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Preservice Teachers' Intentions to Use Social Network Sites: Adoption of Unified Theory of Acceptance and Use of Technology Model II

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This study aims to verify the application of the UTAUT2 theoretical model in explaining the behavior of early childhood preservice teachers using social networking sites. Participants were first selected first-to-fourth-year, department of education, Northern Border university and college of education, Beni Suef through random sampling. 800 questionnaires were collected, with an effective response rate of 93%. After data recovery, Warp PLS 5.0 statistical software was used for statistical analysis. The results showed that variables such as performance expectations, facilitating conditions, hedonic motivation, price measurement, and usage habits in the UTAUT2 theoretical model have a significant positive impact on the intention of university students to use social networking sites. The explanatory power of website behavior is 13.4%. Gender, age, and experience variables have moderating effects on some influence paths in the model. The above results can be used by future university teachers to understand students' behavior in using social networking sites. They can use the behavioral characteristics of students who like to use social networking sites to change relevant courses or communication and interaction methods with students to social networking sites. This can improve student learning, effectiveness and management efficiency.

Keywords: intention, usage behavior, Facebook, conditioning effect, early childhood

INTRODUCTION

Online social networking has become a vital part of college students' daily lives. Research shows that the most frequently used mobile phone by 84.96% of college students is to play social software such as QQ and WeChat (Liu et al., 2023). Since the

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COVID-19 epidemic, the frequency of online learning and communication has increased due to intermittent isolation. 98.62% of college students tend to choose to socialize through online media such as QQ, WeChat and other apps, while offline or letter-writing methods have gradually been replaced (Yuan, 2021). With the emergence of the concept of Facebook and Microsoft's metaverse, virtual social networking will inevitably occupy an increasingly important role in the lives of college students. A survey on college students' online social usage time found that nearly 40% of college students use online social tools for more than two hours a day, and nearly 75% use them for more than one hour (Hu & Luguo, 2016). College students are highly dependent on online social activities. Through online social media, college students' online social activities mainly focus on social activities such as online chatting, browsing Weibo, visiting forums, following hot news, browsing social networking sites, and shopping. Most college students use social networks to contact friends or classmates, followed by following and understanding their friends' latest developments, and some use social networks to meet like-minded friends. Many of them do it for entertainment and leisure, and a few do it for entertainment and leisure.

People use social networking sites to meet their needs for information and interpersonal relationships. Users will use the intimacy that attracts everyone's attention on social networking sites to make up for the lack of belonging in real intimate relationships, that is, seeking virtual friendship on the Internet. and emotional comfort, creating a brand new self to make up for the psychological deficiencies in one's real interpersonal relationships (Abdelraheem & Ahmed, 2018); Barakat,2023; Tafesse, 2022). High use of social networking sites not only helps college freshmen maintain existing relationships (maintained social capital) but also increases students' ability to build new relationship (Tafesse, 2022).

New technologies are constantly being updated. MOOC (Massive Open Online Course, a type of online course) is currently popular in university education, which has gradually become popular and received more attention (Barakat & Elmaghraby, 2022; Calderón-Garrido & Gil-Fernández, 2022). Therefore, this study will be used by students from college of early childhood and college of education. The behavior of social networking sites is used as a research topic and as a theoretical verification of new technology use.

The Unified Theory of Acceptance and Use of Technology (UTAUT) has been proven to be an acceptable and valid model in many studies and is applicable to different countries (Xue et al., 2024). Venkatesh et al. (2003) found that it would be insufficient to explain an individual's intention to use technology and behavioral intentions based solely on psychological or social aspects, so they proposed UTAUT Model in 2003. UTAUT, is regarded as a model with explanatory power. This model combines the impact of factors such as performance expectations, effort expectations, social influence and promotion conditions on users' intention to use, plus moderating variables. Gender, age, experience, and voluntariness are moderated and have approximately 70% explanatory power in predicting a user's degree of use of the system (Timmy et al., 2022).

