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Determinants Impacting Behavioral Intention of Nursing Undergraduates for Blended Education

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Abstract

Purpose: The purpose of this article is to evaluate the indicators that impacted behavioral intention with blended education in Sichuan, China, and the investigation was conducted using a quantitative survey assessment strategy. **Research design, data, and methodology:** The conceptual framework incorporated perceived ease of use, perceived usefulness, system quality, information quality, attitude, satisfaction, and behavioral intention. The researcher distributed the questionnaire to the Nurse Subject Undergraduates in three target medical colleges using a quantitative survey approach with 500 samples and 475 valid data obtained. In this investigation, the researcher's conceptual framework is constructed on the Technology Acceptance Model and Information Systems Success Model. **Results:** Perceived ease of use provided the greatest influence on perceived usefulness. Perceived ease of use has a significant effect on perceived usefulness. Perceived ease of use and perceived usefulness have a significant effect on attitude. Attitude has a significant effect on behavioral intention. System quality and information quality have a significant effect on satisfaction. Finally, satisfaction has a significant effect on behavioral intention. **Conclusion:** If students are satisfied with their online learning experience, their behavioral intention for employment in online learning through the Rain-Classroom Teaching System will be enhanced.

Keywords: Blended Education, Rain-Classroom Teaching System, Behavioral Intention

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Blended education, which combines traditional classroom instruction with online learning components, has evolved as an effective educational technique in the contemporary century. It provides several benefits to learners, educators, and educational institutions by combining the advantages of in-person and digital learning. This article will demonstrate the significance of blended education in improving learning effectiveness, fostering educational equity, and satisfying the different requirements of learners by analyzing relevant research and presenting concrete instances. With the rise of blended learning, the education sector has undergone considerable transformations in recent years. Blended education is more than just a combination of two teaching modes; it is a new educational paradigm that reimagines the learning process (Turyamureeba, 2024). It has grown in popularity due to the rapid growth of information and communication technologies (ICTs) and the changing needs of learners in the twenty-first century.

One of the primary benefits of blended education is the ability to provide a tailored learning environment. Online learning platforms can collect information about students' learning progress, preferences, and performance (Johnson et al., 2016). In contrast, in a traditional classroom setting, it is often difficult for teachers to simultaneously meet the diverse needs of all students. Blended education promotes active learning. In the online component, students can engage in interactive activities such as virtual simulations, group discussions in online forums, and multimedia-rich learning modules (Garrison & Vaughan, 2008). This enhances their understanding of the scientific concepts and increases their

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motivation and engagement.

Furthermore, personal interactions can clarify misconceptions and encourage in-depth discussions among students. The combination of online and in-person learning enables stronger reinforcement of learning. On several occasions, students can access online materials such as video lectures, electronic literature, and quizzes for revision and self-assessment (Bernard et al., 2009). Then, in face-to-face class, they could practice what they have acquired through problem-solving exercises and discussions with their peers and teachers.

Blended education has the potential to overcome geographical barriers. Learners in remote areas can access high-quality educational resources through online components of blended courses (Moore & Kearsley, 2012). It also caters to different learning abilities. Students with learning disabilities or those who need additional support can benefit from the flexibility of blended education. They can use online tools such as text-to-speech software or visual aids at their own pace and then receive in-person guidance from teachers in face-to-face sessions (Hrastinski, 2008). Blended education can be more cost-effective in promoting educational equity. Educational institutions can reach more students without significantly increasing their physical infrastructure costs. For example, by offering blended courses, universities can admit more students from different economic backgrounds without building more classrooms. The online component can handle multiple students' self-study needs, while the face-to-face component can be optimized for more in-depth interactions.

Rain-Classroom Teaching System (RCTS) is an innovative educational tool with several notable characteristics. Firstly, RCTS effectively bridges the gap between online and offline learning. It allows instructors to upload teaching materials such as slides and videos in advance, enabling students to preview before class. During class, real-time interaction is possible. For example, teachers can send in-class quizzes, and students can respond immediately through their devices. The results can be instantly analyzed and presented to the teacher.

Additionally, Rain Classroom offers complete data analytics. RCTS may monitor students' learning advancement, including their involvement in pre-class preparation, in-class activities, and post-class evaluation. This data allows teachers to understand their students' learning circumstances better and alter their instructional tactics. Finally, RCTS has a user-friendly interface. Both teachers and students can easily operate it without much technical training, which promotes its wide application in various educational settings.

Based on the previous research achievements, it is obvious that an empirical investigation has been designed to evaluate the approaches to behavioral intention with six critical latent factors connected with blended education through the RCTS for Nurse Subject Undergraduates (NSU) in three target medical colleges in Chengdu, China.

2. Literature Review

2.1 Perceived Ease of Use

Davis (1989) characterized perceived ease of use as the extent to which an individual considers utilizing a specific technology effortlessly. PEOU is how an individual independently assesses the straightforwardness of utilizing a technology. Aurangzeb (2024) defined PEOU as the individual's assessment of how straightforward it is to engage with a certain software or system. Anwar et al. (2024) described it as the degree to which consumers perceive a system as PEOU. Hamzat and Coker (2024) defined PEOU as the mental evaluation of users regarding the ease with which they can operate a particular technological device or application. Some researchers suggested that PEOU is the users' intuitive feeling about the simplicity or usefulness of using a system or product (Handayani et al., 2022). Depending on the previous academic works, the researcher raised the following hypothesis:

H1: Perceived ease of use has a significant effect on perceived usefulness.

