



## **THE DIGITAL PERSONALITY: HOW PERSONALITY TRAITS SHAPE ONLINE SOCIAL BEHAVIOR**

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### ***Abstract***

*Social media is one of the most widely used social media platforms. It is known that social media has the potential to influence people's social interactions. This study examines the relationship between personality traits and the impact of social media on social interaction among university students at UiTM Perlis. Utilizing a quantitative approach and survey method, data were collected from 202 respondents through a structured questionnaire. Findings reveal that social media significantly enhances social interaction, especially among individuals who may struggle with face-to-face communication. Personality traits, particularly extraversion, also influence social engagement, though to a lesser extent than social media usage. The study contributes to understanding how digital platforms and individual traits jointly shape social behavior. It is recommended that universities promote balanced and mindful use of social media to support healthy social development. Additionally, student affairs units should consider integrating personality awareness programs to foster more effective peer communication. Future research may explore the long-term effects of social media engagement across different personality types and cultural contexts to broaden applicability and deepen insights.*

**Keywords:** *Personality; Social interaction; Social media; Culture; Social Engagement*

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## INTRODUCTION

Social media has become an integral part of everyday life, transforming how people communicate, interact, and maintain relationships. Platforms such as Facebook, Instagram, and X (formerly Twitter) have expanded the boundaries of social interaction, allowing users to engage beyond geographical and cultural limits (Mondal, 2014). Among youth and university students in particular, social media is a dominant channel for building and sustaining social connections (Zhao, 2009; Daud et al., 2014). While these platforms offer many benefits, there is growing concern over their potential impact on psychological well-being and interpersonal behavior.

Recent studies have highlighted that excessive or uncontrolled use of social media may contribute to issues such as stress, loneliness, and even depression (Zsila et al., 2023; Jimenez et al., 2015). These effects may be more pronounced among individuals with certain personality traits, such as introversion, low self-esteem, or emotional instability (Rubber & Rubber, 2007). Research has suggested that personality characteristics can influence how individuals experience and engage with social media, including how they communicate and form relationships in online spaces (Yuen & Lavin, 2004). More recently, Boursier et al. (2023) found that personality traits such as neuroticism and extraversion moderate the relationship between social media use and well-being among university students. Similarly, Al-Saggaf and Nielsen (2024) reported that the Big Five personality traits affect users' willingness to disclose personal information online. These findings indicate a growing interest in understanding how personality shapes digital behavior. However, existing studies are often conducted in Western contexts and may not reflect the cultural and social dynamics of Malaysian students. Group dynamics also depend on endogenous and contextual effects as well as individual qualities. Endogenous effects represent direct social interactions between agents' decisions. These interactions determine alternatives simultaneously, such as peer influence in classrooms where students' efforts are interdependent.

Social media is a vital part of daily life but has negative effects like addiction, mental health issues, and cyberbullying (Zsila & Eric, 2023). Social media can enhance students' academic progress by providing continuous learning opportunities, though it can also be distracting (Chukwuere, 2021). It negatively impacts mental health by increasing stress, loneliness, and depression, necessitating mindful consumption (Jimenez & Morreale, 2015). Obsessive technology use correlates with psychological traits like introversion, shyness, neuroticism, low self-control, loneliness, and depression (Rubber & Rubber, 2007). The link between these traits and compulsive behavior is unclear (Yuen & Lavin, 2004). This study explores how personality characteristics affect social interactions. Given this gap, it is important to explore how social media and personality traits jointly influence social interaction among university students in Malaysia. This study therefore aims to examine the relationship between personality traits and the impact of social media on social interaction, with a focus on students' lived experiences in the digital space.

## LITERATURE REVIEW

### Social Interaction

Social interaction plays a foundational role in shaping human behavior, particularly in learning, identity formation, and communication. It enables individuals to share ideas, form relationships, and function effectively in a social environment. Vygotsky (1978) emphasized that interaction is not just a means of communication but also a critical tool for cognitive development. Through concepts such as the Zone of Proximal Development (ZPD), Vygotsky

explained that learning is most effective when individuals engage with others who are more knowledgeable (Kelly et al., 2017). This social dimension of learning highlights the importance of collaborative strategies such as peer learning, reciprocal teaching, and scaffolding (Woolfolk, 1998).