Venkatesh et al. found that more and more people are becoming more and more user-oriented in the technology acceptance model, so they proposed the "Consumer Information Technology Acceptance and Use Theoretical Model" in 2012, which is the United Technology Model 2 (UTAUT2). Its explanatory power is stronger than UTAUT proposed in 2003. This model will add variables such as hedonic motivation (HM), price value (PV) and usage habits (habit, HT) to explain behavior and intentions. UTAUT has been verified and used by many scholars in different research fields. It can be said that the verification is very complete and a considerable number of articles have been published. However, there are still very few articles published recently using UTAUT2. The reason may be that it is used in Published at the end of 2012, many scholars have not yet verified this related issue. Therefore, in the future, scholars will need to conduct discussion and verification in different research topics to understand whether this model can be appropriately used in different fields. The main purpose of this study is to use the UTAUT2 to conduct an empirical study on the behavior of university students using social networking sites, verify the influence relationship between performance expectations, effort expectations, social influence, promotion conditions, hedonic motivation, price value, usage habits, usage intentions and usage behaviors in the UTAUT2 theoretical model, and investigate whether variables such as gender, age, and experience have moderating effects in the UTAUT2 theoretical model.

Research Hypotheses

Relationship between performance expectation (PE) and usage intention (BI)

Venkatesh et al. (2003) defines performance expectations as when users personally recognize that using the system will effectively improve work performance and achieve expected benefits. According to Abu-Tayeh et al. (2022), PE has the greatest influence on behavioral intention to use mobile banking. Meanwhile, Wijaya and Eva (2020) show that PE has no effect on behavioral intention in the online marketplace Shopping .There seems to be gap in the literature . Based on the above description and explanation, this study will propose research hypothesis 1:

H1: College students' performance expectations for using social networking sites will have a positive and significant impact on usage intentions.

Relationship between effort expectation (EE) and usage intention (BI)

Venkatesh et al. (2003) defines effort expectancy as the user's personal acceptance of new technologies, new systems and operations. Existing literature has confirmed that effort expectation (EE) has a positive and significant impact on usage intentions (Tanantong &Wongras, 2024). Based on the above description and explanation, this study will propose research hypothesis 2:

H2: College students' effort expectation for using social networking sites will have a positive and significant impact on usage intentions.

The relationship between social impact (SI) and usage intention (BI)

Venkatesh et al. (2003) defines social impact as the degree to which individual users accept new technologies when using them, which will also affect others. prior literature indicated that social impact has a positive effect on behavioral intention to

use (Marikyan & Papagiannidis, 2023; Xue et al., 2024). Based on the above description and explanation, this study will propose research hypothesis 3:

H3: College students' social impact for using social networking sites will have a positive and significant impact on usage intentions.

Relationship between facilitating conditions (FC), usage intention (BI), and usage behavior (UB)

FC is defined as the degree of user support for the novel and systematic use of technology that individuals perceive. (Castillo-Vergara et al., 2022). Al-Khaldi and Wallace (1999) found that the more positive an individual's attitude towards computers, the more experience in using personal computers, and the better understanding of personal computer-related equipment are important factors affecting the use of personal computers by knowledge workers.

H4: Facilitating conditions for students to use social networking sites have a positive and significant impact on usage intention.

The relationship between hedonic motivation (HM) and usage intention (BI)

For an innovative or novel product, consumers or users will pursue hedonic motives. When they start to use these new technologies, they are often willing to put more energy into pursuing the novelty of the technology (Castillo-Vergara et al., 2022). Brown and Venkatesh (2005) pointed out that fun and pleasure in using technology are an important factor driving individuals to accept and use technology.

H5: The hedonic motivation of students when using social networking sites has a positive and significant impact on usage intention.

Relationship between price value (PV) and usage intention (BI)

Many theories and social laws in the past have mentioned that value measurement will affect behavioral intentions (Brown & Venkatesh, 2005). Marikyan & Papagiannidis (2023) pointed out that the use of short messaging services (SMS) is quite common. The main reason is that it is cheap. On the other hand, the sales cost may be lower than that of a physical store. When is low, this value has a direct positive impact on usage behavior.

H6: The value measurement of students when using social networking sites has a positive and significant impact on usage intention.

Relationship between usage habits (HT), usage intention (BI), and usage behavior (UB)

Escobar-Rodríguez & Carvajal-Trujillo (2013) used the UTAUT2 model to conduct an empirical study on consumers' online ticket purchase. The results showed that usage habits are an important factor affecting the behavioral intention of online ticket purchase. In predicting the use behavior of online ticket purchase, using Habits are second only to behavioral intentions in their influence.

H7: Students' habits when using social networking sites have a positive and significant impact on behavioral intentions.

The relationship between intention to use (BI) and behavior of use (UB)

Davis (1986) defines usage intention as the degree of user's intention to use a system. When the actual usage behavior also affects the individual's subjective intention to adopt information technology in the future. Escobar-Rodríguez and Carvajal-Trujillo (2013) will use the UTAUT2 model to conduct an empirical study on consumers' online ticket purchase. The research results found that the most influential part of the usage behavior prediction part of online ticket purchase will be the usage intention. Chen (2015) used UTAUT to explore passengers' acceptance of low-cost airlines. The study found that passengers will have a positive impact on behavioral intentions and usage behavior. Based on the above explanation, this study will propose research hypothesis 8:

H8: Students' intention to use social networks will have a positive and significant impact on usage behavior.

