Management of mobile online customer reviews to enhance customer satisfaction in the higher education sector

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ABSTRACT

The purpose of this study was to test the relationship between the independent variables (responsiveness, credibility, reliability, commitment, and empathy) and the dependent variable in the study (satisfaction). A cross-sectional quantitative survey was undertaken to uncover students' perceptions of online customer reviews and to explore the factors that influence how managers respond to these students' online reviews through the lens of the social exchange and the justice theories. Data from 244 respondents were collected through an online survey. Structural equation modelling was used to test the hypotheses and to investigate gender differences in satisfaction with online customer reviews. Results indicated that the strongest predictor of customer satisfaction is commitment, followed by empathy. Responsiveness, reliability, and credibility factors were found to be insignificant in influencing customer satisfaction in an education context. No significant differences existed between men and women with regard to any of the contributing factors relating to satisfaction with online customer reviews. Thus, the study provides information that can potentially influence managers of higher education institutions to invest in open communication channels and platforms that effectively engage students, thereby creating positive experiences. Positive experiences culminate in customer satisfaction.

Keywords: Online customer reviews, responsiveness, empathy, credibility, reliability, commitment, customer satisfaction, justice theory, social exchange theory

INTRODUCTION

Negative online reviews by customers imply that there is a disconnect between the internal management practices of online customer reviews (OCRs) and customer expectations (Ramos, Claudia & Jennifer, 2017). Efforts by management to effectively manage OCRs could enhance the much-needed experience and satisfaction of students in higher education institutions, leading to their loyalty and retention at their tertiary institution of choice. Effective management of OCRs is very important to organisations, especially in this highly competitive era, as it enables the creation and maintenance of a large market share that enhance sales, profitability, sustainability, and growth (Ramos et al., 2017).

A literature search on the management of OCRs revealed several studies conducted in different contexts. Wagner (2015) conducted a study among social media managers to explore various strategies used to manage negative comments posted on social media sites. They reported that organisations should do daily searches for reviews and respond immediately and should create a positive social media environment by encouraging conversations and engaging followers in conversations. A similar study by Park and Allen (2013) among hotel participant employees reported that hotels view comments posted as one mechanism to identify and solve customer problems. One hotel went beyond that to make customer reviews part of a strategic approach to an ongoing relationship. However, it is not clear to which extent responsiveness, empathy, credibility, reliability, and commitment influence satisfaction with the management of online reviews in the context of a tertiary environment. These factors have been found to be significant predictors of satisfaction with OCRs in other contexts, such as social media strategies (Wagner, 2015) and customer service in the hotel industry (Park & Allen, 2013). Therefore, the context of higher education was worthy of further investigation. It is important because it results in setting up open communication platforms that engage students in a manner that is likely to create positive experiences. Thus, the purpose of this study was to investigate how the aforementioned factors influence student satisfaction with how management deals with online reviews in a tertiary environment. This study aimed to suggest tangible solutions for the effective management of online reviews.

OCRs are digital evaluations of a product or service made by someone who has purchased and used or had experience with the product or service (Ramos et al., 2017). These reviews have become an essential part of the day-to-day business of most organisations because of their impact on competitiveness, sales, profitability, growth, and sustainability (Homburg, Jozić, & Kuehnl, 2017).

The current study makes both theoretical and practical contributions. From a theoretical standpoint, this study focussed on OCRs in the context of the higher education sector, which seemingly has been neglected by researchers because most prior studies were conducted in other sectors of the economy such as travel and tourism (Cheng & Loi, 2012) and hospitality services (Run & Niu, 2015). Thus, findings from this study add to the existing body of knowledge and join ongoing conversations among scholars on the management of OCRs in the context of higher education in an emerging economy, such as that of South Africa. Furthermore, this study draws on the social exchange theory (Cook & Rice, 2014) and the justice theory (Harris, Thomas & Williams, 2013), which according to the authors' knowledge, have not been applied before to study OCRs in the higher education sector. The social exchange theory is concerned with the process of people exchanging information by social means with the expectation of gaining something in return (Cook & Rice, 2014). This theory is also concerned with feelings of happiness exhibited by the receivers of service from service providers. The justice theory, on the other hand, is about assessing people's perceptions of fairness in complaint handling methods and rectifying problems related to a service that has already been carried out (Schaefers & Schamari, 2016).

