

# Behavioral Pattern Analysis of Students' Intention to Use School Fan Page

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## Abstract

Social media is the main channel for teenagers to obtain and exchange information, therefore, many schools use social media as an important channel to release schools' information. The main purpose of this study is to explore the behavioral patterns of students' intention to use school fan page. We conducted a questionnaire survey on students of a senior high school in Taoyuan City, Taiwan, and conducted an association rules mining on the collected questionnaire data. We discovered a total of 9 strong association rules whose consequences are usage intentions, and concluded four behavioral patterns. The research results show that the trust and effort expectancy are key factors affecting the students' intentions to use school fan page. The findings of this study can provide practical promotion guidelines for the schools that want to use fan page as a main channel for releasing important information.

*Keywords: Fan page, usage intention, UTAUT, trust, association rule mining*

## 1. Introduction

In 2023, the total number of Internet users in Taiwan will be 21.68 million, equivalent to 90.7% of the total population, an increase of 160,000 compared to 2022. There are approximately 20.2 million users of social media platforms in Taiwan, equivalent to 84.5% of the total population. The population usage rate ranks tenth in the world. In terms of usage time, Taiwanese spend an average of 2 hours and 6 minutes on social media platforms every day. As for the reasons why Taiwanese people use social media platforms, the top five reasons are: keeping in touch with friends and family, passing time, following important social issues, exploring new information, and reading news (Kemp, 2023).

The three most commonly used social media platforms by Taiwanese are LINE (90.7%), Meta (85.3%) and Instagram (65.3%). LINE is a popular instant messaging and social media application first developed and released in Japan in 2011. LINE users can send messages, communicate via voice and video, and share images and other media with friends and family. LINE also allows users to follow and interact with each other (Tateno et al., 2019; Habuchi, 2021).

Meta is a social media platform with users spanning a wide range of ages. Meta was initially popular among young people and later became increasingly popular among middle-aged people. There is a large amount of news and content in the Meta platform, making

it easy for users to obtain new information regardless of the accuracy of the information. Although younger generations spend less time on Meta, many still use it to read news or receive information (Boukes, 2019; Hellemans, Willems, & Brengman, 2020).

Instagram is a platform popular with the younger generation, and almost every young person has an Instagram account. Today's young people mainly use Instagram to create their own style, share their lives, and let more people know and see them (Yau, & Reich, 2019; Kircaburun et al., 2020)

From the above description, we can see that LINE is mainly used for instant messaging, Meta is mainly used for obtaining information and news, and Instagram is mainly used for personal image creation and management.

The Covid-19 epidemic that began in 2019 has brought significant changes to the administrative work and teaching work of educational institutions. In order to reduce the risk of school transmission, Taiwan's Ministry of Education announced on February 4, 2020 that postpone the second semester of the academic year 2020 to prevent the spread of the epidemic (K-12 Education Administration, 2020). As the situation worsened, Taiwan's Ministry of Education announced on May 18, 2021 that all schools will stop on-campus classes from May 19, 2021 (K-12 Education Administration, 2021).

The announcement to stop on-campus classes has had a profound impact on traditional teaching models. Many schools have had to

change traditional face-to-face teaching methods to distance learning (Turnbull, Chugh, & Luck, 2021). However, in addition to changes in teaching methods, schools also face challenges in information dissemination. During the epidemic, many measures or regulations were dynamically adjusted according to changes in the situation. However, since students did not attend school, these measures or regulations could not be communicated to students in a timely manner through collective announcements or announcements by class instructors, which may cause difficulties in school administrative work and harming the rights of students.

In order to overcome the above problems, many schools have established fan pages on the Meta platform as a channel to disseminate important information to students or parents. Fan pages on the Meta platform are web pages or websites specifically created for public figures, organizations, businesses, governments, etc., which mainly provide the latest information on public figures or organizations, and provide social interaction with public figures or organizations (Chen, & Tsai, 2020).

