Customer satisfaction as a mediator of service facility and word of mouth in higher learning institutions

Isaac Kazungu and Hadija Kubenea

*Department of Marketing Procurement and Supply Management,
Moshi Co-operative University, Moshi, United Republic of Tanzania*

Abstract

Purpose – Higher learning institutions (HLIs) need to have quality service facilities to achieve customer satisfaction and positive word of mouth (WoM). The purpose of this study is to assess customer satisfaction as a mediator of service facility and WoM in the context of Tanzania's HLIs.

Design/methodology/approach – A mixed-methods approach was used to achieve the study objectives. Stratified and simple random sampling techniques were adopted to obtain the names of 201 students in HLIs in Tanzania. Confirmatory factor analysis (CFA) and structural equation modelling (SEM) were used to test the hypotheses.

Findings – The findings show that service facility is significantly associated with both WoM and customer satisfaction, while the relationship between customer satisfaction and WoM is significant. The study also found that customer satisfaction mediates the relationship between service facility and WoM.

Practical implications – The practitioners of HLIs can invest in improving service facility. Service quality is an important component that impacts WoM in HLIs. This is the most important element that impacts students' satisfaction and WoM in HLIs more than any other element of service quality.

Originality/value – This paper adds to the body of knowledge on the role of customer satisfaction in mediating the relationship between service facility and WoM in the context of Tanzania's HLIs. This study also presents a methodological contribution for a better understanding of the predictors of customer satisfaction in HLIs from the students' point of view.

Keywords Service facility, Customer satisfaction, Word of mouth, Higher learning institutions, Tanzania

Paper type Research paper

1. Introduction

Almost all aspects of today's economies are dictated by the service industry. The industry contributes significantly to the developed and developing economies through job creation, quality livelihoods, income, gross domestic product (GDP) and sustainable development (Yilmaz and Temizkan, 2022; Geeta and Sivanand, 2021; Magoti and Mtui, 2020; Wetengere, 2016). In Tanzania, for example, the service sector contributes 51.3% of the total GDP (BOT, 2019). Service organisations, regardless of the industry in which they operate, emphasise the provision of quality services because of their vital role in creating their competitive edge and attracting and retaining their customers (Pakurár *et al.*, 2019; Meesala and Paul, 2018).

One of the very important segments of the service industry is higher education. Higher education is an important instrument for the socio-economic development of every single nation (Ali *et al.*, 2021; Adeoti, 2016). Provision of quality services is among the priorities of higher learning institutions (HLIs) worldwide (Narang, 2021; Anis and Islam, 2019). Quality service motivates customers to build a strong and long-term relationship with the HLIs, which allows them to carefully understand the needs and expectations of their customers (Dora *et al.*, 2019). The higher education industry is increasingly contributing significantly to the development of the economies of many nations (Ali *et al.*, 2016). Thus, the critical role of

higher education cannot be undermined by any country, regardless of whether it is a developed country or an emerging country like Tanzania.

The relevance of higher education globally can be further witnessed by the increased number of students in HLIs. It is evident that in the 21st century, the higher education industry has shifted from a declining stage to one of revival and regeneration. The World Bank (WB) reports that there are 200 million students in HLIs across the world, up from 89 million in 1998. This gives evidence of rapid changes and transformations in the higher education industry among the emerging economies (Le *et al.*, 2022). For instance, the number of HLI students in Latin America and the Caribbean is twice what it was in the past decade (WB, 2018). Despite this increased enrolment, HLIs in emerging economies are facing challenges like financial shortages, weak financial diversity and infrastructure facilities (Le *et al.*, 2021, 2022; Sivadas and Jindal, 2017). This status quo limits their ability to implement their mandate (i.e. training, research and consulting) and deliver consistently high-quality services that satisfy their customers.

Currently, Africa has 18,772 HEIs, which is low at 8.9% compared to other emerging economies, i.e. 37% in Asia and 12% in the Caribbean and Latin America. African HEIs have an enrolment of 14.6 million students out of 220.7 million worldwide, equivalent to 6.6% (Zeleza, 2021). In Africa (Sub-Sahara), HLI's "students" enrolment rates are by far the lowest worldwide. However, over the past 40 years, the region has witnessed an increased gross enrolment ratio in HILs, from one percent (in 1965) to five percent (in 2005), and the entire African continent has an estimated enrolment of 1,650 HILs (UNESCO IIEP, 2016). Tanzania has 47 registered universities and university colleges that enrol more than 82,478° students annually (TCU, 2022). This show is a significant expansion of higher education from only one university college, which existed just after independence in 1961 (Mwongoso *et al.*, 2015). While we acknowledge the relevance of HLIs and the multiplication of students in HLIs in emerging economies, there is a need for policy initiatives to ensure that the quantitative increase in students' enrolment and the number of HLIs match the quality of higher education (Narang, 2021).

The interactive relationship between service personnel and the respective customers in the course of delivering highly satisfied customers has continued to gain the attention of researchers in marketing and management studies (Hsu, 2018). The relevance of customer satisfaction in the service industry has no objections. Customer satisfaction is an intangible asset that is essential for a service firm's sustainability and competitive advantage (Ngo and Nguyen, 2016). HLIs need to invest in customer satisfaction and quality service facilities to attract more students. This plays a critical role in influencing decisions related to the selection of courses, programmes of study, and HLIs. Access to excellent service facilities in HLIs is a significant part of the provision of quality service, and to have a good service experience among students, managers are escalating different strategies to properly design and manage the whole service process (Voorhees *et al.*, 2017). The importance of the service facility in the service encounter process can be evident by its ability to influence customer satisfaction with the quality of service offered, thereby resulting in positive word of mouth (WoM) (Handayanto, 2018; Hsu, 2018; Mukerjee, 2018; Popp and Woratschek, 2017; Sivadas and Jindal, 2017). WoM has increasingly become an essential source of information and a catalyst for consumer buying behaviour and attitudes in service industries since intangible goods cannot be certainly evaluated prior to consumption (Mohtasham *et al.*, 2017).