From a practical perspective, this study provides information that could potentially influence higher education institutions to invest in setting up open communication platforms that engage students in a manner that is likely to create positive experiences. This will result in the refinement and development of existing ways in which marketing managers in higher education institutions effectively manage OCRs in a way that retains and attracts new students. It is envisaged that the study will provide guidance and useful contributions to various stakeholders such as marketing managers and their communications staff, information technology managers, and top management by enabling them to develop a comprehensive framework to understand the structure and processes involved in online review

management systems. As a result, higher education institutions will probably be in the best position to assess the variables that determine how satisfied their own students are, ideally as part of consistent, continuing efforts to improve quality.

RESEARCH OBJECTIVE

The primary objective of this research was to further the understanding of students' perceptions of how higher education institutions manage responses to OCRs. The paper further aimed to determine the factors that influence students' satisfaction with how OCRs are managed by these higher education institutions. These predictors are worthy of further investigation because prior studies reported these factors to be significant predictors of customer satisfaction in an online environment (Chakraborty & Bhat, 2018; Reuben, 2012).

The following research question guided this study: *Given the challenges with the structure and level of communication by higher education institutions to solve students' pertinent challenges, what are the factors that influence students' satisfaction with how higher education institutions manage OCRs?* The answer to this question is important to guide marketing managers to develop communication structures and strategies that effectively respond to students' online queries in a way that enhances their satisfaction with the management of online reviews.

The paper is organised as follows: In the first section, OCRs are put into perspective, and it is explained how the constructs of responsiveness, credibility, empathy, reliability, and commitment influence customer satisfaction in the context of higher education. The research methodology is then presented, after which the results are reported. This is followed by a discussion of the results and a brief conclusion highlighting the limitations of the study and identifying future research opportunities.

LITERATURE REVIEW

OCRS IN PERSPECTIVE

OCRs are credible sources of information since many people engage in reviews to make a purchase decision (Elwalda, Lü & Ali, 2016). Prospective students now have a wealth of options when choosing not only what to study but also where to study. This wealth of options is enhanced by using mobile OCRs as prospective students can gather as much information as possible regarding where to study. They can best do this by analysing reviews on popular social media sites such as Facebook and X (formerly Twitter) while using their mobile devices (Anglia, 2019). Research suggests that consumers increasingly rely on mobile online reviews when making product decisions (Elwalda et al., 2016). According to Sparks and Bradley (2014), OCRs have always had the potential to influence other people's attitudes towards a business, and therefore, the effective management of OCRs has the potential to enhance service recovery and justice for consumers. Similarly, Cheng and Loi (2012) support the importance effectively managing OCRs to enhance positive customer experience. In addition, the current researchers hold the view that satisfactory management of OCRs at tertiary institutions could be a way to attract new students and retain current ones for the duration of their studies. This research investigated the management of OCRs to enhance customer satisfaction in the higher education sector.

There is a rapid growth of higher education institutions in the province of Gauteng. According to the Department of Higher Education and Training (2018), Gauteng has over 231 higher education institutions with a total of 205 100 students that are registered with the Department. The South African government retains an essential approval oversight of the sector to ensure institutions deliver valid qualifications through qualified lecturers and that the institutions are financially sustainable.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The research was guided by the social exchange theory (Cook & Rice, 2014) and the justice theory (Harris et al., 2013). The social exchange theory is about people exchanging information by social means with the expectation of gaining something in return (Cook & Rice, 2014). Social interaction can occur between people with the understanding of them benefiting from the interaction. This theory links the problem statement that is related to determining student perceptions regarding the management of OCRs in tertiary institutions. The social exchange theory was applied in the current study to help unravel the behaviours and practices expected of management when communicating with their students. This study sought to understand how higher education institutions engage their students and encourage them to post reviews of their experiences in various tertiary institutions. The ability to determine the behaviours and practices that enhance positive experiences will inform the practical solutions on how management can manage student online reviews in a way that satisfies and retains them.

