

## Effects of Customer Experience in Post-purchase Behavior: Evidence From Library Service in Vietnam

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### Abstract

Vietnamese universities are progressing remarkably in the list of top universities in the world. In order to obtain this achievement, Vietnamese universities have focused on improving lecturers' capabilities, infrastructure, academic training and research quality... In the context of education in Vietnam, library service is an important factor which contributes to ranking index, attracts new enrollments and differentiates from other institutions. To find the best way to enhance students' post-purchase behaviours, the study examined students' experience factors that significantly affect post-purchase behaviours by proposing an analytical framework adopted from EXQ model. Data collected from 570 students studying in Vietnamese universities were analysed through structural equation modelling (SEM). The results show that post-purchase experience has a positive impact on students' satisfaction, loyalty and word of mouth. By emphasizing the role of student experience, this study provides valuable managerial implications and contributes to the literature by suggesting a new analytical framework for measuring customer experience and post-purchase customer behaviour in the library service.

**Keywords:** Customer experience quality, Student's experience, Post-purchase behaviour, Library service

### 1. Introduction

Vietnam is witnessing an increasing number of universities, training programs and students. Recently, Vietnamese university education has obtained outstanding achievements. At present, Vietnam has 2 universities recorded in the list of 1000 top universities in the world according to the most prestigious international ranking [1]. Moreover, due to the Covid-19 pandemic, many Vietnamese students choose national

institutions instead of international ones, which creates great opportunities for Vietnamese universities to increase the number of enrolments. Nevertheless, it also brings challenges for them. As a result, it is remarkably essential to improve program quality and other services to gain advantages in a competitive education market.

Particularly, library service is among the most significant aspects that need to be focused, because this is an important criterion to measure and justify university quality [2]. In other words, university quality is tightly attached to library service quality. Researchers have proved the positive impact of university library quality on learning outcomes of students [3]. Hence, it is the responsibility of Vietnamese university libraries to provide the best experience to students. Nevertheless, at present, Vietnamese university libraries seem to be under-evaluated in terms of capacity and service quality [4]. According to the research of Do (2015), only 19% of users revealed that library service can meet their requirement, while 44% of them rated it poorly [4]. As such, it is critical to examine customer experience quality in Vietnamese university libraries.

Customer experience quality is a crucial aspect contributing to the success of businesses. The concept of customer experience has gained remarkable attention among researchers. It can be viewed as a comprehensive journey comprising multiple touchpoints from pre- to post-purchase [5,6]. Previous studies have examined customer experience in various service sectors such as in retailing [7], hospitality [8], healthcare [9] and banking [10]. However, the number of studies related to customer experience in the education sector in general and library service in particular is limited. Therefore, this study will bridge the research gap by providing insights of customer experience in the context of Vietnamese university libraries. So far, many studies have focused on the impact of customer experience on purchase intention [11,12,13]. However, as customer journey does not stop at the point of purchase, attention should be paid to post-purchase behavior as well. For that reason, this study will focus on the effect of customer experience on several post-purchase aspects, namely customer satisfaction, loyalty and word-of-mouth (WOM).

Regarding customer experience measurement, most researchers agree that it is a multidimensional concept, however, a consensus has not been reached in terms of measurement dimensions [14]. Among the previously proposed measurement scale, the customer experience quality (EXQ) scale of Klaus (2014) is the most prominent as it is applicable in various context and able to cover the holistic nature of customer journey from pre- to post-purchase [5]. Therefore, this study adopted EXQ scale with some customization to examine the impact of customer experience quality dimensions on post-purchase behaviours including, customer satisfaction, loyalty and WOM in library service sector. By systematically exploring the EXQ scale's nature, this study is considered as an important step to enhance customer experience measurement and provide empirical evidence for EXQ's role analysis in future research. Furthermore, based on the research results, some suggestions will be provided to educational institutions and library practitioners to improve customer experience.

## 2. Literature review

### 2.1. Customer experience

Customers desire not only products, but also satisfying experiences. Therefore, instead of single mindedly treating customers as information processor, researchers should also consider the experiential aspect to understand customer behaviour. Consequently, the concept of customer experience has gained significant attention from scholars and become a prominent research topic [15].

Customer experience is a new concept emerging recently in studies with little consensus about its definitions and constructs [15]. Johnston and Kong (2011) opined that customer experience is their interpretation resulted from the interaction with service providers across touch points and how they feel about it [16]. According to Klaus and Maklan (2013), customer experience is defined as the cognitive and affective assessment of customers when they directly or indirectly encounter service providers [17]. Therefore, researchers should not only examine customer experience during service encounters but also consider pre- and post-purchase experience across all channels [17]. Bolton et al. (2014) argued that customer experience includes cognitive, affective, emotional, social and sensory responses of customers to the service [18]. Customer experience is formed across touchpoints in a customer journey; thus, it is holistic in nature, covering all interactions from pre-purchase to post-purchase [19]. To this end, customer experience could be considered as a process-oriented concept rather than the consumption outcome. Lemon and Verhoef (2016) concluded that “customer experience is a multidimensional construct focusing on a customer’s cognitive, emotional, behavioural, sensorial, and social responses to a firm’s offerings during the customer’s entire purchase journey” [20]. In general, customer experience could be viewed as an internal and subjective response formed when customers interact (directly or indirectly) with firms during customer journey.