The HLIs operate in a dynamic business environment, i.e. a liberalised economy. Markets in this environment are characterised by stiff competition and consumers who are well informed, care about value purchases, have high demand for quality products and services, and are value-focused (Kotler and Keller, 2006). Thus, service organisations in this environment are hindered from building and maintaining good customer relations (Yeni and Yasri, 2018). The relationship between service providers and customers during service

provision may result in favourable and long-term relationships with the customer. It should be clearly understood that a service facility is an interaction between service personnel and customers in the process of giving and receiving core service (Voorhees *et al.*, 2017). The interaction between service personnel and customers is not done in a vacuum; it involves the use of facilities put in place by the service firm. Thus, to realise such a relationship, service organisations need to value the service management concept and put in place better service facilities and customer satisfaction, which will then inspire customers, and they will ultimately engage themselves in positive WoM (Abdullahi and wan Yusoff, 2019; Lemy *et al.*, 2019; Handayanto, 2018; Hsu, 2018).

According to the global competitive report of 2017–2018, Tanzania is not performing well in the provision of higher education and training (World Bank, 2017). The underperformance of Tanzanian HLIs, among other things, is attributed to the use of traditional marketing strategies. To improve the situation, HLIs need to be market-oriented by ensuring excellent, quality service delivery by improving service facilities, learning to understand industry requirements and customer characteristics, and keeping up with the competition in the industry. This, according to Muya and Tundui (2020), will make HLIs more competitive domestically and internationally. Likely, HLIs, as a significant component of the service sector, need to apply different strategies that will assure them of positive WoM. However, most HLIs are reportedly experiencing negative WoM, and this is attributed to the use of poor service facilities for studies (Yi and Nataraajan, 2018). Studies by Mahadin and Akroush (2019) and Yeni and Yasri (2018) reveal a direct relationship between service facilities and WoM. From these studies, it can be further emphasised that service firms (HLIs included) need to optimise customer satisfaction through effective use of excellent service facilities. Thus, if customers are satisfied, this will significantly influence WoM intention (Hsu, 2018). Service facilities also help organisations to maintain their images and elevate customer satisfaction. It is, therefore, necessary for HLIs to maintain a harmonious relationship between service facilities and customer satisfaction, which will result in enduring relationships and satisfied customers who will always spread positive WoM (Farooq *et al.*, 2018).

This background has pointed out some factors that have an enormous effect on service provision, given current developments in HLIs. However, the nexus between the service facility, customer satisfaction and WoM is still not given much importance. Likewise, previous studies have given little importance to customer satisfaction given the available service facilities in HLIs. Therefore, while numerous studies have been conducted on the quality of higher education, a universal approach is missing. This study pays attention to these less focused factors to show a universal picture of service facilities, customer satisfaction and WoM in HLIs in emerging economies.

Based on these gaps, we have used service facilities, i.e. "laboratories, lecture rooms, seminar rooms, books and materials, hostels, health centres, facilities for disabled students, sports, Internet, and open and distance learning (ODL) facilities," as independent variables. WoM is classified into four construct variables: WoM intensity, WoM content, positive word of mouth (PWoM) and negative word of mouth (NWoM). We contended that higher education quality entails providing excellent service facilities and ensuring customer satisfaction. Covariance-based (CB) SEM with an AMOS 26 approach is used in this study to determine the impact of service facilities on WoM and how customer satisfaction mediates the two.

2. Literature review
2.1 Service facility
Students in HLIs are usually extremely concerned about what they use in the form of university facilities, and they tend to show their concern over and over again

(Hossain *et al.*, 2018). While in HLIs, students come upon various service facilities on the usual occasions and to varying degrees. HLIs students like to be on a campus with facilities such as excellent hostels, convenient transport, shops, Internet, canteens, laboratories, classrooms, seminar rooms, ODL facilities, libraries, health centres, sports facilities and special facilities for disabled students. Given these, HLIs exploit modern facilities and a pleasant appearance to augment students' service experiences. The perceived satisfaction of students is highly associated with service facilities; the same proposition is conceivable between service facilities and customer satisfaction in HLIs. In this study, "service facility" is defined as physical features that are set up to serve the provision of educational, social and recreational purposes to the students in HLIs. The study uses service facilities such as laboratories, lecture rooms, seminar rooms, books, study material, hostel facilities, health centres, facilities for disabled students, sports and recreational facilities, the Internet and ODL facilities to demonstrate their linkages with WoM among customers in HLIs.

2.2 Word of mouth (WoM)
WoM is well-defined as verbal information, or information passed from person to person between perceived non-commercial communicators. WoM refers to informal communication between consumers about products and services offered by a business (Mukerjee, 2018; Mohtasham *et al.*, 2017; Basri *et al.*, 2016). Also, "word of mouth" refers to the process where customers (receivers and communicators) talk about brands, products and services without any real business intention. WoM may take into account promotional communications initiated by the service provider and formal customer communication channels like suggestions and complaints (Marchand *et al.*, 2018). The essence of using WoM in this study comes from its significant influence in pushing customers (i.e. students) to switch from one brand to another (herein referred to as HLIs). In terms of monitoring customer switch, the WoM effect is thought to be more effective than traditional marketing (Hsu, 2018). A study by Basri *et al.* (2016) shows that PWoM is seven times more powerful than print media advertising (magazines and newspapers), four times more efficient than personal selling and two times more efficient than radio in inducing consumers to switch. The current study uses WoM as a verbal communication between groups of consumers (herein referred to as actual and potential HLI students) about the service they receive in the HLIs, and they talk about good service, bad service and any content they have for the potential customer. The study classified WoM into four sub-groups: WoM intensity, WoM content, pWoM and negative word of mouth (nWoM). It is through WoM intensity that an organisation measures the scope of what consumers are saying about it, and WoM content is all about what is being said about the organisation in terms of its contents. The attitudes (positive or negative) of consumers towards an organisation are what constitute pWoM and nWoM (Goyette *et al.*, 2010). Consumers who have dissatisfied consumption experiences are more likely to acquire negative feelings, anxiety and frustrations through nWoM than those who have pWoM (Li *et al.*, 2020).