The effectiveness of fan pages in business marketing has been confirmed by many studies (Shang et al., 2018; Rahman et al., 2018; Kuo, & Chen, 2023). Kircaburun et al. investigated 1,008 university students' motivations for using social media. The results showed that the main purposes of university students using social media were to meet new friends and socialize, to express or present a more popular self, and to pass time and have fun (Kircaburun et al., 2020). Kolhar Kazi and Alameen surveyed 300 college students on the purpose of using social media. The results showed that 97% of students used social media, but only 1% of them used social media for academic purposes. 35% of students use social media to chat with others, while 43% of students browse these social media to pass the time. Additionally, 57% of students are addicted to social media, and 66% find social media more engaging than academic activities (Kolhar Kazi, & Alameen, 2021). According to the above researches, we can know that most young people use social media for social interaction or entertainment, but it is not clear whether students are willing to use social media to obtain important information released by the school. Therefore, if a school uses social media, such as a fan page established on the Meta platform, to release important information, how to encourage students to obtain important information released by the school through such channels is the main issue we explore in this study.

## 2. Literature Review

Since the Technology Acceptance Model (TAM) was proposed in 1989, the perceived usefulness and perceived ease of use in this model have been widely used by scholars to explore users' acceptance of various information systems in the past few decades (Marangunic, & Granic, 2015; Rahimi et al., 2018). TAM believes that perceived usefulness and perceived ease of use first affect the user's attitude, and then affect the user's intention to use. However, with the complexity of information system applications, many subsequent studies have expanded TAM to explore the impact of factors other than perceived usefulness and perceived ease of use on information system usage intentions.

In 2003, Venkaesh integrated multiple perspectives and theories on technology acceptance to propose the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). This theory comprises four factors that influence usage intention of information system, including Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). Performance Expectancy is defined as the degree to which an individual believes that using new technology or a new system will enhance their job performance. Effort Expectancy is defined as the degree of ease associated with the individual's perception of using new technology or a new system. Social Influence is defined as the degree to which an individual perceives that important others believe they should use the new technology or system. Facilitating Conditions are defined as the degree to which an individual perceives organizational support him for the use of new technology or a new system. Additionally, there are four variables that indirectly affect intention to use: gender, age, experience, and voluntariness of use.

In 2021, Lee and Kim utilized the Unified Theory of Acceptance and Use of Technology (UTAUT) as a theoretical framework to investigate users' acceptance of Metaverse platforms and services (Lee, & Kim, 2022). The study focused on the Metaverse platform "Ifland" as one of the metaverses. Participants were asked to watch a 15-minute artificial intelligence lecture on the Metaverse platform "Ifland," engage in discussions with others about the impact of artificial intelligence during the lecture, and then complete a questionnaire. A total of 120 valid questionnaire responses were collected for analysis, and the hypotheses were confirmed using Partial Least Squares (PLS) analysis. The results indicated that performance expectancy, effort expectancy, and social influence significantly influenced the intention to

use the Metaverse platform, while facilitating conditions did not have a significant impact on usage intention.

In 2021, Puriwat and Tripopsakul utilized the Unified Theory of Acceptance and Use of Technology (UTAUT) as the theoretical foundation to explore the factors influencing users' use of social media for business purposes (Puriwat, & Tripopsakul, 2021). This study collected data from 196 samples through an online survey and employed a structural equation model to validate the proposed hypotheses. The results indicated that performance expectancy, effort expectancy, and social influence significantly impact the behavioral intention to use social media for achieving business objectives.

In 2021, William used UTAUT as a theoretical framework to explore students' perspectives on the use of social media in academic library environments. William used four research variables, including performance expectancy, effort expectancy, social influence, and convenience conditions, to conduct a questionnaire survey among students at two universities to better understand students' views on the adoption and use of social media (Williams, 2021).

