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Factors Impacting Intention to Use and Satisfaction with Blended Learning of Students in Business English Major in Guangdong, China

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Abstract

Purpose: This study investigates the factors impacting intention to use and satisfaction with blended learning business of students in business English major in Guangdong, China. The research framework includes four independent variables: system quality, social identity, information quality, and student interaction; one dependent variable: satisfaction; and a mediator: intention to use, which mediates the relationship between social identity and satisfaction. **Research design, data, and methodology:** The study used questionnaires and collected 500 samples from the School of Foreign Languages at Zhanjiang University of Science and Technology (ZUST). The target population and sample size are chosen by purposive sampling with 500 undergraduates majoring in Business English, and have at least one month of the blended learning experience. Stratified random sampling is based on the undergraduates in different grades. Online questionnaire is used per convenience sampling. Structural equation modeling and confirmatory factor analysis were conducted. **Results:** The results show that system quality, social identity, information quality, and student interactions have a significant impact on satisfaction with blended learning. Intention to use mediate the relationship between social identity and satisfaction. **Conclusions:** The findings suggest that comprehensive factors, including the quality of blended learning, social relationship, cognition, and attitude toward identity, cause the improvement in students' satisfaction with blended education.

Keywords : Satisfaction, System Quality, Information Quality, Social Identity, Intention to Use

JEL Classification Code: E44, F31, F37, G15

1. Introduction

From a global perspective, blended learning has replaced conventional in-person, face-to-face teaching (Al-Fraihat et al., 2020). Hybrid courses, flipped classrooms, web-enhanced courses, and adaptive learning systems are only some of the methods and formats made possible by recent technical developments in blended learning. The broad acceptance of virtual classrooms and e-learning has been facilitated by the extensive use of information and communication technologies at university (Graham, 2006). The COVID-19 epidemic of recent years has further emphasized the need for blended learning and multi-modal teaching techniques to provide access to higher education.

Blended learning is a flexible method of education that combines in-person classroom teaching with digital learning materials and social networking. Suzor (2019) described that blended learning combines in-person instruction with digital tools and materials. According to Garrison and Vaughan, blended learning combines in-person and digital educational experiences (2008). The recent resurgence of interest in blended learning exemplifies the ongoing evolution of modern educational technology theory and the transition of the worldwide educational technology community from dogma to the idea (Motteram & Sharma, 2009; White, 2019).

Although instructors are still responsible for directing and supervising blended lessons, they encourage students to take the lead in their learning by using their initiative and originality (He, 2010). Blended learning combines the best features of traditional classroom education with the

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flexibility and convenience of online study. Although face-to-face classes help students bond, online education promotes individual responsibility and independence. Blended learning combines the finest features of both methods to improve education.

In-depth research on the ideas and concepts of blended learning was undertaken by Han et al. (2004). The researchers concluded that the fundamental idea behind blended learning is to use many cost-effective technologies and information transmission techniques to address a wide range of difficulties. Their findings demonstrated that blended learning has significantly impacted educational outcomes by driving conventional teaching practices. As a bonus, Graham (2013) provided a paradigm for understanding blended learning systems that incorporates three factors: setting (online vs. face-to-face), time (synchronous vs. asynchronous), and delivery modality (individual or group). Graham (2013) believes blended learning systems might be designed to find a positive medium between the two, maximizing both advantages.

Dziuban et al. (2018) found the effects and potential of blended learning in universities. Since it integrates students' perceptions of their learning environment with their access and their level of success, the authors argue that blended learning is quickly becoming the standard in course delivery. Also, they noted that blended learning is adjusting to the development of new ICTs that mimic human cognition in certain ways. Blended learning is an important breakthrough in education because of its potential to improve classroom instruction and learning effectiveness. However, to ensure its efficacy, careful planning, execution, and assessment are required.

