



Data Privacy in Social Media: Awareness and Comfortability of Mathematical Computing Course Session I 2023/2024 Sultan Abdul Halim Mu'adzam Shah Polytechnic's Students

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Abstract

The increasing integration of social media into daily lives of individuals has raised significant concerns about data privacy. As users actively engage with various platforms, the extent to which they are aware of the privacy implications and their comfort levels with the use of personal data become vital issues. This study aimed to identify social media platforms that are often used by students, their level of awareness towards social media data privacy policy and their comfortability towards data privacy by social media companies. The respondents in this study comprises of 106 male and female students. The data are analyzed descriptively by mean, frequency and percentage. The level of awareness towards social media data privacy policy is high with average mean score 3.94, WhatsApp is the often-surfed social media platform by score of 89.62% and most students were highly comfortable with how educational social media platform used their data with mean 3.85. This study proposes the necessity of a diverse approach involving education, user empowerment, and technological advancements to enhance data privacy awareness and comfort levels among students in the realm of social media and prepare to a more secure and responsible online environment for the next generation users.

Abstrak

Meningkatnya integrasi media sosial dalam kehidupan sehari-hari individu telah menimbulkan kekhawatiran yang signifikan mengenai privasi data. Ketika pengguna secara aktif terlibat dengan berbagai platform, sejauh mana mereka menyadari implikasi privasi dan tingkat kenyamanan mereka dalam penggunaan data pribadi menjadi isu penting. Penelitian ini bertujuan untuk mengidentifikasi platform media sosial yang sering digunakan oleh pelajar, tingkat kesadaran mereka terhadap kebijakan privasi data media sosial dan kenyamanan mereka terhadap privasi data oleh perusahaan media sosial. Responden dalam penelitian ini terdiri dari 106 siswa laki-laki dan perempuan. Data dianalisis secara deskriptif dengan mean, frekuensi dan persentase. Tingkat kesadaran terhadap kebijakan privasi data media



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sosial termasuk tinggi dengan skor rata-rata 3,94, WhatsApp merupakan platform media sosial yang sering digunakan dengan skor 89,62% dan sebagian besar siswa merasa sangat nyaman dengan cara platform media sosial pendidikan menggunakan data mereka dengan rata-rata 3,85 . Studi ini mengusulkan perlunya pendekatan beragam yang melibatkan pendidikan, pemberdayaan pengguna, dan kemajuan teknologi untuk meningkatkan kesadaran privasi data dan tingkat kenyamanan di kalangan pelajar di bidang media sosial dan mempersiapkan lingkungan online yang lebih aman dan bertanggung jawab bagi pengguna generasi berikutnya.

Introduction

In the era of information and communication technology, data is increasingly accepted as a precious commodity and highly valued because it gives an advantage to whoever has it especially from a commercial aspect. The advent of innovative communication and media technologies is perceived as a factor that can contribute to the advancement of a developed nation by endorsing the concept of the digital economy, believed to have the potential to boost the country's income (Ali et al., 2020). Whereas, personal data is widely shared and required in commercial transactions. Therefore, the issue that is often discussed in relation to personal data is associated to the data privacy, data security, user's awareness and their comfortability.

So, the law to protect and control the flow of personal data has been introduced. Personal data protection legislation has begun to be widely enforced in most developed countries since 1990 (Schwartz, 1995; Cate, 1995). And now the action is followed by the majority of countries around the world. In Malaysia, the Protection Act Personal Data 2010 (APDP 2010) was introduced to prevent any misuse of the storage or processing of personal data through transactions commercial for example banks, telecommunication companies, insurance, hospitals, educational institutions and etc. Enrico et al. (2021) stated that numerous legal requirements for data protection must be considered when processing personal data for research purposes. The primary consideration involves assessing whether the information meets the criteria for being classified as personal data and can be serves as a fundamental factor influencing the application of data protection laws. The Act is part of the 10th policy goal of the Communications Act and Multimedia 1998, which is to guarantee the information security and reliability as well as network integrity in data protection in Malaysia (Mohd Hamdan, 2015).

Social media nowadays is not only a socialization agent but also used in conveying various information and issues including religion (Muhammad Adnan, Siti Nur Husna & Mohd Izhar Ariff, 2018). As technology in the cyber world explosively grow, of course it also brings negative effects to a country especially among users of the technology. The negative effect happened when error occurred during the process of conveying

information about the third party's privacy and when it is being misused it would jeopardize the reputation and the credibility of the subject data (Imam et al., 2018).

However, the rate of technology development as well as the use of social media in our lifestyle today become an important platform but issues such as privacy and security of user's personal information should be considered. Therefore, this study discusses the awareness and comfortability of users on these issues when using the social media.

