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Agricultural Science Students' Perception on TikTok Usage Towards Their Academic Achievement in Universiti Pendidikan Sultan Idris (UPSI)

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Abstract: Social media is internet-based and enables users to share anything quickly, including movies, images, and personal information through a computer and smartphone via website or applications and is highly used among students in the university, secondary school, and even in primary school in Malaysia. However, the excessive usage of social media and the internet among students in the university can lead to less time spent on studies, low grades in tests or exams, and students not interested in participating in extracurricular activities or classes. Thus, the goal of this study is to identify the perception of 53 Agricultural Science students on the impact of using TikTok application towards their academic achievement in UPSI. The quantitative method is used in this study's design which involves survey study. The research instrument of this study will use questionnaires in Google Form and consist of 4 sections which is Section A about the demography (7 items), Section B about the frequency (10 items), Section C about the perception (9 items) and Section D about the impact on academic performance (10 items). The results finding showed that the independent variables which is access to social media (Mean:2.79), the frequency of using TikTok (Mean:3.30), the perception on TikTok content usage (Mean:3.38) can affect the academic achievement respondents (Mean:3.25). Thus, the TikTok application should be used among students at the higher education level to affect positive changes in students' learning styles, which will improve their academic and psychological performance. In conclusion, this study has found that generally, the perception of TikTok content usage is more related to favourite informative content, the frequency of TikTok application usage is higher on weekends and the impact of TikTok application usage on academic performance is that it can teach digital skills and technological competency.

Keywords: TikTok usage, time management, addicted, academic achievement, Students' perception

1.   Introduction

TikTok is a new app that has joined the ranks of popular social networks like Twitter, Facebook, Instagram and YouTube. Social media is an industry that is always changing and evolving. In Malaysia, there were Social media users totalled 30.25 million in January 2022. Meanwhile, Malaysia has 4 million users, the majority of them are under the age of 30. Therefore, among all the TikTok users in Malaysia, there are students in universities, secondary schools, and even primary schools (Maya, 2021). According to Akhtar (2013), addiction to and overuse of social media and the internet can contribute to student academic issues. This issue may cause students to spend less time studying, perform poorly on tests or exams, and show little interest in joining extracurricular activities or attending classes. O'Keeffe and Pearson (2011) said that excessive social media use can cause chronic illnesses including sleeplessness and insomnia. Therefore, it has been shown that using

social media excessively has a harmful impact on students' physical and mental health, including anxiety, depression, and feelings of isolation. Meanwhile, social media platforms like TikTok, stated Dariyanto and Qorib (2018), have an impact on people's learning styles and approaches. As a result, all users, especially students, can learn how to make interesting and innovative videos that will encourage views and likes for a good site. Nevertheless, the potential of learning and teaching process by using the internet are highly doubtful. Teaching is less effective among the students and lecturer because social sites are easily open to entertainment and neglect the lesson session. This causes students to be less focused and interested in understanding the content of teaching materials during the classes. Thus, they will switch to empty chat rooms and chat with their best friend. In addition, learning uses, internet resources as well, causing students to switch to other websites, for example, Youtube, Instagram, Facebook and TikTok. Hence, excessive social media exposure during the teaching and the learning process is highly discouraged because it can distract students to focus on the class, said Syed (2016).

2.   Literature Review

The purpose of this chapter is to evaluate the current literature and research on the Impact of TikTok Application Usage on Agricultural Science Students Academic Achievement in UPSI.

2.1   Social media usage in education

According to Morissan (2020), social media was used by college students in higher social media, in the opinion of Morissan (2020), was used by college students in higher education to improve their learning styles through group projects in a virtual learning environment. Social media use in education affects traditional learning and teaching methods in one way because of the new paradigm that only educational institutions are privileged to give knowledge to students (Lau, 2017).

2.2   Social media usage (TikTok)

There haven't been many studies on TikTok usage. However, Herath (2020) said that teenagers and young adult students had very little negative impacts from using the TikTok application. Social media is a tool that, depending on the individual, could be used for good or bad. Social media has both positive and negative aspects. Out of the few research studies conducted on TikTok usage and according to our knowledge, there is no research conducted among the Agricultural Science Students. Hence, the purpose of the current study was to examine the impact of TikTok application usage towards Agricultural Science students' academic achievement in UPSI.