The following characteristics define blended learning: (1) it is a dynamic, evolving, and active process of teaching and learning; (2) it consists of both online and in-class components; (3) the online component of blended learning complements the in-class component; and (4) the online and in-class components of blended learning work together to create an integrated learning process (White, 2019). According to several definitions, blended learning is a mashup of online and offline formal education (Akbarov et al., 2018; Alsalhi et al., 2019; Bryan & Volchenkova, 2016). Blended learning is defined in this research as a teaching strategy that combines online and classroom-based instruction.

The blended learning concept has been widely adopted, but how are students responding? Are they satisfied with this approach to education? Students' satisfaction levels are affected by various elements, including their level of involvement and the knowledge and abilities they gain from their coursework (Bedggood & Donovan, 2012). Lee (2010) argues that a student's level of satisfaction may be used as an indicator of how they feel about their educational experience as a whole.

Nevertheless, more investigation needs to be into the elements that impact blended learning students' satisfaction levels. Evaluating instructional strategies and student learning outcomes relies on an awareness of these determinants. Further study on this kind of teaching has shown that the way students view blended learning settings is affected by several factors. There has not been enough research into the dynamics of blended learning's many components—system quality, social identity, intention to use, information quality, student interactions, and satisfaction—to draw firm conclusions. Concerning system quality, DeLone and McLean (2003) suggest that more satisfied and active users contribute to better results. The connection between quality, value, satisfaction, and future behavior has been the subject of a large body of research (Cronin et al., 2000). One measure of information quality is whether or not students are content with how well it serves their needs (Mirabolghasemi & Iahad, 2016). Students' judgments of their own learning experiences and the level of instruction given make quality a more nebulous concept.

Blended methods of instruction provide students unrestricted access to online resources, which can only benefit their educational endeavors (Abou Naaj et al., 2012; Garrison & Kanuka, 2004). Not everyone involved may be enthusiastic about adopting and using blended learning, particularly if they are new to the technology. Understanding and enhancing the efficacy of mixed-learning environments requires considering the numerous elements determining students' satisfaction. Furthermore, some research has examined how one's social identity affects their intention to use. Through the process of self-categorization, social identity is developed, which in turn serves as a foundation for social awareness (norms, values, and beliefs) for group-related behaviors (such as fan clubs) (Hogg & Terry, 2000). The urge for self-expression, which includes constructing a favorable social image and avoiding bad impressions, is at the root of the need to express one's online identity (Leary & Kowalski, 1995). This notion of social identity reflects individuals' propensity to fill others in on their background and where they are in life (Collins & Miller, 1994). In addition, people work to project a positive picture of themselves to accomplish meaningful objectives and avoid negative stereotypes (Dominick, 1999). People feel freer to be themselves online than in real life, perhaps because they have more options for presenting themselves in the virtual world (Jensen Schau & Gilly, 2003). Individuals may feel belonging to a social community and take measures to be regarded as an important part of that community or social group by expressing their ideas, circumstances, and information via films or images (Kelly & McKillop, 1996). Because of this, individuals are more enthusiastic about engaging in blended learning and report higher satisfaction

levels.

In China, blended learning has exploded in popularity as the country's technological infrastructure has improved and more people have access to the Internet (Wu et al., 2019). It has been included in the teaching process for better educational results. Blended learning has been implemented in various methods at schools and colleges throughout China, each tailored to the institution's goals and available resources (Cui & Lockee, 2013). Several schools have started using the flipped classroom approach, in which students learn the basics alone before coming into class to put what they have learned into practice with the help of an instructor. Some educators have started using online learning modules as part of their regular lesson plans to help pupils retain information via engaging digital exercises. Blended learning highlights the need for instructors as facilitators and monitors of the whole learning process. Research implies that blended learning is gaining popularity in China due to various factors, including new technologies, shifting cultural and educational norms, and the COVID-19 epidemic. Blended learning is poised to become more influential in China's educational landscape as the country's online education sector expands.