The justice theory, on the other hand, is about rectifying problems related to a service that has already been carried out. The theory is appropriate for evaluating consumer satisfaction with the complaint process (Schaefers & Schamari, 2016). It deals with recovery satisfaction as it responds to online reviews that have already been posted (Harris et al., 2013). The justice theory has three dimensions, namely distributive, procedural, and interactional justice (Schaefers & Schamari, 2016). Distributive justice is outcome oriented and concerned with perceived fairness of how rewards and costs are shared among group members. Procedural justice is relationship oriented and concerns fairness in the processes involved in allocating resources and resolving disputes. Interactional justice is also relationship oriented and concerned with whether people are treated with respect, kindness, and dignity during interpersonal reactions. In the current study, the distributive dimension advocated for parity in the form of compensation that should be received by the students with complaints in exchange for the troubles encountered. On the other hand, the procedural and interactional dimensions ensure fairness on the interpersonal treatment that students receive during the consumption experience. Schaefers and Schamari (2016) support the use of the justice theory because it has long been used to investigate satisfaction derived from post-complaint recovery with respect to individuals' perceptions of their fair and equitable treatment.

The conceptual framework in Figure 1 shows the relationship between the independent variables and customer satisfaction with OCRs.
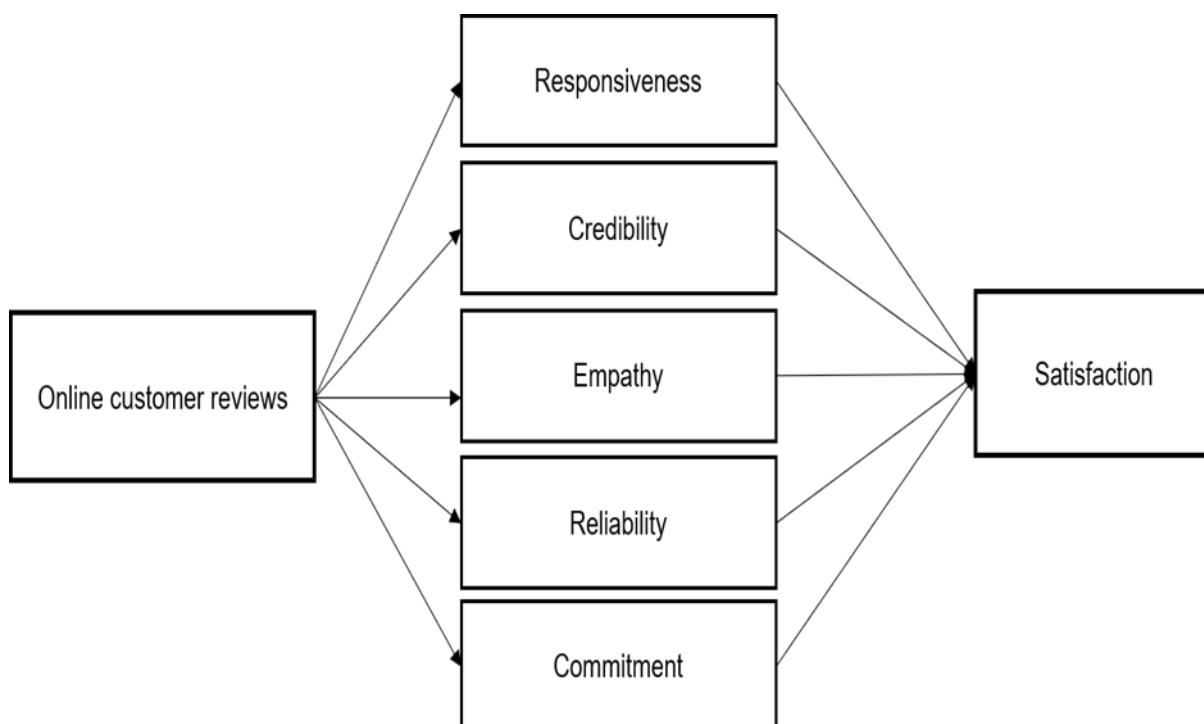
Source: Adapted from Parasuraman, Zeithaml and Berry (1985)