In 2021, Alvi used the Unified Theory of Acceptance and Use of Technology (UTAUT) as the theoretical basis to investigate the factors affecting Indian college students' use of social network tools for higher education learning (Alvi, 2021). This study collected a total of 305 sample data, and used the partial least squares method structural equation model to verify the proposed hypothesis. Research results show that the formation of college students' behavioral intentions is affected by performance expectancy, effort expectancy and social influence. However, the facilitating conditions did not affect their behavioral intentions.

In 2022, Al-Rahmi et al. surveyed 383 students to understand students' use of social media for learning in educational institutions. The findings indicate a strong relationship between PE, EE, SI and behavioral intention to use social media for academic purposes (Al-Rahmi, 2022).

In 2023, Alfalah used an extended version of the UTAUT model to investigate the behavioral intention of using a mobile learning management system among 258 students at a Saudi Arabian university. The results show that performance expectancy, effort expectancy, and instructor influence have a greater impact on usage intention, while convenience conditions are not a significant factor (Alfalah, 2023).

Based on the above literature, this study also uses the Unified Theory of Acceptance and

Use of Technology (UTAUT) as the theoretical basis to explore the impact of performance expectancy, effort expectancy and social influence on high school students' intentions to use school fan pages.

In addition to performance expectancy, effort expectancy and social influence, trust is also an important consideration when people use social media platforms. Research has found that habitual users of social media platforms tend to have low information discernment skills and will share information regardless of its accuracy. This suggests that habitual users sharing misinformation may not be entirely intentional, but stem from a slowness or indifference to sharing information (Ceylan, Anderson, & Wood, 2023). Research also found that 15% of habit sharers share 30-40% of false information. Social media platforms contain a wealth of information. If individuals lack trust in information on social media, they may have doubts about the authenticity, accuracy, or credibility of the information, leading to reservations about using the software. In 2023, Tewari et al. used UTAUT's modified framework to predict Indian students' intention to adopt online learning. They used structural equation modeling to analyze responses from 424 students at public and private universities in India. The results show that perceived safety does have a significant impact on students' willingness to adopt online learning (Tewari et al., 2023). Hatamleh et al. surveyed 493 Jordanian youth to understand the impact of trust in social media on strengthening social relationships. They used structural equation modeling for quantitative analysis, and the results revealed a positive relationship between social media participation and social relationships, with trust being the key moderator in this relationship (Hatamleh, 2023). For these reasons, we considered trust in our study, and we believed that trust would be an important factor affecting high school students' use of school fan pages, which is the difference between this study and other researches.

### 3. Research Method

This study uses the Unified Theory of Acceptance and Use of Technology (UTAUT) and trust as the theoretical basis to conduct a questionnaire survey among high school students in Taiwan to explore their willingness to use school fan pages.

We searched for students on campus who were willing to assist us in conducting the survey, which was conducted face-to-face. Before taking the questionnaire, each participant was asked to browse the school's official fan page for one minute on his mobile phone and point out the posts on the fan page that impressed

him the most. We will also ask each participant to identify posts from fan pages with specific content. After the orientation process was completed, each participant was asked to fill out an online questionnaire using their mobile phone. The questionnaire survey was conducted from June 1, 2022 to July 5, 2022, and data from a total of 223 respondents were collected.

The questionnaire contained two main parts. The first part is background information, including gender, age, awareness of the school

fan page and whether the respondent has ever visited the school fan page. The second part is the questionnaire items, including the five research variables of this study (performance expectations, effort expectations, social influence, trust and usage intention). A five-point Likert scale is used to measure the intensity of each questionnaire item, the options range from 5 to 1, where 5 means strongly agree and 1 means strongly disagree.

Table 1: Research Variables and Questionnaire Item.

Research variable	Questionnaire item
Performance Expectancy (PE)	I think using the school fan page can help me know the school's news, announcements, or activities.
Effort Expectancy (EE)	I think it is very easy to use the school fan page to know about school's news, announcements, or activities.
Social Influence (IS)	I think my classmates and teachers think that I should use the school fan page to know about school's news, announcements, or activities.
Trust (TRU)	I believe that the school's news, announcements, or activities on the school fan page are the newest and correct.
Usage Intention (UI)	I would like to use the school fan page to know about school's news, announcements, or activities.