### 2.2. Customer experience dimensions

Researchers have not yet reached a consensus in terms of customer experience dimensions and its measurements. Some considered customer experience as a unidimensional concept, but most scholars recognized its multidimensionality [14]. Much effort has been made to measure customer experience. In fact, many multidimensional scales were developed to examine customer experience in specific areas of interest, for example in retail [21], health care [22], banking [23], tourism [24], event and festival [25].

In an attempt to develop a more general scale for customer experience, Chang and Horng (2010) demonstrated the Experience Quality scale which consists of 5 dimensions, namely *physical surroundings*, *service providers*, *other customer*, *customer themselves* and *customers’ companions* [26]. However, this scale mainly emphasizes on experience during service interaction process which does not reflect the holistic nature of customer experience from pre- to post-purchase stage. Klaus and Maklan (2012) proposed the EXQ scale which includes 19 items to measure customer

experience [27]. According to the scale, customer experience is made up of 4 dimensions, namely *product experience*, *outcome focus*, *moments-of-truth* and *peace-of-mind*. This is so far the most widely used scale and has been successfully applied in many contexts such as financial services, tourism, retail, travelling and sport events [14]. Later, the EXQ scale was refined and updated with 26 items covering 3 dimensions which are *brand experience*, *service experience* and *post-purchase experience* [5], [14].

- *Brand experience*: refers to the experience that customers have in the pre-purchase stage. It reflects how customers perceive a brand, its product, pricing, personnel as compared to its competitors' offerings when they search for information and evaluate the service providers. It is sometimes shaped by information from customers' social environment (reference groups, peers or other information channels). Thus, customers' perceptions of the brand in prior purchase stage are not always under the control of service providers [28].
- *Service experience*: refers to the experience when customers interact with the service provider's physical presence, personnel, policies and practices. This experience is the result of service using process. Klaus et al. (2013) specified 3 themes related to service experience. The first theme covers the process experience such as the ease or challenge when using service channels [28]. The second theme describes customers' assessment when they directly interact with service providers' employees. Finally, the third theme relates to customers' perception of the service physical evidence.
- *Post-purchase experience*: refers to the experience in post-purchase stage. It usually focuses on customer's perceptions of familiarity, retention and service recovery [28]. This dimension also consists of post-purchase pleasure and social status granted by staying in a relationship with the service provider [5], [14]

According to Kuppelwieser and Klaus (2021), the prevalence of the EXQ scale can be explained due to 2 reasons [14]. Firstly, it is not designed for a specific context or area, rather than that, it can be applied in various fields. Secondly, it captures all direct and indirect interactions between customers and service providers throughout 3 stages of customer journey including pre-, during and post-purchase. However, the authors still called for further empirical studies to validate the scale in different contexts. This study adopted the new EXQ scale with some customizations to measure customer experience as well as examine the relationship between customer experience and customer behaviour (customer satisfaction, customer loyalty and WOM) in Vietnamese university library service.

### **2.3. Relationship between customer experience and post-purchase behaviour**

Several outcomes of customer experience have been recorded in prior research. Brodie et al. (2011) and Ahn and Back (2017) revealed that satisfaction, loyalty, commitment and trust are four main consequences [29], [30]. In addition, Moliner et al. (2018) showed that after shopping journey, consumers might become a supporter of the

brand, spreading positive WOM and convincing others to try it [31]. Particularly in library context, Yadav et al., (2018) verified that customer experience shows a significant impact on users' satisfaction, loyalty and WOM [32]. Thus, in this study, satisfaction, loyalty and WOM could be seen as the consequences of customer experience.

### *2.3.1. Customer experience and customer satisfaction*

Traditionally, customers constantly evaluate the products they buy as they integrate these products into their daily lives [33]. Oliver (1981) defined customer satisfaction as the psychological state resulting from the comparison between experience and prior expectation [34]. Customer satisfaction or dissatisfaction is determined by the overall feelings of an individual after he/she has bought a product [35]. Particularly, a customer whose experience is below expectations will be dissatisfied. Customers whose experiences match or exceed their expectations will be satisfied or even delighted [36]. In this light, Morgeson et al. (2011) also revealed that satisfaction, as perceived by customers, is formed through the whole experience process from recognition to purchase and continuing use [37]. Therefore, customer satisfaction could be defined as the individual's perception of the performance of the product or service as compared to his or her expectations.

With a view to creating satisfied customers, it is required that customers need to believe that the brand meets their needs, offer superior value and good service when they use it. As such, customer satisfaction is strongly associated with customers' responses to service. Many prior studies clearly indicated that different experiences such as affect, sensory and cognitive can impact on satisfaction [38]. Consequently, satisfying customer can be seen the ultimate goal of every process and experience in business. From the review, hypothesis 1 can be proposed as followed:

*H1. Student experience has a positive impact on their satisfaction in Vietnamese university libraries.*

From the general hypothesis and according to a research subject, as well as customer experience measurements, three specific hypotheses can be extracted as:

*H1a: Brand experience has a positive impact on student's satisfaction in Vietnamese university libraries.*

*H1b: Service experience has a positive impact on student's satisfaction in Vietnamese university libraries.*

*H1c: Post-purchase experience has a positive impact on student's satisfaction in Vietnamese university libraries.*

### *2.3.2. Customer experience and customer loyalty*

Customer loyalty is a result that all companies pursue. Thus, loyalty as a phenomenon is gaining impetus in both research and business context. The early conceptualization was led by Newman et al. (2018) when assuming that the loyalty of a consumer towards a brand can be represented by repetitive purchase. Number of visits, consumer spend, frequency of purchase, etc...could be used to measure customer loyalty [39].

