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Evaluate Student Satisfaction of Student Information System Utilising Technology Acceptance Model and Trust in China

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Abstract: In this study, the factors affecting student satisfaction with student information systems have been investigated by applied Technology Acceptance Model and rust. Partial least squares structural equation modelling implemented to study these factors. 400 authentic responses from overseas students in a large number of universities located in Jiangsu province China have been evaluated. The statistical investigation findings demonstrate that student trust has a considerable effect on student satisfaction; meanwhile, the behavioural intention of use has no significant impact on student satisfaction.

Keywords: *Technology Acceptance Model, Student Information System, Trust, Student. Satisfaction.*

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Introduction

These days, technologies have conquered every perspective in our regular life. Meanwhile, Information Systems (IS) is a dynamic element of an individual as well as commerce exchange. IS has secured a considerable place in each nature of the organisation, enabling maximum employment of innovation to handle information contemplating the beneficial impact of the commerce to be accomplished through plenty of business advantages (Gürkut & Nat, 2018).

With computerised innovations and the fast developing of the internet, novel learning methods are being promoted (Redecker & Johannessen, 2013). The expansion in innovation reached a stage where new terms and ideas were presented in the education area (Baleghi-Zadeh et al., 2014). Education is a vital area where the internet is utilised extensively to encourage and promote the knowledge procedure's quality (Alkhanak & Azmi, 2011).

The considerable maturity in China's education industry has given growth to the competition along with organisations inside the sector. Situated in China, Jiangsu province is amongst the largest regions of China concerning the number of universities with international students. The student information system (SIS) helps manage student-related data all through the primary business actions, i.e., registration, affirmation, test, residence, mark distribution, the provided courses, course time tables, records, etc.

A further investigation has assessed the impact of trust with fulfilment regarding distinctive innovations in higher educational organisations, an instance of such studies as the research done by Şahin et al. (2013).

Since then, The Student Information System has achieved a reputation between universities for different logics. Yet, assessing users' trust, along with the contentment of the system, hasn't been thoroughly examined (Ismail et al., 2019). This study's main reason is evaluating international students' fulfilment concerning the information systems in large numbers of universities located in Jiangsu province.

In the current investigation, a sample of 400 overseas students from Jiangsu province universities was involved, China. The Structural Equation Modelling (SEM) technique is applied through the Smartpls program. This study was primarily depending on the TRUST and Technology Acceptance Model (TAM) along with Perceived Ease Of Use (PEOU), Perceived

Usefulness (PU), Atitude Toward System (ATT), Behavioral Intention (INT) in addition to Student Satisfaction (SS).

TAM is an information systems hypothesis that illustrates how users' perceived ease of use in addition to perceived usefulness of the system instantly impact their attitude, which is a correct indicator of utilisation (Davis, 1989). The key components of TAM which decide definite system utilise are (PU), (PEOU), (ATT), as well as (INT).

TAM was utilised to clarify information innovation utilisation behaviour due to its intelligibility (Davis, 1989; Venkatesh & Davis, 2000). Two essentials that identify attitude towards technology utilise are (PU) in addition to (PEOU) (Davis, 1989). TAM had been extensively checked, corroborated as well as expanded across a variety of circumstance similar to web-based bank information systems (Chandio et al., 2017), web-based travel agencies (Agag & El-Masry, 2016) and new media entertainment innovation (Dogruel et al., 2015)

The evaluation of the overseas students' acceptance of the student information system targeted in this study. In this paper, students' contentment was addressed based on the association among student views and adoptions. This model could become a practical implementation to evaluate Jiangsu province universities to become proficient and efficient by providing awareness about how their students as clients seen and adopt their IS. If an organisation, academy, or university know how its understudies as client recognise and admit their services, it may end up further useful and efficient in observance and consistency to the demands plus the prospects of the business and their community, consequently, produce constructive social transformation.

Theoretical framework and hypothesis development

Trust and satisfaction

Morgan and Hunt (1994) portray trust is available as soon as a single party possesses certainty in an exchange partner's authenticity in addition to honesty. As stated by Piriyakul et al. (2015), the entire social relationships could fail with an absence of trust. Reliability was created since a test of the SIS with defined the system generates trust. Agreeing to Gefen et al. (2003), doubt was a major barrier in assessing student trust. Trust is a significant aspect to preserve lasting relationships among clients with firms, especially within the web-based environment, since one-to-one communication has vanished. How companies can achieve clients' trust, why several clients return to a specific site, or which reason perhaps led clients to shift to a

different supplier are vital queries that must be clarified. In case an organisation aims to offer services via the internet competitively, it needs to be aware of the components that help clients earn trust. Therefore, during the last decade, substantial publications had inspected and examined hypothetically and experimentally the components that impact clients trust (Chen & Barnes, 2007; Gefen, 2000; Gefen et al., 2003; Harridge-March, 2006; Lee & Turban, 2001; McKnight & Chervany, 2001; So & Sculli, 2002).

H1: Students Trust would have an affirmative consequence on students Satisfaction with using SIS.

Technology Acceptance Model Regarding Education

Lately, a variety of research was issued within the setting of TAM's application in an academic environment (Teo, 2009; 2010a, 2010b). Several papers emphasised confirming TAM on particular software implemented in universities. As an instance, Escobar-Rodriguez & Monge-Lozano (2012) applied TAM for clarifying college students' adoption of the Moodle program, although Hsu et al. (2009) conducted an experimental study to examine the embracing of a statistical program between online MBA learners in Taiwan. Elwood et al. (2006) discussed students' view of a laptop initiated in the academic environment. They found that the exterior aspect *"perceived change"* is appropriate to recognise the embracing of innovation in an educational context.

Al-hawari & Mouakket (2010) tested the relevance of TAM variables taking into account some exterior features on students' e-retention along with the mediate function of e-contentment in the e-education environment. They found major associations between these variables indicated that more checking throughout diverse nations is required to recognise a further exterior fact variable or impact IT adoption. Furthermore, Waheed & Jam (2010) experienced teachers' adoption of applying an internet-based learning context in accordance with TAM. The study outcomes found that instructors adopt the novel virtual base educational system's implementation for enhanced efficiency of instructors, learners, and organisations.

Agreeing to the literature, the TAM had appeared to be an appropriate paradigm that facilitates the understanding of system suitability (Masrom et al., 2013). It recommends that the client's cognitive system is created prior, after barely least experience to the system (Almusallam et al., 1996). These conceptual have a capable impact on whether clients will, in reality, employ that system in the future (Bagozzi & Warshaw, 1992). Specifically, TAM proposes that designers need to examine the system's

PEOU and its PU to promote client acceptance of the system (Dillon & Morris, 2005).

The TAM was modified from Reasoned Action's hypothesis concerning attitude, approach, purpose, and manners for modelling client approval of information system (Bagozzi & Warshaw, 1992). Reasoned Action's hypothesis was used as a psychometrics paradigm that observes the proposed behaviour pattern's key parameters.

The TAM's fundamental principle is that the better tolerant clients are of novel systems, the better they're ready to modify their performance and time in addition to their effort to establish employing the system. Davis (1989) assumes that PEOU and PU was a major sign of the client's intention to embrace a novel technology.