This study aimed to fill a gap by investigating the variables influencing the level of satisfaction with blended learning held by Business English majors at the School of Foreign Languages in Zhanjiang University of Science and Technology (ZUST) in Zhanjiang, Guangdong, China. The study determined what factors—system quality, social identity, intention to use, information quality, student interactions, and student satisfaction—significantly impact blended learning in higher education. A consensus on a single theory that can explain all the aspects that affect students' satisfaction and experiences has not yet been reached, despite the efforts of several scholars (Tinto & Pusser, 2006). Complex psycho-social aspects, including learning theories, stress, coping, well-being, engagement, agency, and evaluation, all have a role in shaping students' experiences in the classroom and, ultimately, their level of satisfaction (Zineldin et al., 2011).

Theoretically, it is vital to examine what influences college students' satisfaction. Students satisfy with blended learning, which is important for several reasons. First, it has been shown that students are more likely to succeed academically when they are satisfied with their learning environments (Johnson & Johnson, 2009). Second, a correlation exists between how satisfied a student is and how likely they are to finish their degree (Suhre et al., 2007). When students are satisfied with their college experience, they are more likely to remain connected to the institution and spread favorable feedback about it to potential new students. Strategies that concentrate on building the institution's reputation have less influence on the university's brand equity and student recruitment efforts than those that focus on improving students' satisfaction with the university (Dennis et al., 2016).

Lastly, a satisfied student body may boost a school's standing and productivity (Douglas et al., 2008). The findings may be very useful for blended learning program directors and faculty members in higher education. This research is useful for administrators and educators since it highlights the areas students find most important when evaluating their blended learning experiences. Students majoring in Business English at the undergraduate level are targets for this study since it is hypothesized that the findings would improve the quality of online-offline blended teaching for these students, ultimately leading to greater satisfaction with this mode of instruction.

2. Literature Review

2.1 Satisfaction

Bailey and Pearson (1983) proposed that satisfaction is a composite of an individual's feelings and attitudes towards a particular environment, influenced by numerous factors. Oliver (1999) defined satisfaction as a judgment that a product, service, or its features provide a pleasurable level of fulfillment. Owen and Sweeney (2002) defined student satisfaction as the pleasure and success derived from the learning environment.

2.2 System Quality

System quality is defined as how well a system delivers on performance, dependability, usability, and usefulness to its intended audience (Alksasbeh et al., 2019). Features like this may be found in chat, forums, videos, and other forms of online collaboration that improve the educational process. System quality is essential for educational institutions to succeed in producing desirable learning outcomes and accomplishing their goals. Satisfaction, which may be assessed as total satisfaction, is a regularly used metric owing to its simplicity. The Information Systems Success Model was created, and it views success as a process that involves both cause and effect throughout time (DeLone & McLean, 2003). Users can provide feedback on the features and performance of the system. System quality is a critical aspect in the success model of the information system, which often comprises analyzing the working state of the system, network smoothness, data synchronization timeliness, and other criteria. In the context of online education platforms, this study defines system quality as parents' and users' judgment of response speed, operation stability, user-friendly design, and easy navigation. As a consequence of these investigations, the following speculations have developed:

H1: System quality has a significant impact on satisfaction.

2.3 Information Quality

Studies on information quality examine how valuable and applicable the data generated by computer systems are. Information output characteristics include veracity, appropriateness, correctness, accuracy, completeness, timeliness, dissemination, concision, and structure (Bailey & Pearson, 1983; Forsgren et al., 2016). The IS success model proposed that system quality in this model relates to the information system's functionality, adaptability, and user-friendliness. In contrast, information quality refers to the correctness, completeness, and timeliness of the information given by the information system. Individuals and teams may benefit from increased productivity and satisfaction thanks to information and system quality improvements. Wixom and Todd (2005) integrated the IS model's system quality and information quality with the technology acceptance model. They found that system and information quality can affect users' willingness to use through perceived usefulness. This is just one example of the many studies that have confirmed the IS model's theses. There results from these studies:
H2: Information quality has a significant impact on satisfaction.