Furthermore, other researchers visualized loyalty as a mental state of a person towards a specific choice object, which is then reflected in his/her behaviour [38]. On the other hand, loyalty as an attitude may lead to a positive relationship with the brand and be considered as an important key to the success of an organization [38].

Several authors have explored the link between customer experience and loyalty, especially in a comprehensive treatment of customer experience measurements [38]. Prior researchers developed several scales to measure customer experiences and prove that it has significant positive effects on future attitudinal loyalty [20]. Relevant studies empirically tested the antecedents of loyalty in some business context and found that service quality, product quality, service settings, promotions have strong impact on cognitive/attitudinal loyalty [40]. Thus, it can be summarized that:

*H2. Student experience has a positive impact on their loyalty in Vietnamese university libraries.*

From the general hypothesis and according to a research subject, as well as customer experience measurements, three specific hypotheses can be extracted as:

*H2a: Brand experience has a positive impact on student's loyalty in Vietnamese university libraries.*

*H2b: Service experience has a positive impact on student's loyalty in Vietnamese university libraries.*

*H2c: Post-purchase experience has a positive impact on student's loyalty in Vietnamese university libraries.*

### 2.3.3. Customer experience and Word of mouth

Word-of-mouth (WOM) refers to a social behaviour including person-to-person communication which enhances value co-creation to the networks of customers and firms rather beyond current service encounters [41, 42]. WOM initiated by customers in brand communities increases the opportunity for conversations in the next interaction stage, bringing a new round of experience evaluation [42]. WOM was found to be more effective in influencing customer's behaviour than other commercial sources [43] and show a strong impact on customer's choice [44]. In the context of service, the role of WOM is even greater as service is intangible in nature and WOM can be used as a cue to evaluate a service.

Positive WOM is the desired outcomes of customer experiences [45]. Using critical incident analysis technique, Buttle and Groeger (2017) found that respondents are more likely to engage in positive WOM due to satisfied customer experiences [43]. Furthermore, Roy et al. (2017) pointed out the generation of WOM depends on how satisfied the customers are with their experiences. Thus, satisfactory customer experiences lead to positive WOM about products and services [7]. Therefore, it can be hypothesized that a satisfactory customer experience will lead to greater WOM communication. Hypothesis 3 can be proposed as:

*H3. Student experience has a positive impact on their word-of-mouth in Vietnamese university libraries.*

From the general hypothesis and according to a research subject, as well as customer experience measurements, three specific hypotheses can be extracted as:

*H3a: Brand experience has a positive impact on student’s word-of-mouth in Vietnamese university libraries.*

*H3b: Service experience has a positive impact on student’s word-of-mouth in Vietnamese university libraries.*

*H3c: Post-purchase experience has a positive impact on student’s word-of-mouth in Vietnamese university libraries.*

Basing on above literature review and hypothesis development, an analytical framework is proposed as depicted in figure 1:

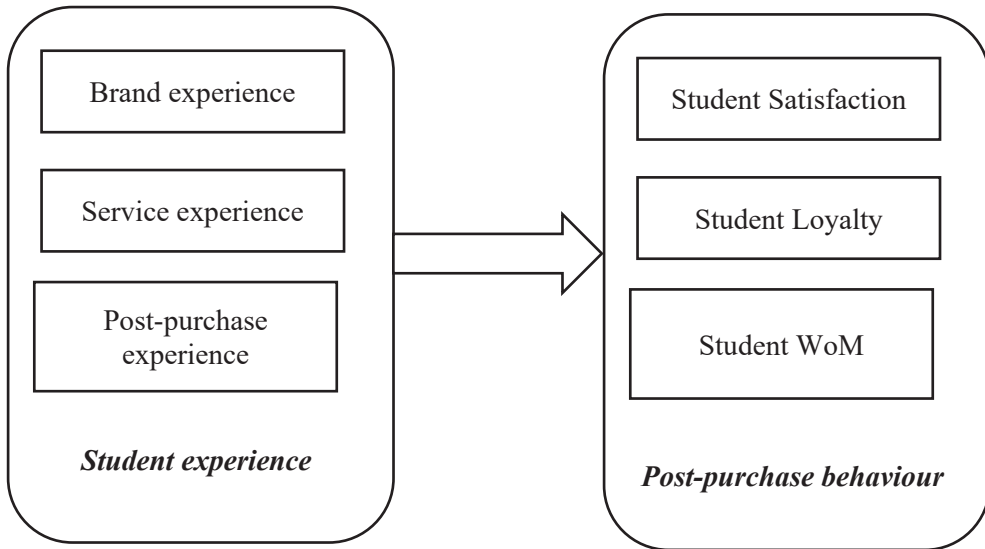


Figure 1. The proposed analytical framework

### 3. Methodology

A questionnaire was built up to find out the impact of student experience on post-purchase behaviour in Vietnamese university libraries. Measurements of student experience in Vietnamese university libraries were developed from EXQ model proposed by Klaus (2014) [6]. Measurements of post-purchase behaviour were developed from the research of Klaus and Maklan (2013) [17]. The original questionnaire containing 43 items in total was pre-tested in a small group of students for readability and adjusted to fit in Vietnamese university library context. After the pre-test stage, 15 items were removed due to incompatibility and 5 items were added. The final questionnaire including 31 items was used to gather data (Table 1). The first part of the questionnaire comprised student experiences and their post-purchase behaviour dimensions; and the second part included demographic information. To avoid questionnaire fatigue and comprehensive errors, all statements were positively worded [43],

Data were collected in Vietnam from January to February in 2021. The target group includes Vietnamese students who already had experiences with library service.