H2: Perceived ease of use has a significant effect on attitude.

2.2 Perceived Usefulness

Perceived usefulness is an individual's psychological conviction that employing a particular methodology, technological advance, or invention will improve their professional productivity or job effectiveness (Davis, 1989). PU performs a critical role in the implementation of new technology. Users are less likely to adopt technologies they do not believe are useful (Handayani et al., 2022). PU correlates positively with user satisfaction. When users find a product or PU, they are more likely to be satisfied—according to a study by Varier et al. (2024). PU plays an important role in the process of innovation diffusion. Innovations perceived as more useful are likely to spread among users (Rogers, 2019). It has a significant consequence on individuals' perceptions and behavioral intentions. Increased PU corresponds to a favorable attitude or willingness to use or promote a product or service (Keržič et al., 2019). Depending on the previous academic works, the researcher raised the following hypothesis:

H3: Perceived usefulness has a significant effect on attitude.

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2.3 Attitude

Attitude is a psychological construct that represents an individual's evaluation of an object, person, or situation, which can be positive, negative, or neutral (Nair & Das, 2012). ATT is a taught tendency to respond continuously positively or negatively to a particular object or thought (Bahjat, 2018). ATT is a reasonably stable arrangement of convictions, emotions, and behavioral tendencies regarding socially relevant things, organizations, events, or representations (Golnaz et al., 2010). ATT is an internal state that influences an individual's perception and response to various environmental stimuli (Nagy, 2018). ATT can be summarized as a bundle of assessments and feelings connected with a given organization, which influence one's strategy or reduction of BEI (Atabek, 2020). ATT is a cognitive, affective, conative construct that encompasses thoughts, feelings, and tendencies to act about a given object or concept; it frequently significantly influences the individuals' behavioral intention (Celik & Yesilyurt, 2013). Depending on the previous academic works, the researcher raised the following hypothesis:

H4: Attitude has a significant effect on behavioral intention.

2.4 System Quality

System quality is defined as a system's overall effectiveness and efficiency in performing its intended functions. It encompasses reliability, performance, and usability (Rughoobur-Seetah & Zuberia, 2021). SYQ is the extent to which a technological system satisfies the participants' previously established functions and requirements. This includes functional and non-functional requirements like security and maintainability (Samarasinghe, 2012). SYQ is considered the combination of technical features that contribute to the seamless operation of a system. These features involve proper integration, error handling, and data integrity (Cidral et al., 2018). SYQ is the quality of the overall system architecture, which includes the design, structure, and communication patterns within the system, while it frequently significantly impacts participants' satisfaction (Salimon et al., 2023). Depending on the previous academic works, the researcher raised the following hypothesis:

H5: System quality has a significant effect on satisfaction.

2.5 Information Quality

Information quality refers to data accuracy, completeness, and timeliness (Afful-Dadzie et al., 2021). Accuracy means that the INQ is free from errors, and it is the degree to which information meets users' needs (Afiah et al., 2020). It includes aspects such as relevance, understandability, and usability. The quality of information that constitutes a useful resource has been identified as INQ (Jebril et al., 2024). The percentage of respondents who consider a source of knowledge current, trustworthy, and substantial is defined by INQ (Rughoobur-Seetah & Zuberia, 2021). INQ indicates how individuals acknowledge knowledge as interrelated, consistent, genuine, and interrelated (Almarashdeh, 2016). Traditionally, research focused on complete perceived usefulness or technique to measure INQ (DeLone & McLean, 2003). In online education, INQ contributes to users' SAT with e-learning, which is based on research conducted by Napitupulu and Patria (2013). Depending on the previous academic works, the researcher raised the following hypothesis:

H6: Information quality has a significant effect on satisfaction.

2.6 Satisfaction

According to Theng et al. (1999), satisfaction is the sense of being happy with online education for aiding during the task's successful completion. The term "The SAT of E-Learning" encompasses how an individual would assess their own online learning experience (Chang, 2012). Numerous studies have demonstrated that the standard of knowledge significantly affects users' SAT with an application, which in turn influences the frequency with which they use it (Nagy, 2018). The primary variable influencing users' long-term, consistent, and devoted use behavior and their positive feelings toward a particular social media platform is their SAT level with the website's structure and its online network information services (McKinney et al., 2002). According to research by Gan and Li (2018), user controllability, loyalty, interest, and connection significantly positively affect academic social media use of SAT and users' BEI. Depending on the previous academic works, the researcher raised the following hypothesis:

H7: Satisfaction has a significant effect on behavioral intention.

2.7 Behavioral Intention

Behavioral intention refers to an individual's subjective probability regarding the performance of a given behavior; it is a precursor to actual behavior and reflects the person's motivation and likelihood to engage in a particular action (Davis, 1989). BEI is an individual's psychological state that shows how ready they are to carry out a particular behavior. Perceptions, personal standards, and perceived behavioral control are some of the components that affect it (Ajzen & Fishbein, 1980). BEI might be considered a person's self-predictive conduct in the future. According to Lin et al.

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(2013), it is a psychological concept that helps forecast whether a person would execute a particular action by bridging the gap between ATT and actual conduct. BEI is the mental image of a person's intention or desire to engage in a behavior. It is a cognitive component influenced by societal factors, individual beliefs, and values (Ching et al., 2021). BEI is a person's anticipating state when carrying out a behavior. According to Al-Adwan et al. (2023), it is a forward-looking construct that can be utilized to forecast and clarify prospective behavior.

