pISSN: 1906 - 3296 © 2020 AU-GSB e-Journal.
eISSN: 2773 – 868x © 2021 AU-GSB e-Journal.
http://www.assumptionjournal.au.edu/index.php/AU-GSB/index

Influencing Factors of Undergraduate Art Students' Satisfaction with Social Media During COVID-19 in Shanghai, China

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Received: December 27, 2023. Revised: February 19, 2024. Accepted: February 22, 2025.

Abstract

Purpose: Social media is a vital medium for communication in today's world. This research examined the factors impacting undergraduates at the Shanghai Institute of Visual Art's satisfaction with social media during COVID-19. The research conceptual framework was developed from previous studies. The seven selected latent variables were perceived usefulness, expected benefits, social risk, sociability, attitude toward use, social media use, and satisfaction. **Research design, data, and methodology:** The quantitative method was conducted to survey the group of 500 students. The study instrument's validity was evaluated using item-objective congruence, and the internal consistency reliability was determined by a pilot test utilizing the Cronbach alpha coefficient. The sampling techniques are judgmental, quota and convenience sampling. Additionally, the sampling analysis is conducted by confirmatory factor analysis and structural equation modeling were used to evaluate the data. **Result:** The results shows that all hypotheses are supported. Perceived usefulness, social risk, perceived risk for using social media and sociability significantly impact attitude toward use. Expected benefits significantly impact social media use. Additionally, attitude toward use and social media use significantly impact on satisfaction. **Conclusions:** Effective communication leads to significant improvements in both virtual and physical security. Ultimately, students' enjoyment of social media can greatly increase when social media producers and school officials stress perceived utility, risk control, sociability, and predicted rewards.

Keywords : Perceived Usefulness, Perceived Risk, Sociability, Expected Benefits, Satisfaction

JEL Classification Code: E44, F31, F37, G15

1. Introduction

For communication, entertainment, relaxation, and opinion expression, people mostly rely on social media sites like Facebook, LinkedIn, Twitter, YouTube, applications, and blogs (Weinberg & Pehlivan, 2011). For many modern people, social media is an invaluable and innovative means of communication. Social media is a useful tool for communication that not only meets people's needs on a social and spiritual level but also facilitates information transmission. Information is another word for knowledge. Social media will greatly benefit higher education as a result. It is not the future yet. This is the current event.

When people contact others using information technology (IT), such as social networking sites or social media, they can easily propagate emotional, social, or other effects that could influence how people engage with one another and their goals for collaboration (Baltar & Brunet, 2012). Social media sites, including Facebook, Twitter, MySpace, YouTube, Flickr, Skype, Wiki, blogs, de.licio.us, Second Life, MIT Open Courseware, online communities, text messaging, and others, have been welcomed with great enthusiasm by the majority of college students (Hew, 2011). In addition to occasionally using social media for teaching and research, college professors—many of whom are "digital immigrants" (Pavlou, 2003)—frequently utilize it for personal purposes (Wind, 2006). Faculty members are far

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less likely to adopt and use social media for teaching and student engagement goals than their students and other campus groups. Emails and other antiquated but recognizable technology are still widely used by academics (Rainie et al., 2012).

Before joining social practice, higher education provides students with a crucial opportunity for adaptation. Understanding and assimilating into the social environment is essential for future survival, learning, and developing skills. Social media offers great potential to assist people's emotional needs in their studies, research, jobs, and daily lives for those living in the twenty-first century. It also serves as a tool to fulfill social needs. Similarly, social media is crucial in modern college students' everyday lives and academic pursuits, especially during the pandemic. The researcher will go over the development history, development state, and present issues of Chinese social media before talking about the major principles of this study. Therefore, this research examined the factors impacting undergraduates at the Shanghai Institute of Visual Art's satisfaction with social media during COVID-19.