According to Hair et al. (2006), the sample size should be at least 5-times higher than number of question items to ensure the data's validity and reliability [52]. This study includes 31 items, as such, the minimum sample size should be 155 (equal to 31x5). Therefore, 600 questionnaires were distributed randomly through social media platforms such as Email, Facebook, etc... and 570 respondents are qualified, the response rate is 95%. In this case, the research sample size meets the requirement of quantitative analysis. The profile of the survey respondents is presented in Table 2.

Scales	Items	Source
Brand experience	The library has a good reputation	[5], [46], [47]
	I am confident in the library's expertise	
	The library gives independent advice (on which product/service will best suit my needs)	
	I choose the library not because of the price alone	
	The people who work at the library represent its brand well	
	The library's reading materials have the best quality	Pilot test's result from authors
	The library's facilities have the best quality	Pilot test's result from authors
	The library's service is superior	[5]
Service experiences	The library advised me throughout the process	[5], [14], [48]
	Dealing with the library is easy	
	The library keeps me informed	
	The library demonstrates flexibility in dealing with me	
	The library's personnel relate to my wishes and concerns	
	The people I am dealing with at the library have good people skills	
	The library's facilities are better designed to fulfill my needs than their competitors'	
	The library's online facilities are designed to be as efficient as possible (for me)	
	The library's facilities are designed to be as efficient as possible (for me)	
	The library's service settings are convenient for me	Pilot test's result from authors
Post-purchase experience	I stay with the library because they know me	[5], [14]
	The library knows exactly what I want	
	The library keeps me up-to-date	
Satisfactions	My feelings towards this library service are very positive	[17], [49]
	I feel good about coming to library for the offerings I am looking for	
	Overall, I am satisfied with library and the service they provide	



	I feel satisfied that library always produce the best results that can be achieved for me	
Loyalty	I consider to use this library as the first choice	[17], [50]
	I will use this library more in the next few years	
	Among many libraries, I only use this library	Pilot test's result from authors
Word of mouth	I always speak positively about this library to others	[17]
	I will recommend this library for my circle of friends (colleagues, families, peers...)	
	I always encourage my circle of friends to choose this library	Pilot test's result from authors

Table 1. Student experience and post-purchase behavior measuring scales

Table 2 revealed that most respondents in this study are females (53.3%) and fell in the age group between 18-22 years old. Moreover, most respondents have University's degree (82.3%) and major in Economy (47.2%. The statistics also revealed that most were from Vietnam National University, Hanoi (57.2%). In reality, Vietnam National University is one of the leading academic institutions in Vietnam with 8 universities, 4 affiliated schools, 13 service units, 48,357 students (from undergraduate to graduate students) and 488 training programs [51]. Consequently, current samples of this study are representative and reliable enough for this specific context.

Variable	Details	Frequency	(%)
Gender	Male	258	45.3
	Female	304	53.3
	N/A	8	1.4
Age	18-22 years old	414	72.6
	23-35 years old	91	16.0
	36-45 years old	65	11.4
Education	University	469	82.3
	Master's degree	62	10.9
	Doctor's degree	39	6.8
Major	Economy	269	47.2
	Technology	83	14.6
	Education	52	9.1
	Law	47	8.2
	Social Science	30	5.3
	Nature Science	24	4.2
	Other	65	11.4
Place	Hanoi	497	87.2
	Others	67	11.8
Library	Vietnam National University	326	57.2
	Vietnam Commercial University	37	6.5
	Foreign Trade University	29	5.1
	National Economics University	36	6.3
	Other	142	24.9

Table 2. Demographic profile of respondents (n = 570)

#### 4. Data analysis

Regarding the validity and reliability of the measurement scale, the confirmatory factor analysis (CFA) using the maximum likelihood estimation was conducted to verify the internal consistency of the measures and all constructs in this study. According to Hair et al. (2006), a model with good fit will have a goodness of fit index (GFI) above 0.90, Root Mean Square Error of Approximation (RMSEA) under 0.08, Tucker-Lewis index (TLI) above 0.90 and Comparative Fit Index (CFI) higher than 0.90 [52]. Based on the CFA result,  $\chi^2 = 1344.638$  ( $df = 422$ ,  $p < 0.001$ ),  $\chi^2/df = 3.186$ ,  $GFI = 0.857$ ,  $RMSEA = 0.062$ ,  $TLI = 0.934$  and  $CFI = 0.940$ , suggesting the model was fit.

In order to assess the discriminant validity, this study applied the guideline proposed by Fornell and Larcker (1981) which stated that the square root of Average Variance Extracted (AVE) should exceed the correlation between any other two constructs [53]. Based on data presented in Table 3, all square roots of AVE are higher than the correlation between any other two constructs, thus confirming discriminant validity.

