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The Differences of Students Traits in Computer Science Program with the Perception of Using Laptops for Studying in Chengdu, Sichuan, China

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Abstract

With a sample size of 475 respondents, this study examined how students' disparities in computer science qualities affect their perceptions of using laptops for learning in a computer science program in Chengdu, Sichuan, China. A questionnaire was used as the research instrument. Conduct statistical analysis of variance on the data (Multivariate Analysis of Variance: MANOVA). Perceived ease of use ($\bar{X}$) = 4.141, perceived usefulness ($\bar{X}$) = 4.181, trust ($\bar{X}$) = 4.147, and behavioral intention ($\bar{X}$) = 4.166 were all high average scores. Meanwhile, at the 0.05 level of significance, gender, age, subjects in computer science courses, and types of laptop manufacturers have no statistically significant difference on perceived ease of use, perceived utility, trust, or behavioral intention. Thus, students use laptops in their study environments, and it was discovered that students' perceived ease of use, perceived usefulness, trust, and behavioral intention to use laptops for studying in computer science courses are generally positive, as the average score is higher, with no significant difference between student characteristics in gender, age, subjects in computer science courses, and types of laptop manufacturers.

Keywords : Perceived ease of use, Perceived usefulness, Trust, Behavioral Intention, Students Trait in Computer Science

JEL Classification Code: A20, C30, C87, I20

1. Introduction[1]

Today's households, businesses, and governments all rely heavily on IT. Card et al. (1983) claim that human-computer contact has increased significantly for work completion. Westland and Clark (2000) estimate that firms invested around 50% of new capital in information technology in the 1980s. Many models and hypotheses have been proposed to study how humans use computers and their applications. Despite institutional efforts to eliminate gender disparities, many women face significant disadvantages in education, politics, and employment. According to Mayoux (2001), women face more socio-cultural, educational, and technological barriers than men. For example, Orji (2010) found that electronic mail, information retrieval, online purchasing behavior, and communication technologies have all been studied, with men being more favorable to men than women. A better

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understanding of the reasons for gender disparities in technology acceptance may help technology development. Intentions to adopt new technologies have been studied theoretically for decades. Venkatesh et al. (2003) synthesized these eight models to create the Unified Theory of Adoption and Use of Technology (UTAUT). Researchers frequently use the Technology Acceptance Model (TAM) and the Unified Theory of Adoption and Use of Technology (UTAUT) to study technology use behavior. The purpose of this study is to compare gender, age groups, and laptop brands on behavioral intentions, perceived ease of use, perceived usefulness, and trust for using laptops.

2. Literature Review and Hypotheses Development

2.1 Perceived usefulness (PU)

Perceived usefulness (PU) is how consumers perceive online shopping (Lee et al., 2011). The model's compatibility comes first. Males and females in this study define PU as the total usefulness of web shopping. Thus, predicting and measuring end-user usefulness and convenience has become an academic interest (Joo et al., 2011). Moreover, the PU of using the internet to gather information and compare products is linked to the notion of online shopping (Vijayasarathy, 2004). According to Vijayasarathy (2004), applying the TAM to data about online shoppers will help managers understand their concerns and their level of IT usage. Thus, this study proposes a TAM-based model of university students' online repurchasing behavior (Davis, 1989). PU and PEOU are positively significant predictors of behavioral intention and purchase intention in Malaysian online shoppers (Rezaei & Amin, 2013). This study examines the impact of TAM behavioral constructs of PU and PEOU on predicting web browser acceptance of innovative retail. So, we used TAM and trust construct to predict the target population's behavioral and purchase intentions. The findings show that while the perceived benefit of shopping online is important for customers to return, having a fun online experience is equally important (Chiu et al., 2009). Zhang et al. (2011) discovered that male users were more deliberate than female users in accepting information systems. According to Shashaani and Khalili (2001), there are no significant gender differences in respondents' preferences for or use of computers. Individuals' perception of usefulness influences their current purchasing behavior (Hernandez et al., 2009). PU motivates men more than women, according to research (Midha, 2012).