2.4 Social Identity

The social identity comprises their persistent self-recognition, trust and belonging in their community, and submission to that community's authority and power structures. From the vantage point of social time, space, and social memory, we may examine how social identity is constructed, deconstructed, reconstructed, and transformed. Fishbein and Ajzen (1975) define behavioral intent as the readiness to do an action. However, the desire to engage in a mode of transportation that has been evaluated and chosen based on one's subjective initiative is known as Intention to Utilize. Psychologists Tajfel et al. (1979) created the Social Identity Theory, which traces social identity back to the 1970s. According to Tajfel (1978), a person's social identity consists of their impression of the group to which they belong and their significance in their lives. The field of social psychology, known as social identity theory, has evolved into an integrated investigation of group dynamics and intergroup connections. Numerous international researchers have built upon this foundation to investigate pertinent ideas of social identity further. Many different conceptual elements, including self-structure, social comparison processes, self-promotion and uncertainty reduction motivation, social influence and consistency, intergroup relations, and the derived effects of social classification, are compatible with and integrated within social identity perspectives. Perceived usefulness and attitude directly impact intention to use, which is a key component in predicting actual user behavior. The Use and Satisfaction Theory is a well-established framework for studying the impact of communication on an audience. Scholars are beginning to pay greater attention to the impact of individual characteristics on user behavior and satisfaction attitude as the theory of use and contentment develops. Based on these findings, a hypothesis has been developed:
H3: Social identity has a significant impact on intention to use.

2.5 Intention to Use

Parasuraman et al. (1985) altered the viewpoint of consumer satisfaction research from both practical and academic research. Research demonstrated that consumer satisfaction and use intent are strongly connected. Wee and Myers (2003) argued that satisfaction is a function of the degree and direction of the mismatch between expectations and perceptions. Oliver (1999) commented that the satisfaction of use and assessment (product or service performance) relate to satisfaction. Katz et al. (1973) grouped the demands of the mass media into five main categories: cognitive needs; emotional needs; the need for personal integration; the need for social integration; the need to alleviate stress. These five types of needs also support and guide the selection of questionnaire variables and have formed an essential aspect of using intent variables in this research. There are two effects after usage: the need is met, and the need is not met, and if it is filled, the satisfaction is greater, and the satisfaction is not satisfied, and the satisfaction is low (Fan et al., 2021). The pleasure of use will further affect future user behavior, and the decision to continue or cease using is the desire to use. Individuals will adjust their wants depending on satisfaction, that is, impact their later readiness to utilize. Both pleasures with usage and willingness came down to the attitude to use measures in this research. The following theory has resulted from these studies:
H4: Intention to use has a significant impact on satisfaction.

2.6 Student Interactions

Management of higher education institutions and practitioners' and students' attitudes and actions toward one another in the classroom may be impacted by students' interactions, as proposed by Johnson and Johnson (2009). Interaction in the classroom may be broken down into its parts—cognitive, emotional, and behavioral—as well as its two levels of awareness, implicit and explicit. Interaction between students in the classroom depends on the circumstances. It also includes the exchange of feelings and

ideas and the collision of concepts and approaches to learning. According to Abarca (2004), an interactive orientation between the management of higher education institutions and practitioners and students can create a multi-level and multi-dimensional interactive environment, which can improve students' practical English application ability, increase their learning awareness and motivation, and give them opportunities to experience learning emotions. Satisfaction with learning reflects how much pupils like the academic experience. Student learning satisfaction occurs when students' expectations are fulfilled or surpassed, whereas student learning dissatisfaction occurs when students' expectations are not satisfied. Students' participation in the classroom facilitates meeting students' expectations and improving their satisfaction with their education. The following theory has resulted from these studies:

H5: Student interactions has a significant impact on satisfaction.

3. Research Methods and Materials

3.1 Research Framework

This research used a conceptual framework with six factors. Based on the conceptual framework, five hypotheses were proposed in Figure 1 and will be tested.