PU indicated the inclination to utilise technology to the degree it thought might help improve a person's capacity to achieve work better. PEOU included the degree of effort, which is needed to utilise technology in a manner that the level an individual thought a system is without struggle, the user might be further expected to use and admit the system. PEOU also impacted PU, the simpler the system is perceived to be to utilise, the extra precious it would be (Davis, 1989). The genuine system is decided by PU and PEOU, which are connected to ATT, which relates to INT. Venkatesh & Davis (1996) developed the Parsimonious Davis (1989) initially inspected and established to defend PU and ATT's relationship in TAM. Agreeing to Davis's (1989) explanation, the fewer effort put forth to utilise a specific system, the extra encouraging attitudes towards the system the extra system will be embraced. This concept applied in the present study to point out which level a student thought that utilising student information system will be without struggle. The definition has been cited in various studies (Alsajjan & Dennis, 2010; Gefen & Keil, 1998; Gefen et al., 2003; Lederer et al., 2000).

Perceived Usefulness

Davis (1989) characterised PU as to which level individual trusts that utilising a specific system will improve the job execution. Subramanian (1994) found that PU had a major connection with attitude toward usage behaviour. This result was afterwards affirmed by Fu et al. (2006) and Suki et al. (2008), which concluded that PU primarily drove INT. Taylor & Todd, (1995); Venkatesh & Davis (2000) gave proof of the noteworthy consequence of PU on usage intention. Selim (2003) examined the course website acceptance model and experienced the associations between PU, PEOU, and ATT with school students. Park (2009) considered that PU and

PEOU were found substantial in influencing ATT. Once a user observes that utilising SIS will make the job more easily, he will be ready to utilise SIS. In accordance with Teo et al. (2007), consumers prefer to be extra useful once a system reacts to them correctly and quickly. Hence, this study hypothesises:

H2: Students' Perceived Usefulness will have affirmative consequences on student trust in using SIS.

H4: Students Perceived Usefulness will have an affirmative consequence on student attitude toward using SIS

Perceived Ease of Use

PEOU is a further main determinant of ATT in the TAM. Davis (1989) distinct PEOU as *"the level to which an individual trust that engaging in web-based dealings would be without struggle."* PEOU is an essential determinant for IT adoption and employment in wide-ranging (Moon & Kim, 2001). This result was affirmed by another scientist (e.g., Fagan et al., 2008), who found that PEOU has undoubtedly impacted the behavioural intention to utilise diverse IS applications.

Moreover Park (2009) in his study of considerate university students' behavioural intention to utilise e-education, found that PU and PEOU were connected. Additional researchers, as well as providing evidence to the straight impact of PEOU on PU (Teo, 2010a). These outcomes propose the subsequent hypotheses:

H3: Students' Perceived Ease of Use would have affirmative consequences on the Perceived Usefulness of the SIS.

H5: Students Perceived Ease of Use would have an affirmative consequence on student attitude toward using SIS

Attitude

Karjaluoto et al. (2002) distinguish attitude as the one's appeal to utilise the system. Fishbein and Ajzen (1975) ranked attitude for two variables: attitude toward the object as well as an attitude toward the behaviour. The last alludes to an individual's assessment of a particular action. In the TAM context, attitude is identified as the effective mediate response among PU and PEOU beliefs and intentions to utilise a goal system (Suki & Ramayah, 2010). Davis (1989) declared that one's general attitude toward employing a given framework is an antecedent to ATT.

A student's behavioural intention might be made by his/her approach to the system. Many scholars (e.g., Lee et al., 2005) have verified

that attitude is a straight determinant of INT. Consequently, to examine the consequence of students' attitudes on their adoption and utilisation of MyMathLab. The study hypothesises that:

H6: Student attitude toward using will have an affirmative consequence on student behaviour intention to use SIS.

H7: Student behaviour intention to use would have an affirmative consequence on student satisfaction of using SIS.

Satisfaction

Concurring with Doll & Torkzadeh (1987), user contentment is *"the professional approach towards a specific PC program."* Seddon (1997) depicted user contentment as an affective consideration on an attractive continuum of diverse results. User contentment is a helpful tool for evaluating the consequence of IS and web benefits, just as a key element to utilising novel innovation (Negash et al., 2003).

DeLone and McLean (2003) affirmed that client contentment among the system impacts intention to employ, and this will exceptionally be extended if the achievement of individuals, affiliations, or associations updated after the system is utilised. They furthermore recognised client fulfilment as the manner variable and revealed that client fulfilment is connected equally to intention to use and use (Bhattacherjee, 2001). Satisfaction indicates student assessment and efficient feedback to the general familiarity of SIS. Wu et al. (2010) describe satisfaction as accomplishing all advantages students intend to obtain from a platform, corresponding to their attitudes and behaviour to utilise the system. Users' familiarity with innovation applications may reinforce their evaluation of services' contentment (Gajendra et al., 2012).

Method

To prove the suggested model, a questionnaire survey was implemented. As asserted by King & He (2005), IS academics have substantially applied survey questionnaires to evaluate constructs and associations. Equally, IS academics have utilised survey questionnaires to study users' satisfaction (Doll & Torkzadeh, 1987; Kettinger & Lee, 1994; Wixom & Todd, 2005).

Aims of the Study

Institutes of higher education in Jiangsu had established cooperative and exchange associations with over 500 international universities. While the

acceptance of overseas students became legal in 1976, over 130 000 overseas students from 175 foreign countries have come to study in Jiangsu. At the latest, the number of overseas students has amplified by an average yearly rate of almost 15%. The most important reason is evaluating international students' fulfilment about the trust and technology acceptance model. A five-point Likert-type scale through the anchor starting *"Strongly agree"* to *"Strongly disagree"* was utilised. The structural equation modelling approach (SEM) followed for the investigation of data uses PLS graphs software.

Research Framework

The consequence of structuring this study model is shown in Figure 1. Arrows that connect constructs (latent variables) demonstrated the hypotheses of causal relationships. In general, this model had six variables (constructs).

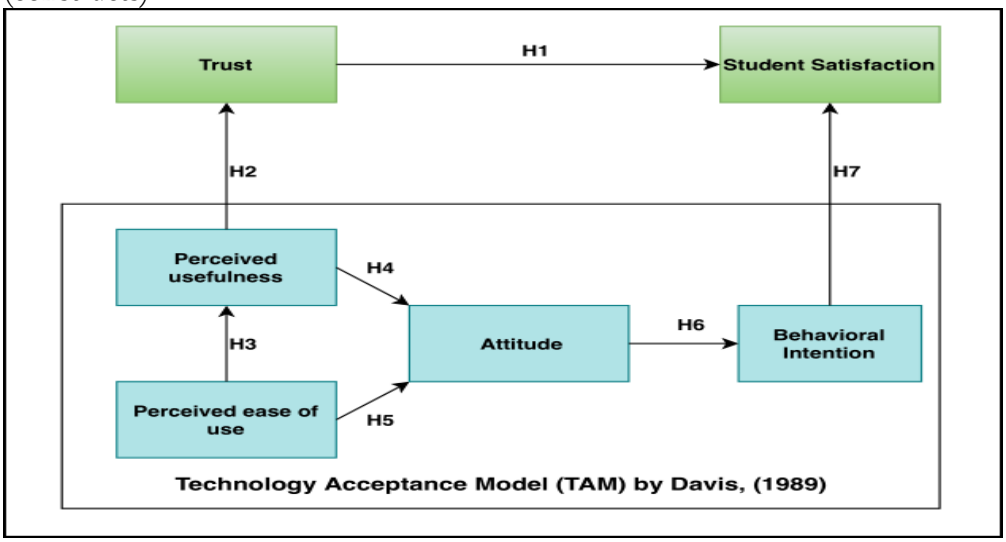


Figure 1 Hypothesized proposed model

Population and Sample

The sample of the pupils for this study includes international students among all schools in the universities. 400 students were chosen based on a proportional stratified sampling strategy over the different schools of the universities. The universities in Jiangsu province were grouped into four main clusters based on the location. The schools were thus grouped into South, North, East, and West of Jiangsu. A proportional

sample size of 100 international students was assigned to each of these clusters. A convenient sampling method was then used to select these respondents from schools that fall within these four clusters.