2. Literature Review

2.1 Perceived Usefulness

Perceived usefulness measures how well people believe technology will boost their capacity to execute activities (Davis, 1989; Flanagin & Metzger, 2001). Numerous scholarly studies have discovered that social media users might employ perceived usefulness to carry out a range of efficient services (Sun, 2013). The perceived utility is the extent to which social media users feel that using a social media application fulfills their needs for being on social media (Parker et al., 2017). Perceived usefulness is commonly interpreted as an individual's confidence that utilizing a certain technology will enhance their productivity at work (Davis, 1989). The degree to which an individual thinks utilizing social media during COVID-19 will surely boost output (Amirul et al., 2022). Hagiu and Altman (2017) state that perceived utility is essential in both social commerce and e-commerce research. Perceived utility plays a crucial role in establishing a user's perspective and mindset on the utility of a technology. One's goals are greatly impacted by choosing to use a system or piece of technology (Liu & Karahanna, 2017). According to Davis (1989), people's adoption of information systems is influenced by their perception of utility. Perceived usefulness is the term used to describe how customers view the value of Internet services (Iyengar et al., 2011).

H1: Perceived usefulness has a significant impact on attitude towards social media.

2.2 Social Risk

His predecessor, Bauer (1960), claimed that hasty and irresponsible social behavior might seriously impair a user's life, reputation, safety, and ability to perform their job. Bauer (1960) produced a research report about the societal risks linked with social media services within the framework of taking an academic point of view. Nobody wants to experience this response. Perceived risk is a multifaceted concept frequently used to describe how dangerous people believe it is to use the open internet framework to change personal data. Users who use Internet services without considering the consequences risk losing their privacy, social standing, and money (Chen et al., 2020). Perceived social risk is what this means (Irfan & Chendragiri, 2014). Widaman and Thompson (2003) claim that persons who engage in regular social activities usually accept the notion of social risk, which is rich, fascinating, scientific, and logical. People are more likely to make wise judgments according to this concept when presented with known dangers. As everyone is aware, there is a nearly immediate correlation between social risk and the frequency of use of social media software by those who regularly participate in social activities (Wang et al., 2021).

H2: Social risk has a significant impact on attitude towards social media.

2.3 Sociability

McKinney and Yoon (2002) cite several prior studies demonstrating the significant influence of social elements in the network environment on learning and social behaviors mediated by scientific reasoning. The primary driving force behind the adoption of various online services on social media platforms is users' desire to participate in social activities (Baker, 1994; Chan & Li, 2010). The scientific concept of reciprocal communication, sharing, cooperation, and teamwork among persons rather than each person working alone in daily life and at work is the wide definition of sociability (Carlson & O'Cass, 2010). As per Flanagin and Metzger (2001), *sociability* can be defined as the aspects of online interaction and communication that facilitate knowledge sharing, information dissemination, and the development of mutual understanding among users. It also encompasses other communication elements that foster mutual trust among individuals in a networked setting. Friendliness is the primary attribute of social environments that enhance online social interactions between users in isolation or between users and documents in appropriate contexts (Lee & Ma, 2012).

H3: Sociability has a significant impact on attitude towards social media.

2.4 Expected Benefits

Researchers refer to users' perceptions of continuous relationships and a variety of network services as perceived expected advantages, and users are drawn to social media platforms because of the positive aspects of these perceptions (Chan & Li, 2010). Scholars refer to the social advantages of solid interactions as perceptual socialization, which positively affects users' learning and quality of life (Berger, 2013). When people are bored with their everyday activities outside of work hours, they will use the services of robust social media platforms to pass the time, share information, create friends, and learn knowledge—these are the main components of social benefits (Park et al., 2010). According to Gan and Li (2018), social advantages are an obsessive type of virtual reward. People can pass the time and get useful benefits like exchanging information, learning new skills and knowledge, establishing friends, and other things like that when they use social media frequently for social purposes. The perceived utility is key in adopting an IS's perceived benefits (Bresnahan, 2001). It is included in and somewhat resembles Expected Benefits. Affirmative thoughts also significantly affect (Ting et al., 2018). The phrase "perceived expected benefits" describes the common benefits individuals use social media, such as content presentation, conversation, knowledge sharing, and information exchange (Dagger & Sweeney, 2007).

H4: Expected benefits have a significant impact on social media use.