In contemporary settings, especially among students, social interaction is increasingly mediated by digital platforms. As a result, understanding what enhances or limits these interactions, such as personality traits or social media behavior, has become a key area of interest for scholars and educators alike. Recent research underscores the significance of social interaction in online learning environments. For instance, Gao et al. (2024) found that social presence and learning engagement significantly mediate the relationship between social interaction and online learning efficiency among middle school students. Their study highlights that fostering social connections in digital learning platforms enhances students' engagement and learning outcomes. This finding aligns with Vygotsky's theory, emphasizing the critical role of social interaction in cognitive development, even within virtual settings.

### **The Impact of Social Media**

Social media has changed the way individuals interact, share ideas, and engage with communities. Platforms such as Facebook, Instagram, and Twitter have made it easier to communicate across boundaries, fostering both personal and professional connections. However, while social media has the potential to enhance interaction, it also poses risks, including disconnection from real-life relationships, cyberbullying, and emotional burnout (Zsila & Eric, 2023).

Studies have shown that social media plays a dual role: it facilitates communication and engagement, especially in academic and crisis contexts (Chew & Eysenbach, 2010; Crooks et al., 2012), but may also disrupt deep, meaningful connections if overused or misused. For instance, Clement (2020) noted the growing dominance of platforms like Facebook and Twitter for knowledge sharing, while others like Cabré-Olivé et al. (2017) emphasized their value in understanding public sentiment. Therefore, evaluating social media's influence on social interaction is vital, especially among young users navigating identity, relationships, and academic responsibilities.

### **Personality Traits**

Personality significantly influences how individuals perceive, process, and respond to social environments, including digital platforms. The Big Five personality traits—extraversion, agreeableness, conscientiousness, neuroticism, and openness—are widely recognized for studying behavioral tendencies. For instance, individuals high in extraversion tend to be more sociable and may thrive on social media, whereas those high in neuroticism may experience anxiety or distress in online interactions.

Recent research underscores the impact of these traits on social media behavior. A meta-analysis by Lin et al. (2024) revealed that extraversion positively correlates with information sharing on social media, while agreeableness, conscientiousness, and neuroticism show negative associations. Openness did not exhibit a significant relationship in this context. Furthermore, Yu et al. (2024) examined the interplay between the Big Five traits, social support, and psychological well-being among university students. Their findings indicate that extraversion and agreeableness influence well-being indirectly through social support, while conscientiousness, neuroticism, and openness have direct effects. These insights highlight the nuanced ways in which personality traits shape social interactions and well-being, particularly in digital contexts. Understanding these dynamics is crucial as social media becomes increasingly integrated into daily life.

### Theoretical Foundation: Vygotsky's Sociocultural Theory

This study is grounded in Vygotsky's sociocultural theory, which posits that social interaction is central to the development of cognition. According to this theory, individuals do not develop in isolation; rather, they grow through cultural tools and social exchanges with others (Jung et al., 2013). The More Knowledgeable Other (MKO) concept further emphasizes that people learn through guidance and dialogue, often mediated by peers, teachers, or even digital platforms (McLeod, 2014). The relevance of this theory in today's digital context lies in how social media can act as both a space for learning and a tool for mediating social interaction. Applying this lens, the present study explores how both personal (personality traits) and external (social media) factors interact to influence social engagement.

### Research Framework

The research framework (see Figure 1) illustrates the relationship between two independent variables the impact of social media and personality traits and their influence on the dependent variable, social interaction. First, the impact of social media variable explores how students perceive and engage with social media, including its role in enhancing or diminishing social communication. Items in this construct include frequency of use, communication habits, and effects on information sharing and emotional connection. Secondly, the personality variable refers to individual traits as defined by the Big Five model, including openness, conscientiousness, extraversion, agreeableness, and neuroticism. It captures how these traits may support or hinder one's ability to interact socially, particularly in online spaces. Finally, the social interaction as the outcome variable, reflecting how students connect with peers, express emotions, seek support, and participate in collaborative activities both online and offline.