2.2 Perceived Ease of Use (PEOU)

The ease of transaction and decision-making would lead to repeat purchases. The PEOU's vital role in IT usage necessitates understanding the factors that contribute to this user experience (Joo et al., 2011). PEOU is defined as the consumer's belief that getting information about products and services from an online website is simple (Awad & Ragowsky, 2008; Rezaei & Amin, 2013). Specifically, male and female users of the internet shop at the same time. The TAM proposes that people's acceptance of new technology is determined by two perceptions: PEOU and PU (Joo et al., 2011). Furthermore, PEOU affects women's online trust propensity more than men (Awad & Ragowsky, 2008). The improvement of website convention and friendliness is important for first-time buyers and returning customers alike. Davis et al. (1989) claim that making a website more user-friendly will improve its overall performance. PEOU is irrelevant to men's computer use. Although TAM includes PEOU, PEOU dominates the intent to use computers by highlighting PU (Yuen & Ma, 2002). Women are more influenced by PEOU in IS and IT, says Terzis and Economides (2011). Individuals' perception of ease of use influences their attitudes toward online shopping (Hernandez et al., 2009). Zhang et al. (2011) claim that perceived behavior control influences Chinese users' BI to accept information systems without self-efficacy, ease of use, or facilitating condition.

2.3 Behavioral Intention

To acquire, dispose of, and use items or services, customers have behavioral intention, as defined by Mowen and Minor (2002). A consumer might want to learn more, share their product experiences, buy a certain product or service, or dispose of a certain item. Simamora (2003) defines behavioral intention as a percentage of future actions. Schiffman and Kanuk (2003) define behavioral intention as the frequency or percentage of total purchases made by brand-loyal customers. Amanah et al. (2017) define

behavioral intents as follows:

1) Customer loyalty, is defined as a state in which customers make repeat purchases and cannot be influenced by competitors to move or refer others.

2) A willingness to pay more than is necessary to obtain the benefits received.

3) Switching proclivity, a behavioral indicator of competitor migration.

4) External response, informing third parties of dissatisfaction with business services.

5) Internal problem-solving, including dissatisfaction with services provided to internal stakeholders.

2.4 Trust

E-commerce requires trust "a willingness to rely on an exchange partner with confidence" (Dennis et al., 2009). A decade of e-commerce growth has been hampered by a lack of trust and growing privacy concerns (Midha, 2012). Online shopping (Wu & Chang, 2006; Rezaei & Amin, 2013; Hsu et al., 2012), explaining employees' behavior in an organizational setting (Harorimana, 2013) and banking (Amin et al., 2013) have all explored trust propensity. Some studies show that trust is important in online business because it influences customers' buying behavior (Chen & Lee, 2008). People are wary of transacting online if they lack trust (Andaleeb, 1995). A meta-analysis of trust scales from 1940 to 1992 revealed that females consistently outperformed males on trust scales (Buchan et al., 2008). In online businesses, lack of trust is a major factor. Trust issues in online transactions influence customers' buying intentions (Andaleeb, 1995). Online shopping is less safe if the buyer and seller do not trust each other (Lee et al., 2011). The trust propensity dentition varies by discipline (Midha, 2012; Murphy & Tocher, 2011). In this study, we define trust as shopper perception of total trust. The main reason why people are hesitant to buy online is payment system security. Purchasing a product online requires releasing personal information about one's credit card, which many people fear. Research shows that women and men trust information systems differently, but it doesn't explain why (Riedl et al., 2010). Men trust more in their interaction partners' (mathematical) abilities, especially women than women do (Schwieren & Sutter, 2008). Trust is vital in marketing, especially in electronic commerce (Liao & Hsieh, 2010). Online shoppers can't see or touch the products. Women are less trustworthy than men, according to Buchan et al. (2008). Building customer trust is critical for B2C e-commerce success (Murphy & Tocher, 2011).

2.5 Conceptual Framework

This study's theoretical foundation is based on university students of different gender, age groups, subjects using laptops in computer science, and laptop brands on behavioral intentions, perceived ease of use, perceived usefulness, and trust for using laptops in studying. Gender, age groups, subjects using laptops in computer science, and laptop brands can be used to segment so lecturers can basically recommend to a student on system specifications. Gender, age, subject, and laptop brand differences in using laptops for computer science studies in Chengdu, Sichuan, China, are depicted in Figure 1.