3. Research Methods and Materials

3.1 Research Framework

The current quantitative investigation was intended to evaluate the key determinants impacting Nurse Subject Undergraduates' behavioral intention toward blended education via RCTS at three target medical institutions in Sichuan province, China. This was accomplished by evaluating the advantages of seven latent variables from the conceptual framework, which included three independent variables (PEOU, SYQ, and INQ), three mediator variables (PU, ATT, and SAT), and one dependent variable (BEI). In order to evaluate the level of authority, the present investigation also looked at the causal relationships connecting each latent variable.

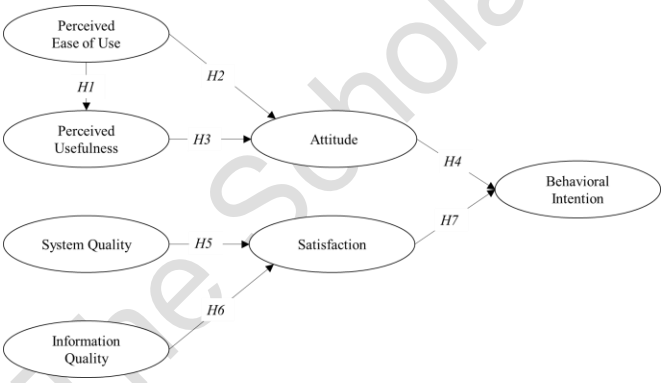

Figure 1: Conceptual Framework

H1: Perceived ease of use has a significant effect on perceived usefulness.
H2: Perceived ease of use has a significant effect on attitude.
H3: Perceived usefulness has a significant effect on attitude.
H4: Attitude has a significant effect on behavioral intention.
H5: System quality has a significant effect on satisfaction.
H6: Information quality has a significant effect on satisfaction.
H7: Satisfaction has a significant effect on behavioral intention.

3.2 Research Methodology

According to the RCTS employment for this academic investigation, the investigator used a multistage sampling approach that included judgmental sampling and quota sampling to administer the quantitative in-person survey to the NSU, which adopted the advantages of blended education at three target medical colleges located in Sichuan, China. Information recognition was combined and analyzed to determine the essential characteristics that substantially impacted respondents' behavioral intention for blended education. Each observable variable is scientifically evaluated using the five-level Likert scale.

It is indispensable to provide the appropriate evaluation by the research instrument for the current research. One professor and two associate professors were designated as professionals to conduct the item-objective congruence (IOC) for content validity determination in this research. Following the content validity assessment, the pilot examination included 30 students, and the internal consistency reliability of the scale items was assessed employing Cronbach's Alpha.

After the reliability and validity assessments of the research instrument were completed, the scale items were distributed to 500 NSUs from the target medical colleges. To evaluate the data, the researcher employed statistical techniques. Construct validity was assessed utilizing confirmatory factor analysis (CFA), and the structural equation model (SEM) was implemented to assess the assumptions and the direct, indirect, and total impact of the connections among the associated factors.

3.3 Population and Sample Size

The current investigation included the NSU at Sichuan Nursing Vocational College (SNVC), Sichuan College of Traditional Chinese Medicine (SCTCM), and Sichuan Vocational College of Health and Rehabilitation (SVCHR). The entire amount of latent and observed variables was employed to determine the minimum sample size for the advanced investigation arrangement in SEM, which was 425 samples. After screening, reduction, and non-probability selection, 500 samples were chosen as the final sample from the 2470 respondents in the qualitative research conducted at these three target medical institutions. Table 2 describes the target population's detailed information from the present research.

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3.4 Sampling Technique

Three experts possessing a minimum of ten years of professional expertise in blended education research were appointed to conduct the IOC assessments while examining the content validity of the research instrument. The IOC investigation determined that all scale items had adequate content validity, and the minimum score was 0.67, which was the acceptable threshold.

The initial investigation intended to ascertain the observed variables' internal consistency reliability. Cronbach's Alpha was utilized to assess the internal consistency reliability of the pilot assessments, which thirty NSUs completed. The findings of the pilot assessment demonstrated that BEI had the weakest Cronbach's Alpha point, 0.727, of any constructs, indicating that the observed variables were trustworthy. The pilot assessment's details are presented in Table 1.

Table 1: Sample Units and Sample Size

No.	Target Medical Colleges	Number of the NSU
1	College of Traditional Chinese Medicine (SCTCM)	1029
2	Sichuan Vocational College of Health and Rehabilitation (SVCHR)	568
3	Sichuan Nursing Vocational College (SNVC)	873
Total		2470

4. Results and Discussion

4.1 Demographic Information

After collecting statistics, 475 acceptable data were gathered after reducing the incorrect information. Table 4 specifies the demographic information for all 475 contributors. 85.89% of participants were female NSUs, while 14.11% were male NSUs. According to institution statistics, 40.84% of the samples were collected from SCTCM, 22.94% from SVCHR, and 36.22% from SNVC. Additionally, 20.42% of the samples were first-year students, 14.53% were sophomores, and 65.05% were juniors throughout all academic years.