The objectives of this research are:

- i. To identify social media platforms that are often used by students of the Mathematical Computing course Session I 2023/2024.
- ii. To identify the level of awareness of Mathematical Computing course students Session I 2023/2024 towards social media data privacy policy.
- iii. To identify the comfort level of Mathematical Computing course students Session I 2023/2024 towards the use of data privacy by social media companies.

The advent of the internet has brought a new dimension to the media landscape. Shapiro, in Croteau & Hoynes (2003) described that the emergence of new and digital technologies nowadays has shown a radical change in the aspect of controlling the information and resources, as well as experience gained from this new media technology. However, the leakage of the confidential information through social media has become a prevalent as today, many people are unaware that a considerable amount of private data has been exposed on the internet caused by both carelessness of the users and the actions of service providers (Yel & Nasution, 2022).

In addition, the atmosphere nowadays that mostly depends on online modern lifestyle has opened a new chapter for users including social life, educational, commercial and business aspects. In fact, the emergence of various social media applications nowadays has also changed the way of communication and interaction between the users (Hennig-Thurau et al., 2004). Furthermore, social media sites also assist in building a good network between users (Lorrie, 2010). However, users will also experience benefit as well as risks from social media as Jacobson et al., (2020) reveals there is a connection between consumers' comfort with marketers utilizing their publicly accessible social media data and their perceptions of the associated risks and benefits.

The study concerning of social media impact to numerous levels of users has been widely studied by domestic and foreign researchers. For example, Afendi Hamat, Mohamed Amin & Haslinda (2012), Farrah Dina Yusop & Melati Sumari (2013) and Adam Mahamat Helou & Nor Zairah Ab. Rahim (2014) studied social media users among the students. Nonetheless, they were not stressing on the aspects of security and data privacy. Truly, when communicating through social media, unknowingly, theft of personal information happened (Lai et al. 2012).

Zurawski (2005) stated that protection to our securities and data privacy is very important while using any technology. He also voiced the issues regarding how far the protection to that matters nowadays can influenced someone's activities and get their personal information. Most of the users enjoy sharing their personal information on social media without taking any initiative to protect it. Additionally, the issue is how far the users of social media applications are aware that the shared information has been seen by other users, then shared to the other users and stored for specific purposes? Are the users aware that the other users are watching their activities while they are online in certain social media applications? Users may not be aware the existence of the concept of digital surveillance through social media applications (Fuchs & Trottier, 2015), which in turn leads to positive and negative effects on themselves, family, community and country.

Social media mostly used by teenagers who tends to share their personal information via online (Pew Research Center, 2013). Although they are able to control their privacy settings on the social media, but the information shared can still be reached by a network of friends in cyberspace. This is proven by Madden et al (2013) who found 51% of the teenagers avoid using some applications on smartphones and tablets due to anxiety about their privacy in cyberspace. Studies also shown 46% of teenagers turn off location tracking features on their smartphones due to concern to their data privacy and do not want their movements to be known by the public. In addition, most of the teenagers who use this social media platform are less knowledgeable about the accessibility by third parties to their personal information in social media world.

Third parties easily can assault and misuse the users' data privacy and personal information via social media applications. It appears that there may be a lack of knowledge among users regarding the security risks associated with disclosing personal information and data privacy through social media applications (Mohamad Salleh & Mohd Ilham, 2017). Lots of social media applications surfed every day by teenagers especially students, such as Tik Tok, Instagram, WhatsApp, Telegram and Facebook. All the platforms need the users to fill some personal information when signing in. The issue is; does the users are aware towards social media data privacy policy? Are the users comfortable towards the use of data privacy by social media companies? Therefore, this study is significant enough to undergo the level of awareness and comfortability of the users; which in this case; we are narrowed it down to students towards data privacy in social media.

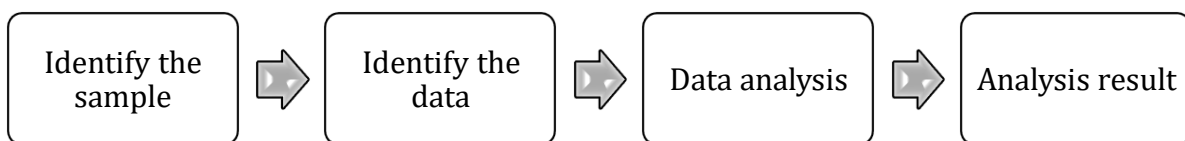
Method

The respondents in this study were semester 1 students of The Mathematical Computing course from Diploma of Information Technology (Digital Technology) (DDT), Department of Information and Communication Technology, Session I 2023/2024. The sampling used was convenience sampling equivalent with Stratton (2021), who stated that this method is cheap, efficient, not taking much time and easy to implement. All semester 1 students, DDT program with a total of 106 male and female students were involved in this study.