2.3   Academic performance

According to Boahene *et al.* (2019), completing certain academic goals within the framework of a student's educational setting at a given institution or university defines academic performance. Academic performance is also referred to as learning outcomes gained, assessment scores, test results, grades, and GPA are used to assess academic achievement of the students (Alghamdi, 2020).

2.4   Theoretical stance of study

According to Bandura (2002) theory, psycho-social factors affect how people behave. Bandura makes it clear that a person's sense of self-worth has a big impact on how well they do. According to social cognitive theory, a person's sense of self, social behaviors, and world perception are all connected (Boahene *et al.*, 2019).

2.5   Conceptual framework

According to Talaue (2018), the Shikawa Model, often known known as the fish bone diagram, served as the study's paradigm. Kaoru Ishikawa developed the causal diagram known as the Skikawa model that illustrates the factors that led to a certain event. The following social media factors could have an impact on students' academic performance: usage of TikTok; their perception on TikTok; access to the internet; and their frequency of using TikTok.
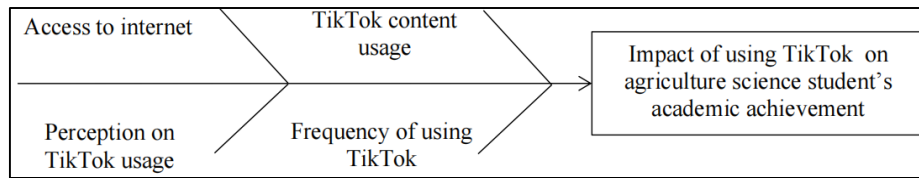
Figure 1: Skikawa Model (Fishbone Model)

3. Methodology

The steps involved in carrying out this study, which are broken down into study design, research population and sampling, data collection instruments, reliability and validity of the methodology, data collection and data analysis, will be explained in this chapter.

This study has a quantitative design, which involves survey study. Brookhurt (2016) said that survey research is the most widely used in educational research because it measures opinions. This study was prepared to identify the perception of Agricultural Science students on the TikTok content usage; the frequency of using TikTok app; and the impact of the TikTok usage on academic achievement among the Agriculture Science students in UPSI. There are 53 Agricultural Science students from the first and the seventh semester who were chosen as the population to gather the data from the Faculty of Technical and Vocational in UPSI. One of the most crucial tools in educational research is a questionnaire, which was used to collect data, information, and variables for the topic's study. Then, the survey was done in accordance with the population and sample.

Students from the Faculty of Technical and Vocational in UPSI in the first and seventh semester were participated in this study. This study's population was drawn from the entire number of all students specified in the Agricultural Science study, which the total of all consists of 53 students from Malay and other ethnicity. Then, the chosen samples involved in this study were students based on Krejcie and Morgan's Sample Size table. The samples in this study were students from the first and seventh semester ($S = 44$). Probability sampling, a straightforward procedure and random sampling approach, was used to choose the sample for this study. The selection of the sample will be entirely random. As a result, the participants who accepted to participate in the study made up the study sample, which was chosen from the population that was easily accessible.

The survey questionnaire, observations, and evaluations of past research and analysis served as the collecting data tools. However, the literature review, survey and analysis were utilized to gather data for the three research questions. Survey forms were given to the respondents. It is a tool that asks a variety of questions to get information out of the respondents. The survey's survey questionnaire consists of simple questions that enable respondents to provide accurate data. Every item on the survey forms is intended to address a certain research sub-problem. The questionnaire for the respondents was made using Google Form. The survey was divided up into 4 sections which is A, B, C and D. Section A was for the collection of information on the personal data of respondents, while Sections B, C and D consisted of Strongly Disagree (SD), Disagree (D), Agree (A), and Strongly Agree are the four categories on the Likert scale (SA).