Table 2: Demographic Profile

Demographic Profile (n=475)		Frequency	Percentage
Gender	Male	67	14.11%
	Female	408	85.89%
College Belong	SCTCM	194	40.84%
	SVCHR	109	22.94%
	SNVC	172	36.22%
Grade	Freshman	97	20.42%
	Sophomore	69	14.53%
	Junior	309	65.05%

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is a statistical technique to calculate the fitness difference between an established component model and actual information, consequently confirming the validity of a conceptual hypothesis (Brown, 2015). This approach is frequently employed in educational studies to assist investigators in confirming the validity of their conceptual frameworks. CFA's initial assessment requirement is Goodness of Fit (GOF).

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 Ease of Use (PEOU)	Davis (1989)	3	0.881	0.772 - 0.873	0.855	0.664
Perceived Usefulness (PU)	Davis (1989)	3	0.863	0.781 - 0.847	0.847	0.649
System Quality (SYQ)	DeLone and McLean (1992)	4	0.946	0.664 - 0.944	0.893	0.629
Information Quality (INQ)	DeLone and McLean (1992)	3	0.903	0.595 - 0.892	0.862	0.518
Attitude (ATT)	Golnaz et al. (2010)	3	0.785	0.805 - 0.848	0.867	0.684
Satisfaction (SAT)	Chang (2012)	4	0.795	0.656 - 0.850	0.797	0.569
Behavioral Intention (BEI)	Asadi et al. (2016)	4	0.727	0.734 - 0.856	0.833	0.625

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Table 4 indicates that the GOF indications satisfy all the appropriate requirements for the CFA. Consequently, each after-adjusted goodness of fit indicator utilized in the CFA examination was satisfactory.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/df	<3.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	1.802
GFI	≥ 0.90 (Sica & Ghisi, 2007)	0.925
AGFI	≥0.80 (Sica & Ghisi, 2007)	0.905
RMSEA	< 0.05 (Hu & Bentler, 1999)	0.041
CFI	≥ 0.90 (Bentler, 1990)	0.965
NFI	≥0.90 (Wu & Wang, 2006)	0.925
TLI	≥ 0.90 (Hair et al., 2006)	0.959
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 = normalized fit index and TLI = Tucker Lewis index.

To satisfy discriminant validity criteria, the coefficient of correlation among any combined latent variables should be less than 0.800 (Ukoha, 2010). The greatest coefficient of association is 0.455, indicating that this research's discriminant validity was supported.

Table 5: Discriminant Validity

	PEOU	PU	SYQ	NQ	ATT	SAT	BI
PEOU	**0.815**						
PU	0.455	**0.806**					
SYQ	0.193	0.044	**0.793**				
INQ	0.068	0.054	0.078	**0.720**			
ATT	0.256	0.323	0.089	0.013	**0.827**		
SAT	0.184	0.030	0.175	0.437	0.037	**0.754**	
BI	0.090	0.032	0.037	0.013	0.137	0.232	**0.791**

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

4.3 Structural Equation Model (SEM)

The structural Equation Model (SEM) is a multidimensional quantitative evaluation technique employed for exploring the causal interconnection among complicated constructs, particularly in educational and academic investigation (Kenneth et al., 1993). In the structural model, SEM might evaluate the deterministic causality among latent variables employing path examination, revealing the impact of exogenous latent variables on endogenous latent variables (Duncan, 2014).

The GOF assessments must be completed before utilizing SEM corresponding to the CFA. The SEM evaluation requirements utilized in the present investigation were identical to the relevant CFA requirements. All the SEM's GOFs have been determined based on the comprehensive data provided in Table 6.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/df	<3.00 (Al-Mamary & Shamsuddin, 2015; Awang, 2012)	1.877
GFI	≥ 0.90 (Sica & Ghisi, 2007)	0.908
AGFI	≥0.80 (Sica & Ghisi, 2007)	0.901
RMSEA	< 0.05 (Hu & Bentler, 1999)	0.043
CFI	≥ 0.90 (Bentler, 1990)	0.959
NFI	≥0.90 (Wu & Wang, 2006)	0.917
TLI	≥ 0.90 (Hair et al., 2006)	0.955
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 = normalized fit index and TLI = Tucker Lewis index.

4.4 Research Hypothesis Testing Result

The findings of the hypotheses' examination are assembled in Table 7, while the entire hypotheses are supported. PEOU generated the strongest significant effect on PU in the present investigation, with a t-value of 10.259*** and a standardized path coefficient (β) at 0.550. At the same time, INQ generated the second greatest significant effect on SAT, with a t-value at 8.454*** and β at 0.479. In addition, PU generated the third strongest significant effect on ATT, with a t-value at 4.589*** and β at 0.299.

In addition, PEOU generated a significant influence on ATT, with a t-value of 1.996* and β at 0.291, and the influence point was fourth-ranked in this research. Moreover, SAT significantly influenced BEI, with a t-value of 4.460*** and β at 0.250, the influence point being the fifth-ranked in this research. Additionally, ATT generated a significant influence on BEI, with a t-value of 4.589*** and β at 0.147, the influence point being the sixth-ranked in this research. Eventually, SYQ significantly influenced SAT, with a t-value of 2.697** and β at 0.129, which was the weakest influence point in this research.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: PEOU→PU	0.550	10.259 ***	Supported
H2: PEOU→ATT	0.291	1.996 *	Supported
H3: PU→ATT	0.299	4.589 ***	Supported
H4: ATT→BI	0.147	2.800 **	Supported
H5: SYQ→SAT	0.129	2.697 **	Supported
H6: INQ→SAT	0.479	8.454 ***	Supported
H7: SAT→BEI	0.250	4.460 ***	Supported

Note: *** p<0.001, ** p<0.01, * p<0.05
Source: Created by the author

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Table 7 demonstrates a standardized path coefficient (β) of 0.550 for H1, indicating that PEOU significantly impacts PU. Previous studies found that undergraduates' psychological reactions concerning the online education system's PU were significantly affected by its PEOU (Davis, 1989; Marakarkandy et al., 2016; Tahar et al., 2020).