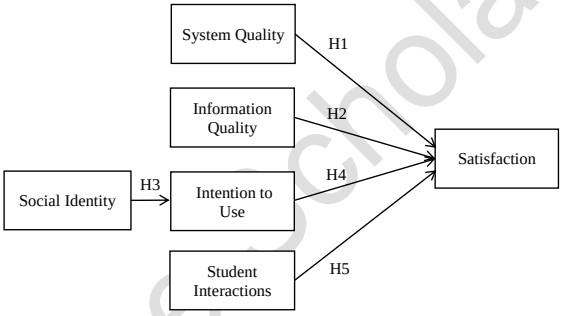

Figure 1: Conceptual Framework

H1: System quality has a significant impact on satisfaction.
H2: Information quality has a significant impact on satisfaction.
H3: Social identity has a significant impact on intention to use.
H4: Intention to use has a significant impact on satisfaction.
H5: Student interactions has a significant impact on satisfaction.

3.2 Research Methodology

In order to examine the variables that impact undergraduate satisfaction with blended learning in higher education, a quantitative method is used in this research. The data was gathered using an online survey made with Questionnaire Star, a platform that made it easier to distribute and gather data. Undergraduates from Zhanjiang University of Science and Technology (ZUST) were the study's target participants, and information was gathered from respondents via an online questionnaire.

Prior to data collection, the index-objective congruence (IOC) of the items was assessed through expert ratings, and a pilot test was conducted involving 50 participants. The IOC results obtained ratings from three experts that exceeded a score of 0.6, indicating approval. The pilot test yielded Cronbach's alpha coefficient values that surpassed the acceptable threshold of 0.7 as specified by Nunnally and Bernstein (1994).

SPSS22.0 and AMOS 26.0 were used to analyze the acquired data. The researcher used confirmatory factor analysis (CFA) and structural equation modeling (SEM) to assess the theoretical framework and the proposed correlations between the variables. After then, the findings were examined and evaluated.

3.3 Population and Sample Size

This research aims to evaluate students who have participated in blended learning at the ZUST Foreign Languages School for at least one month. Located in Zhanjiang, a beautiful port city on the southern tip of mainland China, the ZUST offers a variety of undergraduate programs. A private university approved by the Ministry of Education will become an independent public undergraduate institution in 2021.

Purposive, stratified, random, and convenience sampling will be used to pick the sample. The researcher at ZUST's School of Foreign Languages in Guangdong, China, purposefully chose undergraduate students majoring in Business English for this study. The participants had to have used blended learning for at least a month. The responses were screened using screening questions to ensure they matched the target group's requirements. After screening the whole population, stratified random sampling was used to determine the proportionate sample size for each stratum according to the 25% of each grade. The researcher chose the participants based on their availability and desire.

3.4 Sampling Technique

The target population and sample size are chosen by purposive sampling with 500 undergraduates majoring in

Business English, and have at least one month of the blended learning experience. Stratified random sampling is based on the undergraduates in different year of study, as shown in Table 1. Online questionnaire is used per convenience sampling. Structural equation modeling and confirmatory factor analysis were conducted. The English scale was translated from a previous study into Mandarin to create a measuring instrument, then demographic information and control factors were added.

Table 1: Sample Units and Sample Size

Year of Study	Approximate Population Size (Total Students)	Proportional Sample Size Total
Year One	725	113
Year Two	850	133
Year Three	833	130
Year Four	792	124
Total	**3200**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

Demographic information is concluded in Table 2 and collected from respondents based on gender, year of study, region, parent's degree, and time of use of blended learning. Questionnaires were distributed to 500 sets the students at the ZUST Foreign Language School. The respondents consist of 321 females and 179 males, representing 64.2 percent, and 35.8 percent, respectively. For the region, 69 students from Zhanjiang account for 13.8 percent, and 88 from Guangzhou account for 17.6 percent. For parents' degree, 192 students' parent's degree in Junior high school and below account for 38.4 percent, and 40 students' parent degree is Postgraduate, accounting for 8 percent. For time-of-use blended learning, 172 students use one month, accounting for 34.4 percent, and 97 students use more than a year, accounting for 19.4 percent.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	179	35.8%
	Female	321	64.2%
Region	Zhanjiang	69	13.8%
	Guangzhou	88	17.6%
	Shenzhen	86	17.2%
	Other regions	257	51.4%
Parent's degree	Junior high school and below	192	38.4%
	High school	127	25.4%
	Bachelor or college degree	141	28.2%
	Postgraduate and above	40	8%
Experience of use blended learning	One month	172	34.4%
	Three months	115	23%
	Half a year	116	23.2%
	More than a year	97	19.4%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) was applied to assess the correlations of items within the latent variables and the fitness of the measurement model (Jöreskog, 1969). Cronbach's alpha coefficient values surpassed the acceptable threshold of 0.7 as specified by Nunnally and Bernstein (1994). Composite reliability (CR) and Average variance extracted (AVE) are other measurements of scale items' reliability and consistency (Peterson & Kim, 2013). The value of CR and AVE is acceptable at 0.7 or higher and at 0.4 or higher, respectively, as per Fornell and Larcker (1981) suggestion. The results of CR in this study were all high than the threshold. CR ranged from 0.785 to 0.870. AVE was also greater than 0.5, ranging from 0.504 to 0.573. System quality was the construct with the highest internal consistency according to composite reliability.

