

# Internet-based social media and its influence on student behaviour changes

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**Abstract.** This research identifies the types of social media used by students, its use as well as its impacts to student behavior in learning, communication, social attitude and learning motivation. This research is conducted in Medan city, Indonesia involving senior high school students as the respondents. The sample are randomly selected, 48 S. RI and 104 S.TI. Data is collected by using questionnaires, interview and observation, while analysed by using descriptive statistics. The finding of the research reveals that Google, YouTube, WhatsApp, Facebook make up the mostly used, whereas Twitter, Instagram, WeChat and Telegram use is less. The average duration of social media use is 11,31 hours per day with the highest order for social and entertainment purpose, whereas only the third and sixth for learning and insights purpose respectively. The use of social media for learning is found more among S. RI, while S. TI students. Behavior change identified are the increase of learning activity but the learning pattern is decreased. The frequency of communication increases, but the quality directly decreases. In terms of social behavior, caring and sensitivity increases, but emotional management decreases. This research suggests that it is important to socialize and guide the students in using social media, so threats could be turned into opportunities for Indonesian young generations.

## 1. Introduction

Social media is growing rapidly and emerging in all aspects of life, with no exception to the field of education. Adolescent students are the groups who are vulnerable to the influence of accessible social media [1,2]. During adolescence, students sense high curiosity, big desire of freedom as well as big ego [3]. Therefore, many students protest or even rebel against a rule at home, school and community of which they judge inappropriate to the truths they believe.

Young students' development is influenced by many factors, be it family, school and community environments. Social media that can be accessed freely will affect students' psychological development. If the values are different, then there is a conflict within them. The results of Sheldon's research [4] shows that social media have impact on the behaviour change, both for men and women.

The influence of the environment on teenage students is very strong, especially internet-based social media that is easily and freely accessible [5,6]. On the one hand, social media positively support the needs of schools and self-development. But on the other hand, it serves as a big negative threat for what it can cause. The study concludes that pivotal role played by social media such as You Tube and Facebook in the adolescent student life support their education, but some negative impacts also exist



[7,8]. Therefore, sufficient understanding and awareness of the values are required to enable the students to utilize the social media advancement to support their self-development.

This research aims to determine the types, the duration, the purpose of internet-based social media used by students, as well as its impact on student behaviour changes in learning, communication, social attitudes and learning motivation. This research is considered important because it can reveal the use of social media in the lives of students that can be followed up by mentoring the students to ensure the positive effect of social media use. Thus, the threat due to the free flow of information through the internet-based social media can be an opportunity to take the positive influence and benefit the lives of students.

## 2. Research methods

This research was conducted in Medan, Indonesia in 2018 involving high school students as respondents. The samples were randomly selected, resulting in 152 students who are divided into two groups: 48 students of regular internet use (S-RI) and 104 students of temporary internet use (S-TI). Data was collected through questionnaires, interviews, observations and document studies, while data was analysed by using descriptive statistics.

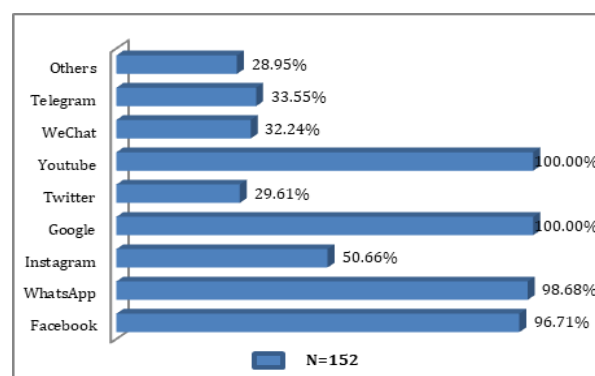
## 3. Results and discussion

The research succeeded in uncovering much information related to the social media use among students. All 152 student respondents use the two most popular media which are Google and YouTube, while not all respondents use other media. Table 1 presents the respondent data distribution in using social media.

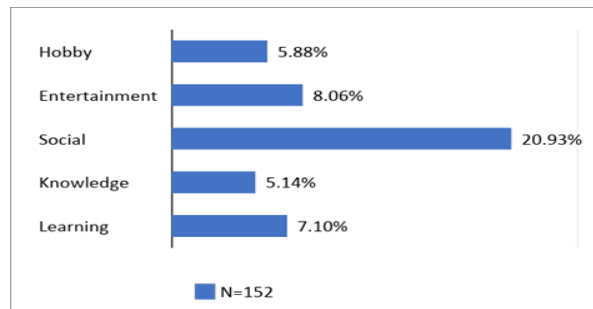
**Table 1.** Distribution of student using social media.

