVIEW

The purpose of this project, as stated earlier, is to develop a multifunction mobile application for private university students. This section compares the existing application that is related to the study.

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Table 3: Current Application Comparison [10]

App Name / Features	Wunderlist	TickTick	Mint
User Login	X	X	X
Calendar	X	✓	X
To-to-list	✓	✓	X
Alert Reminder	✓	✓	✓
Note-taking	✓	✓	X
Countdown Timer	X	✓	X
Track expenses	X	X	✓
Data analysis	X	X	✓

✓: Applicable in App   X: Not Applicable in App

Table 3 displays all features in 3 different mobile application. Those applications have only one common feature which is notification reminder. However, when a user needs to plan their schedule or track their expense, they ought to download several applications that have a specific feature. As a result, users tend to download several applications which is inconvenient and troublesome. Apart from that, the storage capacity will increase as users install multiple application in their mobile devices [11].

III. METHODOLOGY

This section discusses the research methodology that will be conducted in this project. For this analysis, data were collected via an online survey and interview. The data will be obtained using the following methodology, as shown in the table below.

Table 4: Research Methodology [16-17]

Research Dimension	Explanatory Sequential Design
Research Methodology	Mixed Mode
Research Methods	Comparative Analysis

Explanatory sequential design is used as the research dimension in this research. Meanwhile, the research method applied is comparative analysis. The study employed a mixed-method approach to answering how and why questions from the target audience, students more effectively. Therefore, both quantitative and qualitative research method is integrated into this project. This method allowed a deeper understanding of the problem under research than one methodology would have been used on its own [8].

To elaborate on the steps on data collection, the sequential design will illustrate as shown in figure 2.
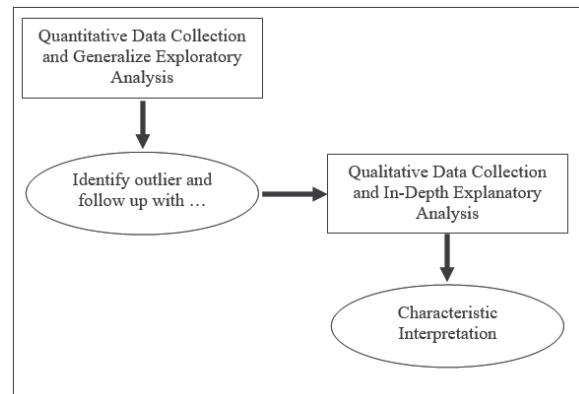

Fig. 2: Sequential Design [13-24]

Usually, a sequential explanatory method is used to describe and analyze the quantitative results through the accumulation and interpretation of qualitative follow-up results. When unexpected results emerge from quantitative research it can be especially useful. Besides, from the figure above it can see that the first step of research is to generalize exploratory analysis. Data collection is performed using a quantitative online survey data collection approach, which simplifies the whole process of analysis as a result. After the generalized explanatory analysis has been established, it is important to perform qualitative data collection which is the interview. The purpose of performing qualitative data collection is to do the in-depth explanatory analysis of quantitative research to justify the previous result [12].

Using the survey as a quantitative data collection, the respondent's data were obtained using a range of open and closed-ended questions. The distribution of the survey and interview was conducted through an online survey, which was created using Google Form. Clearly, the survey did not contain any area to indicate specific identities of the respondents such as names and their identification number to ensure the anonymity of the students [8]. Compared to a traditional paper survey, the online survey is very flexible. The online survey enables people to do something in whatever location on a mobile, desktop, and notebook. It can also auto-generate outcomes for us using the data collected [14]. As for the interview, the researchers used the respondent's interview to validate data obtained. The sampling unit for the research was students from a private university. In the actual data collection, there are 70 respondents for the survey and 15 people asked for an interview. Further explanations about the findings are discussed in the result and finding session.

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IV. RESULTS AND FINDINGS

Given the current situation of the global pandemic virus in Malaysia, both survey and interview were asked through Google Form. This section describes the analyses of the findings that had been carried throughout the entire process.