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
System quality (SQ)	Alksasbeh et al. (2019)	5	0.870	0.714-0.790	0.870	0.573
Social identity (SITY)	Tajfel et al. (1979)	4	0.813	0.695-0.784	0.816	0.526
Intention to use (I)	Parasuraman et al. (1985)	4	0.832	0.722-0.776	0.832	0.554
Information quality (IQ)	Forsgren et al. (2016)	4	0.801	0.673-0.763	0.802	0.504
Student interactions (SION)	Abarca (2004)	3	0.783	0.703-0.785	0.785	0.550
Satisfaction (SAT)	Bailey and Pearson (1983)	5	0.858	0.711-0.765	0.858	0.548

The model fit was presented by the acceptable values of goodness-of-fit indices in Table 4. The statistical values of indices were compared to the acceptance criteria. In which, the values were CMIN/DF = 1.895, GFI = 0.924, AGFI = 0.905, NFI=0.919, CFI = 0.96, TLI = 0.954, and RMSEA = 0.042.

Table 4: Goodness of Fit for Measurement Model

Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 5.0 (Wheaton et al., 1977)	1.895
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.924
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.905
NFI	≥ 0.80 (Wu & Wang, 2006)	0.919
CFI	≥ 0.90 (Bentler, 1990)	0.960
TLI	≥ 0.90 (Sharma et al., 2005)	0.954
RMSEA	< 0.08 (Hopwood & Donnellan, 2010)	0.042
Model Summary		**In harmony with empirical data**

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, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, IFI = Incremental Fit Index, and RMSEA = root mean square error of approximation

Discriminant validity is confirmed when the AVE's square root is larger than any intercorrelated construct's coefficient (Fornell & Larcker, 1981). As illustrated in Table 5, the square root of AVE for all constructs at the diagonal line was greater than the inter-scale correlations. Hence, the discriminant validity was guaranteed.

Table 5: Discriminant Validity

	SQ	SITY	IQ	SION	I	SAT
SQ	**0.757**					
SITY	0.520	**0.725**				
IQ	0.404	0.474	**0.710**			
SION	0.445	0.512	0.442	**0.742**		
I	0.499	0.474	0.487	0.465	**0.744**	
SAT	0.509	0.493	0.486	0.519	0.598	**0.740**

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 goodness-of-fit indices were calculated in Table 6 based on the structural model. The results of statistical values were CMIN/DF = 2.149, RMR = 0.046, GFI = 0.914, AGFI = 0.894, NFI = 0.907, IFI = 0.948, TLI = 0.940, CFI = 0.948, and RMSEA = 0.048. The fitness of the structural model is confirmed.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/DF	< 5.0 (Wheaton et al., 1977)	2.149
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.914
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.894
NFI	≥ 0.80 (Wu & Wang, 2006)	0.907
CFI	≥ 0.90 (Bentler, 1990)	0.940
TLI	≥ 0.90 (Sharma et al., 2005)	0.948
RMSEA	< 0.08 (Hopwood & Donnellan, 2010)	0.048
Model Summary		**In harmony with empirical data**

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, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker-Lewis index, IFI = Incremental Fit Index, and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