The survey was conducted straightforwardly (face-to-face) with the students. After the questionnaire's delivery and retrieving, the data was obtained and found suitable for investigating the data.

Research Instrument and Data Collection Method

This study utilised surveys as a medium to find the required information. The questionnaire comprises three parts. Part one is proposed to find background data of the demographic feature. It contains three matters that cover the subjects' gender-based, their age, and their program. Part two procedures students' perception towards trust and TAM at the university, this part of the survey has 16 items that correspond to the hypothesised proposed model, namely trust (3 items), PU (4 items), PEOU (3 items), ATT (3 items) and INT (3 items). Lastly, part three dealings with the students' satisfaction, which only has three items. A five-point Likert-type scale through anchor starting *"Strongly agree"* to *"Strongly disagree"* was utilised. (SEM) the approach followed for the investigation of data uses PLS graphs software. The data investigation for this study was carried out through the utilisation of (SPSS) version 16.

Hypotheses

The following theories suggested in the present study, and these theories based on historical literature and its context

H1: Students Trust will have an affirmative consequence on students Satisfaction with using SIS.

H2: Students' Perceived Usefulness will have affirmative consequences on student trust in using SIS.

H3: Students' Perceived Ease of Use would have affirmative consequences on the SIS's Perceived Usefulness.

H4: Students Perceived Usefulness would have an affirmative consequence on student attitude toward using SIS.

H5: Students Perceived Ease of Use would have an affirmative consequence on student attitude toward using SIS.

H6: student attitude toward using will have an affirmative consequence on student behaviour intention to use SIS.

H7: student behaviour intention to use would have an affirmative consequence on student satisfaction of using SIS.

Results

Characteristics of Respondents Based on Demographics

Table 1 is confirmation for the distinctiveness of the respondents based on the demography. More than half of the respondents were female, with 53%, along with 47% were males. Age-wise, those aged 17-23 participated with the most elevated rate of 50%, followed by the respondent's age 24-30 16%. Those between 31-34 and other age were 33.3%, and 0.3% correspondingly 44.8% of respondents were bachelor students, while 36.8% and 18.4% were master and Ph.D. students.

Table 1 The properties of the students based upon the demography

Variable	Measurement	Rate	In each hundred
Gender	Male	188	47.0
	Female	212	53.0
Age	17-23	202	50.0
	24-30	64	16.0
	31-44	133	33.3
	Other	1	.3
Program	Bachelor	179	44.8
	Master	147	36.8
	PhD	74	18.4

Confirmatory Factor Analysis (CFA)

CFA is applied to check the origin and affect the relationship among measurement variables as well as latent variables to assert if such association is stable through the observed data (Bagozzi & Yi, 1988; Hair et al., 2014). Because of testing the standard technique variance in our investigation, the variable test was implemented; also, EFA was utilised for the examination.

Table 2 KMO and Bartlett's Test

ITEMS	KMO	Bartlett's Test of Sphericity
PU	0.836	1003.723
PEOU	0.622	277.097
T	0.732	621.276
INT	0.719	1924.407
ATT	0.601	940.944
SS	0.719	530.875

EFA was applied throughout SPSS in determining the fundamental aspects connected. Bartlett's Test of Sphericity was utilised in determining the validity of the construct, while the Kaiser-Meyer-Olkin (KMO) was employed to assess the sampling competence of distinct factors. It was considered that the KMO needs to be 0.6 or further for the variable analysis (Özdamar et al., 2017). The above outcomes demonstrated that both are considerable, also it is reasonable for the factor investigation (See Table 2). The cumulative variance in the result displays 83.60% for perceived usefulness, 62.20% for perceived ease of use, 73.20% for trust, 71.90% for behaviour intention to use, and 60.10%, 71.90% for attitude toward using and student satisfaction, respectively, which surpasses the minimum level of acceptance of 60% (Özdamar et al., 2017). The table also specifies that Bartlett's Test of Sphericity is adequate for the correlation across the factors. These values are proof that there is convergent as well as discriminate validity (Table 3).

Analysis of Data

The model was tried through the PLS-SEM approach. Chin and Newsted (1995) discussed that PLS-SEM is an extensively utilised technique in small in addition to medium sample sizes. The previous link to the hypothetical associations along with the latent variables, and the latter connected to the association among a latent variable plus its pointer. Consequently, it may utilise for assumption verification plus checking the obtainable associations. Figure 1 model is experienced via brilliant PLS Version 3.2.7 software (Ringle et al., 2015).

Measurement Model Estimation

For examining the relations into the structural model, initial the legitimacy and consistency of the dimension model shall evaluate (Fornell &

Larcker, 1981). The composite reliability and Cronbach's Alpha are beyond 0.70; this shows that all the table constructs have higher consistency in terms of assessment (Table 3), a threshold value suggested by some scholars. The estimation of Rho. Rho calculated to appraise the latent variables' reliability, Rho, for each of the factors used considerably more than the concurred estimation of 0.5. The Average Variance Extracted (AVEs) is considered the essential measure for examining the convergent validity. Table 3 highlights the AVE values, which are used as a measure for checking the validity. The minimum (AVE) requirement for convergent validity is 0.5 (Bagozzi & Yi, 1988). Generally, this study states reasonably excellent reliability of the measurement tool applied.

Table 3 Latent variable coefficients

FACTORS	CRONBACH'S ALPHA	rho-A	CR	AVE
Trust	0.874	0.877	0.923	0.799
Perceived usefulness	0.900	0.912	0.930	0.769
Perceived ease of use	0.724	0.796	0.835	0.630
Attitude towards system	0.836	0.834	0.904	0.759
Behavioral intention	0.977	0.978	0.985	0.956
Student satisfaction	0.851	0.855	0.910	0.770

Construct validity has been evaluated throughout set up equally convergent plus discriminant validities. Convergent validity indicates the extent to which a set of indicator variables load jointly; furthermore, it is confirmed once they load highly (loading >0.50) on their connected factors. Entity insightful measures are taken into account consistently if they correlate further than 0.7 through the construct they aim to measure. Table 4 demonstrates the majority of the loadings have been over 0.7 for the six constructs. Once indicator parameters do not cross-load at two or else further constructs, every construct is assumed to be signifying discriminant validity.

Table 4 Cross-loadings and loadings

	ATT	ITU	PEOU	PU	SS	T
ATT1	0.671	0.732	0.751	0.061	0.008	0.053
ATT2	0.733	0.942	0.606	0.035	-0.082	-0.052
ATT3	0.759	0.93	0.625	0.055	-0.073	-0.032
ITU1	0.99	0.823	0.855	-0.044	-0.103	-0.095
ITU2	0.977	0.812	0.824	-0.051	-0.121	-0.103

ITU3	0.967	0.795	0.846	-0.05	-0.104	-0.097
PEOU1	0.484	0.488	0.792	0.146	0.118	0.137
PEOU2	0.957	0.792	0.885	-0.029	-0.099	-0.074
PEOU3	0.333	0.323	0.662	0.305	0.126	0.236
PU1	-0.132	-0.05	-0.001	0.871	0.473	0.796
PU2	-0.017	0.056	0.153	0.903	0.456	0.83
PU3	0.025	0.094	0.133	0.913	0.481	0.851
PU4	-0.061	0.111	0.083	0.819	0.288	0.629
SS1	-0.183	-0.13	-0.083	0.413	0.877	0.525
SS2	-0.079	-0.05	0.051	0.344	0.889	0.471
SS3	-0.033	0.022	0.055	0.522	0.867	0.564
UT1	-0.187	-0.1	-0.047	0.741	0.552	0.867
UT2	-0.082	-0.006	0.094	0.782	0.518	0.903
UT3	-0.008	0.06	0.101	0.866	0.529	0.912

In PLS, discriminant validity has been evaluated utilising two ways. Initial, by investigative the cross-loadings of the construct as well as the measures (Table 4); following, by contrast, the square root of the average variance extracted (AVE) for every construct through the correlation among the construct along with another construct within the model (Fornell & Larcker, 1981). Table 5 illustrates the correlations between the constructs jointly through (AVE's) exposed to diagonal. Almost all the constructs show discriminant validity.