The statistical significance threshold of β at 0.291 indicated that PEOU was crucial in assessing ATT. H2 confirmed that PEOU had a noteworthy influence on ATT. PEOU has been illustrated to significantly impact individuals' perceptions and desires regarding an advanced system or information technology (Karahanna et al., 1999; Marakarkandy et al., 2016; Taylor & Todd, 1995).

The H3 investigation discovered that PU significantly affected ATT, with a value of β at 0.299. According to previous academic accomplishments, there was a significant relationship between PU and ATT inside the TAM structure of the hypothesis (Agarwal & Prasad, 1999; Chau & Ngai, 2010; Nagy, 2018).

H4 observed that ATT significantly impacted BEI, resulting in the β value of 0.147. Several empirical investigations have discovered the relationship between undergraduates' ATT regarding academic achievement and their BEI (Bobbitt & Dabholkar, 2001; Dabholkar & Bagozzi, 2002; Golnaz et al., 2010).

Furthermore, the evaluation of H5 suggested that SYQ substantially affects SAT, with a value of β at 0.129. Multiple research investigations indicate that SYQ was an important aspect of people's SAT when assessing ISSM installation circumstances (Freeze et al., 2010; Masrek et al., 2010; Wang et al., 2007).

H6 observed significant relationships regarding INQ to SAT, with the value of β at 0.479. According to previous academic findings, INQ has an important effect on individuals' SAT alongside the informative technological advances system (Al-Fraihat et al., 2020; Kurt, 2019; Napitupulu & Patria, 2013).

Eventually, H7 demonstrated a significant relationship between SAT and BEI, with a standardized coefficient value of 0.250. Multiple studies established that the SAT has a vital influence on students' BEI, both positively and negatively, and that respondents who are extremely satisfied with blended education have beneficial and detrimental participation in BEI. (Athiyaman, 1997; Babin & Babin, 2001; Clemes et al., 2008).

5. Conclusion and Recommendation

5.1 Conclusion

The present research aims to illustrate how the BEI of nurse-subject undergraduates significantly affected medical institutions in the Sichuan region of China. To validate PEOU, PU, ATT, SYQ, INQ, SAT, and BEI conceptual frameworks. The seven assumptions were generated by applying the conceptual framework. The questionnaires were distributed to 500 target NSUs, and 475 valid observations were obtained. The CFA evaluation was completed to do statistical calculations and determine the construct validity of the association connecting the data and the conceptual framework. Likewise, the SEM was employed to investigate the significant effects that impact the variables related to the BEI, and the general hypotheses were supported.

Based on the accomplishments, PEOU experienced the strongest significant interaction with PU, while ATT experienced the greatest level of significant direct contact with BEI. The other exogenous variables have also generated significant effects on the corresponding endogenous variables.

5.2 Recommendation

According to the statistical analysis, this research suggested the following recommendations for the subsequential instructional practice. Initially, from the perspective of PEOU, for the various functions of the blended learning platform, such as online course viewing, assignment submission, online discussion, etc., the instructor could make an illustrated operation manual to help students get started quickly. In addition, regular technical training sessions are organized to familiarize students with the software and tools that may be used in blended learning, such as the capabilities of video conferencing software. Combining the theoretical knowledge of nursing, clinical cases, and other resources are effectively integrated to make the content structure clear and easy to understand, which is convenient for students to learn under the blended education mode. According to the NSU's learning progress and ability level, the instructor could design a personalized learning path so students can learn at their own pace.

Based on the statistical results for the PU, instructors could deeply integrate nursing theoretical knowledge with clinical cases to make online and offline learning content coherent. For example, when explaining nursing a certain disease, the principle of the disease is provided online, and the case discussion is arranged offline so that NSU can realize that blended education is conducive to the

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construction of a knowledge system. The instructors could set up discussion boards online to encourage NSUs to share insights from nursing learning and organize group activities offline. Discuss the operational points online for a certain nursing operation first and carry out practical operation exercises and exchanges offline.

From the viewpoint of ATT, the instructors can adopt various teaching methods, such as case teaching, situational simulation, and so on. Guide students to think about nursing measures with real clinical cases, let them realize the practicability of knowledge, and stimulate their interest in learning. The scenario simulation immerses students, enhances their ability to solve practical problems, and improves their learning enthusiasm. Meanwhile, instructors could implement problem-oriented learning (PBL). Instructors could ask questions related to nursing practice and allow students to explore independently. In this process, students take the initiative to consult materials, communicate, and discuss to solve problems and gradually form an active attitude to explore knowledge.

From the standpoint of SYQ, the instructors could integrate various types of nursing learning resources, such as clinical case videos, nursing research papers, etc., to match the different learning acquirements. Moreover, the instructors could build efficient teacher-student and student-student interaction modules, such as online discussion rooms, group homework submissions, and evaluation plates, to enhance students' participation. At the same time, the instructors can provide personalized learning paths according to the curriculum Settings of different stages of NSU, such as lower grades focusing on basic nursing knowledge and higher grades focusing on clinical nursing research. In addition, the instruction unit should contact the technical support party of the RCTS system to optimize the system performance regularly, reduce problems such as congestion and slow loading, ensure the fluency of learning, and strengthen data security protection to prevent students from learning data leaks and other security risks.