The survey starts with a question referred to if the respondents struggle more with time management in university. As a result, 89% (62 out of 70) of respondents said they do struggle more with time management now in university compared to high school. According to the interview, many respondents said they worked in a part-time job and took part in student activities. However, balancing a job and a sports club is a big commitment [4]. They tend to cram all these activities into one day and do not get enough sleep, which causes them to perform badly in academic.
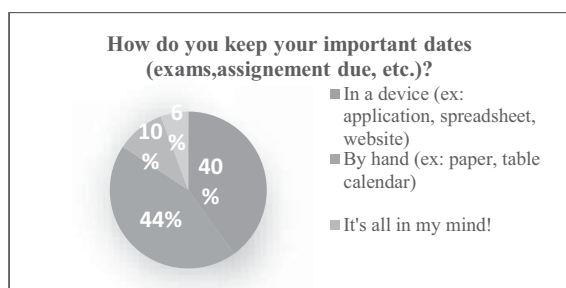

Fig. 3: Important Dates Reminder

The figure shows the result of the survey, in which respondents were asked about their preferred way of keeping their important dates and events. There is a relatively close-ratio percentage between respondents who kept their important dates by hand and in a device, with just four per cent difference between these two. 31 out of 70 respondents said they kept their important dates by writing down on a paper calendar. Meanwhile, there are 28 out of 70 respondents who kept it in an electronic device. This can further explain why students are always in the last minutes when they are facing with upcoming exams and assignments, which affects their studies.

Based on the interview, 11 out of 15 respondents state they prefer to use a planner application that can generate a reminder to notify their important tasks. With this feature, user can get notifications as a reminder for them to finish their task before the deadline. Along with it, 8 out of 15 respondents also state the planner application should have a countdown timer so users may be more motivated to do their task as they see an imminent deadline via the countdown timer. The countdown timer reduced the time of realization, thereby increasing motivation [21]. Other than that, 6 out of 15 respondents prefer the mobile application to have the function of note writing. They can always refer to the notes since they have their phone and the application with them.
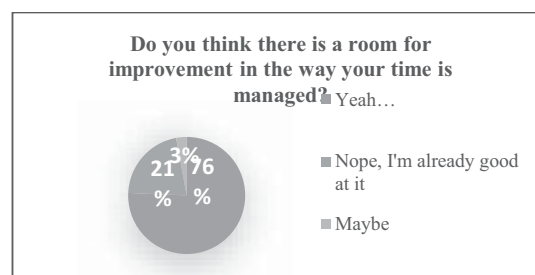

Fig. 4: Time Management Improvement

From the figure, it's been clear that majority of respondents (53 out of 70) state that the way of their time that is being managed could be improved, whereas a small and confident segment of respondents (2 out of 70) state it's not necessary. This statement could support people to encourage them to improve their way of time management with a planner application.
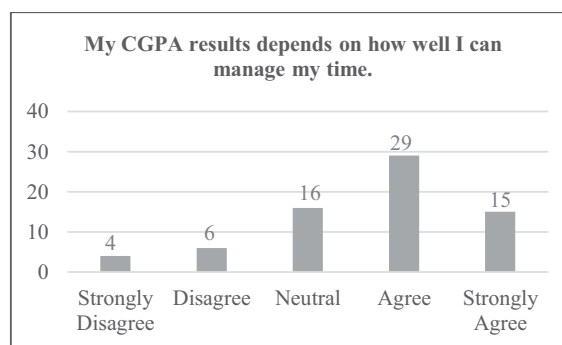

Fig. 5: Time Management vs CGPA Results

Besides that, there are 86% (60 out of 70) respondents agree that their CGPA results depend on how well they can manage their time. This analysis highlights the importance of time management among university students. From the interview, 10 out of 15 respondents also mention they had to arrange more time on their most demanding work to ensure the task can finish within the time frame.

Apart from than that, the respondents were asked how they keep track of their daily income and expenses. Among 70 respondents, only 30 of them (43%) state that they use a device such as a budgeting application or a website to keep track of their money. Those respondents also mention that they do not use the budgeting application frequently because they lose the determination to use it. Not only that, but the application also does not provide a great user interface and does not generate reminders for them to log their income and expenses.
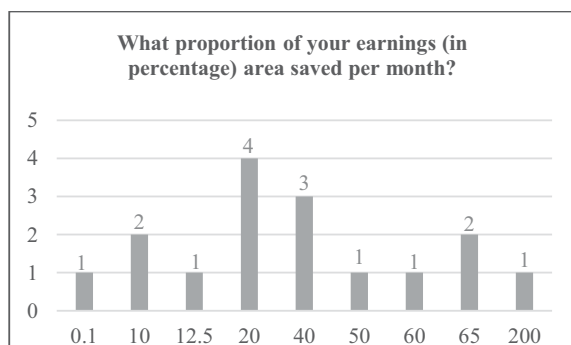
Fig. 6: Savings Per Month