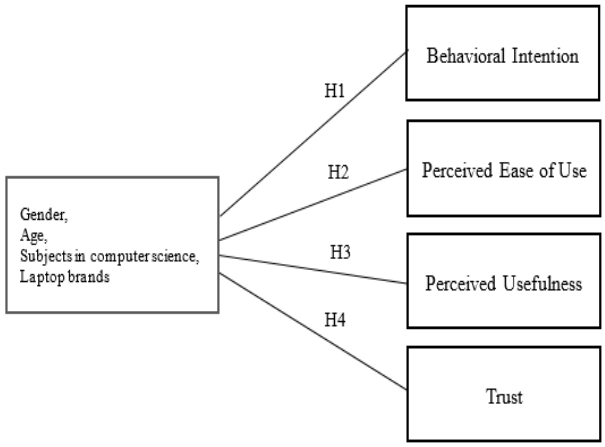

Figure 1. The conceptual framework
Source. Authors

2.6 Hypothesis of the study

In this study, the authors have been proposed the hypotheses upon literature review above:

H1: University students of different gender, age groups, subjects using laptop in computer science, and laptop brands have different behavioral intentions for using laptops in studying.

H2: University students of different gender, age groups, subjects using laptop in computer science, and laptop brands have different perceived ease of use for using laptops in studying.

H3: University students of different gender, age groups,

subjects using laptop in computer science, and laptop brands have different perceived usefulness for using laptops in studying.

H4: University students of different gender, age groups, subjects using laptop in computer science, and laptop brands have different trust for using laptops in studying.

3. Methods and Materials

This study's target population is computer science students in Chengdu and Sichuan District, China. The respondents completed and returned 475 usable questionnaires from universities in Chengdu and Sichuan District. The study chose Sichuan educational district from Chengdu's two educational districts. Using multistage random sampling, every unit in the population had an equal chance of being chosen. To be eligible for this study, participants had to be enrolled in a computer science program and own a laptop computer. A structured questionnaire with a Likert scale was used to collect data. To make the analysis more meaningful, clear, and easily interpretable, descriptive statistics such as percentage analysis were used. The statistical program used inferential statistical tools with MANOVA.

4. Results

Descriptive statistics and Inferential Statistics techniques were used for statistical analysis.

4.1 Descriptive Statistics

The questionnaire, distributed to 475 respondents, included demographic information such as gender, age group, student year in Computer Science, subjects in Computer Science, their laptop brands as well as their studying. The first demographic information that was analyzed is the gender of the respondents. The results show 236 were male (49.7%) and 239 were females (50.3%). The age of the respondents varied from below twenty to more than 51 years old. The minority of them being below 20-year-old (3.75%), 16.75% were between the ages of more than 17 to 21, 34.6% (164) were between the ages of 22-25, 32.9% (156), and were between the ages of above 25, 32.5% (155). Regarding student year in computer science, 25.3% (120) of respondents both were in year one and year two in computer science, then year three 24.4% (116), and 25% (119) were in year four in computer science. For their being in subjects in computer science, enrolled computer programming 18.9% (90), web application 21.6% (103), computer graphic 20.4% (97), system development 20% (95), and operating system 18.9% (90). Lastly, the popular laptop brands that they obtained for studying 16.2% (77) were Lenovo brand, 16.8% (80) were both in ASUS, Acer, and Huawei brands, 17.3% (82) were Dell, followed by 16.2% (77) were Apple and MacBook brand, and HP brand 16.7% (79). Detailed can be viewed in Table 1.

Table 1. Demographic profile

	Frequency	Percent
Gender		
Male	236	49.7
Female	239	50.3
Total	**475**	**100.0**
Age Group		
More than 17 – 21	164	34.6
Between 22-25	156	32.9
Above 25	155	32.5
Total	**475**	**100.0**
Student year in Computer Science		
Year one in Computer Science	120	25.3
Year two in Computer Science	120	25.3
Year three in Computer Science	116	24.4
Year four in Computer Science	119	25.0
Total	**475**	**100.0**
Subjects using laptop in Computer Science		
Computer Programming	90	18.9
Web Application	103	21.6
Computer Graphic	97	20.4
System Development	95	20.0
Operating System	90	18.9
Total	**475**	**100.0**
Laptop Brands		
Lenovo	77	16.2
ASUS, Acer	80	16.8
Huawei	80	16.8
Dell	82	17.3
Apple and MacBook	77	16.2
HP	79	16.7
Total	**475**	**100.0**

From Table 2, there is a high correlation between the perceived ease of use (PEOU), perceived usefulness (PU), trust (TRU), and behavioral intention (BI) as statistically at 0.01 level and with a high positive correlation considering the correlation coefficient. The MANOVA second-order

agreement test, covariance test where there must be no covariance difference can be shown in Table 3.