Table 5. Construct correlation with the square root of AVE on the diagonal

	ATT	INT	PEOU	PU	SS	T
ATT	0.871					
INT	0.832	0.978				
PEOU	0.745	0.828	0.793			
PU	0.059	-0.049	0.126	0.877		
SS	-0.056	-0.122	0.024	0.492	0.878	
T	-0.010	-0.100	0.076	0.893	0.596	0.894

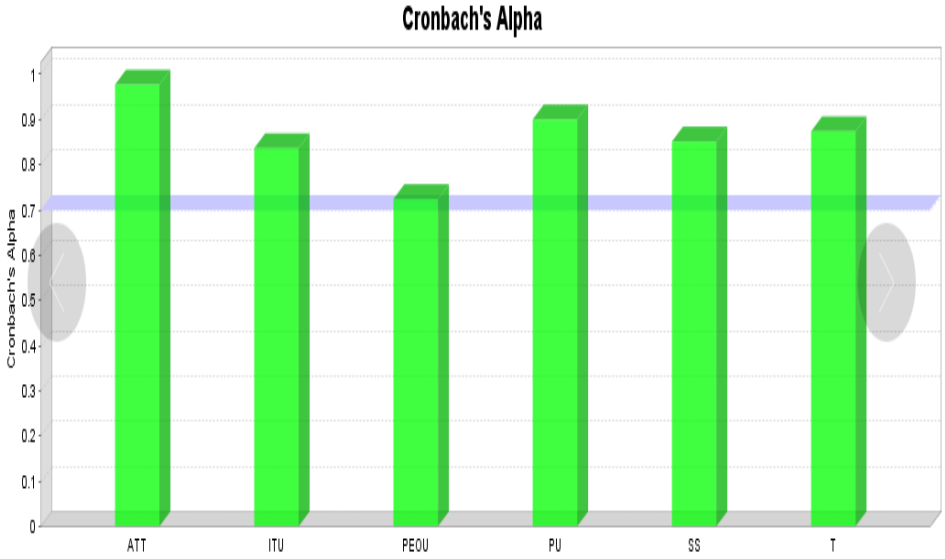


Figure 2. Graphic symbolize Cronbach's alpha

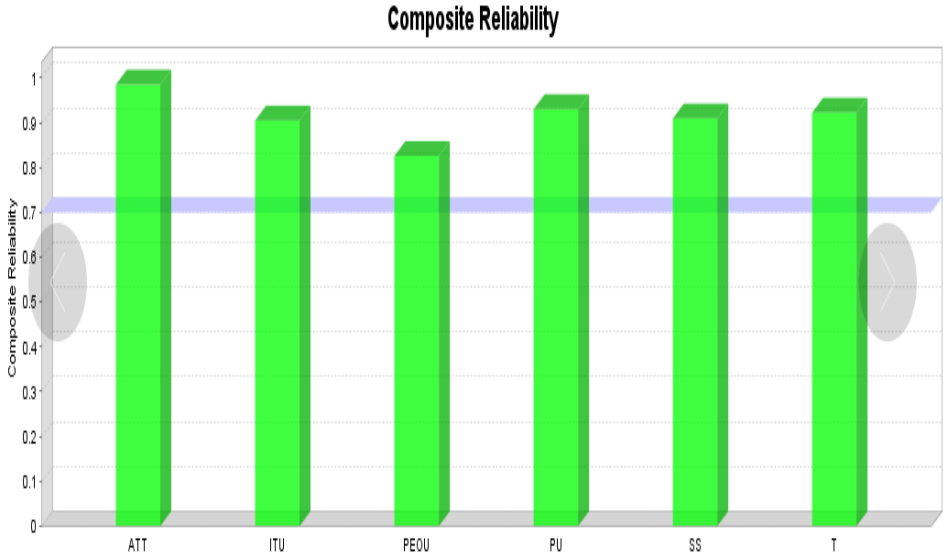


Figure 3. Graphic symbolize CR

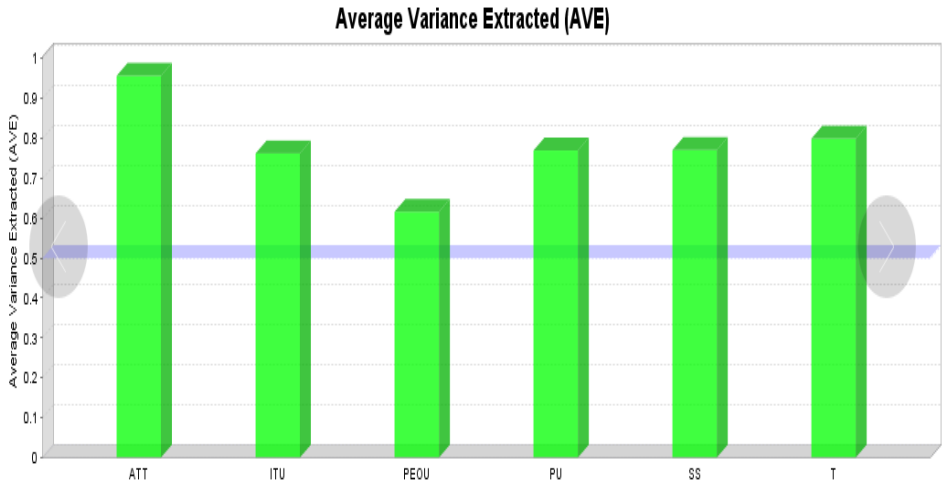


Figure 4. Graphical representation average variance EXTRACTED (AVE)

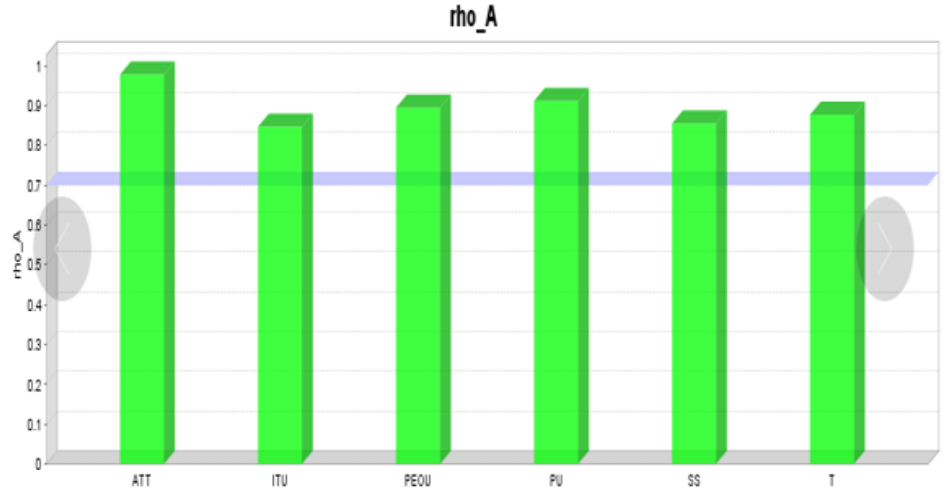


Figure (5) Graphic symbolize RHO_A

Hypothesis Test

The importance of the theories was tested using the b-value. The value of b denoted estimated dissimilarity in the subordinate construct intended for a unit variant in the independent construct(s).