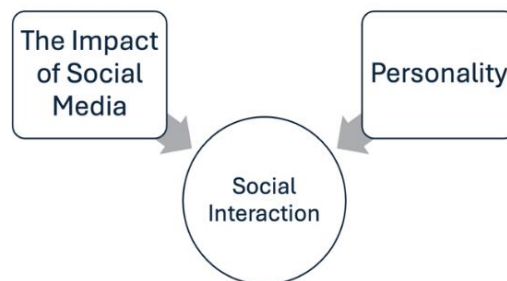


Figure 1: Research Framework

The framework hypothesizes that both social media usage and personality characteristics influence the quality and frequency of social interactions among university students. Hence, the hypotheses of the study are stated below:

**H1:** There is a relationship between the impact of social media and social interactions.

**H2:** There is a relationship between personality and social interactions.

## METHODOLOGY

### Research Design

This study employs a quantitative research design, specifically using the survey method to explore the relationship between personality traits, the impact of social media, and social interaction. Quantitative research allows for the examination of multiple variables, offering reliable and generalizable results. A structured questionnaire was used

to collect responses from a large number of participants efficiently. This approach is suitable as it facilitates statistical analysis and allows for testing hypotheses using measurable data.

### **Population and Study Sample**

The target population for this study comprises undergraduate students enrolled at Universiti Teknologi MARA (UiTM) Perlis, Arau Campus. UiTM Perlis has approximately 5,974 full-time students across various diploma and degree programs (Universiti Teknologi MARA Arau, Perlis). These students were selected due to their active use of social media and relevance to the study's focus on youth digital behavior.

### **Sampling Technique**

The study employed a simple random sampling method, ensuring that every student had an equal chance of being selected. This method is appropriate due to its simplicity, cost-effectiveness, and ability to reduce sampling bias. According to Glenn D. Israel's (1992) sampling table, for a population of 5,974, a minimum sample size of 196 respondents is adequate for a 95% confidence level and  $\pm 7\%$  precision.

### **Research Instrument**

The questionnaire for this study is divided into five parts:

Part A: Demographic background (independent variable).

Part B: Social interaction, with questions adapted from Kimberly Debra Kalish's "Psychometric Properties of the Social Interaction Questionnaire (SIQ)" (Kalish, 2001). Part C: Impact of social media, with questions taken from Joshua Ebere Chukwuere's study on "The Impact of Social Media on Students' Social Interaction" (Chukwuere, 2021). Part D: Family relationships, with questions derived from "The Brief Family Relationship Scale" (Fok et al., 2014). Part E: Personality traits, using questions from the "Big Five Inventory (BFI)" by the Fetzer Institute (Nofhle & Shaver, 2006).

### **Validation Process**

To ensure content validity, the questionnaire was reviewed and validated by one subject matter expert, Dr. Nan Zakiah binti Megat Ibrahim, currently the Head of the Research Management Centre (RMC) at Universiti Poly-Tech Malaysia (UPTM). Her expertise in research methodology and instrument development provided critical insights into the questionnaire items' structure, clarity, and relevance. While best practices often recommend multiple validators, this study engaged one expert due to the specialized alignment of her expertise with the research topic, as well as practical constraints such as time and access. The validation was conducted rigorously, and the feedback received was instrumental in ensuring that the instrument was suitable for the study's objectives and context.

### **Data Collection Technique**

Data was collected using both face-to-face distribution and the Google Forms platform. The use of both methods allowed for better reach and flexibility in data collection. Prior to full deployment, a pilot test was conducted with 100 students from Universiti Poly-Tech Malaysia (UPTM), Kuala Lumpur. Respondents were required to complete the questionnaire voluntarily, with assurance of anonymity. A letter of authorization was provided to legitimize the study and gain the cooperation of target participants.

### **Data Analysis**

Data from the pilot test and final responses were analyzed using IBM SPSS Statistics software, employing

descriptive statistics for demographics, reliability testing via Cronbach's alpha ( $\alpha = .80$  for Impact of Social Media,  $\alpha = .75$  for Social Interactions, and  $\alpha = .60$  for Personality), correlation analysis to examine variable relationships, and hypothesis testing using Pearson's correlation coefficient, with results indicating acceptable internal consistency for the instruments used.

### **Instrument Development**

The questionnaire for this study is divided into five parts:

Part A: Demographic background (independent variable).

Part B: Social interaction, with questions adapted from Kimberly Debra Kalish's "Psychometric Properties of the Social Interaction Questionnaire (SIQ)" (Kalish, 2001).