After collecting the questionnaire data, we used descriptive statistical analysis and association rule mining to explore the behavioral patterns of high school students' intention to use school fan pages. Since there was only one questionnaire for each research variable, the validity and reliability of the questionnaire were not tested.

Association rule mining is a method of finding relationships between variables in data mining technology (Agrawal, Imieliński, & Swami, 1993). It is a technique for discovering correlations within large databases. Let  $I = \{I_1, I_2, \dots, I_m\}$  be a set of items. Given a transaction database  $D = \{t_1, t_2, \dots, t_n\}$ , where each transaction  $t$  is a subset of  $I$ , the association rule is expressed in the form of  $X \Rightarrow Y$ , where  $X$  and  $Y$  are both subset of  $I$ , the intersection of  $X$  and  $Y$  is the empty set.  $X$  and  $Y$  are called the antecedent and consequent of the association rule respectively. The support of the association rule  $X \Rightarrow Y$  is the percentage of transactions in  $D$  that contain both  $X$  and  $Y$ , expressed as  $P(X \cup Y)$ . The confidence of the association rule  $X \Rightarrow Y$  is the percentage of transactions containing  $Y$  among the transactions containing  $X$ , expressed as  $P(Y|X)$ . In practice, researchers usually set the minimum thresholds for support and confidence in advance, which are called minimum support and minimum confidence. When the support and confidence of the discovered association rules are greater than or equal to the minimum support and minimum confidence respectively, these association rules are called strong association rules. Only strong association rules will be considered meaningful and can be applied in practical work.

The most commonly used method for association rule mining is the Apriori algorithm. The Apriori algorithm consists of two main steps: the first step is to identify all frequent itemsets, and the next step is to extract strong association rules from these frequent itemsets. This study uses the Apriori analysis module provided by the famous data mining software Weka 3.8.4 version to analyze the collected questionnaire data to discover the correlation between performance expectancy, effort expectancy and social influence, trust and usage intention. Since association rule exploration is mainly to find the majority of instances in the dataset and ignore the few instances, all 223 data were used for analysis without prior filtering.

#### 4. Results and Discussions

Descriptive statistics of participants' background information are shown in Table 2. It can be seen from the results in Table 2 that most students are aware of the school fan page, and most students have also browsed the school fan page.

The descriptive statistics of the questionnaire items are shown in Table 3. According to the results in Table 3, the proportion of students who agreed or strongly agreed with performance expectancy was the highest. This shows that students generally find it helpful to use the school fan page to obtain important information about the school. In addition, students had the second highest percentage of agreeing or strongly agreeing with trust, which indicates that students generally believe that the infor-

mation obtained through school fan pages is the newest and correct.

Table 2: Descriptive Statistics of Participants' Background Information. (N=223)

Question	Option	Frequency
Gender	Male	105
	Female	118
Age	15 years old	102
	16 years old	71
	17 years old	5
	18 years old	45
KFP: Do you know that your school has an fan page on Meta?	Yes	199
	No	24
BFP: Have you browsed your school's fan page on Meta?	Yes	170
	No	53

Table 3: Descriptive Statistics of the Questionnaire Items. (N=223)

Question	Option	Frequency
PE: I think using the school fan page can help me know the school's news, announcements, or activities.	Strongly disagree	3
	Disagree	4
	Normal	54
	Agree	105
	Strongly agree	66
EE: I think it is very easy to use the school fan page to know about school's news, announcements, or activities.	Strongly disagree	1
	Disagree	8
	Normal	63
	Agree	84
	Strongly agree	67
SI: I think my classmates and teachers think that I should use the school fan page to know about school's news, announcements, or activities.	Strongly disagree	3
	Disagree	3
	Normal	66
	Agree	92
	Strongly agree	59
TRU: I believe that the school's news, announcements, or activities on the school fan page are the newest and correct.	Strongly disagree	1
	Disagree	4
	Normal	63
	Agree	91
	Strongly agree	64
UI: I would like to use the school fan page to know about school's news, announcements, or activities.	Strongly disagree	2
	Disagree	5
	Normal	67
	Agree	89
	Strongly agree	60