For the theorised model, the path coefficient is carried out for each path. The greater the path coefficient, the larger consequence was observed on the endogenic latent construct. Yet, the level implication of the path

coefficient had verified with the T-statistics test. An evaluation is done to identify the significance of the hypothesis (Chin & Newsted, 1995). To evaluate the importance of the path coefficient as well as the T- statistics values, a bootstrapping execution was conducted for the study applying 1000 sub-samples without substantial change. It is outlined in Table 6.

Table 6 - The T-statistics values also the consequence of the path coefficient

Hypothesis path		Path coefficient	T Statistics	P Values	Action
H1	T→SS	0.591	12.006	0.000	ACCEPTED
H2	PU→T	0.893	33.336	0.000	ACCEPTED
H3	PEOU → PU	-0.012	0.202	0.840	NOT ACCEPTED
H4	PU → ATT	0.068	2.219	0.027	ACCEPTED
H5	PEOU → ATT	0.814	38.411	0.000	ACCEPTED
H6	ATT → INT	0.830	36.238	0.000	ACCEPTED
H7	INT → SS	-0.053	1.338	0.182	NOT ACCEPTED

Figure 6 exhibits the consequence of the structural model through path coefficients. Hypothesis checking was performed by investigating standardised estimation, typical errors, and significance level for the entity theory from our proposed model.

Table 6 exhibits the consequence of the theory examined; for theories H1, H2, H4, H5, and H6 supported; however, H3 and H7 have been discarded. By the subsequent path coefficient and important level.

In H1, we expected that the trust would suggestively and affect the fulfilment of the student. The results in Table 6 and Figures 2-5 confirmed that trust pointedly impacted student contentment (b=0.591, T=12.006, p<0.000). Consequently, H1 was highly encouraged. Furthermore, when perceiving the direct and confirmatory impact of the perceived usefulness on trust (H2), the findings from Table 6 and Figures 2-7 suggested that the perceived usefulness affected trust (b=0.893, T=33.336, p<0.000) and promoted H2. H3 is invalid with (b=-0.012, T=0.202, and p=0.840), gives us evidence that perceived ease of use has no critical impact on perceived usefulness. The impact of PU on the attitude was positive and substantial (b=0.068, T=2.219and p=0.027), giving H4 sustained. H5 is valid, and PEOU has a considerable influence on attitude (b=0.814, T=38.411,

p<0.000). H6 attitude has considerable behavioural use (b=0.830, T=36.238, and p<0.000), so H6 is valid. H7 is invalid with (b=-0.053, T=1.338 and p=0.182).

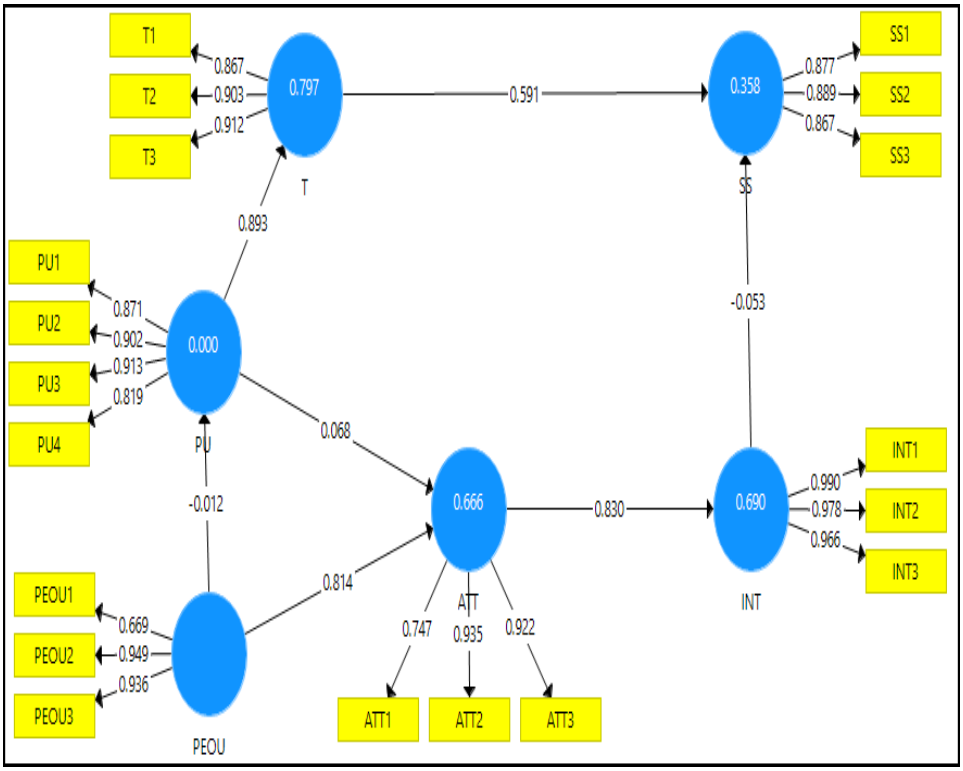
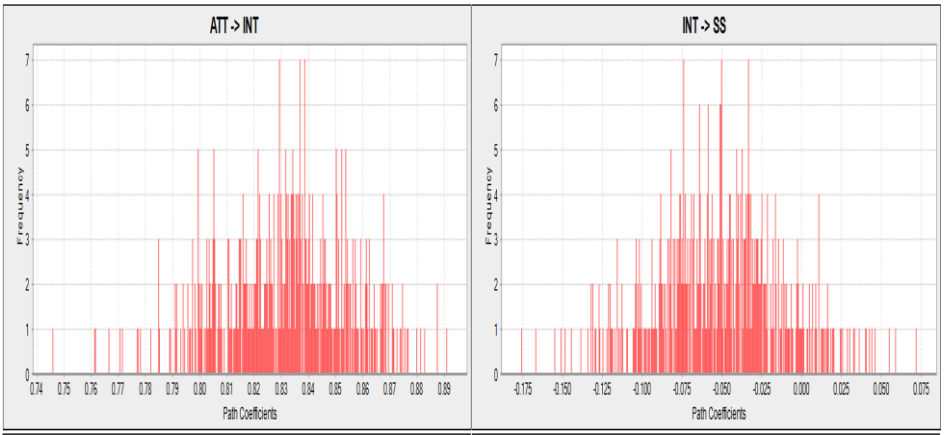
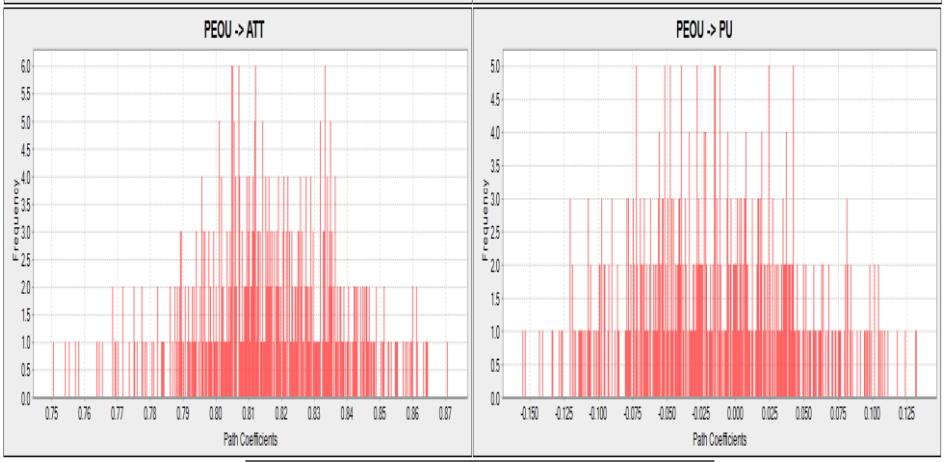
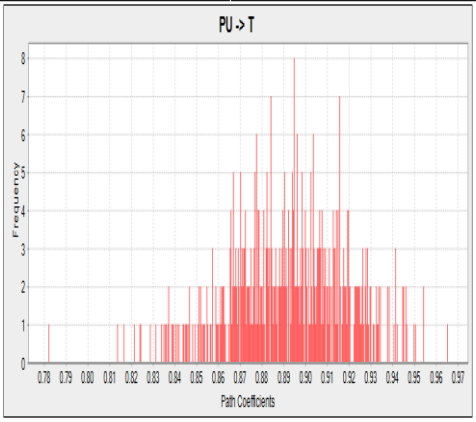