2.3 Customer satisfaction
Understanding customers' satisfaction in HLIs is as important as in other service industries. HLIs seek to maintain long-term, satisfied customers who will serve as good brand ambassadors. This is the fundamental essence of customer satisfaction among HLIs in emerging countries. Customer satisfaction refers to a dimension that defines the happiness of customers in relation to organisational capabilities, products

and services (Hsu, 2018; Ngo and Nguyen, 2016). Customer satisfaction measures customers' expectations, feelings and needs (Pansari and Kumar, 2018). It also influences customer loyalty, price sensitivity and future buying behaviour (Yilmaz and Temizkan, 2022). In this study, we examined how customer satisfaction mediates service facility and WoM relationships in the service industry, specifically in HLIs. The service industry is classified among the three main industrial groups of economies. Services are literally known as "intangible goods." This makes it difficult for potential customers to have a direct understanding of what value they will receive upon using a particular service. In this study, customer satisfaction is considered to be how well a customer feels after reserving the service and how well a student's needs are met individually. It also refers to how well HLIs create good facilities, value and service providers to ensure customers are satisfied and their needs are met. We use one of the five dimensions of the service quality (SERVQUAL) model, which is physical facilities, to measure how customers in HLIs are satisfied with the quality of education provided and how the nexus between service facilities and WoM is moderated by their satisfaction.

2.4 Theoretical review and hypotheses development
This study is anchored on the physical facility, which is a dimension in the service quality (SERVQUAL) model that guides the study and the expectation-disconfirmation theory (EDT) by Oliver (1997) as the supporting theory. The SERVQUAL model was developed by Parasuraman *et al.* (1988) to benchmark the quality of service rendered by service organisations. The model is composed of five key dimensions: physical facilities, reliability, responsiveness, assurance and empathy. As in this study, scholars (i.e. Hsu, 2018; Jung and Seock, 2017) support the adoption and modification of the scale items in the SERVQUAL model to fit different contexts in the service industry. Therefore, we used the SERVQUAL model as the main model to analyse the service facility. This study adapted and modified nine scale items, which are: SF1 – laboratories; SF2 – lectures and seminar rooms; SF3 – libraries; SF4 – hostels; SF5 – sport facilities; SF6 – health centres; SF7 – facilities for disabled people; SF8 – Internet facilities and SF9 – ODL facilities. Also, this study adopted the expectation-disconfirmation theory developed by Oliver (1997) to complement the SERVQUAL model in measuring the mediation effect of customer satisfaction in the relationship between service facilities and WoM. According to the expectation-disconfirmation theory, customer satisfaction is the result of comparing a customer's expectations and perceptions. Thus, the disconfirmation of such expectations implies that a customer is satisfied. From this description, customer satisfaction is the general assessment of what happens during service encounters in the service industry. This is to say that customers are satisfied only if the service facility meets or exceeds their expectations. Conversely, if the service fails to meet customers' expectations in terms of service facilities, they end up unsatisfied with the service and spread nWoM. Therefore, this study proposes hypotheses H1–H4.

H1. Service facilities have significant influence on WoM in HLIs.

H2. Service facilities have significant influence on Customer satisfaction in HLIs.

H3. Customer satisfaction has a significant influence on WoM in HLIs.

H4. Customer satisfaction mediates the relationship between service facilities and WoM in HLIs.
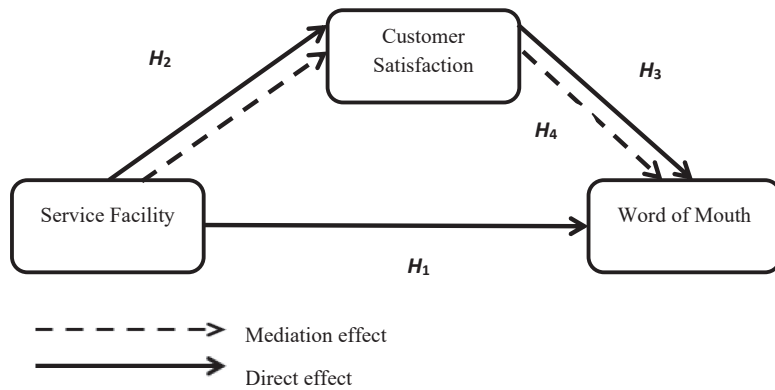
Figure 1.
Conceptual framework

3. Methodology

3.1 Sample

This study was undertaken in the Kilimanjaro region of Tanzania. A mixed-research design was adapted. Students from three selected HLIs – Moshi Co-operative University (MoCU), Mwenge Catholic University (MWECAU) and Kilimanjaro Christian Medical University College (KCMUCo) – were involved. This study used HLIs in the Kilimanjaro region as the unit of analysis and 16,586 students as the population size. A sample size of 273 was determined using the formula developed by Yamane (1967). This study used stratified random sampling because of the heterogeneity of the population. First, the stratified technique is used; then, random sampling is used by randomly selecting respondents from the strata to ensure that the data collected is relevant to the researchers' intentions. The sampling distribution of respondents is presented in Table 1.

3.2 Research instrument

This study adopted and modified structured questions from Hsu (2018) and Goyette et al. (2010). Service facility (laboratories, lecture rooms, seminar rooms, books and study material, hostels, health centres, disabled student facilities, sports, Internet and ODL facilities), customer satisfaction and word of mouth (WoM intensity, content, positive and negative word of mouth) are the variables used. To measure study variables, we developed a research instrument based on a 5-point Likert scale. The instrument was distributed to domain experts in order to assess the level of content validity. The instrument was piloted by four faculty members and 40 HEI students in Arusha, Tanzania, to test the validity and reliability of the research instrument. The instrument was revised as per the pilot results thereafter.