The relationship between gender, age and experience in the regulation of UTAUT2

Gefen and Straub (1997) found that women's perceived usefulness was significantly higher than that of men. Mikkelsen (2002)'s research shows that women have higher computer anxiety than men. Venkatesh et al. (2003) added age interference to the path between performance expectations and behavioral intentions, and it was more significant for young male users. Cao et al. (2009) found that the age variable has a significant interference effect on the path of performance expectations on usage intention. According to the above explanation, this study proposes hypothesis 9:

H9: Gender and age will moderate the relationship between performance expectations (PE) and intention to use social networking sites (BI).

Gefen and Straub (1997) found that gender has a moderating effect on the relationship between effort expectancy and usage intention, in which men's perceived ease of use is significantly higher than that of women. The research of Venkatesh and Morris (2000) showed that in the relationship between effort expectancy and usage intention, women have a higher influence than men. According to the above description, this study proposes hypothesis 10:

H10: Gender, age, and experience will moderate the relationship between effort expectation (EE) and intention to use social networking sites (BI).

Venkatesh and Morris (2000) should analyze the acceptance behavior of financial organization employees towards new organizational internal information systems. The relationship between social influence and usage intention will be significantly moderated by gender, with women having a greater impact than men. Venkatesh et al. (2003) analyzed the moderating effect of age on the relationship between social influence and usage intention and found that older employees have a greater influence. Hompson et al. (1994) studied personal computer use patterns and found that the relationship between social influence and usage intention will be affected by the user's personal experience, so experience has a moderating effect. Venkatesh and Morris (2000) found that experience has a significant moderating effect on the relationship between social influence and usage intention. According to the above description, this study proposes hypothesis 11:

H11: Gender, age, and experience will moderate the relationship between social influence (SI) and intention to use social networking sites (BI).

Venkatesh et al. (2012) confirmed that the importance of UTAUT2 lies in the fact that consumers have previous usage habits when consuming, but whether the technology products used today can be consumed by different groups because of the technology designed by the organization. The purpose of the information product is to bring benefits to consumers during use, so that consumers will feel happy when using it and are willing to use the information product. The research results show that the impact of "hedonic motivation" on "behavioral intention" is mainly age, gender and experience. The last one affects behavioral intention; the impact of "price value " on "behavioral intention" will be affected by age and gender; the impact of "usage habits" on "behavioral intention" will have individual differences, and usage habits will vary depending on the intensity of use. There will also be changes based on age, gender and experience. Binde and Fuksa (2013) studied the mobile Internet usage behavior of residents in Latvia, Russia. The UTAUT2 model provided expected performance, effort expectations, social impact, promotion conditions, and value measurement, and added technical support and internet experience.) has an impact on behavioral intention. Facilitating conditions, technological support and Internet experience will affect usage behavior, and three variables such as gender, age, and experience have a moderating effect in the model. The research subjects were 2,000 Latvia city residents. The results showed that residents' mobile Internet usage behavior will be affected by factors such as performance expectations, effort expectations, social influence, promotion conditions, value measurement, and increased technological support and Internet experience. Here are seven factors The relationship between each independent variable and behavioral intention and usage behavior will be moderated by gender, age, and experience. According to the above explanation, this study proposes hypotheses 12, 13, 14, 15, and 16:

H12a: Gender, age, and experience will moderate the relationship between facilitating conditions (FC) and intention to use social networking sites (BI)

H12b: Gender, age, and experience will moderate the relationship between facilitating conditions (FC) and social networking site usage behavior (UB)

H13: Gender, age, and experience will moderate the relationship between hedonic motivation (HM) and intention to use social networking sites (BI).

H14: Gender, age, and experience will moderate the relationship between price value (PV) and intention to use social networking sites (BI).

H15a: Gender, age, and experience will moderate the relationship between usage habits (HT) and intention to use social networking sites (BI).

H15b: Gender, age, and experience will moderate the relationship between usage habits (HT) and social networking site usage behavior (UB).

H16: Experience will moderate the relationship between intention to use social networking sites (BI) and usage behavior (UB) of social networking sites.