Figure 6 Graphical representation of the path coefficient


ATT -> INT
Frequency
Path Coefficients
INT -> SS
Frequency
Path Coefficients


PEOU -> ATT
Frequency
Path Coefficients
PEOU -> PU
Frequency
Path Coefficients


PU -> T
Frequency
Path Coefficients

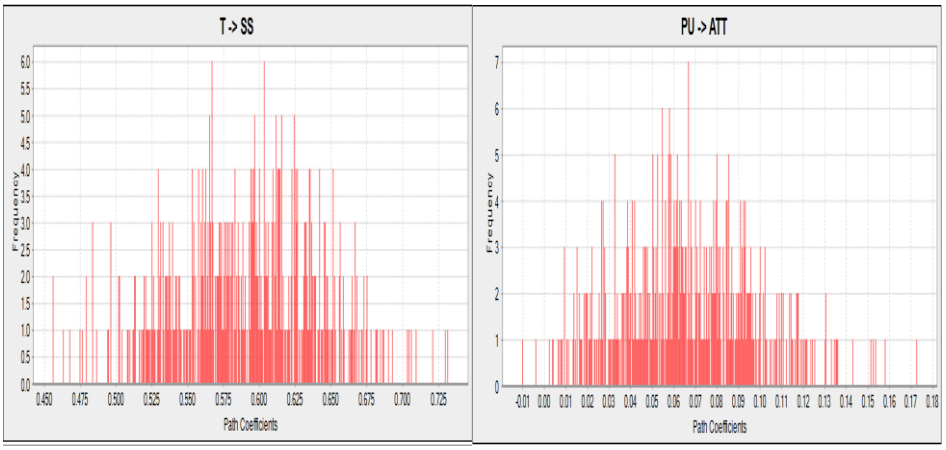


Figure 7 Comprehensive investigation of the structural and measurement models

A thorough examination of the structural and measurement models (Figure 7) has been conducted, and it concluded that all models are declared. The hypothesis which made was statistical significance and thus, were five of the hypotheses accepted two rejected.

Discussion

The prime target of the examination is to scrutinise the variables that impact the student information system's use by international students' study in a large number of universities located in Jiangsu province, China. This study is mainly based on the Trust and Technology Acceptance Model (TAM), including Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Attitude Toward usage system (ATT), Behavioral Intention (INT), and Student Satisfaction (SS).

Hypothesis 1: student trust will have affirmative consequences on student fulfilment of applying SIS. In our model, the evaluation parameters for trust incorporate security, privacy, and experience. The relationship between trust and student contentment has a considerable impact. Consequently, the study exposed student contentment. The result is corresponding to the findings of Deng et al. (2010).

Hypothesis 2: Student PU would have affirmative consequences on student trust using SIS. PU in this study utility identifies with the level to which understudies feel it's significant for them to get data required through an understudy data framework simple, and the program is helpful. PU found

affecting trust; it is considered that's PU was a sturdy predictor of trust; the outcome consisted of Mou et al. (2017).

Hypothesis 3: Students' PEOU would have affirmative consequences on the perceived usefulness of SIS. In this examination, PEOU refers to how much understudies feel that it will be simple, reasonable, and adaptable to utilise the student information system. Several studies support the positive association of PEOU with PU (Davis, 1989; Hsu & Lu, 2004); in our model, we found no significant effect of PEOU on PU.

Hypothesis 4,5: Student perceived usefulness would have an affirmative consequence on student attitude toward SIS usage; student ease of use will have affirmative consequences on student attitude toward usage SIS. TAM suggests that the system's definite usage is identified by the client's behavioural intention to use (INT) the system.

Which is recognised by clients' attitudes toward utilising the system and their perceived usefulness and ease of use of the system (Davis, 1989) jointly PU and PEOU compose a noteworthy impact on (ATT), which in turn affects the (INT). According to Teo (2009), there is a strong relationship between PEOU, PU, and ATT. For hypothesis (4) and (5) from the result, it can observe that there is a considerable affirmative relationship among PU, PEOU, and ATT.

Hypothesis 6: Prior research has tested the relationship between attitude toward the usage of the system and behavioural intention (Hsu & Lu, 2004). The result shows there is a considerable relationship between ATT and INT.

Hypothesis 7: In our model, we suggest that there is a link relationship linking behavioural intention to use and student contentment; the result show there is no significant relationship between INT and SS.

Conclusion and future work

The conclusions for this study, predicated on observed consequences, have recognised the aspects for escalation students' satisfaction for utilising the SIS. Five from seven hypotheses from the proposed model (H1, H2, H4, H5, and H6) proved to be substantial in assessing student satisfaction, even though the leftover two (H3 and H7) were insignificant.

This study aimed to suggest and examine a research model to estimate SIS's student satisfaction in Jiangsu province by utilising TAM and trust. The results of this research will help an organisation, academy, or university to know how its understudies as client perceive and accept their

services; it may end up more useful and efficient in observance and consistency to the demands plus the prospects of the business and their community accordingly leading to positive community revolutionise.

The study opens the door to comparative research between universities in other provinces and evaluates its findings. Additionally, this study's consequences have started the endeavour to assess and compare students' satisfaction concerning SIS between Jiangsu province universities.

Study Limitations

There were not many boundaries or weaknesses recognised in this study. The primary limitation was the number of respondents that respond to the survey. Extra participants could be better. However, this is ordinary of approximately any study. One more limitation was the knowledge level the respondents had with the IS. Respondents with extra experience or years in school may have a diverse viewpoint than respondents in the first year of school. Computer knowledge was a further restriction as those respondents with more experience with computer applications may have had an unusual perception than respondents will little expertise.