2.5 Attitude Towards Social Media

The use of social media during COVID-19 was linked to prior perceptions about the platform (Amirul et al., 2022). A person's "disposition to respond warmly or adversely to an object, person, or event" was defined as their attitude toward using social media by Ajzen and Fishbein (1980). Wen (2014) asserts that a user's attitude toward using social media for activities depends on their point of view. The primary factors determining an individual's attitude toward social media are their judgments and religious beliefs (Limayem et al., 2007). A person's motivation to accept and use a new system or technology is greatly influenced by their attitude toward using social media (Luo et al., 2011). People's attitudes reveal their thoughts and feelings on a specific activity (Ajzen & Fishbein, 1980). Fishbein and Ajzen (1975) defined attitudes regarding social media use as feelings about an item's positive or negative qualities or a simplified assessment of a reported object linked to the positive-negative prototype. An individual's overall perspective on social media use is known as their attitude, which stems from their conceptions of the activity, its consequences, and their importance to those conceptions (Rafael et al., 2012). As has been observed, attitudes toward using social media are impacted by various unstable factors, including strong opinions about the activity, the user's incentive to use social media, and the perceived risk of unexpected events (Bao, 2016).

H5: Attitude towards social media has a significant impact on satisfaction.

2.6 Social Media Use

Users' satisfaction with the services provided by social media when engaging in social activities is strongly related to their utilitarian and hedonistic values, and this satisfaction has a significant influence on their values (Norvilitis & MacLean, 2010). A sophisticated technique for analyzing how people utilize social media to achieve their objectives is called social media Utilize (SMU). Academics often use this approach in related research reports (Podsakoff et al., 2012). The psychological and social media foundations of desires that result in media expectations and various media behaviors that satisfy needs are the main emphasis of the usage and fulfillment theory (Katz et al., 1973). Social media use has been linked to decreased organizational performance (Abdullah et al., 2018) and decreased working performance (Robb & Woodyard, 2011; Sahi & Kalra, 2013). According to publications, social media technologies—which are often free to use, encourage open communication, and are user-centric-significantly affect organizational operations (Cao et al., 2018).

H6: Social media use has a significant impact on satisfaction.

2.7 Satisfaction

In order to detect psychological states, satisfaction contrasts unmet expectations with prior social media usage (Oliver, 1981). Goldsmith and Goldsmith (2006) propose that an individual's level of contentment in a given scenario can be influenced by their attitudes or thoughts towards certain elements. Customers will be satisfied if social media platforms add new possibilities (Gan & Li, 2018). Satisfaction symbolizes positive psychological feelings that modify behavior and promote long-term use. Researchers have found that satisfaction positively impacts habits (Wu, 2016). According to Wixom and Todd (2005), satisfaction is a key sign of how well science is being applied and how new uses of it are intended. Oliver (1999) described customer satisfaction as the happy accomplishment of needs, desires, or goals. According to this description, a user feels delightfully fulfilled when their needs, wants, or ambitions are accomplished through consumption. Satisfaction "reflects a post-consumption evaluative judgment" because the customer believes the cost produces effects contrary to a measure of happiness versus misery. According to Oliver

(1981), "satisfaction" is a condition of emotional openness and self-evaluation that matches expectations.

3. Research Methods and Materials

3.1 Research Framework

This study aims to determine the satisfaction of undergraduates with social media at the Shanghai Institute of Visual Arts (SIVA) School of New Media. This study employed the quantitative survey method since it was the most effective way to obtain data on students' attitudes and assess their psychological responses.

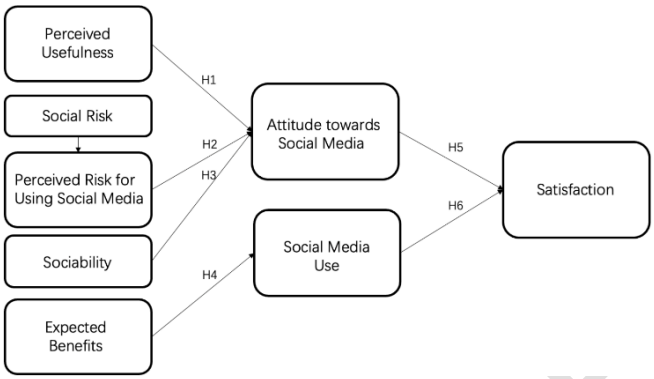

Figure 1: Conceptual Framework

H1: Perceived usefulness has a significant impact on attitude towards social media.
H2: Social risk has a significant impact on attitude towards social media.
H3: Sociability has a significant impact on attitude towards social media.
H4: Expected benefits have a significant impact on social media use.
H5: Attitude towards social media has a significant impact on satisfaction.
H6: Social media use has a significant impact on satisfaction.