Based on the above assumptions, the model is shown in Figure 1:

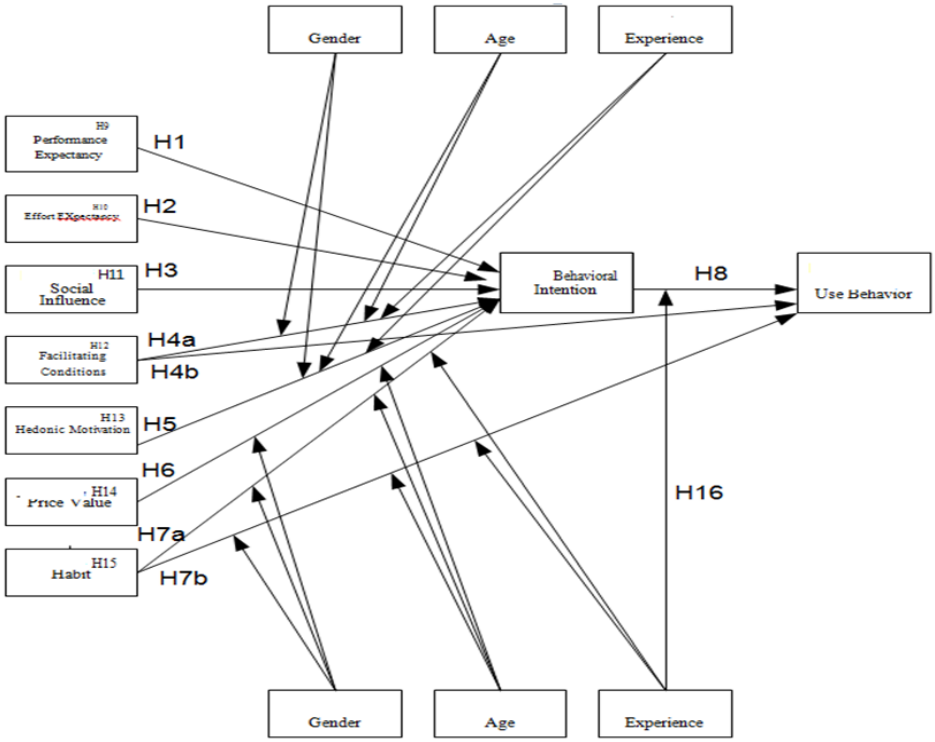

Figure 1
Research hypothesis model

METHOD

A survey research design was conducted using Structural Equation Modeling to test a hypothesized model grounded in the literature.

Participants

Students in first-to-fourth years from department of education, Northern Border university and college of education, Beni Suef were the targets for this study. They were selected through a random sampling procedure (Best & Kahn, 2006).A total of 860 questionnaires. In order to increase the questionnaire recovery rate, the researcher entrusted one academic staff from to be the person in charge to conduct the questionnaire survey. The purpose of this research was explained to the participants. When the participating students understand the purpose of this research and agree to participate in filling out after completing the questionnaire, the questionnaire administration began. 800 valid questionnaires were recovered, with a valid questionnaire recovery rate of 93%.

Instrument

This study uses questionnaires as a data collection tool to explore the behavior of university students using social networking sites. In order to effectively improve the reliability and validity of the questionnaire scale, the item design of the questionnaire content was mainly based on literature discussion, with reference to the scale of Venkatesh et al. (2012), and then partially modified the scale based on the actual situation of this study. The first part of the UTAUT2 scale includes performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), habit (HT), usage . There are a total of 33 questions covering aspects such as social networking site intention (UI) and social networking site usage behavior (UB). The questionnaire questions were designed using a five-point Likert scale to design response items. The response levels were "strongly agree", "agree", "no opinion", "disagree" and "strongly disagree". The basic data report includes: gender, age, personal experience in using social networking sites, whether you currently use mobile phone networks, whether you think teachers should use this social networking site to interact with you, and what you think will be moving part of the course to social networking sites to discuss with you will improve your motivation to learn.

Data Analysis

This study proposes sixteen research hypotheses and will use the partial least squares (PLS) method for analysis. PLS is a statistical method based on regression analysis that can perform path analysis. Its functions are similar to the analysis technique of Structural Equation Modeling (SEM). It can simultaneously measure the correlation between constructs in the model and analyze the reliability and validity of each construct. This research uses the Warp PLS 5.0 statistical software.