3.3 Statistical tool and analytical techniques

This study employed a mixed-method approach because it aimed at extending the expectation disconfirmation theory to the context of HLIs using both quantitative and

Name of university	Population size	Ratio	Sample size
MoCU	10,500	0.6	164
MWECAU	3,832	0.3	82
KCMUCo	2,254	0.1	27
Total	16,586		273

Table 1.
Distribution of sample size

qualitative methods. The quantitative cross-sectional data were analysed using covariance-based (CB) SEM with AMOS 26. A two-step approach, which combines confirmatory factor analysis (CFA) and path model analysis, was applied to test the relationship between variables. Kaiser–Meyer–Olkin (KMO) and Bartlett's test of sphericity were carried out to test the suitability of data for qualifying for further inferential analysis by SEM, whereby high values close to 1.0 normally imply that factor analysis can be suitable with the available data (Pallant, 2020). Confirmatory factors analysis (CFA) was performed to measure the internal consistency, convergent validity and model fit. To analyse internal reliability and convergent validity, the study calculated Cronbach's alpha () and a value > 0.7 was accepted (Ali *et al.*, 2021; Boateng, 2020); it also calculated composite reliability (CR), with a value > 0.7 being accepted (Ursule *et al.*, 2022). Average Variance Extracted (AVE) was also analysed and a value > 0.5 was accepted (Boateng, 2020). Lastly, the model analysed the factor loading, where a value > 0.5 was accepted (Bagozzi and Yi, 2012). *p*-values were used to test the statistical significance of the hypotheses. The principle is that, with a *p*-value of less than 0.05, we reject the null hypothesis and accept the alternative hypothesis (Ibrahim, 2015). Structural models were run to explore the causal relationships between the service facility and the WOM and the mediating role of customer satisfaction.

Qualitative data were collected by using the face-to-face interview method. A total of 12 students (4 from each HLI) were interviewed, and the responses were written down using a notebook. Qualitative data from the interviews was analysed by examining, categorising, tabulating and recombining some evidence to address the research problem. We used the respondents' views from interviews by categorising them into themes, and the arguments given by interviewees were compared and contrasted. Finally, the key explanations were matched with the contents of the literature and empirical evidence.

4. Results and discussion

4.1 Descriptive analysis

A service facility plays an essential role in promoting an organisation since the facility explains a lot about the quality of the service offered by the organisation or institution. According to Table 2, 33.3% strongly agreed and 40.3% agreed that the university has excellent laboratories, 4.0% disagreed and 1.0% strongly disagreed and 21.4% were neutral. This implies that the majority of the universities have excellent laboratories, but a few things in the laboratory facility need to be improved, and some things like the size of the laboratory should be increased. The findings of this study are supported by Narang (2021), who identified that the availability of well-equipped facilities is vital and contributes largely to the provision of quality education, thereby contributing to personal development among students in HLIs. As a result, HLIs must maintain such facilities with a focus on

Variable	SA%	A%	N%	D%	SD%	Likert mean	Std Deviation
Excellent laboratory	33.3	40.3	21.4	4.0	1.0	1.99	0.894
Lectures and seminar room	50.7	19.4	17.4	12.4	0	1.92	1.085
Books and study material	60.2	16.4	9.5	7.5	6.5	1.84	1.248
Enough hostel	29.4	21.9	8.5	34.3	6.0	2.66	1.366
Sport facilities	48.8	32.8	10.4	4.0	4.0	1.82	1.040
Health centre	45.8	38.3	9.5	6.5	0	1.77	0.872
Facility favoured the disable students	32.8	40.3	20.9	3.0	2.5	2.02	0.951
Excellent Internet facility	36.3	31.8	25.9	3.5	2.5	2.04	0.994
Open and distance learning (ODL) facility	34.8	28.4	24.9	10.0	2.0	2.16	1.074
Note(s): SA= strongly agreed, A = agreed, N = neutral, D = disagree, SA = strongly disagree							

practical orientation to ensure the adaptability of current teaching techniques to meet labour market demand.

Table 2 shows that 50.7% of respondents strongly agreed and 19.4% agreed that HLIs have enough lecture and seminar rooms, while 12.4% disagreed and 17.4% remained neutral. This implies that universities have lecture halls and seminar rooms, but there are not enough, especially due to the increasing number of students in HLIs and also in those universities with a lot of programmes and different levels of education. Ngo and Nguyen (2016) also agree that HLIs' facilities have a direct influence on the performance of the student and also the selection of the university, so it is important to have a quality facility to ensure customer satisfaction.

The findings show that 60.2% strongly agreed and 16.4% agreed that libraries have enough study materials and 9.5% were neutral, while 7.5% disagreed and 6.5% strongly disagreed that libraries have enough study material (see Table 2). This shows that the university library has enough study materials, both print and online. With the use of digital libraries in HLIs, most students use the online library or search for information online. This finding is related to Mohtasham *et al.* (2017), who identify innovation as one of the reasons for satisfaction and successful WoM, such as the use of an online library to ensure student access to all material in the library even if the HLI lacks library facilities.

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Table 2 further indicates that 48.8% of respondents strongly agreed and 32.8% agreed, respectively, that HLIs have enough sports facilities, while 4% disagreed and 4% strongly disagreed that HLIs have enough sports facilities and 15.9% were neutral. This indicates that most students are satisfied with the availability of sports facilities in HLIs. This finding is consistent with Popp and Woratschek (2017), who discovered that the availability of quality sports facilities has a direct relationship with university selection because many students are young.

The results in Table 2 indicated that 45.8% of respondents strongly agreed and 38.3% agreed that HLIs have excellent health centres, while 16% were neutral. This implies that students are satisfied with the quality of health services they are receiving through health facilities located in their respective HLIs. Universities therefore are a very important part of the education sector and that they have to ensure that excellent health facilities are in place for the quality provision of health services to their students.

The results in Table 2 show that 32.8% of HLI students strongly agreed, 40.3% agreed that service facilities, in general, favoured people with disabilities, while 20.9% were neutral, 3% disagreed and 2.5% strongly disagreed that university facilities favoured this very important category of students. This means that HLIs have been successful in building infrastructure facilities that assist students with disabilities to a large extent. This finding discloses that every customer has the right to be served and treated the same despite the physical differences since every customer is the heart of the business. Further, results in Table 2 indicated that 36.3% of respondents strongly agreed and 31.8% agreed that HLIs have Internet facilities, while 3.5% disagreed, 2.5% strongly disagreed and 25.9% were neutral. This implies that most of the respondents revealed the need for HLIs to have a reliable and functioning Internet facility all the time. This is supported by Sivadas and Jindal (2017), who identified that Internet facilities are very important for the sustainability of institutional core activities. Thus, all operations in HLIs are now conducted through the

Internet, so it is very important for HLIs to improve the Internet facility to ensure reliable access by all members of the HLI community, students included.