According to Hair et al. (2006), three criteria must be fulfilled when evaluating the convergent validity [52]. In particular, the standardized factor loadings should be significantly linked to the latent construct and have a loading estimate of at least 0.60, the value of AVE must be greater than 0.50 and the reliability score of constructs should exceed 0.70. According to Table 3, all standardized loadings of the items were higher than 0.60, the AVE of all constructs exceeded 0.50 and the reliability score of all constructs exceeded 0.70; thus, convergent validity was confirmed.

Variable	CR	FL	AVE	1	2	3	4	5	6
Brand experience	0.924	0.734-0.859	0.604	<b>0.777</b>					
Service experience	0.948	0.808-0.848	0.648	<i>0.732</i>	<b>0.804</b>				
Post-purchase experience	0.830	0.850-0.899	0.620	<i>0.669</i>	<i>0.801</i>	<b>0.787</b>			
Customer satisfaction	0.914	0.879-0.906	0.728	<i>0.716</i>	<i>0.854</i>	0.831	<b>0.853</b>		
Customer Loyalty	0.827	0.786-0.899	0.618	<i>0.667</i>	<i>0.780</i>	0.796	0.822	<b>0.786</b>	
Word-of-Mouth	0.896	0.899-0.920	0.741	<i>0.682</i>	<i>0.800</i>	0.763	0.831	0.806	<b>0.861</b>

*CR* = Composite reliability; *FL* = Factor Loading; *AVE* = average variance extracted; the diagonal entries (in Bold) represent the square root's average variation, and off-diagonals (in Italics) are the correlations between the constructs.

Table 3. Test results of convergent validity and discriminant validity

**Structural model and hypothesis testing**

In the evaluation of the structural model, the fit statistics indicated that the research model in this study provides an acceptable fit to the data ( $\chi^2 = 1344.638$ ,  $df = 422$ ,  $\chi^2/df = 3.186$ ,  $GFI = 0.857$ ,  $RMSEA = 0.062$ ,  $TLI = 0.934$  and  $CFI = 0.940$ ). The estimation of the standardized coefficients indicates that the path between each construct was positive and significant ( $p < 0.001$  for all instances) in the research model.

As for H3a, the results from Table 4 ( $\beta = 1.042$ ,  $p < 0.001$ ) indicate that post-purchase experience has a significant positive influence on customer loyalty, thus supporting H3a. As for H3b, the results from Table 4 ( $\beta = 0.797$ ,  $p < 0.001$ ) indicate that post-purchase experience has a significant positive influence on customer satisfaction, thus supporting H3b. As for H3c, the results from Table 4 ( $\beta = 0.823$ ,  $p < 0.001$ ) indicate that post-purchase experience has a significant positive influence on word of mouth, thus supporting H3c.

Hypothesised path	S.R.W $\beta$	Critical ratio	Supported (Yes/No)
H1a: Brand experience → Student’s loyalty	0.059	1.137	No
H1b: Brand experience → Student’s satisfaction	0.035	0.854	No
H1c: Brand experience → Student’s Word of Mouth	0.063	1.301	No
H2a: Service experience → Student’s loyalty	-0.121	-1.286	No
H2b: Service experience → Student’s satisfaction	0.164	2.284	No
H2c: Service experience → Student’s Word of Mouth	0.067	0.800	No
H3a: Post-purchase experience → Student’s loyalty	1.042	10.233	Yes
H3b: Post-purchase experience → Student’s satisfaction	0.797	10.198	Yes
H3c: Post-purchase experience → Student’s Word of Mouth	0.823	9.162	Yes

Notes: \* $p$ -value < 0.001. S.R.W = standardised regression weight

Table 4. Results of hypotheses testing

**5. Discussion and implications**

**Discussion**

This research proposes an analytical framework illustrating student experience factors and their post-purchase behaviour. The validation of the framework has also been

tested. According to the analysis result, only post-purchase experience positively affects their post-purchase behaviours, including of satisfaction, loyalty and WOM. This finding is partly similar to the previous study of Klaus (2014) which claim that brand experience, service experience and post-purchase experience have positive impact on satisfaction, loyalty and WOM [5]. Klaus (2014) also found that among the three factors, post-purchase experience has the strongest effect on loyalty and WOM implying extra attention from managers to this dimension [5].

