The Influence of Gadget towards Information Technology Addict and Procrastination Behaviour

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Abstract. The objective of this research is to find the influence of gadget towards social media addict and procrastination behaviour especially for college students. The method in this research used quantitative and descriptive methods. The questionnaires are distributed to 100 of college students from one of university in Bandung as sample in this research, whereas to find the rate of addiction on social media and procrastination behaviour used multiple regression analysis. From this research can be found There are positive correlation between gadget and social media addict \((r=-0.25, p<0.001)\), while correlation between gadget to procrastination tendency has positive correlation too \((r=0.27, p<0.001)\). Meanwhile the correlation of social media addict to procrastination also has positive correlation \((r=0.054, p<0.001)\). It can be concluded that the influence of gadget towards social media is around 25%, the influence of gadget towards procrastination tendency is 27% and the influence of social media addict to procrastination is around 54%.

1. Introduction
Nowadays, most of people around the world use internet in their daily life. Millennial generation as the most generation who use gadget, most of them cannot stay away from their gadgets and some of them get addicted to gadgets, because they grow up in the massive technology era. Gadget is one of the most device that people need, because it can be used for communication, getting information or news from around the world, playing games, entertainment and getting many friends from different areas even different countries by social media. However, besides give positive impacts, gadget and social media also can give negative impacts. One of the negative impacts of gadget is making the user lazy and postpone their work or for student they often delay their task. Because of that, it needs to study of the influence of gadget towards social media addict and procrastination behavior.

The survey that conducted by UNESCO showed that 4 out of 10 Indonesians are active on social media such as Facebook and WhatsApp. [1] In 2018, the numbers of social media users in Indonesia increased 13% along with year on year user which reach 3,196 million users. [2] Millennial generation is one who often spend their times on social media. They are really hard to stay away from it. Because of that, they also often delay their task or indicate procrastination. The research showed that 95% of students are engaged to procrastination as proposed by Solomon and Rothblum (1984). [3] Ani (2010) found that there is an excessive use of internet reported in undergraduate students. [4] Thatcher and Goolam, (2005a, b) viewed internet addiction as a factor that influences the academic behaviour of university students. [5] Hur, (2006) and Kim et al., (2006), also proposed the effect of internet addiction on academic performance. [6] The millennial generations who spend a lot of time on
social media are tended to postpone their task, the more they spend their time on it the indication of procrastination and addicted on social media can be greater or acute. The objectives of this research are to find the correlation between the addictions on social media to deep the procrastination tendencies of the students and to find the crucial reason of students’ procrastination.

2. Methodology

2.1. Participants
The sample of this research conducted to 100 undergraduate students from one of University in Bandung. Slovin’s random sampling is applied to count the sample. [8] The sample consists of 78 (78 %) male and 22 (22%) female.

2.2. Procedures
The procedure in this research is conducted by asking the participants if they would like to participate in this research by answer the questions that related to the addiction on social media and procrastination. The questionnaire is given to the participants using Google Apps. Respondent’s opinions are measured by Likert Scale. Five points of agreement scale of Likert Scale are applied in this research to assess the agreement or disagreement. The quantitative method is conducted in this research. For calculating the scale of questionnaire, it is converted using Multiple Regression analysis with SPSS.

Temporal Motivational Theory (TMT) is a theoretical model that explains the motivation which includes time as a fundamental term (Steel and König, 2006) also applied in this research to find the deep of procrastination by finding the value of Temporal Motivation Theory (TMT). It is formulated as follows in Figure 1 [3].

\[
U = \frac{E \times V}{(\Gamma \times D) + 1}
\]

Note,
U = Utility
E = Expectancy
V = Value
D = Delay
\(\Gamma\) = Sensitivity to Delay