3.2 Research Methodology

According to Bulgurcu et al. (2018), the researcher placed questions on the surveys that she desired the respondents to answer. A questionnaire was first proposed by Malhotra (2006) as a set of structured questions used to elicit data from participants. According to Stafford et al. (2004), the questionnaire was a self-administered survey tool that gave respondents access to the results. The researcher should also validate the instrument if a specific set of questions assesses a crucial concept developed by other researchers from past investigations. Leonardi (2014) stated that a questionnaire was the most important instrument for collecting data for descriptive survey studies. Smith and Gallicano (2015) assert that questionnaires are especially useful because each respondent can do it without the researcher's prompt assistance. If a respondent could not participate in the study in person, the researcher might still get the data by mailing or via a network questionnaire.

3.3 Population and Sample Size

The quantitative Danielsoper calculator will be used to calculate the sample size for this dissertation. The required parameters were entered, including the expected level of statistical power (0.8), the expected effect size (0.2), the number of latent variables (eight), the number of observable variables (25), and the stated probability level (0.05). Based on the projected results, the sample size for this empirical study should contain a minimum of 444 students from the new media art and design institutions.

3.4 Sampling Technique

The sample techniques of judgmental and convenience sampling were to select from 1650 Shanghai Institute of Visual Art undergraduate design program students who fell within the desired four grade levels. 500 respondents were selected as the final stage sample using quota selection from the four divisions. 480 surveys were deemed legitimate data. However, 20 out of 500 surveys contained inaccurate data.

Table 1: Sample Units and Sample Size

Subjects	Population Size	Proportional Sample Size
Freshman	420	127
Sophomore	430	131
Junior student	380	115
Senior student	420	127
Total	**1,650**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

An overview of all 480 respondents' demographic information is given in Table 3. Of the participants, 35% were male responders, and 65% were female respondents. First-year students made up 27.3% of the participants, followed by sophomores (24.58%), juniors (25.29%), and seniors (22.29%). Regarding age, 17.92% of responders were between the ages of 16 and 18, 40% were between the ages

of 19 and 21, 34.17% were between the ages of 22 and 24, and 7.91% were over 24.

Table 2: Demographic Profile

Demographic and General Data (N=480)		Frequency	Percentage
Gender	Male	168	35
	Female	312	65
Academic Year	Freshman	131	27.3
	Sophomore	118	24.58
	Junior Student	124	25.83
	Senior Student	107	22.29
Age	16-18	86	17.92
	19-21	192	40
	22-24	164	34.17
	Above 24	38	7.91
Number of social media in use	0	2	0.42
	1-3	173	36.04
	4-5	274	57.08
	More than 5	31	6.46

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was employed in this study to assess the validity of each variable. The results revealed that all items within each variable demonstrated significant factor loads, indicating discriminant validity. To evaluate the goodness of fit, the factor load values exceeding 0.30 and the P values lower than 0.05 were considered acceptable (Hair et al., 2006).

Furthermore, the reliability of the variables was assessed using a cut-off point in Table 3, which required a reliability value greater than 0.7 and a mean-variance of extraction higher than 0.5 (Fornell & Larcker, 1981). It was found that all indicators met these standards, affirming their reliability and validity within the study.

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Perceived Usefulness (PU)	Davis (1989)	3	0.783	0.662-0.831	0.785	0.551
Social Risk (ROS)	Bauer (1960)	3	0.734	0.640-0.877	0.803	0.580
Sociability (SOC)	Ma and Lee (2019)	4	0.628	0.689-0.844	0.860	0.607
Attitude Towards Use (ATT)	Amirul et al. (2022)	3	0.639	0.613-0.876	0.814	0.598
Expected Benefits (EB)	Kim et al. (2010)	3	0.675	0.648-0.822	0.803	0.578
Social Media Use (SMU)	Cao et al. (2013)	3	0.761	0.602-0.898	0.798	0.574
Satisfaction (SAT)	Oliver (1981)	3	0.725	0.676-0.814	0.777	0.539