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Part D: Family relationships, with questions derived from "The Brief Family Relationship Scale" (Fok et al., 2014).

Part E: Personality traits, using questions from the "Big Five Inventory (BFI)" by the Fetzner Institute (Nofle & Shaver, 2006).

### **Data Analysis for Pre-Test**

The pre-test data were analyzed using the reliability test, specifically Cronbach's alpha, through the IBM SPSS statistics application. The four variables analyzed—social interactions, impact of social media, family relationships, and personality—showed acceptable reliability scores.

### **Pre-Test**

A pre-test was conducted with 100 students from Universiti Poly-Tech Malaysia Kuala Lumpur (UPTMKL) to evaluate the questionnaire's effectiveness. The test aimed to assess the clarity, relevance, and suitability of the questions concerning the study's objectives.

### **Frequency of Respondent Background for Pre-Test**

The pre-test included 73 respondents, with 61.6% male and 38.4% female participants. Most respondents were between 21-30 years old (76.7%), and the majority had a diploma (47.9%) or a bachelor's degree (41.1%).

### **Instrument Reliability**

The instrument's reliability was evaluated using Cronbach's alpha, which showed acceptable values for the study's variables, such as social interactions and the impact of social media, with  $\alpha = .75$  and  $\alpha = .80$ , respectively.

### **Correlation of Social Media Impact**

The correlation between items in the social media impact variable was strong, indicating that the items effectively measured the intended construct.

## **RESULT AND DISCUSSION**

### **Respondents' Demographics**

A pilot study was conducted involving 202 participants, focusing on their demographics such as gender, age, and education level. The study revealed that out of 202 respondents, 113 (55.9%) were female, and 89 (44.1%) were

male. Regarding age distribution, the majority of respondents (54%) were between 21-30 years old, while 93 (46%) were 20 years old or younger. No participants were aged 31 or above. In terms of education, most respondents (86.6%) held a diploma, followed by a smaller percentage with degrees (9.4%), master's degrees (3%), and SPM certificates (1%). No respondents had an STPM qualification.

Table 1: Frequency of Respondents

<b>Demography Factors</b>			
<b>Gender</b>		<b>n</b>	<b>%</b>
	Female	113	55.9
	Male	89	44.1
<b>Age</b>			
	20 years old and below	93	46
	21-30 years old	109	54
	31-40 years old	0	0
<b>Education</b>			
	Diploma	175	86.6
	Degree	19	9.4
	Master	6	3
	SPM	2	1
	STPM	0	0

**Instrument Reliability**

To assess the reliability of the instruments used in this study, Cronbach's Alpha was employed to measure internal consistency across four variables: Social Interactions, The Impact of Social Media, Family Relationships, and Personality.

Table 2: Cronbach Alpha Analysis

<b>Variable</b>	<b>Items</b>	<b><math>\alpha</math></b>
Impact of Social Media	13	.90
Social Interactions	12	.85
Personality	12	.60

**Correlation Analysis**

The study also examined the correlations between items within each variable, particularly focusing on the Impact of Social Media, Social Interactions, and Personality.

Table 3: Correlation Inter Item for Variable the Roles Impact of Social Media.

<b>Item</b>	<b>Correlation Inter Item</b>
My usage social media improves my social interactions	.90
The use of social media improves my communication and sharing of information with friends and peers	.90
The use of social media promotes physical distance among friends	.90
The use of social media encourages student to spend hours (time) online	.90
Usage of social media promotes data privacy issues and exposure of personal information	.90
The usage of social media is a useful tool in meeting friends	.90

Social media promotes cyberbullying and infringement of privacy	.90
Indeed, social media is terrible for social interactions	.84
Social media platforms are not favorable for interacting with friends	.84

Table 4: Correlation Inter Item Social Interaction

Item	Correlation Inter Item
There is someone who help me by running errands	.84
There is someone who has said or done to me to take my mind of my worries	.83
There is someone who has given me the information that made me feel anxious	.80
There is someone who has made a helpful suggestion to me about how I might adjust the way I am doing my everyday activities	.90
There is someone who has said or done something to encourage me to feel better	.84
There is someone who has help me with my personal activities	.82
There is someone who has help me with my other activities of daily living	.83
There is someone who has help me with listening to my feelings	.83
There is someone who has said or done something to make me feel comfortable with the way how I look	.85
There is someone who has given me an unwanted advice about how I should change my ways of doing every day	.90
There is someone who has said or done something that has discourage me from getting better	.83