Table 2. The Correlations of Dependent variables

	$\bar{x}$	Std. D	PEOU	PU	TRU	BI
Perceived Ease of Use (PEOU)	4.141	0.693	-	-	-	-
Perceived usefulness (PU)	4.181	0.665	.402**	-	-	-
Trust (TRU)	4.147	0.690	.232**	.315**	-	-
Behavioral Intention (BI)	4.166	0.690	.462**	.327**	.283**	-

Note. **Correlation is significant at the 0.01 level (2-tailed).

From Table 3, it was found that the covariance of independent variables is different (sig < 0.05). This is not in agreement with the MANOVA statistics, but this study will continue to test the hypothesis. Violation of the MANOVA agreement may lead to the robustness decreasing of the test, or a decrease in the power of the test, causing the MANOVA test to normally be based on Wulk's Lambda (Tabachnick & Fidell, 2001). There is a violation of the agreement instead, opt for Pillai's Trace, which has more Robustness, however, the test stats tend to be consistent.

Table 3. Covariance test by Box's Test of Equality of Covariance Matrices

Box's M	361.026
F	1.192
df[1]	190
df[2]	4067.000
Sig.	.040*

From Table 4, the interpretation of the results shows Pillai's Trace instead, it was found that all independent variables consisting of gender, age, subjects in computer science (course using PC), and laptop brands had a statistically significant effect on using laptops for studying in the Computer Science program in Chengdu, Sichuan, China.

Table 4. The difference in mean by Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.988	6153.938[b]	4.000	310.000	.000*
	Wilks' Lambda	.012	6153.938[b]	4.000	310.000	.000*
	Hotelling's Trace	79.406	6153.938[b]	4.000	310.000	.000*
	Roy's Largest Root	79.406	6153.938[b]	4.000	310.000	.000*
Gender	Pillai's Trace	.024	1.937[b]	4.000	310.000	.016*
	Wilks' Lambda	.976	1.937[b]	4.000	310.000	.016*
	Hotelling's Trace	.025	1.937[b]	4.000	310.000	.016*
	Roy's Largest Root	.025	1.937[b]	4.000	310.000	.016*
Age	Pillai's Trace	.009	.337	8.000	622.000	.000*
	Wilks' Lambda	.991	.336[b]	8.000	620.000	.000*
	Hotelling's Trace	.009	.335	8.000	618.000	.000*
	Roy's Largest Root	.007	.581[c]	4.000	311.000	.000*
Course_using_PC	Pillai's Trace	.063	1.246	16.000	1252.000	.025*
	Wilks' Lambda	.938	1.245	16.000	947.703	.022*
	Hotelling's Trace	.064	1.242	16.000	1234.000	.022*
	Roy's Largest Root	.038	3.011[c]	4.000	313.000	.018*
Laptop_brand	Pillai's Trace	.065	1.039	20.000	1252.000	.041*
	Wilks' Lambda	.936	1.038	20.000	1029.104	.041*
	Hotelling's Trace	.067	1.036	20.000	1234.000	.041*
	Roy's Largest Root	.037	2.333[c]	5.000	313.000	.042*
Gender * Age * Course_using_PC * Laptop_brand	Pillai's Trace	.239	.863	92.000	1252.000	.000*
	Wilks' Lambda	.781	.862	92.000	1229.513	.000*
	Hotelling's Trace	.257	.861	92.000	1234.000	.000*
	Roy's Largest Root	.098	1.327[c]	23.000	313.000	.000*

a. Design: Intercept + Gender + Age + Couse_using_PC + Laptop_brand + Gender * Age * Couse_using_PC * Laptop_brand
b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

From Table 5, it was found that independent variables consisting of gender, age, subjects in computer science (course using PC), and laptop brands, influenced using laptops for studying in the Computer Science program in Chengdu, Sichuan, China with an R^2 of perceived ease of use (.371), R^2 of perceived usefulness (.360), R^2 of trust (.354), and R^2 of behavioral intention (.352).