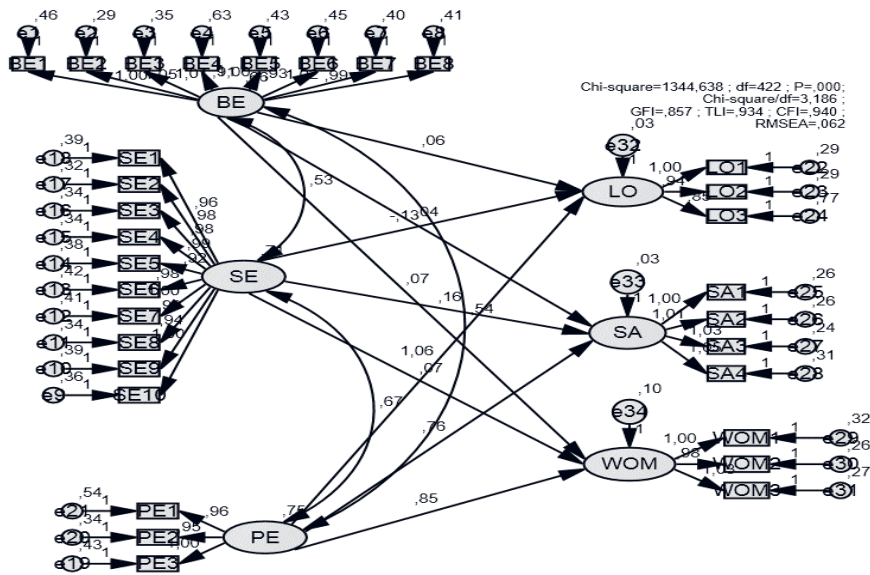


Figure 2. Model summary

On the other hands, there are some differences in this research findings as compared to other studies. In particular, brand experience and service experience do not positively influence student satisfaction, loyalty and WOM in Vietnamese university library context. The result seems to contradict as most prior research proved the significant influence of brand experience and service experience on satisfaction, loyalty or WOM [20], [42]. However, this result reflects the situation of Vietnamese university library.

In Vietnam, university libraries are internal units within a university and their main users are the people who study and work there, thus they know the library quite well and it is usually their only choice, therefore their behaviours are not affected if they have either good or bad brand experience. Furthermore, regards to service experience, many Vietnamese students lack sufficient knowledge of technology usage in the library; in fact, only 51.8 percent of library users are competent in using computers [54]. Although several educational programmes related to digital library service have been introduced to students, they are still not aware of digital or advanced physical evidence in libraries [54], [55]. Besides, human resources in libraries do not match customer demand or expectation; especially, qualified staffs are in shortage [54]. This problem is quite noticeable, but cannot be solved instantly [54]. Therefore,

Vietnamese students normally do not pay attention on service experiences, such as library staffs or physical environment during usage process. In other words, service experience is considered as an obvious aspect in this specific context, which do not bring major impact on customer satisfaction, loyalty or even word of mouth. However, the importance of service experience should not be underestimated and need to be raised in the future.

### **Implications**

For managers, it is important to provide excellent post-purchase experience so as to increase student satisfaction, loyalty and WOM. To do that, Vietnamese university library should pay more attention to student familiarity, retention, service recovery and post-service pleasure.

*Firstly*, university libraries could treat students as collaborator and create a participatory service by encouraging them to provide comment, reviews or ratings for reading materials. This encouragement not only provides informative offerings for subsequent users but also makes customers feel more attached to the library as a contributor.

*Secondly*, post-service customer feedback system should be implemented and addressed in a timely manner. If frustrated students can get their messages to service provider and received proper support, they may retain or even feel delighted [56]. The customer feedback system helps increase customer retention, guide service recovery and create post-service pleasure. Additionally, libraries can avoid loss resulted from disappointed students.

*Thirdly*, university libraries could apply technologies to create a better experience for students. Mobile application is a good way to stay connected with readers after their visits as well as update new information to them. In addition, it is convenient for readers as they can get access to library's online data base and manage borrowing activities. However, it requires digitalization of the traditional data base which poses a challenge in Vietnam context where digitalization process of academic libraries is not fully implemented [57].

*Last but not least*, although brand experience and service experience do not have great impact on satisfaction, loyalty and word of mouth in library services; library managers still need to focus on maintaining and developing these aspects. Particularly, library managers can raise students' awareness towards their brand by enhancing marketing activities or building popular brand image of organization. Besides, it is important to improve service and infrastructure quality by adding modern devices, valuable reading materials and qualified employees.

For researchers, several theoretical implications can be considered. The study was conducted to figure out students' perception of their university library experience and its impact on their behaviours. As shown in the result, only post-purchase experience positively influences student satisfaction, loyalty and WOM in Vietnamese university library context. This is a difference as compared to previous studies and it should be validated by future research in different context [44]. Furthermore, this study only examined the 3 outcomes of student experience on their behaviours, other variables could be the interest of future studies. For example, trust can be a potential outcome

of good customer experience as customers are more likely to trust the ability of a service provider if they are pleased during their journey. Last but not least, it worth noting that this study was carried out in the period of Covid-19 pandemic which might bring significant impact on students' experience in university libraries. Therefore, future research should eliminate this temporary phenomenon by conducting research in normal condition.

## 6. Conclusion

Basing on the theory of Klaus (2014) and Kuppelwieser and Klaus (2021), this paper has examined the relationship between student experiences and their post-purchase behaviour in the context of Vietnamese university libraries. The data were collected from a sample of 570 Vietnamese students, which are diverse in age, genders, academic years and universities. As a result, among three dimensions of customer experience, only post-purchase experience has statistically significant impact on their post-purchase behaviour in term of satisfaction, loyalty and word-of-mouth. This result is slightly different from previous works of Klaus and Maklan (2013), Klaus (2014) and Kuppelwieser and Klaus (2021), which can be considered as a new finding in this specific context. Practically, this study recommends several implications in order to enhance Vietnamese students' experiences in library service, which in turn result in satisfaction, loyalty and word-of-mouth. Finally, managers in university libraries can utilize these new findings with a view to developing Vietnam library service prosperously.