Figure 1. The Formula of Temporal Motivational Theory (TMT)
The Utility is a subjective perception of the usefulness of an effort for individuals The magnitude of this utility depends on the interaction between expectancy (E), and value (V) divided by the interaction between the length of time intervals when the subject tried to obtain the results of these efforts (D) and sensitivity to the time interval (\(\Gamma\)) which resulted in impulsivity in the execution of tasks. [3]

3. Result and Discussion
Nowadays, many people around the world use gadget in their daily life. Technically, modern gadgets may refer to technology devices or services such as mobile phones, computers, laptops, smartphones, internet, televisions, I-pods, pen drives, emails, Facebook, YouTube, Instagram and Twitter which are used every day by people especially the youths. [9] The most active users on social media are millennial generations. Because of that, the object of this research is the student of one university in Bandung Indonesia, as one who include to millennial generation. From the questionnaire that already spread to the participants found that as describe in the Table 1 below:
Table 1. The Daily Usage of Participants Spent on their times on Social Media

| Total Participants | Times (hours) |
|--------------------|---------------|
| 8                  | 1             |
| 12                 | 1.5           |
| 19                 | 2             |
| 21                 | 2.5           |
| 30                 | 3             |
| 10                 | >3            |

According to the Table 1 above, it can be seen that most of participants spent their time on social media around 3 hours (30 participants), even 10 participants spent their times more than 3 hours on social media, 21 participants spent their times on social media 2.5 hours per day, while 19 participants spent their times on social media 2 hours per day, 12 participants spent their times on social media 1.5 hours per day, only 8 participants who spent their time on social media around 1 hour. The result also accordance with the survey of Saima Salim on digitalinformationworld website that explains the daily time people spent on social media has increase from time to time. It shows on the Figure 2 below:

The Figure 2 above showed that from 2012 until 2018 the average of daily time spent on social media has been increased significantly from 1 and half hours a day in 2012 became 2 hours and 22 minutes in
2018. However, from that figure also can be seen that millennial generations (around 16-24 years old) are the users who most spent their times on social media, it is more than 3 hours per day.

However, someone who spent more than 3 hours per day on social media or social networking sites is reported as poor mental health. For example, as present young people tend to spend their times on Instagram, many of them use it as the platform to show their daily life to others and for gaining self-esteem also find the others attentions, but sometimes they compare their life with the other that make them feel their life worse than the others. Even the users of Instagram increase from time to time, now it reaches 800 million user around the world, but it was pointed as the worse of social media platform related to young generation’s mental health that proposed by UK survey. [11]

The addiction on social media beside can make the user get poor mental health also they get procrastination tendencies. Nevertheless, it can be describe as the tendency to postpone their work or task as Steel (2008) pointed out that procrastination effects the self-efficacy and self-actualization, distractibility, impulsiveness, self-control and organizational behaviour of the students. It caused the students passive and lazy to do their task and increasing the delaying tendency, so it is not surprisingly may effect on students personality traits on learning. [12]

Procrastination has been specified into three types: decisional procrastination (inability to make a decision within a specified time period); arousal procrastination (purposefully waiting until the last minute for a thrill-seeking sensation, yielding pleasure from “beating the clock”); and avoidance procrastination (delayed motivation by a desire to prevent performance evaluation and fears) [13].

As Steel (2007) proposed in his research about the procrastination relationships with its variables on the Table 2. As stated in the procrastination literature, self-efficacy is assessed primarily for the academic and work domains. Second, value is represented by three major variables. It is directly expressed by task aversiveness. The more unpleasant a task, the more likely one will be to put it off. In another words, people tend to delay their task because they think that is unpleasant task. Also, need for achievement should be negatively associated with procrastination. Because people need the high achievement, they should work or do their task with enjoy. Similarly, boredom proneness should be positively associated, because boredom makes work less pleasant. [14]
Table 2. Expected Procrastination Relationships with Its Variables and The Validation Temporal Motivation Theory [14]