Table 5. Analysis of variance using the Tests of Between-Subjects Effects method

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	PEOU	84.438[a]	161	.524	1.145	.157
	PU	75.327[b]	161	.468	1.093	.253
	TRU	79.995[c]	161	.497	1.066	.315
	BI	79.490[d]	161	.494	1.056	.341
Intercept	PEOU	5464.813	1	5464.813	11931.260	.000
	PU	5649.965	1	5649.965	13198.290	.000
	TRU	5608.814	1	5608.814	12032.012	.000
	BI	5651.242	1	5651.242	12082.720	.000
Gender	PEOU	1.750	1	1.750	3.822	.005*
	PU	.054	1	.054	3.125	.007*
	TRU	.798	1	.798	1.712	.019*
	BI	.088	1	.088	2.188	.006*
Age	PEOU	.353	2	.177	2.386	.006*
	PU	.143	2	.071	3.167	.008*
	TRU	.399	2	.200	1.428	.006*
	BI	.028	2	.014	1.030	.032*
Course_using_PC	PEOU	3.848	4	.962	2.100	.008*
	PU	3.942	4	.986	2.302	.005*
	TRU	2.367	4	.592	1.269	.028*
	BI	2.163	4	.541	1.156	.033*
Laptop_brand	PEOU	1.588	5	.318	1.693	.006*
	PU	4.346	5	.869	2.030	.007*
	TRU	3.289	5	.658	1.411	.022*
	BI	1.024	5	.205	2.438	.008*
Gender * Age * Course_using_PC * Laptop_brand	PEOU	9.392	23	.408	2.892	.006*
	PU	10.719	23	.466	1.089	.035*
	TRU	8.976	23	.390	2.837	.008*
	BI	11.143	23	.484	1.036	.041*
Error	PEOU	143.362	313	.458		
	PU	133.990	313	.428		
	TRU	145.907	313	.466		
	BI	146.394	313	.468		
Total	PEOU	8373.250	475			
	PU	8512.302	475			
	TRU	8392.984	475			
	BI	8470.023	475			
Corrected Total	PEOU	227.799	474			
	PU	209.317	474			
	TRU	225.903	474			
	BI	225.884	474			

a. R Squared = .371 (Adjusted R Squared = .047)

b. R Squared = .360 (Adjusted R Squared = .031)

c. R Squared = .354 (Adjusted R Squared = .022)

d. R Squared = .352 (Adjusted R Squared = .019)

From Table 6, the relationship between gender, age, subjects in computer science courses, types of laptop

computers that affect perceived ease of use, perceived usefulness, trust, and behavioral intention. By using statistical analysis of multiple variance Multivariate analysis of variance (MANOVA), the independent variables were gender, age, courses in computer science, and laptop brands. Whereas the dependent variables were quantitative including perceived ease of use, perceived usefulness, confidence in use, and usage behavior, the dependent variables were all four groups, the mean and standard deviation values were as follows: perceived ease of use (PEOU) ($\bar{x}$) = 4.141 and SD = 0.693, perceived usefulness (PU) ($\bar{x}$) = 4.181 and SD = 0.665, trust (TRU) ($\bar{x}$) = 4.147 and SD = 0.690, and behavioral intention (BI) ($\bar{x}$) = 4.166 and SD = 0.690, with a statistical significance of 0.05. The variance between independent variables (gender, age, subjects in computer science courses, laptop brands) and dependent variables (perceived ease of use, perceived usefulness, trust, behavioral intention) showed that under the variance between independent and dependent variables there was a statistical significance of 0.05, but there was no correlation in a difference between perceived ease of use, perceived usefulness, trust, and behavioral intention.

Table 6. Hypotheses testing results

Statements	Decision
H1: University students of different gender, age groups, subjects using laptop in computer science, and laptop brands have no different behavioral intentions for using laptops in studying.	Supported
H2: University students of different gender, age groups, subjects using laptop in computer science, and laptop brands have no different perceived ease of use for using laptops in studying.	Supported
H3: University students of different gender, age groups, subjects using laptop in computer science, and laptop brands have no different perceived usefulness for using laptops in studying.	Supported
H4: University students of different gender, age groups, subjects using laptop in computer science, and laptop brands have no different trust for using laptops in studying.	Supported

5. Discussion and Conclusion

The results showed that students use a variety of laptop brands in classroom settings, both during the regular school year and during the COVID-19 pandemic. The results also showed that students in the Computer Science Program in Chengdu, Sichuan, China use a variety of laptops to study. The high levels of reported ease of use, perceived usefulness, trust, and behavioral intention show that using a variety of laptop brands is beneficial in computer science. Aside from this, the study found no significant differences in students' perceptions of ease of use, usefulness, trust, and behavioral intention to use laptops for studying in computer science courses based on gender, age, subject, or laptop brand. Less favorable perceptions of perceived ease of use, utility, trust, and behavioral intention of using a variety of laptop brands in their study environments were found among students who own personal laptops and internet-connected smartphones. While many studies have examined the COVID-19 epidemic and normal situation, their effects, and outcomes on education and training activities, none have examined the intention of university students studying computer science in Chengdu, Sichuan, China to use laptops for their learning environments. Initially, the study's findings were compared to extensive research conducted in the field during the COVID-19 outbreak and in normal conditions. Bulutlu (2018) claims that university students have a positive and significant effect on their perceptions of utility and ease of use, and that as students increase, so does their perceived usefulness and ease of use. Sartaş and Barutçu (2020) found that student's readiness for online learning was generally good. A control mechanism is required to facilitate learning activities despite students' self-management, motivation, communication, and computer/internet skills.