Table 2 shows that 39.3% of respondents strongly agreed and 38.3% agreed, respectively, that HLIs have ODL facilities, while 11.4% disagreed, 1% strongly disagreed and 24.9% remained neutral. This observation indicates that most of the HLIs have ODL facilities. This indicates that the ODL facility is very important, and HLIs should use the ODL facility to ensure that all students have access to education, even those who are very far away. This was also observed by Adeoti (2016), who revealed that the university's development is linked to innovation and that this innovation is also related to ODL since students prefer it for different reasons. So, if HLIs are able to capture it, it means that they can satisfy their customers and build brand loyalty.

These descriptive results were supported by the response obtained from an interview with students from the selected universities who were requested to respond (1) if she or he is satisfied with the service facility, (2) how does the HLI's service facility influence the selection of the university and (3) how does the HLI's service facility affect the student's performance? For example, one of the interviewed students reported that:

> . . . we have excellent facilities here, compared to other HLIs, I am very satisfied with sports facilities, lecture theatres, hostels and health centre. All these give me a happy stay here at the university . . . .

> . . ..am highly satisfied with the physical facilities that we are using during teaching and learning . . . for sure I will be a good University ambassador to my friends who would love to join this higher learning in near future . . . added another student.

Yet another student emphasised that " . . . *service facility is an important factor in the selection of HLIs and programme of study. For example, when a person wants to study science, then he/ she will select a HLI which has excellent laboratory facilities and if a person is interested in sports, he or she will select an Institution with good sports facilities . . .*".

Similarly, one first-year student shared her experience with how the outstanding service facility inspired her to apply for studies; in this regard, she emphasised that " . . ..*I used to visit my sister who was studying here, the beautiful classes, sports and health facilities that I saw over the past four years motivated me to apply to this University . . .*".

Furthermore, another interviewee added that " . . . *Service facility plays an important role in strengthening students' performance . . .. good HLI's facilities such as classes, library, and access to Internet, hostels and others enable students to study without worries and perform well in their studies . . .*".

4.2 Service facility sampling adequacy

Findings in Table 3 show that the KMO index of sampling adequacy is significantly high [0.832 > 0.5] (Field, 2013). This confirms that the data collected is perfectly suitable for factor analysis. Bartlett's value is also highly significant [$\chi = 862.241$, df. $= 21$, $p = 0.000$]. This confirms that variable constructs under the service facility have adequate internal consistency, thus, data is multivariate normal and acceptable for further statistical analysis and generalisation on the population of HLIs students.

Test		Coefficient
Kaiser–Meyer–Olkin measure of sampling adequacy		0.832
Bartlett's test of sphericity	Approx. chi-square	862.241
	Df	21
	Sig	0.000

Table 3.
Service facility KMO sampling adequacy

4.3 Test of hypotheses

Pathway coefficients in Table 4 show that service facility is significantly associated with both WoM [Std. β = 0.875; p-value < 0.05] and customer satisfaction [Std. β = 0.707; p-value < 0.05]. Also, the relationship between customer satisfaction and WoM was significant [Std. β = 0.863; p-value < 0.05]. Thus, hypotheses H1, H2 and H3 are accepted, and three conclusions are made: (1) Service facilities have a significant influence on WoM in HLIs, (2) Service facilities have a significant influence on customer satisfaction in HLIs and (3) customer satisfaction has a significant influence on WoM in HLIs. This finding is consistent with several previous studies conducted in the context of HLIs (Abdullahi and wan Yusoff, 2019; Lemy et al., 2019). This observation implies that HLIs with customers who are highly satisfied with their service facilities will always be communicated positively by their actual customers herein defined as the students to others potential customers. Thus, service facility and WoM, when mediated by customer satisfaction forms, the most valuable marketing tools which when used effectively, will always create a competitive advantage that 'will not be easily replicated by other HLIs.

4.4 Mediation analysis

Results of the mediation analysis in Table 5 shown that both the direct and indirect effects from service facility to word of mouth are statistically significant at [β = 0.210; Std.β = 0.875; p-value < 0.05] and [β = 0.001; Std.β = 0.743; p-value < 0.05] respectively. Thus, hypothesis H4 is accepted, and it is concluded that customer satisfaction mediates the relationship between service facility and WoM. This implies that there is a significant relationship between service facility and word of mouth and satisfaction was the main factor affecting WoM intention, indicating that still satisfaction have correlation or significant effect on WoM. This observed relationship between service facility and WoM, mediated by students' satisfaction, is alien with studies by Dora et al. (2019), Handayanto (2018), Hossain et al. (2018) and Popp and Woratschek (2017). The mediation of customer satisfaction is unique in the service marketing literature, which clarifies the critical role of customer satisfaction in explaining the success of HLIs in an emerging economy. This is also supported by Meesala and Paul (2018), who revealed that satisfactory encounters by customers may be a tool for competitive advantage for a service organisation and may result in repeat service usage, customer satisfaction and positive WoM. The study results concur with the expectation-disconfirmation theory by Oliver (1997). It has been revealed that customers are satisfied as a result of a comparison between their expectations and perceptions. Therefore, the

Paths	Estimate	S.E	C.R	p-value	Label
CS ← SF	0.707	0.085	8.300	***	par_17
WoM ← CS	0.863	0.140	6.166	***	par_29
WoM ← SF	0.875	0.013	67.307	***	par_30

Note(s): *** = Sign indicates a probability lesser than 5% (0.05)
WoM = word of mouth, SF = service facility, CS = customer satisfaction

Table 4.
Pathway coefficients

Effects	β	Std.β	S.E	p-value
Total effect	0.211	1.618	0.014	***
Indirect effect	0.001	0.743	0.001	***
Direct effect	0.210	0.875	0.013	***

Table 5.
Mediation analysis

disconfirmation of their expectations then predicts that a customer is satisfied. From this account, HLIs students' satisfaction is the overall evaluation of what service facilities are used during service encounters in the teaching and learning environment. Students are therefore satisfied if and only if the service facilities either meet or exceed their expectations, this will then be associated with positive WoM.