References

Agag, G., & El-Masry, A. A. (2016). Understanding consumer intention to participate in online travel community and effects on consumer intention to purchase travel online and WOM: An integration of innovation diffusion theory and TAM with trust. *Computers in Human Behavior*, *60*, 97-111. http://dx.doi.org/10.1016/j.chb.2016.02.038

Al-hawari, M. A., & Mouakket, S. (2010). The influence of technology acceptance model (TAM) factors on students'e-satisfaction and e-retention within the context of UAE e-learning. *Education, Business and Society: Contemporary Middle Eastern Issues*, *3*(4), 299-314. http://dx.doi.org/10.1108/17537981011089596

Alkhanak, S. A. K., & Azmi, I. A. G. (2011). University students information technology experience and its role towards e-learning orientation. *New Educational Review*, *24*(2), 231-242. https://tner.polsl.pl/dok/volumes/tner_2_2011.pdf#page=231

Almusallam, A. A., Al-Gahtani, A. S., Aziz, A. R., & Rasheeduzzafar. (1996). Effect of reinforcement corrosion on bond strength. *Construction and Building Materials*, *10*(2), 123-129. https://doi.org/10.1016/0950-0618(95)00077-1

Alsajjan, B., & Dennis, C. (2010). Internet banking acceptance model: Cross-market examination. *Journal of Business Research*, *63*(9-10), 957-963. https://doi.org/10.1016/j.jbusres.2008.12.014

Bagozzi, R. P., & Warshaw, P. R. (1992). An examination of the etiology of the attitude-behavior relation for goal-directed behaviors. *Multivariate Behavioral Research*, *27*(4), 601-634. https://psycnet.apa.org/doi/10.1207/s15327906mbr2704_6

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74-94. http://dx.doi.org/10.1007/BF02723327

Baleghi-Zadeh, S., Mohd Ayub, A. F., Mahmud, R., & Mohd Daud, M. D. (2014). Behavior intention to use of learning management system among Malaysian pre-service teachers: A confirmatory factor analysis. *International Journal of Education and Literacy Studies*, *2*(1), 29-39. http://doi.org/10.7575/aiac.ijels.v.2n.1p.29

Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 25(3), 351-370. http://dx.doi.org/10.2307/3250921

Chandio, F. H., Irani, Z., Zeki, A. M., Shah, A., & Shah, S. C. (2017). Online banking information systems acceptance: An empirical examination of system characteristics and web security. *Information Systems Management*, *34*(1), 50-64. https://doi.org/10.1080/10580530.2017.1254450

Chen, Y. H., & Barnes, S. (2007). Initial trust and online buyer behaviour. *Industrial Management and Data Systems*, *107*(1), 21-36. http://dx.doi.org/10.1108/02635570710719034

Chin, W. W., & Newsted, P. R. (1995). The importance of specification in causal modeling: The case of end -user computing satisfaction. *Information Systems Research*, *6*(1), 73-81. https://doi.org/10.1287/isre.6.1.73

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

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. http://eli.johogo.com/Class/p7.pdf

Deng, Z., Lu, Y., Wei, K. K., & Zhang, J. (2010). Understanding customer satisfaction and loyalty: An empirical study of mobile instant messages in China. *International Journal of Information Management*, *30*(4), 289-300. https://d1wqtxts1xzle7.cloudfront.net/35210317/Understanding_customer_satisfaction_and_loyalty_An_empirical_study_of_mobile_instant_messages_in_China-with-cover-page-v2.pdf?Expires=1636117420&Signature=Jwi0VpemU1gB1z3tJvKGLDgtZtEJrCQu-0n-QpA0pFOfKYevY7nwFB5WsqU~824x9oDbtnutMdpFKnP~vzp6V2UNuGtySCMWrAEBFib2S-

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Dillon, A., & Morris, M. G. (2005). User acceptance of information technology: Theories and models. *Annual Review of Information Science and Technology*, *31*, 3-32. https://www.learntechlib.org/p/82513/

Dogruel, L., Joeckel, S., & Bowman, N. D. (2015). The use and acceptance of new media entertainment technology by elderly users: Development of an expanded technology acceptance model. *Behaviour and Information Technology*, *34*(11), 1052-1063. https://doi.org/10.1080/0144929X.2015.1077890

Doll, W. J., & Torkzadeh, G. (1987). The quality of user documentation. *Information and Management*, *12*(2), 73-78. https://doi.org/10.1016/0378-7206(87)90062-0

Elwood, S., Changchit, C., & Cutshall, R. (2006). Investigating students' perceptions on laptop initiative in higher education: An extension of the technology acceptance model. *Campus-Wide Information Systems*, *23*(5), 336-349. http://dx.doi.org/10.1108/10650740610714099

Escobar-Rodriguez, T., & Monge-Lozano, P. (2012). The acceptance of Moodle technology by business administration students. *Computers and Education*, *58*(4), 1085-1093. https://doi.org/10.1016/j.compedu.2011.11.012

Fagan, M. H., Neill, S., & Wooldridge, B. R. (2008). Exploring the intention to use computers: An empirical investigation of the role of intrinsic motivation, extrinsic motivation, and perceived ease of use. *Journal of Computer Information Systems*, *48*(3), 31-37. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.843.7707&rep=rep1&type=pdf

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Addison-Wesley.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50. https://doi.org/10.2307/3151312

Fu, J. R., Farn, C. K., & Chao, W. P. (2006). Acceptance of electronic tax filing: A study of taxpayer intentions. *Information and Management*, *43*(1), 109-126. https://doi.org/10.1016/j.im.2005.04.001

Gajendra, S., Xi, B., & Wang, Q. (2012). E-government: Public participation and ethical issues. *Journal of E-Governance*, *35*(4), 195–204. http://dx.doi.org/10.3233/GOV-2012-0320

Gefen, D. (2000). E-commerce: The role of familiarity and trust. *Omega*, *28*(6), 725-737. http://dx.doi.org/10.1016/S0305-0483(00)00021-9

Gefen, D., & Keil, M. (1998). The impact of developer responsiveness on perceptions of usefulness and ease of use: An extension of the technology acceptance model. *ACM SIGMIS Database*, *29*(2), 35-49. https://doi.org/10.1145/298752.298757

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, *27*(1), 51-90. http://dx.doi.org/10.2307/30036519

Gürkut, C., & Nat, M. (2018). Important factors affecting student information system quality and satisfaction. *Eurasia Journal of Mathematics, Science and Technology Education,*, *14*(3), 923-932. https://doi.org/10.12973/ejmste/81147

Hair, F. Jr, Sarstedt, M., Hopkins, L., & Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, *26*(2), 106-121. https://doi.org/10.1108/EBR-10-2013-0128

Harridge-March, S. (2006). Can the building of trust overcome consumer perceived risk online? *Marketing Intelligence and Planning*, *24*(7), 746-761. http://dx.doi.org/10.1108/02634500610711897

Hsu, C. L., & Lu, H. P. (2004). Why do people play on-line games? An extended TAM with social influences and flow experience. *Information and Management*, *41*(7), 853-868. https://doi.org/10.1016/j.im.2003.08.014

Hsu, M. K., Wang, S. W., & Chiu, K. K. (2009). Computer attitude, statistics anxiety and self-efficacy on statistical software adoption behavior: An empirical study of online MBA learners. *Computers in Human Behavior*, *25*(2), 412-420. https://www.academia.edu/5654480/Computer_attitude_statistics_anxiety_and_self_efficacy_on_statistical_software_adoption_behavior_An_empirical_study_of_online_MBA_learners

Ismail, M., Çelebi, E., & Nadiri, H. (2019). How student information system influence students' trust and satisfaction towards the university? An empirical study in a multicultural environment. *IEEE Access*, *7*, 111778-111789. https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=8794811

Karjaluoto, H., Mattila, M., & Pento, T. (2002). Factors underlying attitude formation towards online banking in Finland. *International Journal of Bank Marketing*, *20*(6), 261-272. http://dx.doi.org/10.1108/02652320210446724