Table 5: Correlation Inter Item Personality

Item	Correlation Inter Item
I see myself as someone who is talkative	.50
I see myself as someone who tends to find fault with others	.80
I see myself as someone who does a thorough job	.54
I see myself as someone who is depressed, blue	.71
I see myself as someone who is original, comes up with new ideas	.50
I see myself as someone who is reserved	.50
I see myself as someone who is helpful and unselfish with others	.52
I see myself as someone who can be somewhat careless	.50
I see myself as someone who us relaxed, handle stress well	.50
I see myself as someone who is curious about many different things	.50
I see myself as someone who is full of energy	.50
I see myself as someone who is starts quarrels with others	.50

### Hypothesis Testing

Two hypotheses were tested to examine the relationships between variables. Firstly, hypothesis 1 stated that there is a relationship between the impact of social media and social interactions. The results supported this hypothesis, showing a significant positive correlation ( $r = .589^{**}$ ,  $p < 0.01$ ). This indicates that as social media use increases, it positively influences social interactions among respondents. Secondly, hypothesis 2 stated that there is a relationship between personality and social interactions. The results also supported this hypothesis, albeit with a weaker correlation ( $r = .203^{**}$ ,  $p < 0.01$ ).

This suggests that personality traits are related to how individuals engage in social interactions, but the relationship is less strong compared to the impact of social media. This study demonstrates that social media significantly enhances social interactions by connecting individuals globally and facilitating exchanges among those with common interests. It aligns with previous research, reinforcing the role of social media in fostering personal growth and communication. Additionally, personality traits, particularly extroversion, influence social interaction patterns, though this impact is less pronounced compared to social media's effect. These findings contribute to social interaction theory by illustrating how digital platforms and personality traits interact to shape social behaviors. The results underscore social media's value in maintaining relationships and enhancing communication, especially for those who find face-to-face interactions challenging. The study successfully identified a relationship between social media use and social interactions. Social media platforms enable individuals to connect with others regardless of geographical distance, fostering global communication and interaction. These platforms also facilitate connections among people with shared interests, encouraging the exchange of ideas and supporting personal development. The findings are consistent with previous research by Daud et al. (2014), Zhao (2009), and others, while also offering new insights into the evolving dynamics of social interaction in the digital age.

In addition to examining social media, the research explored the connection between personality and social interaction. The results revealed that personality traits significantly influence how individuals engage socially. Extroverted individuals and those with other positive personality traits are more likely to participate in social interactions. These findings align with earlier studies, including those by Cheetham (2021), reinforcing the idea that personality plays a crucial role in shaping social behavior. This study contributes to the broader understanding of social interaction theory by emphasizing the role of social media in enhancing interpersonal connections. It highlights how digital platforms support personal growth and knowledge sharing through open communication and rapid dissemination of information. In today's technology-driven world, these findings underscore the importance of understanding how digital tools influence human interaction and contribute to social development.

## **CONCLUSION**

This study investigated the relationship between personality traits and the impact of social media on social interaction among students at UiTM Perlis. The results revealed that social media significantly enhances students' ability to interact and communicate, especially for those who may find face-to-face engagement challenging. While personality traits particularly extraversion also influence social interaction, their effect was found to be less substantial compared to the role of social media. Considering the findings of the study, several recommendations are proposed for future research. Firstly, it is suggested that future studies adopt a longitudinal approach to better understand how personality traits and social interaction evolve over time with continued social media use. This would provide deeper insights into long-term behavioural changes among students. Secondly, future research could explore other factors that may influence or mediate the relationship between social media and social interaction, such as emotional intelligence, self-esteem, or digital literacy. Including these variables may help explain variations in how individuals engage with social platforms.

Thirdly, the study could be expanded to include students from other institutions or regions, including private universities or rural campuses. This would allow for broader comparisons and enhance the generalisability of the findings. Lastly, researchers may consider using a mixed-method approach in future studies. While this study

focused on quantitative data, incorporating qualitative methods such as interviews or focus groups could offer more detailed insights into students' personal experiences with social media and interaction.

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