In the sentiment of INQ, the instructors should establish a professional review team for the content uploaded to the RCTS learning platform, whether it is curriculum materials or research results, including senior nursing experts, education scholars, etc., to ensure scientific and accurate information. Meanwhile, instructors should prioritize cooperating with authoritative nursing research institutions and nursing schools of well-known universities to obtain first-hand, high-quality information. In addition, instructors should classify information in detail according to different branches of nursing, such as basic nursing and clinical nursing, and set accurate labels to facilitate students to locate the required information quickly. Moreover, instructors should use the platform algorithm to recommend high-quality information that is highly relevant to students based on their learning progress and course electives.

Eventually, from the perspective of SAT, instructors should ensure that theoretical knowledge is closely integrated with clinical practice; for example, when teaching nursing operations, they should intersperse clinical case videos. Update the teaching content in time to reflect the latest research results and clinical guidelines in nursing. The instructors should provide layered learning materials according to students' foundation and learning progress, such as electronic documents that strengthen basic knowledge for students with weak foundations. The instructors should respond to students' online questions in a timely manner and can set up special time for answering questions, using live or message board replies. The instructors should design collaborative group nursing projects, such as developing nursing plans, and promote student collaboration through online collaboration tools.

5.3 Limitation and Further Study

The present evaluation concentrated on the UNS throughout three medical institutions in the Sichuan province of China; nevertheless, numerous undergraduates in medical institutions were probably excluded from this quantitative investigation. Furthermore, alternative technological acceptance theories were not addressed, while only seven variables corresponding to the ISSM and TAM models were identified in the conceptual framework.

The subsequent examination could be categorized into two separate sections: expanding the scope of the investigation to include additional fields of study in medical colleges. As a component of the research framework construction, supplementary variables from multiple methods of acceptability hypotheses, including ECM, TRA, and UTAUT, could be evaluated.

References

Afful-Dadzie, E., Afful-Dadzie, A., & Egala, S. B. (2021). Social media in health communication: A literature review of information quality. *Health Information Management Journal, 52*(1), 3-17. https://doi.org/10.1177/1833358321992965

Afiah, N. N., Alfian, A., & Sofia, P. (2020). Effect of employee competence and internal control systems on accounting information quality of the local government in West Java region. *Utopía y Praxis Latinoamericana, 25*(1), 146-153.

Agarwal, R., & Prasad, J. (1999). Are individual differences germane to the acceptance of new information technologies? *Decision Sciences, 30*(2), 361-391. https://doi.org/10.1111/j.1540-5915.1999.tb01614.x

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior* (1st ed.). Prentice-Hall.

The Scholar: Human Sciences

Al-Adwan, A. S., Li, N., Al-Adwan, A., Abbasi, G. A., Albelbisi, N. A., & Habibi, A. (2023). "Extending the Technology Acceptance Model (TAM) to Predict University Students' Intentions to Use Metaverse-Based Learning Platforms". *Education and Information Technologies, 28*(11), 15381-15413. https://doi.org/10.1007/s10639-023-11816-3

Al-Fraihat, D., Joy, M., & Sinclair, J. (2020). Evaluating e-learning systems success: An empirical study. *Computers in Human Behavior, 102*, 67-86. https://doi.org/10.1016/j.chb.2019.08.022

Al-Mamary, Y. H., & Shamsuddin, A. (2015). Testing of the technology acceptance model in context of Yemen. *Mediterranean Journal of Social Sciences, 6*(1), 268-275. https://doi.org/10.5901/mjss.2015.v6n4s1p268

Almarashdeh, I. (2016). Sharing instructors' experience of learning management system: A technology perspective of user satisfaction in distance learning course. *Computers in Human Behavior, 63*, 249-255. https://doi.org/10.1016/j.chb.2016.05.022

Anwar, M., Astuti, W., & Sugito, P. (2024). Perceived ease of use and perceived usefulness, intention to use digital banks, and the role of trust as mediating variables. *KnE Social Sciences, 95-108*. https://doi.org/10.18502/kss.v4i2.12697

Asadi, S., Nilashi, M., Husin, A. R. C., & Yadegaridehkordi, E. (2016). Customers perspectives on adoption of cloud computing in banking sector. *Information Technology and Management, 18*(4), 305-330. https://doi.org/10.1007/s10799-016-0270-8

Atabek, O. (2020). Associations between emotional states, self-efficacy for, and attitude towards using educational technology. *International Journal of Progressive Education, 16*(2), 175-194. https://doi.org/10.29329/ijpe.2020.272.12

Athiyaman, A. (1997). Linking student satisfaction and service quality perceptions: The case of university education. *European Journal of Marketing, 31*(7), 528-540. https://doi.org/10.1108/03090569710176655

Aurangzeb, W. (2024). Investigating technology perceptions among secondary school teachers: A systematic literature review on perceived usefulness and ease of use. *Academy of Education and Social Science Review, 4*(2), 160-173. https://doi.org/10.55058/ae.ssr.v4i2.1234

Awang, Z. (2012). *Research methodology and data analysis* (2nd ed.). UiTM Press.