This section offers the data collected, analysis, and its interpretation in perspective of the study's questions. All the results of this study were analyzed using Statistical Packages for the Social sciences (SPSS) to determine the mean, standard deviation, frequency and percentage via descriptive statistics.

Reliability Statistics Test from the Pilot Study data had been done to analyze the Cronbach's Alpha for Section B, C and D. Based on those tables, the results for the Section B, C and D were accepted because all the Cronbach's Alpha data is greater than 0.75. Which means, the actual study could proceed to analyze the mean, mode, median and standard deviation.

Table 1: Section B of the Cronbach's Alpha

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.891	0.891	10

Table 2: Section C of the Cronbach's Alpha

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.949	0.960	9

Table 3: Section D of the Cronbach's Alpha

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.955	0.955	10

4.　　　Analysis and Discussion

This paragraph offers and interprets the findings of the study which included the quantitative data collection involving the survey questionnaires. For the results section of this dissertation, the quantitative results and discussions were presented in this chapter, respectively.

Descriptive analysis data on the frequency of TikTok usage in Section B, shows that the data distribution of respondents' mean score falls between 1.98 and 3.30. Item B1 "I surf Tiktok more often on weekdays." provides a score for the mean and standard deviation in (Mean:2.94±.770). For the item B2 "I surf Tiktok more often on weekends." with the mean and standard deviation for score in (Mean:3.30±.882). For item B3 "I will surf Tiktok first before the class starts." provides a score for the mean and standard deviation in (Mean:2.57±.888). For item B4 "I will surf Tiktok right after the class is over." with the mean and standard deviation for score in (Mean:2.64±.942). For item B5 "I will browse Tiktok during the class session without the knowledge of the lecturer." provides a score for the mean and standard deviation in (Mean:2.32±.956). For item B6 "I will browse Tiktok while doing assignments given by the lecturer." with the mean and standard deviation for score in (Mean:2.53±1.049). For item B7 "It became my habit to surf Tiktok before going to bed." provides a score for the mean and standard deviation in (Mean:3.15 ±.864). For item B8 "The first thing I do after waking up is surfing Tiktok." with the mean and standard deviation for score in (Mean:2.42±1.008). For item B9 "I only browse Tiktok once a week or twice per month." provides a score for the mean and standard deviation in (Mean:2.49±1.049). For item B10 "I never use or install the Tiktok application." with the mean and standard deviation for score in (Mean:1.98±1.168). The findings showed that the frequency of TikTok application usage whose mean and standard deviation scores are highest is (Mean:3.30±.882) while the score with the lowest mean and standard deviation is (Mean:1.98±1.168). Overall, these results indicate that the frequency of TikTok application used were surf more often on weekends. Excessive access and desire to use TikTok application can lead to the addiction to social media, which can result in the development of health-risking habits that can negatively affect someone's quality of life and well-being. Excessive access and desire to use TikTok application can lead to the addiction to social media, which can result in the development of health-risking habits that can negatively affect someone's quality of life and well-being (Simek, 2019).

Table 4: Descriptive Analysis Data on Frequency of TikTok Usage in Section B

Items	Mean	Standard Deviation
B1	2.94	.770
B2	3.30	.882
B3	2.57	.888
B4	2.64	.942
B5	2.32	.956
B6	2.53	1.049
B7	3.15	.864
B8	2.42	1.008
B9	2.49	1.049
B10	1.98	1.168