The correlation magnitude among the independent and dependent variables proposed in the hypothesis is measured by regression coefficients or standardized path coefficients. As presented in Table 7, five proposed hypotheses were supported.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: SQ→SAT	0.171	3.275**	Supported
H2: IQ→SAT	0.151	2.761**	Supported
H3: SITY→I	0.660	11.18**	Supported
H4: I→SAT	0.412	7.711**	Supported
H5: SION→SAT	0.243	4.078**	Supported

Note: ** p<0.01
Source: Created by the author

System quality significantly impacts satisfaction, with a standardized path coefficient of 0.171 and a t-value of 3.275 in **H1.** Information quality significantly impacted satisfaction with a standardized path coefficient of 0.151 and a t-value of 2.761 in **H2.** Social identity significantly impacts intention to use with a standardized path coefficient of 0.660 and a t-value of 11.18 in **H3**. The strongest impact on satisfaction is the intention to use. The path relationship between Intention to Use and satisfaction has a standardized path coefficient of 0.412 and a t-value of 7.711 in **H4.** Student interactions are the last significant factor impacting satisfaction, with a standardized path coefficient of 0.243 and a t-value of 4.078 in **H5.**

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This study aims to investigate the variables impacting the level of satisfaction with blended learning held by Business English majors at the School of Foreign Languages in ZUST, in Zhanjiang, Guangdong, China. The study framework includes a dependent variable (satisfaction), a mediation variable (intention to use), and four independent factors (system quality, social identity, information quality, and student interactions). Five hundred data samples were gathered from business English majoring first-year students, sophomores, juniors, and seniors at the School of Foreign Languages in ZUST.

All five hypotheses for the relationship between variables were supported. The results of this study have important consequences for both academics and educators. The findings of this research are as follows. First, social identity significantly impacts the intention to use blended learning. This supports the statement that individuals with a strong identity related to education or teaching are more likely to have a positive intention to use blended learning. This is likely due to the perceived benefits of combining face-to-face teaching with online learning tools (Kurucay & Inan, 2017). Students who identify more strongly with their learning group or class are likelier to have a positive attitude toward blended learning (Arbaugh et al., 2009). Additionally, individuals who perceive blended learning as compatible with their social identity may be more likely to adopt this teaching approach (Seferoğlu et al., 2009). This paper highlights the importance of understanding social identity factors when promoting blended learning as part of teaching pedagogy.

Second, system quality has a significant impact on satisfaction with blended learning. As previous studies have shown, the quality of the technical infrastructure and support on users' overall satisfaction in blended learning programs. The system's quality can affect user satisfaction by influencing their perceptions of the blended learning environment's ease of use, usefulness, and reliability (Al Mulhem, 2020). When users perceive the system quality as high, they are more likely to be satisfied with their learning experience. Conversely, lower system quality can lead to negative perceptions, frustrations, and dissatisfaction with the blended learning program (Kuhbandner et al., 2009). This paper highlights the importance of considering system quality when designing and implementing blended learning programs to ensure high user satisfaction and positive learning outcomes.

Third, information quality has a significant impact on satisfaction with blended learning. This study further supports this view in blended education that when users perceive the course content as high quality, they are more likely to be satisfied with their learning experience. Information quality encompasses factors like the accuracy, relevance, and timeliness of the course material and the variety and suitability of the available resources (Byun et al., 2011). Positive perceptions of information quality are associated with increased engagement, higher motivation, and deeper learning (Lee, 2010). This research highlights the importance of information quality when designing and implementing blended learning programs to ensure high user satisfaction and positive learning outcomes. Ultimately, creating high-quality educational materials can enhance student engagement and increase the effectiveness of blended learning.

Fourth, student interactions have a significant impact on satisfaction with blended learning. Previous studies have concluded that students who have opportunities to engage with their peers and instructors are more likely to be satisfied with their learning experience. Positive perceptions of student interactions are associated with increased motivation, academic performance, and a sense of belonging (Kuo et al., 2014). Interaction includes both synchronous and asynchronous communication and collaboration, enabling students to have a sense of community and support while learning (Evans & Gao, 2016). This study highlights the importance of student interactions when designing and implementing blended learning programs to ensure high user satisfaction and positive learning outcomes. Creating opportunities for student interactions can enhance student engagement, foster a collaborative and supportive learning environment, and ultimately contribute to the effectiveness of blended learning.