|       | Facebook | WhatsApp | Instagram | Google | Twitter | YouTube | WeChat | Telegram | Others |
|-------|----------|----------|-----------|--------|---------|---------|--------|----------|--------|
| S-RI  | 46       | 48       | 28        | 48     | 14      | 48      | 22     | 21       | 14     |
| S-TI  | 101      | 102      | 49        | 104    | 31      | 104     | 27     | 30       | 30     |
| Total | 147      | 150      | 77        | 152    | 45      | 152     | 49     | 51       | 44     |

The fulfillment of the content needed make the students reuse the media. Table 1 shows all the students use Google and YouTube to get what they need, followed by the users of WhatsApp 98.68% and Facebook 96.71%. While Instagram media is only used by 50.66% of students, Twitter, WeChat, Telegram and other social media are used merely by less than 35% of students. Figure 1 and Figure 2 visualizes the distribution of students' social media use.



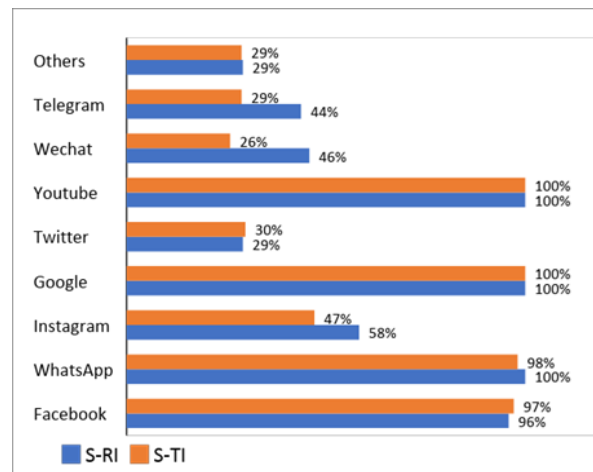
**Figure 1.** Percentage of social media users.



**Figure 2.** Purpose of social media used.

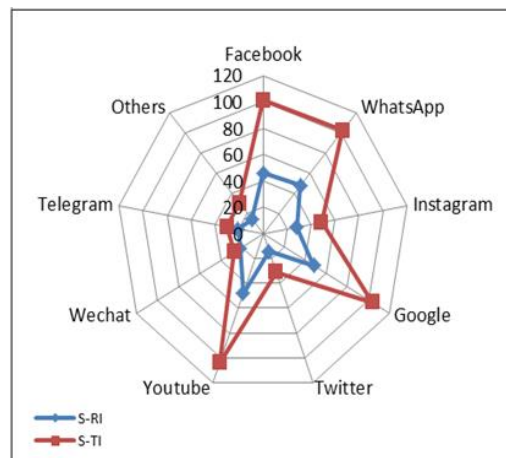
Social media is mostly used for social communication. Table 2 shows that the use of social media to support learning is only 7.10%, to increase knowledge 5.14%, while for social communication is greater which is 20.93%, and the rest is for entertainment purposes 8.06% which is higher than the need to support learning. This finding differs from that of Hong Kong which stated that 16.5% students use YouTube to support learning [9], and other media such as Facebook and WhatsApp, whereas the results of this study only indicate 7.10% use of social media to support learning. This fact is a disadvantage, because social media can be effectively used by students to learn independently, acquire extensive learning materials and integrate various media [10-12]. In addition, social media is also effective to support blended learning in an effort to improve student learning outcomes [8,13].

The use of social media based on student groups shows relatively similar data between the groups of students who use the regular internet access (S-RI) with a group of students who use the Internet on a temporary basis (S-TI). Figure 3 displays that social media Google and YouTube are used by all students, while other social media such as Twitter, WeChat and Telegram are only used by a small number of students. The S-TI student group use Facebook and Twitter more often than the S-RI group. In contrary, the other seven social media are used more by S-RI group than S-TI group. The following figure shows the visualization of students' social media use.



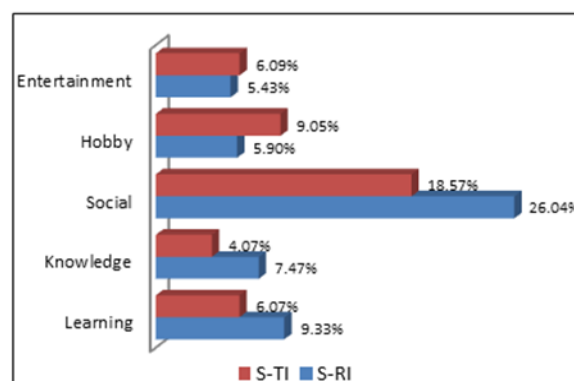
**Fig.3.** Percentage of social media use.