Babin, B., & Babin, L. (2001). Seeking something different? A model of schema typicality, consumer affect, purchase intentions, and perceived shopping value. *Journal of Business Research, 54*(2), 89-96. https://doi.org/10.1016/S0148-2963(99)00117-2

Bahjat, A. (2018). Attitudes towards using mobile applications in teaching mathematics in open learning systems. *International Journal of E-Learning & Distance Education, 33*(1), 2-16.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. https://doi.org/10.1037/0033-2909.107.2.238

Bernard, R. M., Abrami, P. C., Borokhovski, E., Wade, C. A., Tamim, R. M., Surkes, M. A., & Bethel, E. C. (2009). A Meta-Analysis of Three Types of Interaction Treatments in Distance Education. *Review of Educational Research, 79*(3), 1243-1289. https://doi.org/10.3102/0034654309333844

Bobbitt, L. M., & Dabholkar, P. A. (2001). Integrating attitudinal theories to understand and predict use of technology-based self-service: The internet as an illustration. *International Journal of Service Industry Management, 12*(5), 423-450. https://doi.org/10.1108/EUM0000000006227

Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). The Guilford Press.

Celik, V., & Yesilyurt, E. (2013). Attitudes to technology, perceived computer self-efficacy, and computer anxiety as predictors of computer-supported education. *Computers & Education, 60*(1), 148-158. https://doi.org/10.1016/j.compedu.2012.07.008

Chang, C. C. (2012). Exploring the determinants of e-learning systems continuance intention in academic libraries. *Library Management, 34*(1/2), 40-55. https://doi.org/10.1108/01435121311298261

Chau, V. S., & Ngai, L. W. L. C. (2010). The youth market for internet banking services: Perceptions, attitude, and behavior. *Journal of Services Marketing, 24*(1), 42-60. https://doi.org/10.1108/08876041011013099

Ching, S. C., Lin, P., Jong, M. S. J., Chiu, T. K. F., & Qin, J. (2021). Perceptions of and behavioral intentions towards learning artificial intelligence in primary school students. *Educational Technology & Society, 24*(3), 89-101.

Cidral, W. A., Oliveira, T., Di Felice, M., & Aparicio, M. (2018). E-learning success determinants: Brazilian empirical study. *Computers & Education, 122,* 273-290. https://doi.org/10.1016/j.compedu.2018.04.011

Clemes, M. D., Gan, C. E. C., & Kao, T.-H. (2008). University Student Satisfaction: An Empirical Analysis. *Journal of Marketing for Higher Education, 17*(2), 292-325. https://doi.org/10.1080/08841240801912831

Dabholkar, P. A., & Bagozzi, R. P. (2002). An attitudinal model of technology-based self-service: Moderating effects of consumer traits and situational factors. *Journal of the Academy of Marketing Science, 30*(3), 184-201. https://doi.org/10.1177/0092070302303002

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340. https://doi.org/10.2307/249008

DeLone, W. H., & McLean, E. R. (1992). Information systems success: The quest for the dependent variable. *Information Systems Research, 3*(1), 60-95. https://doi.org/10.1287/isre.3.1.60

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems, 19*(4), 9-30. https://doi.org/10.1080/07421222.2003.11045748

Duncan, O. D. (2014). *Introduction to structural equation models* (1st ed.). Academic Press.

The Scholar: Human Sciences

Freeze, R. D., Alshare, K. A., Lane, P. L., & Wen, H. J. (2010). IS success model in e-learning context based on students' perceptions. *Journal of Information Systems Education, 21*(2), 173-184.

Gan, C., & Li, H. (2018). Understanding the effects of gratifications on the continuance intention to use WeChat in China: A perspective on uses and gratifications. *Computers in Human Behavior, 78*, 306-315. https://doi.org/10.1016/j.chb.2017.10.029

Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines* (1st ed.). Jossey Bass.

Golnaz, R., Zainulabidin, M., Mad-Nasir, S., & Eddie Chiew, F. C. (2010). Non-Muslim perception awareness of Halal principle and related food products in Malaysia. *International Food Research Journal, 17*(3), 667-674.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.

Hamzat, A. A., & Coker, A. (2024). Whatsapp messenger for education: Attitude, perceived ease of use, and retention level among undergraduate students in Kwara State universities, Nigeria. *Academia Jurnal Inovasi Riset Akademik, 4*(4), 135-141.

Handayani, D. S., Hapsari, E. D., & Widyandana, W. (2022). Perceived ease of use and usefulness of Facebook for premenstrual syndrome health education. *Jurnal Promkes: The Indonesian Journal of Health Promotion and Health Education, 10*(1), 58-64.

Hrastinski, S. (2008). Asynchronous & synchronous e-learning. *Educause Quarterly, 31*(4), 51-55.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Jebril, H. A. M., Mohamad, U. H., & Ahmad, M. N. (2024). Exploring the application of ISSM and TTF theories: A literature review. *International Journal on Advanced Science Engineering Information Technology, 14*(5), 1589-1595. https://doi.org/10.18517/ijaseit.14.5.2024.1595

Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2016). *NMC Horizon Report: 2016 Higher education edition* (1st ed.). The New Media Consortium.

Karahanna, E., Straub, D. W., & Chervany, N. (1999). Information technology adoption across time: A cross-sectional comparison of pre-adoption and post-adoption beliefs. *MIS Quarterly, 23*(2), 183-213. https://doi.org/10.2307/249751

Kenneth, A., Bollen, J., & Long, S. (1993). *Testing structural equation models* (1st ed.). SAGE Publications.