Last, the intention to use significantly impacts satisfaction with blended learning. The impact of intention to use on satisfaction with blended learning was consistent with previous studies. When participants have a positive attitude towards adopting the blended learning methods, they tend to show higher satisfaction with the learning experience (Abadi et al., 2016). This positive relationship can be explained by the better learning outcomes and the higher level of student engagement experienced by those engaged in blended learning (Hsu et al., 2020). This study highlights the importance of considering and understanding students' intention to use blended learning methods when designing and implementing blended learning programs. The studies also demonstrate that positive attitudes towards blended learning can enhance users' satisfaction, which is critical for their continued engagement and better educational outcomes.

In sum, the study reveals that system quality, social identity, information quality, and student interactions significantly impact satisfaction with blended learning. Students' intention to use mediates the relationship between social identity and satisfaction. The findings of this study

suggest that comprehensive factors, including the quality of blended learning, cause an improvement in students' satisfaction with blended education.

5.2 Recommendation

Firstly, system quality and information quality promote satisfaction with blended learning. That suggests that the management of higher education institutions and practitioners should prioritize accurate, concise, and relevant course materials to promote information quality in the blended learning environment. The system and information of blended learning should be regularly reviewed to ensure its relevance and currency to the course, as well as the appropriateness of the language and examples provided. Management of higher education institutions and practitioners could conduct assessments and evaluations of the quality of the blended learning program to track progress and ensure that the course meets the learning objectives.

Secondly, another practical implication can be drawn from the finding that intention to use mediates the relationship between social identity and satisfaction. Developing students' social identity and their intention to use it to increase satisfaction with blended learning is vital. Educational institutions can create community among students by encouraging social interaction, such as group projects, online discussions, and social events. This can help students develop a stronger social identity and increase their intention to use blended learning. Educators can emphasize the advantages of blended learning, such as increased flexibility, personalized learning, and access to a wider range of resources. This can help students see the value of blended learning and increase their intention to use it. Educational institutions can offer training and support to help students develop the skills they need to succeed in blended learning. Educational institutions can regularly seek feedback from students about their experiences with blended learning, including their satisfaction and intention to use it.

Thirdly, higher education institutions and practitioners could encourage student interactions to optimize students' satisfaction with blended learning. They can create frequent opportunities for communication and collaboration in the blended learning environment. Such opportunities include discussion forums, group assignments, and online group projects. This can enable students to create an environment that fosters social interaction, builds a sense of community, and promotes engagement.

In conclusion, blended learning environments provide significant opportunities for promoting student interactions and satisfaction. Incorporating the practical implications discussed above can enhance student learning, engagement, and overall learning experience.

5.3 Limitation and Further Study

This study is an empirical study of Business English majors' students' intention to use and satisfaction with blended education in Zhanjiang, Guangdong, China. On the one hand, it enriches the relationship research between system quality, social identity, information quality, student interactions, intention to use, and satisfaction. However, this study has some limitations, which can be solved through future research. Firstly, regarding the survey's subjects, the research was restricted to sending out and receiving responses from 500 students at ZUST who are enrolled in blended learning courses. However, the sample could be more convincing and representative. A greater sample size would allow more students from a wider range of courses and majors to participate. A more in-depth, extensive, representative, and convincing study is possible. More students at a variety of institutions may participate in follow-up studies. It may also examine how students receive well-blended learning at a cross-section of institutions representing various geographic areas if time and resources allow. Secondly, the research also had a potential flaw in its ability to predict whether students' satisfaction with their education would alter over time since just a single questionnaire survey was completed rather than several surveys conducted at various times. Hence, when an appropriate amount of time has passed, researchers may conduct surveys throughout the student body at different times to uncover deeper systemic issues and draw more robust findings.

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