4.5 Theoretical contribution
This study proposes additional insights into the management and marketing of HLIs in developing countries. This study's findings confirm the applicability of the expectation-disconfirmation theory in linking the relationship between service facilities and WoM among HLIs in an emerging economy. The importance of high co-efficient values on service facilities, customer satisfaction and WoM cannot be overstated. These results point out that the provision of quality education will prosper if HLIs invest in building and maintaining excellent service facilities that will enhance the provision of university education, thus leading to student satisfaction.

4.6 Practical implication of the study
The findings of this study have broad implications for all stakeholders and actors in the HLIs. There is no doubt that improving the link between HLI service facilities, customer satisfaction and WoM marketing will increase their effectiveness. This provides suggestions for practitioners in HLIs to invest much more in improving the service facility. This is the most important element of service quality and one of the key features that affects WoM in HLIs more than any other element of service quality. Also, through the responsible Ministries and education stakeholders, the governments can take more input from this study to develop countrywide short-term and long-term plans for developing excellent service facilities in HLIs.

5. Conclusion, limitations and future research scope
This study's conclusions are mainly drawn from the key findings obtained from the estimated SEM. Empirical results reveal that customer satisfaction significantly influences customer satisfaction, and the individual influence of service facility and customer satisfaction on WoM is statistically significant. As a result, the effects of the two constructs on WoM were significant. This implies that investment in excellent service facilities like laboratories, lecture rooms, hostels, health centres, ODL and Internet facilities in HLIs strengthens the quality of education offered and makes students highly satisfied, good performers and brand ambassadors who will always spread positive WoM about the HLI. The study therefore concludes that a superb service facility is one of the key elements of service quality, which leads to positive WoM. Satisfaction was found to be mediating the relationship between the service facility and WoM. Therefore, it is concluded that excellent service facilities and positive WoM, mediated by highly satisfied students, make a functional and holistic marketing approach for a well-aligned HLI. Thus, for quality education provision in HLIs, the mediation effect of customer satisfaction on the relationship between the service facility and the WoM must be observed. The government and other education stakeholders of HLIs should put much effort into improving service facilities to meet students' expectations and satisfaction with the provision of quality education.

Findings from this study show both theoretical and practical implications. The study confirms the relevance of the expectation-disconfirmation theory in establishing the relationship between service facility customer satisfaction and WoM in HLIs. From this theory, the provision of quality education by HLIs is largely dependent on how they invest in excellent service facilities that will enhance the provision of university education, thus

leading to satisfaction among students who will speak positively to others. Practically, practitioners in HLIs have to invest in improving service facilities. This is the most important element of service quality and one of the key features that affect students' satisfaction and WoM in HLIs more than any other element of service quality.

The study limitations are threefold: (1) The first limitation was on the scope; the study examined only five variable constructs. Our proposal is that future research might focus on other types of constructs when examining the extent to which service facilities influence WoM. (2) This study used a sample size of 201, and the sampled respondents were limited to only three HLIs based in the Kilimanjaro region. Future research has to be done on a larger and more diverse sample size, and it will be interesting to see how the same variables can be replicated in service industries other than education. (3) Future research can also be done by exploring the relationship between service facilities and customer satisfaction using economic approaches like the utility-based model of WoM activity or the law of utilities.

References

Abdullahi, I. and Wan Yusoff, W.Z. (2019), "Influence of facilities performance on student's satisfaction in Northern Nigerian universities: results from interim study", *Facilities (Bradford, West Yorkshire, England)*, Vol. 37 Nos 3/4, pp. 168-181, doi: 10.1108/F-08-2017-0088.

Adeoti, J.O. (2016), "University-industry linkage and the challenge of creating a developmental university in Nigeria", *Towards Quality in African Higher Education*, Vol. 16 No. 1, pp. 375-387.

Ali, F., Zhou, Y., Hussain, K., Nair, P.K. and Ragavan, N.A. (2016), "Does higher education service quality effect student satisfaction, image and loyalty? A study of international students in Malaysian public universities", *Quality Assurance in Education*, Vol. 24 No. 1, pp. 70-94, doi: 10.1108/QAE-02-2014-0008.

Ali, M.H., Siddique, M.A. and Abubakar, M. (2021), "Quality of education and university image on word of mouth: empirical study from Pakistani universities", *iRASD Journal of Educational Research*, Vol. 2 No. 1, pp. 35-48, available at: https://journals.internationalrasd.org/index.php/jer/article/view/542

Anis, A. and Islam, R. (2019), "Prioritised challenges and critical success factors for delivering quality education in Malaysian private higher education institutions", *Quality Assurance in Education*, Vol. 27 No. 4, pp. 465-492, doi: 10.1108/QAE-11-2018-0122.

Bagozzi, R.P. and Yi, Y. (2012), "Specification, evaluation, and interpretation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 40 No. 1, pp. 8-34, doi: 10.1007/s11747-011-0278-x.

Bank of Tanzania (Bot) (2019), *Annual Report 2018/2019*, Bank of Tanzania, Dodoma.

Basri, N.H., Ahmad, R., Anuar, F.I. and Ismail, K.A. (2016), "Effect of word of mouth communication on consumer purchase decision: Malay upscale restaurant", *Procedia - Social and Behavioral Sciences*, Vol. 222, pp. 324-331, doi: 10.1016/j.sbspro.2016.05.175.

Boateng, O.I. (2020), "Influence of consumer sales promotion on consumers' purchasing behaviour of the retailing of consumer goods in Tema, Ghana", *Journal of Marketing Management*, Vol. 8 No. 1, pp. 24-36, doi: 10.15640/jmm.v8n1a4.