This study applied a quantitative design with a set of questionnaires that was adopted and adapted from Victoria, Jeffrey & Gemma (2021). The questionnaires were addressed at identifying the Mathematical Computing course students' awareness and comfortability regarding data privacy in social media. The content validity index (CVI) for all 21 questions has been done by the experts and the value was 0.92. Polit et al. (2007) said that the interpretations of the CVI which is above 0.78 have satisfactory content validity and the items were relevant.

Then, a pilot study was carried out with the aim of obtaining the reliability of the questionnaire conducted so that the findings were valid and trusted. Hence, a pilot study of 20 students was run. This number is sufficient for a deep study in social science field (Creswell, 2009; Marohaini, 2013). The Cronbach Alpha value for the entire awareness and comfortability items is 0.905. This showed that the instruments reached a level of reliability as a good measurement construct that is above 0.7 (Hair et al., 2010).

The data then were analysed quantitatively using Microsoft Excel 2019. The statistic was generated, including frequency, percentage and mean. Table 1 shows the mean score interpretation used that suggested by Pallant (2001). The respondents answered the survey via google form. The respondents voluntarily responded to that online survey.



Flow Chart 1. Conceptual framework

Table 1. Mean Score Interpretation
Source; Pallant (2001)

| Mean Score | Interpretation |
|-------------|----------------|
| 1.00 – 2.33 | Low |
| 2.34 – 3.66 | Intermediate |
| 3.67 – 5.00 | High |

Result and Discussion

Demographics Analysis

Table 2. Frequency distribution for gender, race and age

| Item | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| Gender : | | |
| Male | 59 | 55.66 |
| Female | 47 | 44.34 |
| Race : | | |
| Malay | 87 | 82.08 |
| Chinese | 6 | 5.66 |
| Indian | 11 | 10.38 |
| Siamese | 1 | 0.94 |
| Sikh | 1 | 0.94 |
| Age (year) : | | |
| 18 | 94 | 88.68 |
| 19 | 7 | 6.60 |
| 20 | 2 | 1.89 |
| 21 | 1 | 0.94 |
| 22 | 1 | 0.94 |
| 24 | 1 | 0.94 |

A total of 106 responses received via google form were then analysed in this study. The distribution of data in Table 1 shows that the majority of respondents consist of male students, that is 59 students (55.66%) and 47 female students (44.34%). Among them, there were 87 Malay students (82.08%), 11 Indian students (10.38%), and 6 Chinese students (5.66%). Meanwhile, there were one student (0.94%) each for Siamese and Sikh student. Besides that, most of the respondents' age was 18 years old, which is 94 students

(88.68%), 7 students (6.60%) were 19 years old and 2 students (1.89%) were 20 years old. The respondents that age 21, 22, 24 years old, were only one student (0.94%) respectively.

Objective 1

To identify social media platforms that are often used by students of the Mathematical Computing course Session I 2023/2024.

Table 3. Frequency distribution for frequently surf of media social platform

| Media social platform | Frequency | Percentage (%) |
|------------------------------|------------------|-----------------------|
| Facebook | 31 | 29.25 |
| WhatsApp | 95 | 89.62 |
| Tik Tok | 82 | 77.36 |
| Youtube | 56 | 52.83 |
| Instagram | 74 | 69.81 |
| Telegram | 53 | 50.00 |
| Twitter | 12 | 11.32 |

Table 3 shows the frequency distribution for frequently surf of media social platform among the students. The students can choose more than one social media platform listed in the questionnaires that they surfed daily. They believe that they can get information, share information and communicate easily via social media platform. Evidently, from the analysis WhatsApp was the main frequently surfed social media platform chosen by the students, 95 students (89.62%). This matter arised with the existence of WhatsApp groups according to individual subjects. Besides that, TikTok has been the second highest surfed by students next to Instagram, with 82 students (77.36%) and 74 students (69.81%) respectively. Youtube and Telegram also actively accessed by the students with 56 students (52.83%) and 53 (50%) each. Meanwhile, Facebook (29.25%) and Twitter (11.32%) were less frequently surfed by the students.

Objective 2

To identify the level of awareness of Mathematical Computing course students Session I 2023/2024 towards social media data privacy policy.