## References

- [1] QS Top Universities (2021). QS World University Rankings 2021 [Online]. Available: <https://www.topuniversities.com/university-rankings/world-university>.
- [2] Au, L.T.C. & Le, T.A. (2020). Improving the quality of university library services to meet the requirements of basic educational quality accreditation. *Ho Chi Minh City Open University Journal of Science*, 10 (1), 2020, 55–66.
- [3] Onuoha, U.D., Ikonne, C.N. & Madukoma, E. (2013). Perceived Impact of Library use on the Research Productivity of Postgraduate Students at Babcock University, Nigeria. *Journal of Research & Method in Education*, 1 (1), 11-16.
- [4] Do, V.H. (2015). Collaboration to share materials – solutions to enhancing information resources for Vietnamese university libraries' (in Vietnamese). *Vietnam Library Journal*, 3 (53), 3-9.
- [5] Klaus, P. (2014). *Measuring customer experience: How to develop and execute the most profitable customer experience strategies*. Springer.

- [6] McColl-Kennedy, J.R., Zaki, M., Lemon, K.N., Urmetzer, F. & Neely, A. (2019). Gaining customer experience insights that matter. *Journal of Service Research*, 22, (1), 8-26.
- [7] Roy, S.K., Balaji, M.S., Sadeque, S., Nguyen, B. & Melewar, T.C. (2017). Constituents and consequences of smart customer experience in retailing. *Technological Forecasting and Social Change*, 124, 257-270.
- [8] Guan, J., Wang, W., Guo, Z., Chan, J.H. & Qi, X. (2021). Customer experience and brand loyalty in the full-service hotel sector: the role of brand affect. *International Journal of Contemporary Hospitality Management*, 33 (5), 1620-1645.
- [9] Kashif, M., Zakiah Melatu Samsi, S., Awang, Z. & Mohamad, M. (2016). EXQ: measurement of healthcare experience quality in Malaysian settings: A contextualist perspective, *International Journal of Pharmaceutical and Healthcare Marketing*, 10 (1), 27-47.
- [10] Komulainen, H. & Saraniemi, S. (2019). Customer centricity in mobile banking: a customer experience perspective, *International Journal of Bank Marketing*, 37 (5), 1082-1102.
- [11] Shi, S., Wang, Y., Chen, X., & Zhang, Q. (2020). Conceptualization of omnichannel customer experience and its impact on shopping intention: A mixed-method approach. *International Journal of Information Management*, 50, 325-336.
- [12] Chen, N., & Yang, Y. (2021). The impact of customer experience on consumer purchase intention in cross-border E-commerce - Taking network structural embeddedness as mediator variable, *Journal of Retailing and Consumer Services*, 59.
- [13] Nasermodeli, A., Ling, K. C., & Maghnati, F. (2013). Evaluating the impacts of customer experience on purchase intention. *International Journal of business and management*, 8(6), 128.
- [14] Kuppelwieser, V.G. & Klaus, P. (2021). Measuring customer experience quality: the EXQ scale revisited, *Journal of Business Research*, 126, 624-633.
- [15] Jain, R., Aagja, J. & Bagdare, S. (2017). Customer experience—a review and research agenda, *Journal of Service Theory and Practice*, 27 (3), 642–662.
- [16] Johnston, R. & Kong, X. (2011). The customer experience: a road-map for improvement, *Managing Service Quality: An International Journal*, 21 (1), 5-24.
- [17] Klaus, P. & Maklan, S. (2013). Towards a Better Measure of Customer Experience. *International Journal of Market Research*, 55 (2), 227–246.

- [18] Bolton, R.N., Gustafsson, A., McColl-Kennedy, J., Sirianni, N. J. & Tse, D.K. (2014). Small details that make big differences: a radical approach to consumption experience as a firm's differentiating strategy. *Journal of Service Management*, 25 (2), 253-274.
- [19] Gupta, A. (2016). Redefining service quality scale with customer experience quality scale: a critical review. *International Journal of Services and Operations Management*, 25 (1), 48-64.
- [20] Lemon, K.N. & Verhoef, P.C. (2016). Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing*, 80 (6), 69–96.
- [21] Bagdare, S. & Jain, R. (2013). Measuring retail customer experience. *International Journal of Retail & Distribution Management*, 41 (10), 790-804.
- [22] Browne, K., Roseman, D., Shaller, D. & Edgman-Levitan, S. (2010). Analysis & commentary measuring patient experience as a strategy for improving primary care. *Health Affairs*, 29 (5), 921-925.
- [23] Garg, R., Rahman, Z. & Qureshi, M.N. (2014). Measuring customer experience in banks: Scale development and validation. *Journal of modelling in Management*, 9 (1), 87-117.
- [24] Kim, J.H., Ritchie, J.R.B. & McCormick, B. (2010). Development of a Scale to Measure Memorable Tourism Experience. *Journal of Travel Research*, 51 (1), 12-25.
- [25] Geus, S.D., Richards, G. & Toepoel, V. (2016). Conceptualisation and operationalization of event and festival experiences: Creation of an event experience scale. *Scandinavian Journal of Hospitality and Tourism*, 16 (3), 274-296.
- [26] Chang, T.Y. & Horng, S.C. (2010). Conceptualizing and measuring experience quality: the customer's perspective. *The Service industries journal*, 30 (4), 2401-2419.
- [27] Klaus, P. & Maklan, S. (2012). EXQ: a multiple-item scale for assessing service experience. *Journal of Service Management*, 23 (1), 5–33.
- [28] Klaus, P., Gorgoglione, M., Buonamassa, D., Panniello, U. & Nguyen, B. (2013). Are you providing the “right” customer experience? The case of Banca Popolare di Bari. *International Journal of Bank Marketing*, 31 (7), 506–528.
- [29] Brodie, R.J., Hollebeek, L.D., Juric, B. & Ilic, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of service research*, 14 (3), 252-271.