Scale reliability and validity test

First, the problem of common method variation is detected. The reliability and validity analysis of the relevant scales in this study was carried out using the Warp PLS 5.0 statistical software developed by Kock (2015). The partial least squares (PLS) statistics of this software provide two test values in the reliability analysis part: Composite reliability and Cronbach's α value. In terms of validity, convergent validity and discriminant validity were used to test the validity of the scale. The relevant analysis content is explained as follows:

1) *Common method variation and collinearity test*

This study conducted exploratory factor analysis on all items in the eight facets and obtained a total of eight factors. The explanatory power of the first factor was 36.10%, which was not greater than 50%. Therefore, there is no serious problem of common method variation. . In addition, the second method is to use one-factor confirmatory factor analysis to test again, that is, set all items as one factor for pattern detection. When the factor loadings of all items are significant and greater than .50, it means that there is common method variation (Peng et al., 2006). In addition, the overall fit of confirmatory factor analysis for a single-factor model will be worse than the overall fit of other models (Mossholder et al., 1998). This study used Lisrel version 8.80 statistical

software to conduct confirmatory factor analysis of the single-factor model. From the overall fitness value of the model, it can be found that the single-factor model is worse than the eight-factor skew model. The eight-factor skew model is susceptible to large samples except for the $\chi 2$ test. Except for the influence that cannot pass, the values of other adaptation indicators all pass the model evaluation standards (see Table 1), which shows that there is no serious common method variation problem in this study.

Table 1
Verification factor analysis adaptation index results

Model	χ^2	DF	RMSEA	CFI	SRMR	PNFI	GFI	AGFI
single factor model	2740.22	456	.09	.91	.08	.80	.85	.67
Eight-factor oblique model	1653.71	436	.06	.98	.05	.86	.91	.88
Evaluation criteria	Not obvious		<.08	>.90	<.05	>.50	>.80	>.80

Collinearity test of model potential variables, according to the analysis results of Warp PLS 5.0 statistical software, the VIF value of potential variables ranges from 1.162 to 2.727. The general loose principle is VIF value <10, and the strict standard is VIF value <5 , the most stringent standard is VIF value <3.3. Therefore, the VIF value of all potential variables in this research model is lower than 3.3, which meets the strict standard. It means that there is no collinearity problem.

Reliability analysis

According to Table 2, the combined reliability value and Cronbach's α value of each variable are both above .70, which meets the verification standards, indicating that the reliability of the measurement model of this study has reached an acceptable level.

Table 2
Cronbach's α value analysis results of each research variable

subscales	composite reliability	Cronbach's α value
Performance Expectations (PE)	.86	.79
Effort Expectation (EE)	.91	.86
Social Impact (SI)	.81	.72
Facilitating Conditions (FC)	.82	.72
Hedonic Motive (HM)	.89	.83
Price Value (PV)	.86	.78
Usage Habits (HB)	.86	.79
Intent to use social networking sites (BI)	.89	.83
Social Network Usage Behavior (UB)	1.00	1.00

Convergent validity is to understand whether the factor loading of the measured variable on its underlying variable has a large enough value. According to the recommendations of Hair et al. (2009), the factor loading must be greater than .50. If not, reaches .50, the item must be deleted. The test results of this study are shown in Table 3. The factor loadings of all measured variables in this study ranged from .66 to .85 and were all greater than .50, which met the recommended standards. Therefore, each potential variable in this study has good convergent validity.

Table 3
Factor loadings for all measured variables in the model

variables	PE	EE	SI	FC	HM	PV	HT	BI
PE1	.81							
PE2	.75							
PE3	.84							
PE4	.73							
EE1		.81						
EE2		.84						
EE3		.88						
EE4		.84						
SI1			.73					
SI2			.67					
SI3			.81					
SI4			.67					
FC1				.69				
FC2				.76				
FC3				.81				
FC4				.66				
HM1					.83			
HM2					.83			
HM3					.85			
HM4					.75			
PV1						.75		
PV2						.78		
PV3						.77		
PV4						.79		
HT1							.83	
HT2							.83	
HT3							.73	
HT4							.74	
BI1								.79
BI2								.84
BI3								.84
BI4								.80

Based on the above analysis results, it can be seen that the model of this study has passed the common method variation problem detection and the collinearity test of the potential variables of the model. In addition, the reliability and validity analysis results of the measurement models show that the combined reliability and Cronbach's α reliability values of all measurement models meet the reliability requirements. In terms of validity, all measurement models have passed the convergent validity and Discriminant validity test. Therefore, the measurement models of this study have good reliability and validity, and can further analyze the influence of structural models.