Using the Apriori analysis module provided by the data mining software Weka 3.8.4 version, an association rule analysis was conducted on the collected questionnaire data. The minimum support was set to 0.25, and the minimum confidence was set to 0.7, resulting in 127 strong association rules. Among the 127 strong association rules, the consequent of 9 strong association rules is usage intention, as shown below:

- (1) TRU=Agree ⇒ UI=Agree (support=0.305, confidence=0.747)
- (2) PE=Agree, TRU=Agree ⇒ UI=Agree (support=0.251, confidence=0.824)
- (3) BFP=Yes, TRU=Agree ⇒ UI=Agree (support=0.260, confidence=0.806)
- (4) KFP=Yes, TRU=Agree ⇒ UI=Agree (support=0.291, confidence=0.793)
- (5) KFP=Yes, BFP=Yes, TRU=Agree ⇒ UI=Agree (support=0.256, confidence=0.803)
- (6) BFP=Yes, PE=Agree ⇒ UI=Agree (support=0.256, confidence=0.731)
- (7) KFP=Yes, BFP=Yes, PE=Agree ⇒ UI=Agree (support=0.251, confidence=0.727)
- (8) KFP=Yes, SI=Agree ⇒ UI=Agree (support=0.274, confidence=0.714)
- (9) EE=Agree ⇒ UI=Agree (support=0.269, confidence=0.747)

From the above 9 strong association rules, we can identify four behavioral patterns of usage intention.

First behavioral pattern: From the first rule to the fifth rule, we observe that when TRU is "Agree", the UI is also "Agree". Our findings largely support the research variable TRU, and

indicates that TRU has a significant impact on UI. Many researchers have studied the importance of Trust in using social media (Phua, Jin, & Kim, 2017). When students trust the contents on social media, their intention to use social media will increase.

Based on the first behavioral pattern of usage intention, we propose the following suggestion: To enhance students' intention to use the school fan page, the administrators of the school fan page should regularly update the content and maintain the accuracy of posts. When students repost incorrect information, the administrators should promptly correct it.

Second behavioral pattern: From the sixth rule and seventh rule, we find that when have BFP is "Yes", and PE is "Agree", the UI is also "Agree". Our findings support the research variable PE, which is in line with expectations and indicates that PE is an important factor on UI. When students believe that social media is useful to them, their intention to use social media will increase (Yildiz Durak, 2019).

Based on the second behavioral pattern of usage intention, we propose the following suggestion: Important information to be announced by the school should be published on the fan page first. This will give students who browse the school fan page the impression that they can know about school's news, announcements or activities as quickly as possible through the school fan page.

Third behavioral pattern: According to the eighth rule, we find that when KFP is "Yes", and SI is "Agree", then UI is also "Agree". Our findings support the research variable SI, indicating that SI has a positive impact on UI (Sharma, Joshi, & Sharma, 2016). In other words, the support obtained from peers can enhance students' intention to use social media.

Based on the third behavioral pattern of usage intention, we propose the following suggestion: School personnel can post posters on bulletin boards to promote the school fan page, and ask teachers or student opinion leaders to encourage students to use the fan page to know about school's news, announcements or activities.

Fourth behavioral pattern: According to the ninth rule, we find that when EE is "Agree", then UI is also "Agree". Our findings support the research variable EE, which means that EE has a significant impact on UI. When students believe that social media is helpful to them, their intention to use social media will increase (Al-Mamary, 2022).

Based on the fourth behavioral pattern of usage intention, we propose the following suggestion: When administrators publish posts on the school fan page, they should use clear titles

or meaningful tags to make it easy for students to find school's news, announcements, or activities on school fan page.