Dora, Y.M., Lisdayanti, A. and Borshalina, T. (2019), "Word of Mouth implications of service quality mediated student satisfaction: a study on a private university in Bandung", *Journal of Advance Research in Dynamical and Control Systems*, Vol. 11 No. 3, pp. 1049-1055, available at: https://www.researchgate.net/publication/337210883_

Farooq, M.S., Salam, M., Fayolle, A., Jaafar, N. and Ayupp, K. (2018), "Impact of service quality on customer satisfaction in Malaysia airlines: a PLS-SEM approach", *Journal of Air Transport Management*, Vol. 67, pp. 169-180, doi: 10.1016/j.jairtraman.2017.12.008.

Field, A. (2013), *Discovering Statistics Using IBM SPSS Statistics*, 4th ed., SAGE Publication, London.

Geeta, M. and Sivanand, C.N. (2021), "Service sector-role played in economic development", *Revista Geintec-gestao Inovacao e Tecnologias*, Vol. 11 No. 4, pp. 2655-2666, available at: http://revistageintec.net/wp-content/uploads/2022/03/2307.pdf

Goyette, I., Ricard, L., Bergeron, J. and Marticotte, F. (2010), "e-WOM Scale: word-of-mouth measurement scale for e-services context", *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, Vol. 27 No. 1, pp. 5-23, doi: 10.1002/cjas.129.

Handayanto, E. (2018), "Mediating role of satisfaction on relationship between service quality and word of mouth in Islamic private universities in Indonesia", *Advances in Social Science, Education and Humanities Research, 5th International Conference on Community Development (AMCA 2018)*, Vol. 231, doi: 10.2991/amca-18.2018.147.

Hossain, M.A., Hossain, M.M. and Chowdhury, T.H. (2018), "Understanding the success of private universities an empirical investigation from 'graduates' perspective", *International Journal of Quality and Reliability Management*, Vol. 35 No. 1, pp. 145-162, doi: 10.1108/IJQRM-02-2015-0031.

Hsu, L.C. (2018), "Investigating effect of service encounter, value, and satisfaction on word of mouth: an outpatient service context", *International Journal of Environmental Research and Public Health*, Vol. 15 No. 1, pp. 1-15, doi: 10.3390/ijerph15010132.

Ibrahim, M. (2015), "The significance of P-value in medical research", *Journal of Allied Health Sciences*, Vol. 1 No. 1, pp. 74-85.

Jung, N.Y. and Seock, K. (2017), "Effect of service recovery on customers' perceived justice, satisfaction, and word-of-mouth intentions on online shopping websites", *Journal of Retailing and Consumer Services*, Vol. 37 No. 1, pp. 23-30, doi: 10.1016/j.jretconser.2017.01.012.

Kotler, P. and Keller, K.L. (2006), *Marketing Management*, 12th ed., Pearson Prentice Hall, Upper Saddle River, NJ, p. 402.

Le, T.T., Nguyen, T.L., Trinh, M.T., Le, V.T. and Pham, H.H. (2022), "Investigating Vietnamese undergraduate students' willingness to pay for higher education under the cost-sharing context", *Policy Futures in Education*, Vol. 20 No. 1, pp. 19-43, doi: 10.1177/14782103211011898.

Le, T.T., Nguyen, T.L., Trinh, M.T., Nguyen, M.H., Nguyen, M.P.T. and Pham, H.H. (2021), "Adopting the Hirschman–Herfindahl Index to estimate the financial sustainability of Vietnamese public universities", *Humanities and Social Sciences Communications*, Vol. 8 No. 1, pp. 1-10, doi: 10.1057/s41599-021-00927-2.

Lemy, D., Goh, E. and Ferry, J. (2019), "Moving out of the silo: how service quality in Novations can develop customer loyalty in Indonesia's hotels", *Journal of Vacation Marketing*, Vol. 25 No. 4, pp. 462-479, doi: 10.1177/1356766718819658.

Li, Y., Wu, R. and Li, D. (2020), "The influence of subjective characteristics of social network sites on consumers' word-of-mouth sharing", *Online Information Review*, Vol. 44 No. 5, pp. 977-994, doi: 10.1108/OIR-09-2018-0263.

Magoti, E. and Mtui, J.M. (2020), "The relationship between economic growth and service sector in Tanzania: an empirical investigation", *African Journal of Economic Review*, Vol. 8 No. 2, pp. 219-238, available at: https://www.ajol.info/index.php/ajer/article/view/197212

Mahadin, B.K. and Akroush, M.N. (2019), "A study of factors affecting word of mouth (WOM) towards Islamic banking (IB) in Jordan", *International Journal of Emerging Markets*, Vol. 14 No. 4, pp. 639-667, doi: 10.1108/IJOEM-10-2017-0414.

Marchand, A., Henning, T. and Wiertz, C. (2018), "Not all digital word of mouth is created equal: understanding the respective impact of consumer reviews and microblogs on new product success", *International Journal of Research in Marketing*, Vol. 34 No. 2, pp. 336-354, doi: 10.1016/j.ijresmar.2016.09.003.

Meesala, A. and Paul, J. (2018), "Service quality, consumer satisfaction and loyalty in hospitals: thinking for the future", *Journal of Retailing and Consumer Services*, Vol. 40, pp. 261-269, doi: 10.1016/j.jretconser.2016.10.011.

Mohtasham, S.S., Sarollahi, S.K. and Hamirazavi, D. (2017), "The effect of service quality and innovation on word of mouth marketing success", *Eurasian Bus Rev*, Vol. 7, pp. 229-245, doi: 10.1007/s40821-017-0080-x.

Mukerjee, K. (2018), "The impact of brand experience, service quality and perceived value on word of mouth of retail bank customers: investigating the mediating effect of loyalty", *Journal of Financial Services Marketing*, Vol. 23 No. 4, pp. 12-24, doi: 10.1057/s41264-018-0039-8.

Muya, F. and Tundui, H. (2020), "Strategies for improving the performance of higher learning institutions in Tanzania", *International Journal of Social Sciences and Educational Studies*, Vol. 7 No. 1, pp. 27-41.