Table 4
Discriminant Validity Results

	PE	EE	SI	FC	HM	PV	HT	BI	UB
PE	.78	.57	.61	.56	.49	.61	.45	.59	.25
EE	.57	.84	.52	.57	.26	.39	.39	.40	.26
SI	.61	.52	.72	.61	.49	.51	.50	.52	.25
FC	.56	.57	.61	.73	.50	.58	.48	.56	.27
HM	.49	.26	.49	.50	.82	.62	.44	.63	.27
PV	.61	.39	.51	.58	.62	.77	.57	.68	.26
HB	.45	.39	.50	.48	.44	.57	.78	.64	.30
BI	.59	.40	.52	.56	.63	.68	.54	.82	.32

FINDINGS

Verification of the influence relationship of UTAUT2 theoretical model

After testing the reliability and validity of the measurement model to ensure that the research structure has good reliability and validity, the structural model was then tested. Based on the UTAUT2 theoretical model, this study proposed the influence relationship between variables such as performance expectations, effort expectations, social influence, promotion conditions, hedonic motivation, value measurement, usage habits, usage intentions and usage behaviors, as well as gender, age and experience, etc. Whether the variables have moderating effects in the UTAUT2 theoretical model, these research hypotheses will use Warp PLS 5.0 software to conduct structural model testing. According to Hair et al. (2014) it is recommended that it must consider the following two factors: (1) standardized path coefficient; (2) use R2 to judge the explanatory ability of the model. The results of the path coefficient and R2 value between each potential variable can show the degree of fit between the structural model and the empirical data. The standardized path coefficient needs to reach statistical significance; R2 is used to judge the explanatory ability of the model, and the R2 value The higher the value, the better the explanatory power.

Path coefficient

The structural equation model (path analysis) and results are shown in Figure 2. The path coefficient represents the strength and direction of the relationship between the research variables. The path coefficient test should be significant and should be consistent with the direction expected by the research hypothesis to establish the relationship between the independent variables and the dependent variables. The results show:

H1: Performance expectations of college students when using social networking sites have a positive and significant impact on behavioral intentions. (β = .13, $p<.05$), indicating that the higher the performance expectations of college students when using social networking sites, the higher their intention to use social networking sites.

H2: The effort expectations of college students when using social networking sites have no significant impact on their intention to use social networking sites (β = .02, $p>.05$), so the research hypothesis is not supported.

H3: The social influence of college students when using social networking sites has no significant impact on the intention to use social networking sites (β = -.02, p>.05), so the research hypothesis is not supported.

H4: The promotion conditions for college students to use social networking sites have a positive and significant impact on the intention to use social networking sites (β = .07, p<.05), indicating the promotion conditions for college students to use social networking sites. The higher the value, the higher the intention to use social networking sites.

H5: The hedonic motivation of college students when using social networking sites has a positive and significant impact on the intention to use social networking sites (β = .24, p<.05), indicating that the higher the hedonic motivation of students when using social networking sites , the higher the intention to use social networking sites. H6: The value measurement of college students when using social networking sites has a positive and significant impact on the intention to use social networking sites (β = .20, p<.05), indicating the value measurement of college students when using social networking sites. The higher the value, the higher the intention to use social networking sites.

H7: The habits of college students when using social networking sites have a positive and significant impact on the intention to use social networking sites (β = .27, p<.05), which means that the better the usage habits of college students when using social networking sites. When it is high, the intention to use social networking sites is higher.

H8: The intention to use social networking sites among college students has a positive and significant impact on usage behavior (β = .18, p<.05), indicating the usage habits of college students when using social networking sites. The higher the value, the higher the intention to use social networking sites.

H9: The gender of college students will negatively and significantly moderate the relationship between performance expectations and intention to use social networking sites (β = -.09, p<.05), indicating that male students have a strong relationship between performance expectations and the use of social networking sites. The influence relationship between group website intentions is smaller than that for female students. The age of college students does not significantly moderate the relationship between performance expectations and intention to use social networking sites (β = -.01, p>.05), and the research hypothesis was not supported.

H10: The gender of college students will not significantly moderate the relationship between effort expectations and intention to use social networking sites (β = -.01, p>.05), and the research hypothesis was not supported. Age did not significantly moderate the relationship between effort expectancy and intention to use social networking sites (β = .01, p>05), and the research hypothesis was not supported. Students' experience with social networking sites will positively and significantly moderate the relationship between effort expectations and intention to use social networking sites (β = .14, p<.05), indicating that the more experience students have in using social networking sites, the greater their impact on effort. The greater the relationship between expectations and intention to use social networking sites.