Table 4. Mean score for the level of awareness towards social media data privacy policy

| Item | Criteria | Mean Score | Average Mean Score |
|-------------|---|-------------------|---------------------------|
| A1 | I am aware of national data privacy policies related to the personal use of social media (The Personal Data Protection Act, PDPA 2010). | 3.98 | |

| | | | |
|-----|---|------|------|
| A2 | I am aware of the data privacy security issues of social media. | 4.18 | 3.94 |
| A3 | I am aware of the data privacy policies of different social media services that I use. | 4.09 | |
| A4 | I know there are security features in the social media I use. | 4.23 | |
| A5 | I am convinced that my privacy data could be threatened. | 3.91 | |
| A6 | I know how to control privacy settings and personal information in social media. | 4.24 | |
| A7 | I need to take steps to protect my social media privacy data when using social media. | 4.46 | |
| A8 | I am aware of the risks associated with privacy and security on social media. | 4.12 | |
| A9 | I see personal details about other people, causing me to feel the need to share my information with others. | 2.63 | |
| A10 | I am more careful when uploading videos of my activities via social media. | 4.37 | |
| A11 | I always provide my privacy data without feeling suspicious when asked to fill in the social media used. | 3.09 | |

Social media users undoubtedly realized that crime can exist via social media platform. So, it is very important for the users to be sensitive the do and don't when surfing and publishing something in the social media, and also to be alert about their data privacy. The items of A1 to A11 are the questionnaires asked about the students' level of awareness towards social media data privacy policy. Table 4 shows that the students were well aware about social media data privacy policy with mean score for each item between 3.67 – 5.00, except A9 and A11. These 2 items are negative questions directing them to answer the scale between 1 and 2. That is why the mean score for both items are 2.63 and 3.09 respectively. However, the level of awareness towards social media data privacy policy among the students were high with average mean score of 3.94.

Objective 3

To identify the comfort level of Mathematical Computing course students Session I 2023/2024 towards the use of data privacy by social media companies.

Table 5. Mean score for the comfortability towards the use of data privacy by social media companies

| Item | Criteria | Mean Score | Average Mean Score |
|-------------|--|-------------------|---------------------------|
| C1 | I am comfortable with how social media companies use my data. | 3.43 | |
| C2 | I am confident that the Personal Data Protection Act 2010 can effectively regulate social media companies' use of my data. | 3.64 | |
| C3 | I am comfortable with how Facebook uses my data. | 3.08 | |
| C4 | I am comfortable with how Twitter uses my data. | 3.08 | 3.46 |
| C5 | I am comfortable with how Instagram uses my data. | 3.43 | |
| C6 | I am comfortable with how Tik Tok uses my data. | 3.31 | |
| C7 | I am comfortable with how Youtube uses my data. | 3.56 | |
| C8 | I am comfortable with how Whatsapp uses my data. | 3.70 | |
| C9 | I am comfortable with how Telegram uses my data. | 3.53 | |
| C10 | I am comfortable with how educational social media (Ms Teams, Google Meet) uses my data. | 3.85 | |

As per Table 5, the students were moderately comfortable towards the use of data privacy by social media companies with average mean score is 3.46. Most of the students were highly comfortable with how educational social media platform such as Ms Teams and Google Meet used their data, refer to item C10 with mean 3.85. The students were least comfortable with how Facebook (item C3) and Twitter (item C4) used their data, but seemed to have slightly more trust in WhatsApp (item C8). Generally, they were confident and have faith in PDPA 2010 (item C2) in regulating the usage of their data by social media companies effectively.

The findings also highlighted the implications to the use of methodology as well as being a starting point to continue the study on a larger scale to gain insights as well as the perception of social media users to data privacy and security issues. Additionally, further research might investigate focus on data privacy for educational uses of social media due to coronavirus pandemic which has created a new dynamic in educational world (Trust, Carpenter, Krutka & Kimmons, 2020). Hence, educators innovatively used social media platform as their teaching and learning tools and medium because they can easily spread

and share the information to the students and sometimes unconsciously ignore about data privacy and security issues.

Conclusion

Essentially, users nowadays are aware the importance of social media literacy, knowledge and awareness related to the security and privacy of personal information when using the social media. Awareness and knowledge practiced by the users about data privacy will reduce their exposure to cyber treats of social media sphere. This is inline with the findings of a high level of awareness towards social media data privacy policy among the students, although their level of comfortability concerning to the use of data privacy by social media companies are modest.

Data privacy and security issues like this should be conscious and aware not only by social media users, but among Internet users too. This is because social media has permeated into various aspects of modern life today not only teenagers and adults, but also kids. So, users must emphasize on their responsibility towards the data privacy issue in social media.

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