Descriptive analysis data on the perception on TikTok content usage in Section C, showed that the data distribution of respondents' mean score falls between 3.08 to 3.38. Item C1 "I can see news-related content such as live news streaming, news reporting or broadcast news in Tiktok" with the mean and standard deviation for score in (Mean:3.26±.711). For the item C2 "I can see and refer to educational content that is related to case study, industry research or informative posts in Tiktok." provides a score for the mean and standard deviation in (Mean:3.32±.673). For item C3 "I can see and know health-related content such as professionals and athletes that share their fitness tips and routine in Tiktok." with the mean and standard deviation for score in (Mean:3.34±.649). For item C4 "I can get inspirational content such as quotes, facts, motivations or personal stories of success in Tiktok." provides a score for the mean and standard deviation in (Mean:3.36±.653). For item C5 "I can see entertainment content such as jokes, memes, viral videos or pranks in Tiktok." with the mean and standard deviation for score in (Mean:3.36±.623). For item C6 "I can see and learn about makeover related contents such as hairstyle, wardrobe change, hijab tutorial or makeup tutorial." provides a score for the mean and standard deviation in (Mean:3.30±.668). For item C7 "I can see animal content such as cute animals videos, animal rescue or pet grooming." with the mean and standard deviation for score in (Mean:3.38±.740). For item C8 "I can see and do arts related content such as crafts, painting, sketching and DIY projects." provides a score for the mean and standard deviation in (Mean:3.32±.673). For item C9 "I would like to make a Tiktok video, such as a dance video, lip-sync, dialogue reenactment, hashtags challenge or using TikTok filters." with the mean and standard deviation for score in (Mean:3.08±.958). The findings showed that the frequency of TikTok application usage with the highest mean and standard deviation score is (Mean:3.30±.882) while the lowest mean and standard deviation score is (Mean:1.98±1.168). The findings showed that the perception of TikTok application usage whose mean and standard deviation scores are highest is (Mean:3.38±.740) while the score with the lowest mean and standard deviation is (Mean:3.08±.958). These results suggest that, the perception of TikTok content usage were more related to the favourite informative content. These results were consistent with the data obtained with the media platforms' use in education. They alter traditional learning and teaching methods, which are no longer seen as having exclusive rights to give knowledge to students under the new paradigm (Lau, 2017). Besides, the perception of TikTok application usage can be supported by the previous research, Herath (2020) said that teenagers and young adult students had very little negative impacts from using the TikTok application.

Table 5: Descriptive Analysis of the Perception on TikTok Content Usage in Section C

Items	Mean	Standard Deviation
C1	3.26	.711
C2	3.32	.673
C3	3.34	.649
C4	3.36	.653
C5	3.36	.623
C6	3.30	.668
C7	3.38	.740
C8	3.32	.673
C9	3.08	.958

Descriptive analysis data on the impact of TikTok usage towards academic performance in Section D, shows that the data distribution of respondents' mean score falls between 2.96 to 3.25. Item D1 "Tiktok videos can give me inspiration, new knowledge and motivation for my current major subject." provides a score for the mean and standard deviation in (Mean:3.21±.600). For the item D2 "Assignments given by the lecturer can be done in time." with the mean and standard deviation for score in (Mean:3.04±.759). For item D3 "Related Tiktok videos can be an example to complete my assignment." provides a score for the mean and standard deviation in (Mean:3.11±.698). For item D4 "I can explore and find related topics about agricultural content by using Tiktok." with the mean and standard deviation for score in (Mean:3.19±.681). For item D5 "Tiktok can help me to identify project ideas for my current major subjects." provides a score for the mean and standard deviation in (Mean:3.09±.658). For item D6 "Tiktok video can give me digital skills and technological competency." with the mean and standard deviation for score in (Mean:3.25±.648). For item D7 "Encourage me to do group discussion about related issues with my major subject based on Tiktok video." provides a score for the mean and standard deviation in (Mean:3.11±.670). For item D8 "I can exchange ideas with other students that I have learned from Tiktok videos." with the mean and standard deviation for score in (Mean:3.19±.681). For item D9 "I can improve my level of understanding of an agricultural course studied from a related Tiktok video." provides a score for the mean and standard deviation in (Mean:3.42±.744). For item D10 "I can score high mark for my assignment and test by referring

to Tiktok video." with the mean and standard deviation for score in (Mean:2.96±.854). The findings showed that the impact of TikTok application usage towards academic performance whose mean and standard deviation scores are highest is (Mean: 3.25±.648) while the score with the lowest mean and standard deviation is (Mean: 2.96±.854). These presents that the impact of TikTok application usage towards academic performance were it can give digital skills and technological competency. These results agree with the findings of other studies, academic self-efficacy promotes self-control, which leads to better student achievement in terms of learning, improving skills and knowledge, and academic achievement said Boahene *et al.* (2019).