The square root of the extracted mean variance was utilized to assess the correlation coefficients, confirming that all correlation coefficients were higher than the corresponding values for the variables presented in Table 4. Additionally, the CFA test employed several model-fitting indexes, including GFI, AGFI, NFI, CFI, TLI, and RMSEA, to evaluate the model's overall fit.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	<3.00 (Hair et al., 2010)	2.765
GFI	>0.85 (Bagozzi & Yi, 1988)	0.922
AGFI	>0.80 (Sica & Ghisi, 2007)	0.830
RMSEA	<0.08 (Pedroso et al., 2016)	0.061
CFI	>0.90 (Bentler, 1990)	0.950
NFI	>0.90 (Bentler & Bonett, 1980)	0.945
TLI	>0.90 (Bentler & Bonett, 1980)	0.978
Model Summary		**Acceptable Model Fit**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, RMSEA = Root mean square error of approximation, CFI = Comparative fit index, NFI = Normed fit index and TLI = Tucker-Lewis index

The results of the study and presentation of the discriminant validity are shown in Table 5. The diagonally specified quantity is the AVE square root of the AVE, and none of the correlations crossing any two latent variables were more than 0.80 (Liu et al., 2020; Schmitt & Stults, 1986). Therefore, these quantitative data were used to verify the discriminant validity.

Table 5: Discriminant Validity

	PU	SMU	EB	ROS	SAT	ATT	SOC
PU	**0.742**						
SMU	0.358	**0.758**					
EB	0.490	0.446	**0.760**				
ROS	0.547	0.327	0.269	**0.766**			
SAT	0.493	0.494	0.605	0.277	**0.734**		
ATT	0.406	0.352	0.534	0.367	0.387	**0.773**	
SOC	0.484	0.342	0.489	0.369	0.501	0.457	**0.779**

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author.

4.3 Structural Equation Model (SEM)

In this study, the CFA evaluation was conducted before verifying the structural equation model (SEM). The SEM methodology is applied to a particular set of linear coefficients to assess the fit of the proposed causality explanation. SEM considers any bias or dishonesty in the coefficient and examines the relationship between the attributes in the matrix (Roth et al., 2016). Table 6 shows that

the combined values of CMIN/DF, GFI, AGFI, CFI, NFI, TLI, and RMSEA were all acceptable fit. Hence, the results show that the SEM's goodness of fit was determined.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values
CMIN/DF	<3.00 (Hair et al., 2010)	2.224
GFI	>0.85 (Bagozzi & Yi, 1988)	0.917
AGFI	>0.80 (Sica & Ghisi, 2007)	0.835
RMSEA	<0.08 (Pedroso et al., 2016)	0.052
CFI	>0.90 (Bentler, 1990)	0.971
NFI	>0.90 (Bentler & Bonett, 1980)	0.906
TLI	>0.90 (Bentler & Bonett, 1980)	0.944
Model Summary		**Acceptable Model Fit**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, RMSEA = Root mean square error of approximation, CFI = Comparative fit index, NFI = Normed fit index and TLI = Tucker-Lewis index

4.4 Research Hypothesis Testing Result

As seen by Table 8's results, social media use was directly and significantly impacted by projected advantages, yielding the largest impact effects in this quantitative approach with a standardized path coefficient (β) of 0.696 (t-value = 10.442***). The second powerful significant interaction effect on contentment with β is provided by social media use, at 0.547 (t-value = 9.875***). Furthermore, attitude was significantly impacted by perceived usefulness expectancy (β at 0.523; t-value at 8.369***), sociability (β at 0.384; t-value at 5.438***), and attitude (β at 0.325; t-value at 5.514***) which significantly influenced satisfaction. Thus, with a t-value of 3.985***, perceived danger had the least significant impact on attitude in our quantitative study.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: PU→ATT	0.523	8.369***	Supported
H2: ROS→ATT	0.211	3.985***	Supported
H3: SOC→ATT	0.384	5.438***	Supported
H4: EB→SMU	0.696	10.442***	Supported
H5: ATT→SAT	0.325	5.514***	Supported
H6: SMU→SAT	0.547	9.875***	Supported

Note: *** p<0.001
Source: Created by the author

Table 7's findings demonstrate H1 that perceived utility can significantly predict attitude, with a standardized path parameter threshold of 0.523 for this structural method. Several studies have demonstrated the relationship between behavioral intention, attitude, and perceived usefulness (Ayeh et al., 2013; Huh et al., 2009).