Kettinger, W. J., & Lee, C. C. (1994). Perceived service quality and user satisfaction with the information services function. *Decision Sciences*, *25*(5–6), 737-766. https://doi.org/10.1111/j.1540-5915.1994.tb01868.x

King, W. R., & He, J. (2005). External validity in IS survey research. *Communications of the Association for Information Systems*, *16*(1), 880-884. http://dx.doi.org/10.17705/1CAIS.01645

Lederer, A. L., Maupin, D. J., Sena, M. P., & Zhuang, Y. (2000). The technology acceptance model and the World Wide Web. *Decision Support Systems*, *29*(3), 269-282. https://doi.org/10.1016/S0167-9236(00)00076-2

Lee, M. K. O., Cheung, C. M. K., & Chen, Z. (2005). Acceptance of Internet-based learning medium: The role of extrinsic and intrinsic motivation. *Information and Management*, *42*(8), 1095-1104. https://www.academia.edu/3166789/Acceptance_of_Internet-based_learning_medium_the_role_of_extrinsic_and_intrinsic_motivation

Lee, M. K. O., & Turban, E. (2001). A trust model for consumer internet shopping. *International Journal of Electronic Commerce*, *6*(1), 75-91. https://doi.org/10.1080/10864415.2001.11044227

Masrom, M. A., Skitmore, M., & Bridge, A. (2013). Determinants of contractor satisfaction. *Construction Management and Economics*, *31*(7), 761-779. http://dx.doi.org/10.1080/01446193.2013.814919

McKnight, D. H., & Chervany, N. L. (2001). What trust means in e-commerce customer relationships: An interdisciplinary conceptual typology. *International Journal of Electronic Commerce*, *6*(2), 35-59. https://doi.org/10.1080/10864415.2001.11044235

Moon, J.-W., & Kim, Y.-G. (2001). Extending the TAM for a World-Wide-Web context. *Information and Management*, *38*(4), 217-230. https://doi.org/10.1016/S0378-7206(00)00061-6

Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(3), 20-38. http://dx.doi.org/10.2307/1252308

Mou, J., Shin, D. H., & Cohen, J. (2017). Understanding trust and perceived usefulness in the consumer acceptance of an e-service: A longitudinal investigation. *Behaviour and Information Technology*, *36*(2), 125-139. https://doi.org/10.1080/0144929X.2016.1203024

Negash, S., Ryan, T., & Igbaria, M. (2003). Quality and effectiveness in web-based customer support systems. *Information and Management*, *40*(8), 757–768. https://doi.org/10.1016/S0378-7206(02)00101-5

Özdamar, Ş., Roden, M. F., & Billor, M. Z. (2017). Petrology of the shoshonitic Çambaşı pluton in NE Turkey and implications for the closure of the Neo-Tethys Ocean: Insights from geochemistry, geochronology and Sr– Nd isotopes. *Lithos*, *284–285*, 477-492. http://doi.org/10.1016/j.lithos.2017.04.025

Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning.

Journal of Educational Technology and Society, *12*(3), 150-162. https://www.jstor.org/stable/jeductechsoci.12.3.150

Piriyakul, M., Piriyakul, R., Chuachareon, O., Boonyoung, M., Piriyakul, P., & Piriyakul, I. (2015). Effects of trust, satisfaction and factors corresponding to TAM on intention to reuse internet business transaction. *International Review of Management and Business Research*, *4*(3), 344-358. https://www.irmbrjournal.com/paper_details.php?id=474

Redecker, C., & Johannessen, Ø. (2013). Changing assessment - Towards a new assessment paradigm using ICT. *European Journal of Education*, *48*(1), 7996. https://doi.org/10.1111/ejed.12018

Ringle, C. M., Wende, S., & Becker, J. M. (2015). *SmartPLS* (3) [Computer software]. Bönningstedt.

Seddon, T. (1997). Education: Deprofessionalised? Or reregulated, reorganised and reauthorised? *Australian Journal of Education*, *41*(3), 228-246. https://doi.org/10.1177%2F000494419704100303

Selim, H. M. (2003). An empirical investigation of student acceptance of course websites. *Computers and Education*, *40*(4), 343-360. https://doi.org/10.1016/S0360-1315%2802%2900142-2

So, M. W. C., & Sculli, D. (2002). The role of trust, quality, value and risk in conducting e-business. *Industrial Management and Data Systems*, *102*(9), 503-512. https://doi.org/10.1108/02635570210450181

Subramanian, G. H. (1994). A replication of perceived usefulness and perceived ease of use measurement. *Decision Sciences*, *25*(5–6), 863-874. http://test.scripts.psu.edu/users/g/h/ghs2/replicationdecisionsciencespaper.pdf

Suki, N. M., & Ramayah, T. (2010). User acceptance of the e-government services in Malaysia: Structural equation modelling approach. *Interdisciplinary Journal of Information, Knowledge and Management*, *5*(1), 395-413. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.464.2199&rep=rep1&type=pdf

Suki, N. M., Ramayah, T., & Suki, N. M. (2008). Internet shopping acceptance. *Direct marketing. Anais an International Journal*, *2*(2), 97-110. https://doi.org/10.1108/17505930810881752

Şahin, A., Kitapçi, H., & Zehir, C. (2013). Creating commitment, trust and satisfaction for a brand: What is the role of switching costs in mobile phone market? *Procedia - Social and Behavioral Sciences*, *99*(6), 496-502. http://doi.org/10.1016/j.sbspro.2013.10.518

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, *6*(2), 144-176. http://home.business.utah.edu/actme/7410/taylortodd.pdf

Teo, T. (2009). Modelling technology acceptance in education: A study of pre-service teachers. *Computers and Education*, *52*(2), 302-312. http://dx.doi.org/10.1016/j.compedu.2008.08.006

Teo, T. (2010a). An empirical study to validate the Technology Acceptance Model (TAM) in explaining the intention to use technology among educational users. *International Journal of Information and Communication Technology Education*, *6*(4), 1-12. http://dx.doi.org/10.4018/jicte.2010100101

Teo, T. (2010b). A path analysis of pre-service teachers' attitudes to computer use: Applying and extending the technology acceptance model in an educational context. *Interactive Learning Environments*, *18*(1), 65-79. https://doi.org/10.1080/10494820802231327

Teo, T. S. H., Lim, G. S., & Fedric, S. A. (2007). The adoption and diffusion of human resources information systems in Singapore. *Asia Pacific Journal of Human Resources*, *45*(1), 44-62. https://doi.org/10.1177/1038411107075402

Venkatesh, V., & Davis, F. D. (1996). A model of the antecedents of perceived ease of use: Development and test. *Decision Sciences*, *27*(3), 451-481. https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1540-5915.1996.tb00860.x

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, *46*(2), 186-204. http://doi.org/10.1287/mnsc.46.2.186.11926

Waheed, M., & Jam, F. A. (2010). Teacher's intention to accept online education: Extended TAM model. *Interdisciplinary Journal of Contemporary Research in Business*, *2*(5), 330-344. https://www.researchgate.net/profile/Mehwish-Waheed/publication/291769213_Teacher's_intention_to_accept_online_education_Extended_TAM_model/links/5b6d86fb299bf14c6d98a8f1/Teachers-intention-to-accept-online-education-Extended-TAM-model.pdf

Wixom, B. H., & Todd, P. A. (2005). A theoretical integration of user satisfaction and technology acceptance. *Information Systems Research*, *16*(1), 85-102. http://doi.org/10.1287/isre.1050.0042

Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers and Education*, *55*(1), 155-164. https://www.academia.edu/3185101/A_study_of_student_satisfaction_in_a_blended_e_learning_system_environment