- [30] Ahn, J. & Back, K.J. (2018). Antecedents and consequences of customer brand engagement in integrated resorts. *International Journal of Hospitality Management*, 75, 144-152.
- [31] Moliner, M.A., Monferrer-Tirado, D. & Estrada-Guillén, M. (2018). Consequences of customer engagement and customer self-brand connection. *Journal of Services Marketing*, 32(4), 387–399.
- [32] Yadav, A., Yadav, A., Sehrawat, A. & Deshwal, P. (2018). A Statistical Study to Analyse the Effect of Services Experience Quality in a Library on User’s Behaviour. *IEEE International Conference on System, Computation, Automation and Networking (ICSCA)*, 1–6.
- [33] Fournier, S. & Mick, D.G. (1999). Rediscovering Satisfaction. *Journal of Marketing*, 62(4), 5-23.
- [34] Oliver, R.L. (1981). Measurement and Evaluation of Satisfaction Processes in Retail Settings. *Journal of Retailing*, 57(3), 25–48.
- [35] Solomon, M., Russell-Bennett, R., & Previte, J. (2012). *Consumer behaviour*, Pearson Higher Education AU.
- [36] Dobrota, M., Nikodijevic, A. & Mihailovic, D. (2012). Influence of the customer experience on satisfaction with mobile phones. *Journal of Engineering Management and Competitiveness*, 2(2), 69-75.
- [37] Morgeson, F.V., III, Mithas, S., Keiningham, T. & Aksoy, L. (2011). An investigation of the cross-national determinants of customer satisfaction. *Journal of the Academy of Marketing Science*, 39(2), 198–215.
- [38] Srivastava, M. & Kaul, D. (2016). Exploring the link between customer experience–loyalty–consumer spend. *Journal of Retailing and Consumer Services*, 31, 277–286.
- [39] Newman, M. G., Takei, H., Klokkevold, P. R., & Carranza, F. A. (2018). *Newman and Carranza's Clinical periodontology E-book*. Elsevier Health Sciences.
- [40] Yeng, L.C. & Mat, N.K. (2013). The Antecedents of Customer Loyalty in Malaysian Retailing: Capitalizing the Strategic Tool. *Proceedings of 3rd Asia-Pacific Business Research Conference*, 25-26.
- [41] Akaka, M.A., Vargo, S.L. & Lusch, R.F. (2013). The complexity of context: a service ecosystems approach for international marketing. *Journal of Marketing Research*, 21(4), 1-20.
- [42] Zhang, M., Hu, M., Guo, L. & Liu, W. (2017). Understanding relationships among customer experience, engagement, and word-of-mouth intention on online brand communities. *Internet Research*, 27(4), 839-857.

- [43] Buttle, F., & Groeger, L. (2017). Who says what to whom in what channel? A rules theoretic perspective on word-of-mouth marketing. *Journal of Marketing Management*, 33(13), 1035-1059.
- [44] Casalo, L.V., Flavian, C. & Guinaliú, M. (2008). Promoting consumer's participation in virtual brand communities: A new paradigm in branding strategy." *Journal of marketing Communications*, 14(1), 19-36.
- [45] Cetin, G. & Dincer, F. I. (2014). Influence of customer experience on loyalty and word-of-mouth in hospitality operations. *Anatolia*, 25(2), 181-194.
- [46] Van der Westhuizen, L.-M. (2018). Brand loyalty: exploring self-brand connection and brand experience. *Journal of Product & Brand Management*, 27(2), 172-184.
- [47] Prentice, C., Wang, X., & Loureiro, S. M. C. (2019). The influence of brand experience and service quality on customer engagement. *Journal of Retailing and Consumer Services*, 50, 50-59.
- [48] Ali, F., Amin, M., & Cobanoglu, C. (2016). An integrated model of service experience, emotions, satisfaction, and price acceptance: an empirical analysis in the Chinese hospitality industry. *Journal of Hospitality Marketing & Management*, 25(4), 449-475.
- [49] Choshaly, S. H., & Mirabolghasemi, M. (2018). Using SEM-PLS to assess users satisfaction of library service quality: evidence from Malaysia. *Library Management*, 40(3), 240-250.
- [50] El-adly, I.M. (2019). Modelling the relationship between hotel perceived value, customer satisfaction, and customer loyalty. *Journal of Retailing and Consumer Services*, 50, 322-332.
- [51] Vietnam National University (2021). VNU key statistics [Online]. Available: <https://vnu.edu.vn/eng/?C2235> [Accessed March 20, 2021].
- [52] Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2006). *Multivariate data analysis*, Pearson Prentice Hall.
- [53] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- [54] Do, V.H. (2014). Digital libraries and digital librarians. *Journal of Information and Documentation*, 34(6), 3-11.
- [55] Nguyen, S.H. & Chowdhury, G. (2013). Interpreting the knowledge map of digital library research (1990-2010). *Journal of the American Society for Information Science and Technology*, 64(6), 1235-1258.

- [56] Do, H.V., Dorner, D.G. & Calvert, P. (2019). Discovering the contextual factors for digital library education in Vietnam. *Global Knowledge, Memory and Communication*, 68(1), 125-147.
- [57] Kaur, K. & Singh, D. (2011). Customer service for academic library users on the web. *The Electronic Library*, 29(6), 737–750.