During the COVID-19 pandemic process, from the perspective of computer science teachers, distance education advantages for some participants by Etin et al. (2021). For students to understand and use the new educational system, Serçemeli and Kurnaz (2020) claim that perceived ease of use, utility, trust, and behavioral intention are sufficient. The online university education provided by Altuntaş et al. (2020) is good because it technically enhances students' capacities. Turan and Gürol (2020) believe that the ability to view recorded lecture videos via the system is extremely beneficial for time management. Our study's findings are broadly supported by students' positive attitudes and intentions toward using digital environments like virtual classrooms and online learning. Our research found that perceived ease of use, usefulness, trust, and behavioral intention to use laptops for studying are not affected by gender, age, computer science subject, or laptop brand. The average score is higher, and the students' perceived ease of use, perceived usefulness, trust, and behavioral intention to use laptops for studying in computer science courses are generally positive.

Ylmaz et al. (2020) discovered that student satisfaction levels do not vary by gender. The findings of these studies largely match our findings. Our research also shows that students' perceptions of ease of use, perceived usefulness,

trust, and behavioral intention to use laptops in the classroom are unaffected by their department. Admitting students to all departments with the same unique skill pattern in using ICT gadgets in their educational environment is categorical. After the unexpected pandemic, students' readiness for online learning activities influenced their attitude toward mandatory online learning applications, according to Sartaş and Barutçu (2020).

The results of this study show that students who own laptops are more likely than not to use computers for studying in computer science classes. Students who have the appropriate technical equipment and system infrastructure to use laptops for computer science studies are expected to have good perceptions of ease of use, utility, trust, and behavioral intention. Karatepe et al. (2020) claim that most pre-service teachers have access to enough cognitive devices and the internet to participate in a classroom. Laptop computers are the most commonly used cognitive-communication tool by pre-service teachers, followed by smartphones. According to Serçemeli and Kurnaz (2020), 75% of students attend online/distance education courses using their own devices. Students who have access to the internet via a device are significantly more satisfied than students who do not, according to Ylmaz et al. (2020). For example, an epidemic study found that 83 percent of students have electronic devices that allow access to educational systems, and 97 percent have adequate internet access (Zan & Zan, 2020). A large portion of China's student population is expected to adapt. Our country's young population's ability to adapt to new technologies is seen as a major advantage in this transition.

There is no significant difference between gender, age, computer science courses, and laptop brand perceptions among students in the computer science program in Chengdu, Sichuan province, China. The authors are advised to conduct future research on a larger sample group and to use both qualitative and quantitative approaches to obtain more in-depth results.

References

Ajzen, I. (1991) The Theory of Planned Behaviour. *Organizational Behaviour and Human Decision Processes*, 50, 179-211. http://dx.doi.org/10.1016/0749-5978(91)90020-T

Altuntas, S., Erdogan, Z., & Dereli, T. (2020). A clustering-based approach for the evaluation of candidate emerging technologies. *Scientometrics*, *124*(2), 1157-1177.

Amanah, D., Harahap, D. A., & Lisnawati, D. (2017). Exploring online purchase decision among university students in Indonesia. *Journal of Humanities and Social Science*, 22(5), 72-77.

Amin, M., Isa, Z., & Fontaine, R. (2013). Islamic banks: Contrasting the drivers of customer satisfaction on image, trust, and loyalty of Muslim and non-Muslim customers in Malaysia. *International journal of bank marketing*.

Andaleeb, S. S. (1995). Dependence relations and the moderating role of trust: implications for behavioral intentions in marketing channels. *International Journal of Research in Marketing*, *12*(2), 157-172.

Awad, N. F., & Ragowsky, A. (2008). Establishing trust in electronic commerce through online word of mouth: An examination across genders. *Journal of management information systems*, *24*(4), 101-121.

Bandura, A. (1986) Social Foundations of Thought and Action: A Social Cognitive Theory. Prentice Hall, Englewood Cliffs.

Buchan, N. R., Croson, R. T., & Solnick, S. (2008). Trust and gender: An examination of behavior and beliefs in the Investment Game. *Journal of Economic Behavior & Organization*, *68*(3-4), 466-476.