| Construct                                      | Theoretical connection                                                                 | Relationship |
|------------------------------------------------|----------------------------------------------------------------------------------------|--------------|
| Expectancy                                     |                                                                                       |              |
| Self-efficacy                                  | Represents the belief that one has the capability to successfully complete a range of tasks. | Negative     |
| Value                                          |                                                                                       |              |
| Task aversiveness                              | By definition, unpleasant tasks have low value.                                         | Positive     |
| Need for achievement                           | Helps to create more pleasure in accomplishment.                                       | Negative     |
| Boredom proneness                              | Increases the likelihood that a broad range of life’s tasks will be found tedious.       | Positive     |
| Sensitivity to delay                           |                                                                                       |              |
| Distractibility, impulsiveness, lack of self-control | All three of these variables are empirically related to sensitivity to delay.           | Positive     |
| Age                                            |                                                                                       | Negative     |
| Sensitivity to delay tends to decrease with age.|                                                                                       |              |
| Delay                                          |                                                                                       |              |
| Timing of rewards and punishment               | Emphasizing the focus of past research, delay is operationalized as the delay for rewards. | Positive     |
| Organized                                      | Helps with the creation of proximal goals.                                             | Negative     |
| Intention–action Gap                           | Represents a failure to later act upon intentions.                                      | Positive     |

The correlation between gadget and social media addict has positive correlation ($r=-0.25$, $p<0.001$) the more smart or sophisticated the gadget, the more highest the tendency to social media addict because the sophisticated gadget makes people tend to spend a lot of time on it. This result is in line with the research proposed by Samy from Al Azhar University, the study concludes that mobile use by individuals has reduced the time they spend engaging in face-to-face communications with each other because of the time spent on the mobile. [15] Their messages, photos, chats, comments are fastest to upload or download also share to their peers. The level of social media addiction depends on how long the user spent times on it. For social media users that use it more than 3 hours per day have to be careful because it can lead to poor mental health.

While the correlation between gadget to procrastination tendency has positive correlation too ($r=-0.27$, $p<0.001$). Many people tempted and distracted because of their gadget. They focused on and play it, they gave to much attention on gadgets than others. Of course it can cause procrastination. The gadget users especially students they tend to delay do their task because of gadget. As proposed by Lepped et.al (2014) said that there is a strong negative correlation between the amount of time spent on the computer and the time spent on study; and again they found that people who spend more time on computers spend less time on studying and get less GPAs. [16] It is also in line with the research of Cheng et.al (2000) that proposed a significant positive correlation was found between total time spent on studying and test scores reflecting that procrastination can ultimately lead to lower academic performance. [17]

Meanwhile, the correlation of social media addict to procrastination also has positive correlation ($r=-0.054$, $p<0.001$). The depth of addiction on social media is related to the level of procrastination. As mentioned previously, that the addiction on social media may cause the tendency of procrastination level became high, because the students tend to became lazy, passive and their expectation to get high score on study become low. They do their task in the rush even they tend to give up on the task because there is no much time left. As Steel proposed on his research (2007) on table 2 Expectancy component is negatively correlated with self-efficiency because they already delayed the task and did the task in hurry,
even their expectation are too high that they can do the task on time but the fact sometimes they give up for the high score because they do without pay much attention and are not in the particular ways. [14]. Various studies also showed a significant correlation between internet addictions to procrastinations [18].

4. Conclusion
The students as one of millennial generation are well known by their activity that hyper-connected to the internet. They spent much time on their gadget and social media. This research conducted to 100 students of one University in Bandung. The research found that 30% of students spent their times on social media around 3 hours a day. There are positive correlation between gadget and social media addict (\( r = -0.25, p < .001 \)), while correlation between gadget to procrastination tendency has positive correlation too (\( r = -0.27, p < .001 \)). Meanwhile, the correlation of social media addict to procrastination also has positive correlation (\( r = -0.054, p < .001 \)). It can be concluded that the influence of gadget towards social media is around 25%, the influence of gadget towards procrastination tendency is 27% and the influence of social media addict to procrastination is around 54%.

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