Based on the above figure, it can be seen that percentage of social media use is quite balanced. The difference only rests in three types of social media which are Instagram, WeChat and Telegram used more by S-RI group than S-TI group. YouTube, Google, WhatsApp and Facebook are mostly used while WeChat, Telegram and other media contribute to a small percentage of students use. This indicates that the social media is mostly used for social communication by students. Figures 4 and 5 show the details of the duration of the social media use.

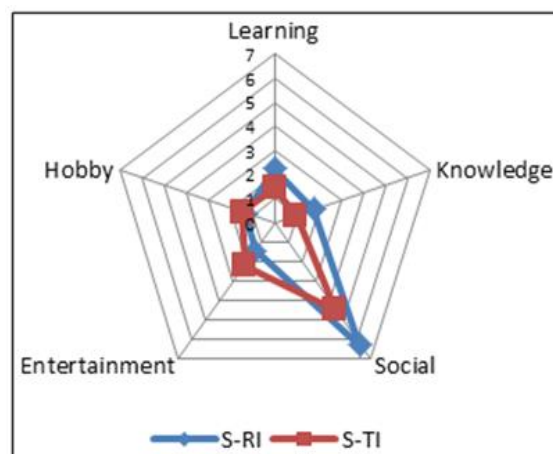


**Figure 4.** Frequency of social media use.

Instead of using social media as learning needs, some students use them for social relations and entertainment. The average time duration of social media use is 11,31 hours/day (47.11%) with the highest duration for the purposes of social relations and entertainment, while learning and improving knowledge lie in the third and fifth.



**Figure 5.** Percentage of time spent on social media.



**Figure 6.** Time duration of social media use.

The results of this research indicate that 7.1% of students' time is spent for learning purposes through social media, while in Malaysia, students use social media Facebook, WhatsApp and

Instagram for learning purposes on the average of 4.5 hours/day [1] while students in Hongkong use YouTube, Facebook and WhatsApp to support their learning on the average of 3.2 hours/day [8].

The use of media for social relations, learning and knowledge enhancement is mostly found among S-RI students rather than S-TI. In contrast, S-TI student group use the social media more for both entertainment and hobbies. The flow of information that can be accessed freely through social media affects the student behaviour. The results show that the use of social media has changed the student behaviour, not only in the aspects of learning but also communication, social attitudes and motivation. Table 2 shows the changes in student behaviour after using social media.

**Table 2.** Index of behavior changes due to social media use.

| No | Aspect of Behaviour Change |                          | Index |
|----|----------------------------|--------------------------|-------|
| 1  | Learning Activity          | Learning effectivity     | 1.42  |
|    |                            | Learning intensity       | 1.24  |
|    |                            | Efficiency               | 1.50  |
|    |                            | Learning rules           | 0.20  |
| 2  | Communication              | Direct relationship      | -1.20 |
|    |                            | Volume of communication  | 1.20  |
|    |                            | Content of communication | 0.80  |
| 3  | Social attitude            | Caring for others        | 1.56  |
|    |                            | Sensitivity              | 1.64  |
|    |                            | Emotional control        | -1.28 |
| 4  | Motivation                 | Spirit of doing activity | 1.36  |
|    |                            | Volume of activity       | 1.02  |
|    |                            | Confidence to success    | 1.62  |

Decrease    Constant    Increase  
-2.00   ←    0.00   →    2.00

It can be seen from the above table that within the aspect of learning, there is an increase in the frequency and intensity of learning though the learning patterns is declined. The frequency of communication with other people has also increased but the quality of the content of communications and social interactions with direct interaction decreases. In the social aspect, there is an increased level of awareness and sensitivity to the condition of the other person, but personal emotional control even more decreases. In the aspect of motivation, overall improvement occurs, including spirit of doing activity and confidence to achieve the best result. This is in line with the research of Fitrianur [14] which stated that social media has an effect on students' behaviour, i.e. affective effect in terms of the change and formation of behaviour including emotions such as feelings of compassion, sadness, joy, anger and so forth that stimulates the student behaviour change. In a similar vein, the research conducted by Roswita [5] also concluded that the students' motives and satisfaction in using social media has a linear impact on student behaviour changes. Similarly, Kot's research [15] proved that social media improve the student education.

#### 4. Conclusion

Based on the research findings, it can be concluded that social media is needed by students, especially Google, YouTube and WhatsApp. The use of social media is quite high but more for social communication rather than for supporting their learning. Social media has also changed the student's behaviour, specifically increasing the time duration, intensity of learning, motivation and self-confidence as well as increasing its social sensitivity. However, there are also negative impacts identified due to social media, namely the decreasing quality of content in communication and emotional control as well as the less direct interaction as it is replaced by social media. The research recommends the need for socialization and guidance to students for proper use of social media in order to positively impact the students' self-development in particular to support the success of their education.

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