Bulutlu, O. (2018). Examination of the intentions of university students to use simultaneous virtual classroom environments in distance education programs.

Çakir, R., & Arslan, F. (2020). Examination of distance education students' attitudes together with the intent to use concurrent virtual classroom environments. *International Journal of Turkish Educational Sciences*, 15(2020), 114-133.

Card, S.K., Moran, T.P. & Newell, A. (1983). The Psychology of Human-Computer Interaction. Erlbaum, Hillsdale.

Çetin, S., De Wolf, C., & Bocken, N. (2021). Circular digital built environment: An emerging framework. *Sustainability*, *13*(11), 6348.

Chen, S.-H., & Lee, K.-P. (2008). The role of personality traits and perceived values in persuasion: An elaboration likelihood model perspective on online shopping. *Social Behavior and Personality: An international journal*, *36*(10), 1379-1400.

Chiu, C. -Y., Mallorie, L., Keh, H. -T., & Law, W. (2009). Perceptions of culture in multicultural space: Joint presentation of images from two cultures increases in group attribution of culture-typical characteristics. *Journal of Cross-Cultural Psychology*, 40, 282–300.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, *35*(8), 982-1003.

Davis, F., Bagozzi, R. and Warshaw, P. (1992) Extrinsic and Intrinsic Motivation to Use Computers in the Workplace. *Journal of Applied Social Psychology*, 22, 1111-1132. http://dx.doi.org/10.1111/j.1559-1816.1992.tb00945.x

Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology. *MIS Quarterly*, 13, 319-340. http://dx.doi.org/10.2307/249008

Dennis, C., Merrilees, B., Jayawardhena, C. & Tiu Wright, L. (2009). E-consumer behavior. *European Journal of Marketing*, 43(9/10), 1121-1139. https://doi.org/10.1108/03090560910976393

Zhang, Y. L., Bai, L. Z., & Zhang, D. (2010). Strengthening the Engineer's Lifelong Education. *In Advanced Materials*

Research (Vols. 156–157, pp. 241–244). Trans Tech Publications, Ltd. https://doi.org/10.4028/www.scientific.net/amr.156-157.241

Fishbein, M. and Ajzen, I. (1975) Belief, Attitude, Intention and Behaviour: An Introduction to Theory and Research. Addison-Wesley, Reading.

Harorimana, D. (2013). Innovation and learning through knowledge gatekeepers: a critical examination of the relationship between trust, openness, and the use of gatekeepers in organizations. *International journal of innovation and learning*, *14*(3-4), 350-382.

Hernández, B., Jiménez, J., & Martín, M. J. (2009). Key website factors in e-business strategy. *International Journal of information management*, *29*(5), 362-371.

Hsu, C. L., Chang, K. C., & Chen, M. C. (2012). Flow experience and internet shopping behavior: Investigating the moderating effect of consumer characteristics. *Systems Research and Behavioral Science*, *29*(3), 317-332.

Joo, Y. J., Lim, K. Y., & Kim, E. K. (2011). Online university students' satisfaction and persistence: Examining perceived level of presence, usefulness and ease of use as predictors in a structural model. *Computers & education*, *57*(2), 1654-1664.

Schiffman, L. G., & Kanuk, L. L. (2003). Consumer Behavior, Printice Hall of (India) Private Limited, New Delhi.

Karatepe, O. M., Saydam, M. B., & Okumus, F. (2021). COVID-19, mental health problems, and their detrimental effects on hotel employees' propensity to be late for work, absenteeism, and life satisfaction. *Current Issues in Tourism*, *24*(7), 934-951.

Lee, P. K., Cheng, T. E., Yeung, A. C., & Lai, K. H. (2011). An empirical study of transformational leadership, team performance and service quality in retail banks. *Omega*, *39*(6), 690-701.

Liao, P. W., & Hsieh, J. Y. (2010, August). Using the Technology Acceptance Model to explore online shopping behavior: Online experiences as a moderator. In *2010 International Conference on Management and Service Science* (pp. 1-4). IEEE.

Mayoux, L. (2001) Jobs, Gender and Small Enterprises: Getting the Policy Environment Right. SEED Working Paper No. 15, *Series on Women's Entrepreneurship Development and Gender in Enterprises (WEDGE)*.

Midha, V. (2012). Impact of consumer empowerment on online trust: An examination across genders. *Decision Support Systems*, *54*(1), 198-205.