FIGURE 1: PREDICTORS OF CUSTOMER SATISFACTION

CUSTOMER SATISFACTION

Customer satisfaction is described by Run and Niu (2015) as a state experienced by a consumer who has encountered performance that fulfils their expectation. According to Javed and Cheema (2017), customer satisfaction is the by-product of positive customer experience and concerned with reaching and exceeding customer needs, wants, and demands. Mansoora (2017) describes customer satisfaction as a measure of how well a company's products and customer experiences meet customer expectations. This is important as it reflects the company's reputation by indicating how well its products and services resonate with the buyers. Positive mobile OCRs suggest that customers are happy with the company's products and services. This improves the company's credibility and leaves positive impressions on potential customers (Mansoora, 2017). Higher education students should be satisfied with the level of service they receive from their institutions. Apart from the benefit of student retention, satisfied students have the potential to create strong, long-lasting bonds with their educational institution while making the educational institution a reference throughout their entire cycle of studies (Ramos et al., 2017). Customer satisfaction is therefore vital to achieve business goals of increasing revenue, profitability, sustainability, and growth (Wagner, 2015).

FACTORS THAT INFLUENCE CUSTOMER SATISFACTION WITH OCRS

CUSTOMER RESPONSIVENESS

Responsiveness is the timely reaction towards customers' needs (Reuben, 2012); in other words, it is about being prompt and effective for the purpose of creating value for the customers. Aghamirian, Dorr and Aghamirian (2015) concur with Reuben (2012) by suggesting that customer responsiveness is a measure of how quickly and efficiently a company responds to the needs of its customers. On the other hand, Munusamy, Chelliah and Mun (2010) propound that customer responsiveness is necessary to provide quality service. This construct has been used to measure customer satisfaction in the study of service quality delivery and its impact on customer satisfaction in the banking sector in Malaysia (Munusamy et al., 2010), where it was found to be a need in providing quality service but not a requirement. Timely, prompt, and effective reactions to students' needs, expressed through OCRs, result in their satisfaction (Wagner, 2015). Based on the above, it was hypothesised that:

H1: There is a positive relationship between responsiveness and satisfaction.

CREDIBILITY

Chakraborty and Bhat (2018) define credibility as the quality of being trusted and believed in, and it is therefore concerned with the aspect of trust. Trust is made up of three essential components (Chakraborty & Bhat, 2018). The first component is the belief that the relationship partner will show benevolence in their actions, which directly or indirectly affect the relationship in question. The second component is the belief that trust also encompasses honesty, which means that the trusting party relies on the relationship partner being credible. The third component is the belief that the relationship partner has the competence to act for the benefit of the relationship. Credibility is linked to assurance, which is the degree of trust and confidence that the customer feels towards the service provider, as well as the trust and confidence that the service provider is competent to supply the service (Van de Ridder, Berk, Stokking & Ten Cate, 2014). The credibility construct was tested in research conducted by Van de Ridder et al. (2014) in which they assumed that not all feedback provided to students have a similar impact on learning. They tested the credibility of feedback provided to medical students on training, and the feedback scenario showed that the credibility of feedback providers was affected by age and experience. The results of their study could have bearing on OCRs and customer satisfaction because if higher education institutions' responses to OCRs can be trusted and believed, students will be satisfied. Based on the above, it was hypothesised that:

H2: There is a positive relationship between credibility and satisfaction.

EMPATHY

Stein and Ramaseshan (2016) postulate that empathy is the action of understanding, being aware of, being sensitive to, and experiencing the feelings, thoughts, and experience of another. It is the strongest predictor of customer satisfaction, and when service providers lack empathy, it can have serious consequences for customer retention. This is supported by Wieseke, Geigenmüller and Kraus (2012) who describe empathy as the capability to alleviate dissatisfying experiences in social interactions. Wieseke et al. (2012) investigated empathy by measuring the relationship between employees and customers, and their results confirm that employee empathy relates positively to customer satisfaction. Service customers often have expectations regarding the extent to which the service provider appears to understand and be concerned with their individual needs and wants. This means that higher education institutions should understand and tailor their interactive behaviours to specific students. This mutual adaptation in service encounters results in mutual customer-employee interactions and a satisfying service experience (Wieseke et al., 2012). Based on the above, it was hypothesised that:

H3: There is a positive relationship between empathy and satisfaction.

RELIABILITY

Reliability is the ability to perform the promised service dependably and accurately (Aghamirian et al., 2015). Siddiqi (2013) describes reliability as the extent to which the service is delivered to the standards expected and promised. In essence, it represents the customer getting what they feel they paid for. This assertion is supported by Zhang, Xie, Huang and He (2013), who reported that reliability is one of the important factors in customer satisfaction.