With a standardized path coefficient of 0.211 in H2, the study showed that one of the critical aspects of attitude is the perception of risk. Emotions are altered by risk perception, which influences attitude (Wu & Chen, 2017). Previous research supports the hypothesis that perceived shopping risk influences user feelings (Otieno et al., 2013).

With a standard coefficient value of 0.384, the observable statistic results for H3 confirmed the hypothesis that sociability strongly impacted attitude. Fraley et al. (2000) discovered that attitude completely mediates the effect of enjoyment on behavioral intention in a technology-based self-service scenario.

In this quantification experiment, the most significant result is shown by a standard coefficient value of 0.696, and H4 further demonstrated that expected benefits were significantly impacted by social media use. For instance, Parra-López et al. (2011) presented and backed evidence supporting a distinct connection between perceived benefits and the inclination to utilize social media networks. Since people follow social media pages to get or share material, visitors of blogs expect rewards from doing so.

With a standard coefficient value of 0.325, H5 provided more evidence in favor of the study's conclusion that attitude significantly influenced pleasure. Attaining particular financial objectives leads to delight (Huy & Shipilov, 2012).

Based on a statistical score of 0.547 on the standard coefficient of the active influence and the second highest effect point on satisfaction in this study, H6 concluded that social media use was substantially connected with contentment. According to Huan and Niu (2018), "Social Media Use Satisfaction" refers to an individual's affective assessment of their overall social media experience for personal finance.

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This study aimed to identify the key variables significantly affecting undergraduate students' satisfaction with online learning at the Shanghai Institute of Visual Art in Shanghai, China. The six hypotheses to validate the relationship between perceived usefulness, expected advantages, perceived risk, attitude, sociability, social media use, and satisfaction were displayed in the conceptual framework. 480 undergraduate students with prior social media experience completed the survey to examine the interactions between these variables.

Confirmatory factor analysis (CFA) was employed to determine whether the outcomes fit the specified theory-derived measurement model. Similarly, structural equation modeling, or SEM, was employed to test hypotheses and

evaluate the relationships between observable and latent elements that influence satisfaction. According to the study's findings, social media use directly affects satisfaction in the biggest way. Expected advantages influenced people's use of social media the most. Furthermore, attitude was significantly impacted by sociability, perceived risk, and perceived utility, all of which had an adverse effect on the standardized route coefficient.

5.2 Recommendation

Drawing from the findings of this quantitative study, the researchers advocate the following changes to social media content aimed at youth. First and foremost, the most significant aspects influencing students' happiness with social media in this study are social media's features and usage scenarios. Thus, developers should focus more on the comprehensive functionalities of social media tools.

Furthermore, a positive outlook will raise pupils' contentment with social media. Four potential variables were found to influence student happiness in this study, with projected benefits having the strongest effect. As a result, aspiring social media producers should put in maximum effort to enhance the industry's user experience. Improved services that are quicker, more accurate, and better overall can raise users' opinions of social media.

Additionally, as social media is a vital medium for communication in today's world, all rights groups must engage in social media optimization. The people's government, the workers' firm, the students' school, and so on can all work together to increase the effectiveness of social operations. Effective communication leads to significant improvements in both virtual and physical security. Ultimately, students' enjoyment of social media can greatly increase when social media producers and school officials stress perceived utility, risk control, sociability, and predicted rewards. This contributes to ensuring the standard of everyday living and education for students.

5.3 Limitation and Further Study

According to the actual situation of this survey, the limited time for quantitative research is about one year. In addition, the target population and samples participating in the survey are limited to the two major schools of Shanghai Institute of Visual Arts, and the conceptual framework only contains seven potential variables. Therefore, if the sample range of the survey is expanded and the field of potential variables is improved, the results of this research direction may be more accurate. In addition, other technology acceptance theories, such as Rational Behavior Theory (TRA), Planning Behavior Theory (TPB), and Information Systems Success Model (ISSM), should be explored to develop conceptual frameworks.

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