Mowen, JC, & Minor, M. (2002). Consumer behavior. *Jakarta: Erlangga*, 90.

Murphy, G. B., & Tocher, N. (2011). Gender differences in the effectiveness of online trust building information cues: An empirical examination. *The Journal of High Technology Management Research*, *22*(1), 26-35.

Orji, R. (2010) Impact of Gender and Nationality on Acceptance of a Digital Library: An Empirical Validation of Nationality Based UTAUT Using SEM. Journal of Emerging Trends in Computing and Information Sciences, 1, 68-79.

Rezaei, S., & Amin, M. (2013). Exploring online repurchase behavioural intention of university students in Malaysia. *Journal for Global Business Advancement*, *6*(2), 92-119.

Riedl, R., Hubert, M., & Kenning, P. (2010). Are there neural gender differences in online trust? An fMRI study on the perceived trustworthiness of eBay offers. *MIS quarterly*, 397-428.

Rogers, E.M. (1995) Diffusion of Innovation. Free Press, New York.

Sarıtaş, E., & Barutçu, S. (2020). Digital transformation in teaching and students' readiness for online learning: A study on Pamukkale University students during the pandemic period. *Journal of Internet Applications and Management*, 11 (1), 5-22.

Schwieren, C., & Sutter, M. (2008). Trust in cooperation or ability? An experimental study on gender differences. *Economics Letters*, *99*(3), 494-497.

Serçemeli, M., & Kurnaz, E. (2020). Research on students' perspectives on distance education and distance accounting education during the Covid-19 pandemic period. *International Journal of Social Sciences Academic Research*, 4 (1), 40-53.

Shashaani, L., & Khalili, A. (2001). Gender and computers: Similarities and differences in Iranian college students' attitudes toward computers. *Computers & Education*, *37*(3-4), 363-375.

Simamora, B. (2003). Winning Market with Marketing. Main Library Gramedia.

Tabachnick, B.G. & Fidell, L.S. (2001). Using Multivariate Statistics. 4th Edition, Allyn and Bacon, Boston.

Taylor, S. & Todd, P.A. (1995) Assessing IT Usage: The Role of Prior Experience. *MIS Quarterly*, 19, 561-570. http://dx.doi.org/10.2307/249633

Terzis, V., & Economides, A. A. (2011). Computer based assessment: Gender differences in perceptions and acceptance. *Computers in human behavior*, *27*(6), 2108-2122.

Thompson, R.L., Higgins, C.A. & Howell, J.M. (1991) Personal Computing: Toward a Conceptual Model of Utilization. *MIS Quarterly*, 15, 124-143. http://dx.doi.org/10.2307/249443

Turan, Z., & Gürol, A. (2020). An urgent transformation in education: Stress perceptions and opinions of university students taking online courses during the Covid-19 pandemic. *Journal of Hasan Ali Yücel Faculty of Education/Hasan Ali Yücel Journal of the Faculty of Education (HAYEF)*, 17 (2).

Venkatesh, V., Morris, M.G., Davis, G.B. & Davis, F.D. (2003) User Acceptance of Information Technology: Towards a Unified View. MIS Quarterly, 27, 425-478.

Vijayasarathy, L. R. (2004). Predicting consumer intentions to use on-line shopping: the case for an augmented technology acceptance model. *Information & management*, *41*(6), 747-762.

Westland, C. & Clark, T. (2000) Global Electronic Commerce: Theory & Case Studies. Massachusetts Institute of Technology, London.

Wu, J.-F., & Chang, Y.P. (2016). Multichannel integration quality, online perceived value and online purchase intention: A

perspective of land-based retailers. *Internet Research*, 26(5), 1228-1248. https://doi.org/10.1108/IntR-04-2014-0111

Yamamoto, G. T., & Altun, D. (2020). The Coronavirus and the rising of online education. *Journal of University Research*, *3*(1), 25-34.

Yilmaz Ince, E., Kabul, A., & Diler, İ. (2020). Distance education in higher education in the COVİD-19 pandemic process: A case of Isparta Applied Sciences University. *International Journal of Technology in Education and Science*, *4*(4), 345-351.

Yuen, A. H., & Ma, W. W. (2002). Gender differences in teacher computer acceptance. *Journal of technology and Teacher Education*, *10*(3), 365-382.

Zan, N., & Zan, BU (2020). Education in an Emergency with Coronavirus: An Overview of Faculty of Letters Students from Different Regions of Turkey Included in the Distance Education System. *Electronic Turkish Studies*, 15 (4).