Keržič, D., Tomaževič, N., Aristovnik, A., & Umek, L. (2019). Exploring critical factors of the perceived usefulness of blended learning for higher education students. *PLOS ONE, 14*(11), e0223767. https://doi.org/10.1371/journal.pone.0223767

Kurt, O. E. (2019). Examining an e-learning system through the lens of the information systems success model: Empirical evidence from Italy. *Education and Information Technologies, 24*(2), 1173-1184. https://doi.org/10.1007/s10639-018-9805-z

Lin, P., Lu, H., & Liu, S. (2013). Towards an education behavioral intention model for e-learning systems: An extension of UTAUT. *Journal of Theoretical and Applied Information Technology, 47*(3), 1120-1127.

Marakarkandy, B., Yajnik, N., & Dasgupta, C. (2016). Enabling Internet banking adoption: An empirical examination with an augmented technology acceptance model (TAM). *Journal of Enterprise Information Management, 30*(2), 263-294. https://doi.org/10.1108/JEIM-09-2015-0070

Masrek, M. N., Jamaludin, A., & Mukhtar, S. A. (2010). Evaluating academic library portal effectiveness: A Malaysian case. *Journal of Library Review, 59(*3), 198-212. https://doi.org/10.1108/00242531011031168

McKinney, V., Yoon, K., & Zahedi, F. M. (2002). The measurement of web-customer satisfaction: An expectation and disconfirmation approach. *Information Systems Research, 13*(3), 296-315. https://doi.org/10.1287/isre.13.3.296.76

Moore, M. G., & Kearsley, G. (2012). *Distance education: A systems view of online learning* (7th ed.). Wadsworth Cengage Learning.

Nagy, J. (2018). Evaluation of online video usage and learning satisfaction: An extension of the technology acceptance model. *International Review of Research in Open and Distributed Learning, 19*(1), 160-185. https://doi.org/10.19173/irrodl.v19i1.2886

Nair, I., & Das, V. M. (2012). Using technology acceptance model to assess teachers' attitude towards use of technology as teaching tools: A SEM approach. *International Journal of Computer Application, 42*(2), 1-6.

Napitupulu, T. A., & Patria, S. H. J. (2013). Factors that determine electronic medical records users' satisfaction: A case of Indonesia. *Journal of Theoretical and Applied Information Technology, 58*(3), 499-505.

Rogers, E. M. (2019). *Diffusion of innovations* (5th ed.). Simon & Schuster.

Rughoobur-Seetah, S., & Zuberia, Z. A. (2021). An evaluation of the impact of confinement on the quality of e-learning in higher education institutions. *Quality Assurance in Education, 29*(4), 422-444. https://doi.org/10.1108/QAE-05-2021-0084

Salimon, M. G., Mokhtar, S. S. M., Aliyu, O. A., Yusr, M. M., & Perumal, S. (2023). Solving e-learning adoption intention puzzles among private universities in Nigeria: an empirical approach. *Journal of Applied Research in Higher Education, 15*(3), 613-631. https://doi.org/10.1108/jarhe-11-2020-0410

Samarasinghe, S. M. (2012). E-learning systems success in an organizational context [Doctoral dissertation]. Massey University of New Zealand.

Sica, C., & Ghisi, M. (2007). The Italian versions of the Beck Anxiety Inventory and the Beck Depression Inventory-II: Psychometric properties and discriminant power. In M. A. Lange (Ed.), *Leading-edge psychological tests and testing research* (pp. 27-50). Nova Science Publishers.

Tahar, A., Riyadh, H. A., Sofyani, H., & Purnomo, W. E. (2020). Perceived ease of use, perceived usefulness, perceived security, and intention to use e-filing: The role of technology readiness. *The Journal of Asian Finance, Economics and Business, 7*(7), 537-547. https://doi.org/10.13106/jafeb.2020.vol7.no7.537

The Scholar: Human Sciences

Taylor, P., & Todd, A. (1995). Assessing IT usage: The role of prior experience. *MIS Quarterly, 19*(4), 561-570. https://doi.org/10.2307/249633

Theng, Y. L., Duncker, E., Mohd-Nasir, N., Buchanan, G., & Thimbleby, H. (1999). Design guidelines and user-centered digital libraries. In S. Abiteboul & A. Vercoustre (Eds.), *Proceedings of ECDL'99* (pp. 167-183). Paris, France.

Turyamureeba, S. (2024). Blended learning in higher education: Models and effectiveness. *Eurasian Experiment Journal of Arts and Management, 5*(3), 5-10.

Ukoha, O. (2010). *Confirmatory factor analysis: Basics, concepts, and measuring.* LAP Lambert Academic Publishing.

Varier, D., Powell, M. G., Dodman, S., View, J. L., & DeMulder, E. (2024). The relationship between teachers' equity orientation and instructional usefulness of assessments of and for learning. *Education Sciences, 14*(11), 1183. https://doi.org/10.3390/educsci14111183

Wang, Y. S., Wang, H. Y., & Shee, D. Y. (2007). Measuring e-learning systems success in an organizational context: Scale development and validation. *Computers in Human Behavior, 23*(4), 1792-1808. https://doi.org/10.1016/j.chb.2005.10.006

Wu, J., & Wang, Y. (2006). What drives mobile commerce? An empirical evaluation of the revised technology acceptance model. *Information & Management, 43*(5), 537-550. https://doi.org/10.1016/j.im.2006.03.003

The Scholar: Human Sciences