Siddiqi (2013) used the reliability construct to test customer satisfaction in the retail banking sector in Bangladesh. They report that there is a positive relationship between reliability and customer satisfaction, and showed that customers are satisfied with the services provided by the service providers as promised, especially in the speedy handling and solving of problems. Javed and Cheema (2017) add that reliability is fostered by reliable and honest staff leading to customer satisfaction, which in turn leads to positive organisational ratings. Based on the above, it was hypothesised that:

H4: There is a positive relationship between reliability and satisfaction.

COMMITMENT

Commitment refers to an implicit or explicit pledge of the continuity of a relationship between exchange partners (Aghamirian et al., 2015). Commitment plays a central role in relationships and mutually beneficial relationships breed customer satisfaction (Hassan, Shamsudin, Hasim, Mustapha, Jaafar, Adruthdin, … & Ahmad, 2019). There are two types of commitment, namely affective and calculative commitment (Roman, Gonzalez & Mercado, 2013). Affective commitment has an element of emotional attachment and is brought about by a person sharing, identifying with, or internalising the values of the organisation. Calculative commitment stems from a cognitive evaluation of the instrumental worthiness of a continued relationship with the organisation. Thus, gains and losses, plusses and minuses, or rewards and punishments are added up and considered to determine whether to maintain or terminate a relationship between two parties. In the case of the current study, the commitment by the higher learning institution influences students' decision to continue studying with the higher education institution or drop out and enrol with another institution.

Hassan et al. (2019) investigated commitment as a predicting factor of customer satisfaction and found a positive relationship between organisational commitment and customer relationships, culminating in customer satisfaction. Owing to the importance of commitment in the development of relationships, organisations should invest more in

providing quality service to retain and prolong relationships. In the current study, it is suggested that higher education institutions should go beyond ensuring commitment and also ensure customer engagement and quick turn-around times. Based on the above, it was hypothesised that:

H5: There is a positive relationship between commitment and satisfaction.

THE DIFFERENCE IN SATISFACTION LEVELS WITH THE MANAGEMENT OF OCRS BETWEEN MALE AND FEMALE STUDENTS

It was necessary to investigate gender differences so marketing professionals can consider their target audience's gender when designing websites and other platforms of communication. This enable all customers to use these websites and other platforms with satisfaction. It is believed that there is a difference in satisfaction levels between men and women with regards the management of OCRs. Mansoora (2017) asserts that the satisfaction of male consumers with online communication is significantly higher than that of their female consumers. Perceptions and disconfirmations about the use of social network sites differ between genders. It should be noted that most OCRs are done on mobile devices through social network sites, such as Facebook, WhatsApp, YouTube, X (formerly Twitter), and Instagram, and websites. Mansoora (2017) adds that male consumers are more satisfied with their online shopping experience, marketers' customer service, and external incentives offered by the sellers than female consumers. This suggests that marketing professionals should consider their target audience's gender when designing websites and other platforms of communication so they are fully used with satisfaction by all customers. Based on the above, it was hypothesised that:

H6: There is a positive relationship between gender and satisfaction.

METHODS

SAMPLING PROFILE

The target population for this research was students currently registered with the Eduvos higher education institution in the province of Gauteng, including first-year male and female students from all faculties. The choice of this cohort group was informed by the assumption that it represents the age group that owns smartphones, are most active on social media sites, and would have higher prior customer service expectations before joining their preferred institution of higher learning (Awang, Kutty & Ahmad, 2014). According to Awang et al. (2014), a university presents first-year students with an unknown world about which they have varying expectations and aspirations, and this has the potential to influence these students to write many reviews about their experiences.

This study adopted a non-probability sampling method, specifically a convenience sampling technique, to select 244 students from higher education institutions in the province of Gauteng. The choice of 244 students was informed by the formula of Tabachnick and Fiddell (2013), which proposes that N > 50 + 8m (m = number of independent variables). It was therefore concluded that the 244 respondents who were selected to participate in the study were an appropriate sample size as it was above the minimum of 90 respondents required by the formula. This sampling method was successfully used in prior related studies (Joffe, 2011; Ramos et al., 2017).