Table 6: Descriptive Analysis on the Impact of TikTok Usage toward Academic Performance in Section D

Items	Mean	Standard Deviation
D1	3.21	.600
D2	3.04	.759
D3	3.11	.698
D4	3.19	.681
D5	3.09	.658
D6	3.25	.648
D7	3.11	.670
D8	3.19	.681
D9	3.42	.744
D10	2.96	.854

5.   Conclusion

Utilizing social media such as TikTok helps one develop particular cognitive skills that improve their sense of self-worth or self-confident. People who have higher self-efficacy perform better and have more success in life. Boahene *et al.* (2019), stated that higher self-efficacy among students is linked to improved academic performance. Thus, TikTok application should be used among students in higher education level to brought a change in students learning styles state in positive ways that will enhance effects on students' academics and psychology performance. In conclusion, this study has found that generally the perception of TikTok content usage was more related to favourite informative content, the frequency of TikTok application usage was higher on weekends and the impact of TikTok application usage on academic performance was that it can teach digital skills and technological competency. This study establishes a quantitative framework for detecting the impact of TikTok application usage on Agricultural Science students' academic achievement on the UPSI.

References

Akhtar, N. (2013). Relationship between internet addiction and academic performance among university undergraduates. *Educational Research and Reviews*, 8(19), 1793-1796.

Alghamdi, A., Karpinski, A. C., Lepp, A., & Barkley, J. (2020). Online and face-to-face classroom multitasking and academic performance: Moderated mediation with self-efficacy for self-regulated learning and gender. *Computers in Human Behavior*, 102, 214-222.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied psychology*, 51(2), 269-290.

Boahene, K. O., Fang, J., & Sampong, F. (2019). Social media usage and tertiary students' academic performance: Examining the influences of academic self efficacy and innovation characteristics. *Sustainability*, 11(8), 2431.

Brookhart, S. M., Guskey, T. R., Bowers, A. J., McMillan, J. H., Smith, J. K., Smith, L. F., & Welsh, M. E. (2016). A century of grading research: Meaning and value in the most common educational measure. *Review of Educational Research*, 86(4), 803-848.

Deriyanto, D., & Qorib, F. (2019). Persepsi Mahasiswa Universitas Tribhuwana Tunggadewi Malang terhadap Penggunaan Aplikasi Tik Tok. *JISIP: Jurnal Ilmu Sosial Dan Ilmu Politik*, 7(2).

Herath, H. M. W. M. (2020). Impact of TikTok on University Students' Academic Achievements–A Case Study of Uva Wellassa University of Sri Lanka. *The American Journal of Humanities and Social Sciences Research*, 3(6), 141-146.

Krejcie, R.V. & Morgan, D.W. (1970). *Determining Sample Size for Research. Activities. Educational and Psychological Measurement*. 30(3):607-610.

Lau, W. W. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. *Computers in human behavior*, 68, 286-291.

Maya, D., & Cecilia, M. (2021). Social media. *Investopedia updated*, Mar, 15.

Mehmood, E., Abid, A., Farooq, M. S., & Nawaz, N. A. (2020). Curriculum, teaching and learning, and assessments for introductory programming course. *IEEE Access*, 8, 125961-125981.

Morissan (2020). The influence of smartphone use on academic performance among Indonesian university students. *Jurnal Komunikasi: Malaysian Journal of Communication*, 36(3), 84-101.

Simsek, A., Elciyar, K., & Kizilhan, T. (2019). A comparative study on social media addiction of high school and university students. *Contemporary educational technology*, *10*(2), 106-119.

O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*, 127(4), 800-804.

Syed-Abdul, S., Gabarron, E., & Lau, A. (Eds.). (2016). *Participatory health through social media.* Academic Press.

Talaue, G. M., AlSaad, A., AlRushaidan, N., AlHugail, A., & AlFahhad, S. (2018). The impact of social media on academic performance of selected college students. *International Journal of Advanced Information Technology*, 8(4/5), 27-35.