## 5. Conclusion

With the rapid advancement of technology and the swift development of new media, mobile phones have become the optimal information carrier. Schools can leverage social media to quickly and cost-effectively convey important information to students. In an era where almost every school has a fan page, why do some school fan pages thrive while others remain inactive?

In this study, based on the Unified Theory of Acceptance and Use of Technology (UTAUT) and the trust, we conducted a questionnaire survey among students at a high school in Taiwan to identify behavioral patterns in students' intention to use the school fan page. The results indicate that trust and effort expectancy are key factors influencing students' intention to use the school fan page. For students who are aware of the school fan page, social influence is a critical factor affecting their intention to use it. On the other hand, for students who have browsed the school fan page, performance expectancy is a key factor influencing their intention to use it. Based on the findings, this study proposes four suggestions to enhance students' intention to use the school fan page. These suggestions aim to enable schools to improve student awareness, satisfaction, and loyalty by leveraging fan pages.

## References

- Agrawal, R., Imieliński, T., & Swami, A. (1993). Mining association rules between sets of items in large databases. In *Proceedings of the 1993 ACM SIGMOD international conference on Management of data* (pp. 207-216).
- Alfalah, A. A. (2023). Factors influencing students' adoption and use of mobile learning management systems (m-LMSs): A quantitative study of Saudi Arabia. *International Journal of Information Management Data Insights*, 3(1), 100143.
- Al-Mamary, Y. H. S. (2022). Understanding the use of learning management systems by undergraduate university students using the UTAUT model: Credible evidence from Saudi Arabia. *International Journal of Information Management Data Insights*, 2(2), 100092.
- Al-Rahmi, A. M., Shamsuddin, A., Wahab, E., Al-Rahmi, W. M., Alturki, U., Al-draiweesh, A., & Almutairy, S. (2022). Integrating the role of UTAUT and TTF model to evaluate social media use for