MEASURES

The survey instrument used in this study consisted of 24 items. Section A in the questionnaire contained two screening questions, Section B focussed on the device the student uses to make online reviews, and Section C contained 24 statements intended to measure the management of OCRs. The factors included (a) customer responsiveness, (b) credibility, (c) commitment, (d) reliability, (e) empathy, and (f) customer satisfaction. All items

in Section C used a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7). Section D in the questionnaire contained demographic questions. Prior to administering the questionnaire, ethical clearance was obtained and the survey instrument was pre-tested among a sample of 20 students from the target population. The six contributing factors mentioned above were measured with multiple scale items adopted from previous studies and had Cronbach's alpha values ranging from 0.8 to 0.9 to indicate that these adopted scales met the criteria for internal consistency reliability (Pallant, 2016). Statements to measure customer responsiveness were taken from Munusamy et al. (2010), statements to measure credibility were taken from Van de Ridder et al. (2014), statements to measure commitment were taken from Roman et al. (2013), statements to measure reliability were taken from Siddiqi (2013), statements used to measure empathy were derived from Wieseke et al. (2012), and those to measure customer satisfaction were taken from Javed and Cheema (2017).

The data were collected through an online questionnaire that was administered to 300 respondents at one private institution of higher learning. A total of 244 returned questionnaires, representing a response rate of 81%, were deemed suitable for analysis after eliminating questionnaires that contained errors or missing responses. The survey questionnaire was distributed online to students through Microsoft Forms. This method is fast and enables the solicitation of participation (Pallant, 2016). No incentives were offered to respondents to participate in the study.

COMMON METHOD BIAS

To prevent common method bias, the researchers considered several steps suggested by Rodríguez-Ardura and Meseguer-Artola (2020) during the design of the questionnaire for this study. Firstly, the wording of the questions was marginally adapted to be concise, clear, and accurate before the questionnaire was pre-tested. Secondly, the item wording was improved after pre-testing the questionnaire with 20 participants from the study population. Thirdly, the respondents were assured of anonymity and confidentiality to discourage them from providing biased responses. Lastly, the respondents were assured that the research was for academic purposes only to encourage truthful responses.

RESULTS

SAMPLE PROFILE AND OCRS

The demographic profiles of respondents are presented in Table 1. More men (58%) participated in the survey than women (41%). With regard to ethnicity, 76% were Africans, 15% were White, 4% were Indian, and 5% were other ethnicities. With regards to degree qualifications, 17% were studying towards a Bachelor of Science in Information Technology, 26% were studying towards a Bachelor of Commerce Law, 24% were studying towards a Bachelor of Commerce General, 13% were studying towards a Bachelor of Arts in Psychology and English, 12% were studying towards a Bachelor of Commerce in Accounting, and 8% were studying towards a Bachelor of Arts degree in Graphic Design. With regards to the type of device used in reviews, 59% used mobile phones and 41% used their personal computers.

TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENTS

Demographic variables	Number	Percentage (%)
Gender		
Male	142	58
Female	100	41
Other	2	1
Ethnicity		
African	185	76
White	37	15
Indian	10	4
Other ethnicities	12	5
Degree qualification		
BS. Information Technology	41	17
BCom. Law	63	26
BCom. General	59	24
BA. Psychology and English	32	13
BCom. Accounting	29	12
BA. Graphic Design	20	8
Type of device used in reviews		
Mobile phone	144	59
Personal computer	100	41

MEASUREMENT MODEL

The study used covariance-based structural equation modelling to explore the relationship between the factors that predict satisfaction with mobile online reviews. Confirmatory factor analysis (CFA) was used to test construct validity and reliability of the constructs (Pallant, 2016) using AMOS Graphics Version 28 software. Table 2 indicates the results of CFA fit indices (normed $X^2(187) = 2.297$ (p = 0.000); incremental fit index (IFI) = 0.960; comparative fit index (CFI) = 0.959; Tucker-Lewis index (TLI) = 0.950; and root mean square error of approximation (RMSEA) = 0.073 to indicate adequate model fit (Hair, Black, Babin & Anderson, 2019; Hooper, Coughlan & Mullen, 2008; Hu & Bentler, 1999).