H11: The gender of college students will negatively and significantly moderate the relationship between social influence and intention to use social networking sites (β = -

.06, p<.05), indicating that male students have a greater influence on social influence and intention to use social networking sites. The relationship is smaller than that for girls, and the research hypothesis is supported. Age did not significantly moderate the relationship between social influence and intention to use social networking sites (β = -.04, p>.05). Experience in using social networking sites will positively and significantly moderate the relationship between social influence and usage intention (β = .18, p<.05), indicating that the more experience students have in using social networking sites, the greater the relationship between social influence and usage intention. The greater the relationship between intention to use social networking sites.

H12a: The gender of college students will negatively and significantly moderate the relationship between facilitating conditions and intention to use social networking sites (β = .06, p<.05), indicating that male students have a negative influence on the relationship between facilitating conditions and intention to use social networking sites. The relationship between them is smaller than that of female students. Age did not significantly moderate the relationship between influence-facilitating conditions and intention to use social networking sites (β = .01, p>.05), and the research hypothesis was not supported. College students' experience in using social networking sites will negatively and significantly moderate the relationship between influencing conditions and intention to use social networking sites (β = -.18, p<.05), indicating that college students' experience in using social networking sites The greater the experience, the smaller the impact on the relationship between facilitating conditions and intention to use social networking sites.

H12b: Whether age will significantly moderate the relationship between facilitating conditions and the behavior of using social networking sites (β = .01, p>.05), the research hypothesis was not supported. The experience of using social networking sites among college students does not significantly moderate the relationship between influencing conditions and usage behavior (β = .04, P > .05), and the research hypothesis was not supported.

H13: The gender of college students will not significantly moderate the relationship between hedonic motivation and intention to use social networking sites (β = -.05, p>.05), and the research hypothesis was not supported. Age did not significantly moderate the relationship between hedonic motivation and intention to use social networking sites (β = .05, p>.05), and the research hypothesis was not supported.

H14: The gender of the college students does not significantly moderate the relationship between impact value measurement and intention to use social networking sites (β = .02, p>.05), and the research hypothesis was not supported. Age did not significantly moderate the relationship between affect value measures and intentions to use social networking sites (β = .01, p>.05), and the research hypothesis was not supported. College students' experience with social networking sites did not significantly moderate the relationship between impact price value and intentions to use social networking sites (β = -.03, p>.05), and the research hypothesis was not supported.

H15a: The gender of college students will not significantly moderate the relationship between usage habits and intention to use social networking sites (β = -.04, p>.05), and the research hypothesis was not supported. Age will significantly moderate the

relationship between usage habits and intention to use social networking sites (β = .08, p>.05), indicating that the older the students are, the greater the relationship between usage habits and intention to use social networking sites. The greater the impact on the relationship. College students' experience in using social networking sites will positively and significantly moderate the relationship between usage habits and intention to use social networking sites (β = .09, p<.05), indicating that students' experience in using social networking sites The more, the greater the impact on the relationship between usage habits and intention to use social networking sites.

H15b: The gender of college students will not significantly moderate the relationship between usage habits and usage behavior (β = -.01, p>.05), and the research hypothesis was not supported. Age does not positively and significantly moderate the relationship between usage habits and usage behavior (β = .03, p>.05), and the research hypothesis was not supported. College students' experience in using social networking sites does not significantly moderate the relationship between usage habits and usage behavior (β = -.02, p>.05), and the research hypothesis was not supported.

H16: College students' experience in using social networking sites will not significantly moderate the relationship between intention to use social networking sites and behavior of using social networking sites (β = .03, p>.05).

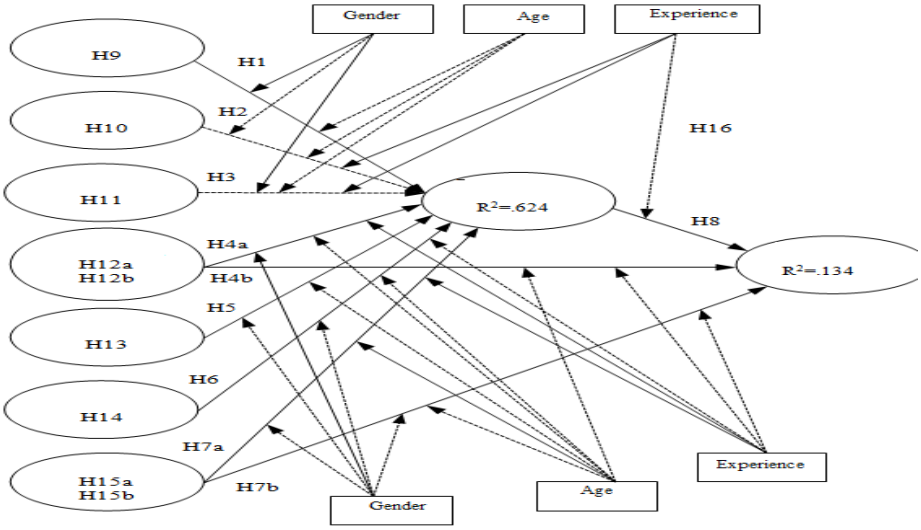

Figure 2
Research model SEM analysis results

Explanatory power of correlations (R2)