- teaching and learning in higher education. *Frontiers in Public Health*, 10, 905968.
- Alvi, I. (2021). College students' reception of social networking tools for learning in India: an extended UTAUT model. *Smart Learning Environments*, 8(1), 1-18.
- Boukes, M. (2019). Social network sites and acquiring current affairs knowledge: The impact of Twitter and Facebook usage on learning about the news. *Journal of Information Technology & Politics*, 16, 36-51.
- Ceylan, G., Anderson, I. A., & Wood, W. (2023). Sharing of misinformation is habitual, not just lazy or biased. *Proceedings of the National Academy of Sciences*, 120(4), e2216614120.
- Chen, M. H., & Tsai, K. M. (2020). An empirical study of brand fan page engagement behaviors. *Sustainability*, 12(1), 434.
- Habuchi, I. (2021). Social media usage and translocality among Japanese young adults. *The second offline: Doubling of time and place*, 245-261. Singapore, Springer.
- Hatamleh, I. H. M., Safori, A. O., Habes, M., Tahat, O., Ahmad, A. K., Abdallah, R. A. Q., & Aissani, R. (2023). Trust in social media: Enhancing social relationships. *Social Sciences*, 12(7), 416.
- Hellemans, J., Willems, K., & Brengman, M. (2020). Daily active users of social network sites: Facebook, Twitter, and Instagram-use compared to general social network site use. In *Advances in Digital Marketing and eCommerce: First International Conference, 2020* (pp. 194-202). Springer International Publishing.
- K-12 Education Administration, Ministry of Education Republic of China (Taiwan). (2020). *Letter No. 1090011636 from the K-12 Education Administration dated February 4, 2020*. [https://cpd.moe.gov.tw/page\\_two.php?id=34054](https://cpd.moe.gov.tw/page_two.php?id=34054).
- K-12 Education Administration, Ministry of Education Republic of China (Taiwan). (2021). *Letter No. 1100062040 from the K-12 Education Administration dated May 18, 2018*. [https://cpd.moe.gov.tw/page\\_two.php?id=34835](https://cpd.moe.gov.tw/page_two.php?id=34835).
- Kemp, S. (2023). *DIGITAL 2023: TAIWAN*. <https://datareportal.com/reports/digital-2023-taiwan>
- Kircaburun, K., Alhabash, S., Tosuntaş, Ş. B., & Griffiths, M. D. (2020). Uses and gratifications of problematic social media use among university students: A simultaneous examination of the Big Five of personality traits, social media platforms, and social media use motives. *International Journal of Mental Health and Addiction*, 18, 525-547.
- Kuo, Y. F., & Chen, F. L. (2023). The effect of interactivity of brands' marketing activities on Facebook fan pages on continuous participation intentions: An S-OR framework study. *Journal of Retailing and Consumer Services*, 74, 103446.
- Lee, U. K., & Kim, H. (2022). UTAUT in Metaverse: an "Ifland" case. *Journal of Theoretical and Applied Electronic Commerce Research*, 17(2), 613-635.
- Marangunić, N., & Granić, A. (2015). Technology acceptance model: a literature review from 1986 to 2013. *Universal access in the information society*, 14, 81-95.
- Phua, J., Jin, S. V., & Kim, J. J. (2017). Gratifications of using Facebook, Twitter, Instagram, or Snapchat to follow brands: The moderating effect of social comparison, trust, tie strength, and network homophily on brand identification, brand engagement, brand commitment, and membership intention. *Telematics and Informatics*, 34(1), 412-424.
- Puriwat, W., & Tripopsakul, S. (2021). Explaining social media adoption for a business purpose: an application of the UTAUT model. *Sustainability*, 13(4), 2082.
- Rahimi, B., Nadri, H., Afshar, H. L., & Timpka, T. (2018). A systematic review of the technology acceptance model in health informatics. *Applied Clinical Informatics*, 9(03), 604-634.
- Rahman, Z., Moghavvemi, S., Suberama-naian, K., Zauddin, H., & Bin Md Nasir, H. N. (2018). Mediating impact of fan-page engagement on social media connectedness and followers purchase intention. *Online Information Review*, 42(7), 1082-1105.
- Shang, S. S., Hsu, W. Y., Tseng, H. T., Jiang, J. J., & Chiang, C. J. (2018). An empirical study on the effects of an enterprise fan page. *Journal of Organizational Computing and Electronic Commerce*, 28(3), 252-268.
- Sharma, S. K., Joshi, A., & Sharma, H. (2016). A multi-analytical approach to predict the Facebook usage in higher education. *Computers in Human Behavior*, 55, 340-353.
- Tateno, M., Kim, D. J., Teo, A. R., Skokauskas, N., Guerrero, A. P., & Kato, T. A. (2019). Smartphone addiction in Japanese college students: usefulness of the Japanese version of the smartphone addiction scale as a screening tool for a new form of internet

- addiction. *Psychiatry investigation*, 16(2), 115-120.
- Tewari, A., Singh, R., Mathur, S., & Pande, S. (2023). A modified UTAUT framework to predict students' intention to adopt online learning: moderating role of openness to change. *The International Journal of Information and Learning Technology*, 40(2), 130-147.
- Turnbull, D., Chugh, R., & Luck, J. (2021). Transitioning to E-Learning during the COVID-19 pandemic: How have Higher Education Institutions responded to the challenge?. *Education and Information Technologies*, 26(5), 6401-6419.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478.
- Williams, M. L. (2021). Students' perceptions of the adoption and use of social media in academic libraries: a UTAUT study. *South African Journal of Communication Theory and Research*, 47(1), 76-94.
- Yau, J. C., & Reich, S. M. (2019). "It's just a lot of work": Adolescents' self-presentation norms and practices on Facebook and Instagram. *Journal of Research on Adolescence*, 29, 196-209.
- Yildiz Durak, H. (2019). Examining the acceptance and use of online social networks by preservice teachers within the context of unified theory of acceptance and use of technology model. *Journal of Computing in Higher Education*, 31(1), 173-209.

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