Mwongoso, A.J., Kazungu, I. and Kiwia, R.H. (2015), "Measuring service quality gap in higher education using servqual model at Moshi University College of Co-operative and Business Studies (MUCCOBS): implications for improvement", *International Journal of Economics, Commerce and Management*, Vol. 3 No. 6, pp. 298-317.

Narang, R. (2021), "How do management students perceive the quality of education in public institutions?", *Quality Assurance in Education*, Vol. 20 No. 4, pp. 357-371, doi: 10.1108/09684881211263993.

Ngo, V.M. and Nguyen, H.H. (2016), "The relationship between service quality, customer satisfaction and customer loyalty: an investigation in Vietnamese retail banking sector", *Journal of Competitiveness*, Vol. 8 No. 2, pp. 103-116, doi: 10.7441/joc.2016.02.08.

Oliver, R.L. (1997), *Satisfaction: A Behavioral Perspective on the Consumer*, McGraw-Hill, New York.

Pakurár, M., Haddad, H., Nagy, J., Popp, J. and Oláh, J. (2019), "The service quality dimensions that affect customer satisfaction in the Jordanian banking sector", *Sustainability*, Vol. 11 No. 4, p. 1113, doi: 10.3390/su11041113.

Pallant, J. (2020), *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM SPSS*, 7th ed., Routledge, London, pp. 1-378.

Pansari, A. and Kumar, V. (2018), "Customer engagement marketing", in Palmatier, R., Kumar, V. and Harmeling, C. (Eds), *Customer Engagement Marketing*, Palgrave Macmillan, Cham. doi: 10.1007/978-3-319-61985-9_1.

Parasuraman, A., Zeithaml, V. and Berry, L. (1988), "SERVQUAL: a multiple item scale for measuring customer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-40.

Popp, B. and Woratschek, H. (2017), "Consumer–brand identification revisited: an integrative framework of brand identification, customer satisfaction, and price image and their role for brand loyalty and word of mouth", *Journal of Brand Management*, Vol. 24 No. 3, pp. 250-270, doi: 10.1057/s41262-017-0033-9.

Sivadas, E. and Jindal, R.P. (2017), "Alternative measures of satisfaction and word of mouth", *Journal of Services Marketing*, Vol. 31 No. 2, pp. 119-130, doi: 10.1108/JSM-09-2015-0282.

TCU (2022), "Tanzania commission for universities", List of Approved University Institutions in Tanzania as of 2nd August, 2022, available at: https://www.tcu.go.tz/sites/default/files/LIST%20OF%20UNIVERSITY%20INSTITUTIONS%20IN%20TZ%20AS%20OF%202%20AUGUST%202022.pdf

UNESCO IIEP (2016), "Governance reform in high education a study of the selected country in Africa", program and meeting doc, available at: https://unesdoc.unesco.org/ark:/48223/pf0000245404/PDF/245404eng.pdf.multi

Ursule, F.O., Judith, H. and Clara, N.T. (2022), "A systematic PLS-SEM approach to an assessment of unemployment among university graduates in Madagascar", *Advances in Applied Sociology*, Vol. 12 No. 9, pp. 423-438, doi: 10.4236/aasoci.2022.129034.

Voorhees, C.M., Fombelle, P.W., Gregoire, Y., Bone, S., Gustafsson, A., Sousa, R. and Walkowiak, T. (2017), "Service encounters, experiences and the customer journey: defining the field and a call to expand our lens", *Journal of Business Research*, Vol. 79, pp. 269-280, doi: 10.1016/j.jbusres.2017.04.014.

Wetengere, K. (2016), "Impact of higher learning institutions in provision of quality socio-economic development in Tanzania", *African Journal of Economic Review*, Vol. 4 No. 1, pp. 195-216, available at: https://www.ajol.info/index.php/ajer/article/view/127214

World Bank (2017), *Global Investment Competitiveness Report 2017/2018: Foreign Investor Perspectives and Policy Implications*, The World Bank, p. 393, doi: 10.1596/978-1-4648-1175-3.

World Bank (2018), "The world bank annual report 2018", World Bank. © World Bank, Washington, DC, available at: https://openknowledge.worldbank.org/handle/10986/30326 License: CC BY-NC-ND 3.0 IGOhttp://hdl.handle.net/10986/30326

Yamane, T. (1967), *Statistics: an Introductory Analysis*, 2nd ed., Harper & Row, New York.

Yeni, S. and Yasri, Z. (2018), "The effect of service quality and customer satisfaction toward word of mouth intention", *Advances in Economics, Business and Management Research Journal, 2nd Padang International Conference on Education, Economics, Business and Accounting (PICEEBA-2 2018)*, Vol. 64, pp. 677-685, doi: 10.2991/piceeba2-18.2019.52.

Yi, Y. and Nataraajan, R. (2018), "Customer satisfaction in Asia", *Psychology and Marketing*, Vol. 35 No. 6, pp. 387-391, doi: 10.1002/mar.21093.

Yılmaz, K. and Temizkan, V. (2022), "The effects of educational service quality and socio-cultural adaptation difficulties on international students' higher education satisfaction", *SAGE Open*, Vol. 12 No. 1, pp. 1-18, doi: 10.1177/21582440221078316.

Zeleza, P. (2021), "Quality higher education 'indispensable' for Africa's future", Africa edition, University World News, 06 July, 2021, available at: https://www.universityworldnews.com/post.php?story=202107051145016

Further reading

Usman, U. and Mokhtar, S.S.M. (2016), "Analysis of service quality, university image and student satisfaction on student loyalty in higher. Education in Nigeria", *International Business Management*, Vol. 10 No. 12, pp. 2490-2502, available at: https://repo.uum.edu.my/id/eprint/21287

Yacob, Y., Ali, J.K., Hii, J.W.S. and Lim, X.J. (2018), "Members' participation in service co-creation: the mediating effect of satisfaction towards loyalty", *Asian Journal of Business Research*, Vol. 8 No. 2, pp. 18-33, doi: 10.14707/ajbr.180047.

Corresponding author
Isaac Kazungu can be contacted at: isaackazungu@gmail.com