To improve the accuracy of the findings, some part of the negative results will be ignored. From the interview, 8 out of 15 respondents state their proportion of their monthly earning is less than 20 per-cent in total average. Majority of respondents think that it's difficult to keep track of their money in a budgeting application because the app does not remind them to log in their earnings and spending.
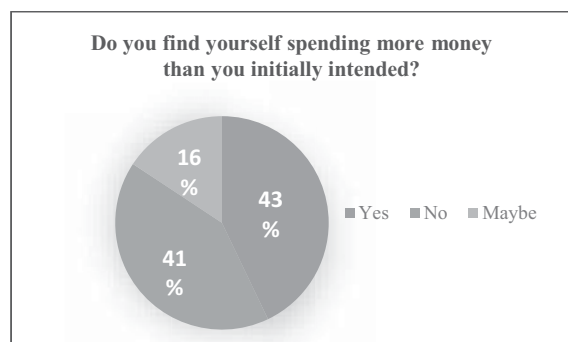

Fig. 7: Spending Patterns

Furthermore, the respondents were asked if they find themselves overspending their money. 59 out of 70 respondents state that they do spend more than they intended. They do not limit themselves when it comes to spending because most of the respondents fail to control themselves when it comes between the "needs" and "wants".
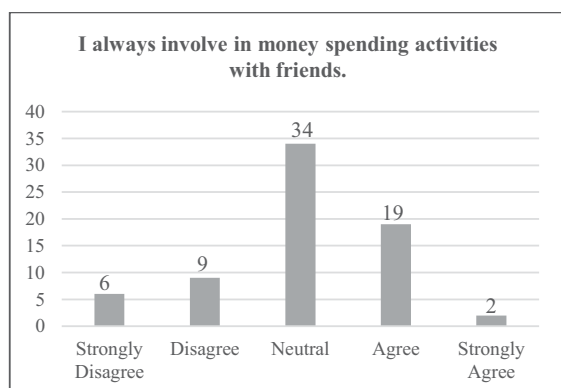

Fig. 8: Spending Patterns with Friends

79% of respondents agree that they always involve in money spending activities with their friends. Some claimed they are influenced by the decisions of certain friends around them

every day. For instance, if their friends want to grab a meal, catch a movie, or go on a trip, it's hard to reject them even though they do not have enough money in their entertainment budget. Not to mention the fact that spending money can be a cover-up for stress or difficult feelings. They also reward themselves after handing in a huge report, by spending more on entertainment. For this reason, it is a common issue associated with women when they have compulsive spending, which may lead to an addiction.

From the survey, there are 61% (43 out of 70) of respondents did not take the finance-related course in university, whereas only 23% (16 out of 70) are taking the course. This explains why most students are poor in financial literacy and money management. Students who take the finance course helps them to make better decisions with their money. Finance is about organizing and analyzing, learning finance and being more financially literate, help students to make smarter personal financial decisions [6].
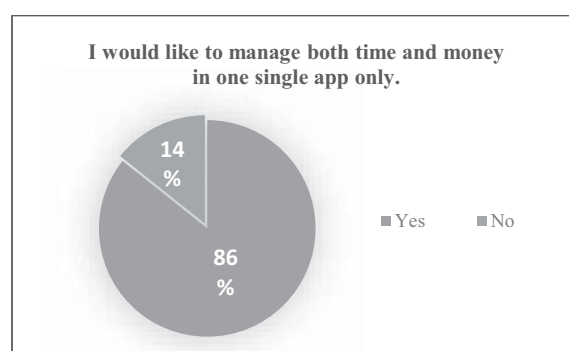

Fig. 9: Financial Management Apps

In general, it seems that 60 out of 70 respondents support the idea of having a multifunction mobile application that can organize their task and events, at the same time, keep track of their weekly income and expenses. As being said, with the multifunction application, users will know the importance of time scheduling and financial managing and therefore lead them to achieve their goals.

V. CONCLUSION, LIMITATION AND FUTURE WORKS

In conclusion, higher academic success is correlated with effective time management, which reduces the level of anxiety in students. Student life at the university requires good time management across the various phases of existence to achieve academic success and balance job and personal life [25]. If users were to create time allocation expectations every day or week, they would be able to use event scheduling to make time management decision that would enable them to meet their defined goals. Furthermore, studying the background of money management techniques and how students make financial choices can enable financial counsellors and professionals discover methods of preventing or minimizing tension by understanding ways to interact with finances at times of financial stress [22].

As with most studies, this research also has its limitations. First, survey and interview questionnaires among young adults represented by private university students were conducted via the internet. Their lack of clarification on the matter could have affected the degree of error in their

judgments, and thus the precision of the research. It is also likely that respondents may be biased in responding to the queries. The second limitation of the research was the sample of respondents. All research respondents were based in the same private university in Malaysia, which restricts generalization [24]. Another limitation is that the research was conducted by some students who were in a finance-related course. To some extent, such students can also be more knowledgeable about their finances.

VI. References

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