The explanatory power is generally called R2, which is the percentage of variation that can be explained by external variables to internal variables, and therefore represents the predictive ability of the research model. Therefore, the higher the R2 value, the stronger the predictive ability (Chicco et al., 2021). The R2 of the intention to use (BI) variable is .624, which is above medium explanatory power. It represents "performance

expectations", "effort expectations", "social influence", "facilitating conditions", "hedonic motivation" and "price value". ", "usage habits" and other variables can explain the variable "usage intention" to a degree of 62.4%; while the R2 of the "usage behavior" variable is .134, which is a weak explanatory power, and it represents " facilitating conditions", Variables such as "usage habits" and "usage intention" can explain "usage behavior" to a degree of 13.4%.

DISCUSSION

This study applied the UTAUT2 theory to verify the behavior of college students using social networking sites. The results found that the independent variables in the model, such as performance expectations, facilitating conditions, hedonic motivation, price measurement, and usage habits, have an important impact on the use of social networking sites by college students. Website intention has a significant positive impact, and this result supports the research results of Chong and Ngai (2013), and Venkatesh et al. (2012). Effort expectancy and social influence do not have a significant impact on the intention to use social networking sites. In this study, effort expectation is defined as the behavior of college students using social networking sites. They believe that the content of the social networking site is complex and easy to operate. Social influence refers to the degree to which college students perceive their important relationships and whether they should use social networking sites. None of these will have a significant impact on usage intention. According to Venkatesh et al. (2003), as users accumulate more experience, the influence of content complexity and ease of operation of social networking sites will be lost.

The ranking of the influence of independent variables on college students' intention to use social networking sites is: usage habits, hedonic motivation, price value, performance expectations, and facilitating conditions. This result is similar to the results of Escobar-Rodriguez and Carvajal-Trujillo (2013) who studied the purchase of air tickets through online systems. Consumers believe that using computers or mobile phones to access the Internet is a very easy activity in life, and they can save money by purchasing air tickets online. Regarding the influence of the intention to use social networking sites, promotion conditions and usage habits on the behavior of using social networking sites in the model, this study found that the three influence paths all have a significant impact, among which the influence of intention to use social networking sites on the behavior of using social networking sites is Maximum, this result is the same as some previous studies (Escobar-Rodriguez & Carvajal-Trujillo, 2013).

In terms of the analysis results of moderating variables, the impact relationship between boys' performance expectations and usage intention is smaller than that of girls. This result is the same as the research results of Wu and Lin (2008). In terms of the age variable, it was found that older college students will enhance the influence of their usage habits on the intention to use social networking sites. Therefore, older college students use social networking sites as a regular behavior and will have a higher dependence on the use of social networking sites. In terms of experience variables, it was found that the more experience students have in using social networking sites, the greater the impact on the relationship between their effort expectations and intentions to use social networking sites. Therefore, students with more experience in using social

networking sites will reduce the impact of social networking sites. Barriers to the use of social networking sites will strengthen their willingness to use social networking sites. On the contrary, college students with less experience in social networking sites will have higher barriers to operating social networking sites, which will reduce their willingness to use social networking sites. Therefore, providing social networking services The introduction to the content of the group website and the operation instructions will be helpful to college students with less experience in social networking sites.

CONCLUSION

This study found that the independent variables performance expectations, promotion conditions, hedonic motivation, price value, usage habits and other variables in the UTAUT2 theoretical model have a significant positive impact on the intention of students in first-to-fourth years from department of education, Northern Border university and college of education, Beni Suef to use social networking sites. Only effort expectancy has a significant positive impact on the use of social networking sites. There is no significant impact on the intention to use social networking sites. These six independent variables have a good ability to explain the intention to use social networking sites. However, there is still room for improvement in the explanation of the intention to use social networking sites, facilitating conditions and usage habits on the behavior of using social networking sites. Gender, age, and experience variables have moderating effects in the model.

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