TABLE 2: FIT INDICES FOR THE MEASUREMENT MODEL

Fit indicators	Measurement model	Recommended thresholds	Recommending authors
χ2/df	2.297	⩽ 5.00	Hooper et al., 2008
CFI	0.956	⩾ 0.90	Hu & Bentler, 1999
IFI	0.950	⩾ 0.90	Hu & Bentler, 1999
TLI	0.950	⩾ 0.90	Hu & Bentler, 1999
RMSEA	0.073	⩽ 0.08	Hu & Bentler, 1999

VALIDITY AND RELIABILITY TESTS

Convergent validity was assessed through CFA. The average variance extracted (AVE) and composite reliability (CR) were computed to assess convergent validity. The results in Table 3 indicate that the CR of the factors range between 0.89 and 0.95, which satisfies Hair et al.'s (2019) criteria. Internal consistency was measured using Cronbach's alpha coefficients, and the values meet the set criteria of 0.7 for reliability of the constructs (Fornell & Larcker, 1981). The AVE values for the latent constructs also met the minimum threshold suggested by Fornell and Larcker (1981) as the values range from 0.76 to 0.83, which are above the cut-off point of 0.5 to indicate that the scale items are representative of the underlying constructs.

TABLE 3: AVE, CRONBACH'S ALPHA VALUES, AND CR

Construct	AVE	Cronbach's alpha	CR
Customer satisfaction	0.829	0.971	0.951
Responsiveness	0.736	0.887	0.893
Credibility	0.740	0.894	0.895
Empathy	0.759	0.903	0.904
Reliability	0.762	0.944	0.762
Commitment	0.746	0.916	0.746

DISCRIMINANT VALIDITY OF THE CONSTRUCTS

According to Fornell and Larcker (1981), discriminant validity occurs when there is a statistical difference between two latent variables that represent distinct theoretical conceptions. The body of research suggests that researchers frequently use the Fornell and Larcker (1981) criteria when evaluating discriminant validity. Nevertheless, Voorhees, Brady, Calantone, and Ramirez (2016) contend that the criterion proposed by Fornell and Larcker is not sensitive enough or sufficiently extensive. Henseler, Ringle and Sarstet (2015) developed a novel method for evaluating discriminant validity, namely the heterotrait-monotrait ratio of correlations (HTMT). This technique was motivated by the critiques of the Fornell and Larcker criterion. According to Henseler et al. (2015), the HTMT is a metric for how similar two latent variables are to other latent variables. It is considered that discriminant validity has been demonstrated if the HTMT is less than 1. Henseler et al. (2015) found that a threshold of 0.85 is a reliable way to distinguish between distinct and non-distinct pairs of latent variables.

Table 4 presents the results showing that the latent variables satisfy the criteria for discriminant validity. However, one pair (credibility and empathy) had a marginally higher value of 0.855. According to Henseler et al. (2015), the rigorous discriminant validity threshold is 0.850 and the liberal discriminant validity criterion is 0.900. Therefore, it can be contended that every construct is theoretically unique.

TABLE 4: HTMT ANALYSIS

	Responsiveness	Credibility	Empathy	Reliability	Commitment	Satisfaction
Responsiveness						
Credibility	0,842					
Empathy	0,827	0,855				
Reliability	0,831	0,819	0,844			
Commitment	0,682	0,727	0,728	0,714		
Satisfaction	0,606	0,639	0,689	0,693	0,790	

Notes: Thresholds are 0.850 for strict and 0.900 for liberal discriminant validity

STRUCTURAL MODEL

After confirming convergent and discriminant validity, the structural model was evaluated to test the hypothesised paths using structural equation modelling because of its ability to simultaneously test hypothesised paths and overall model fit (Hair et al., 2019). Table 5 shows the results of the goodness of fit indices for the structural model. It is evident from results in Table 5 that the structural model meets the thresholds to indicate adequate model fit.

TABLE 5: RESULTS OF THE STRUCTURAL MODEL

Fit indicators	Structural model	Recommended thresholds	Recommending authors
χ^2/df	2.093	$\leqslant 5.00$	Hooper et al., 2008
CFI	0.966	$\geqslant 0.90$	Hu & Bentler, 1999
IFI	0.966	$\geqslant 0.90$	Hu & Bentler, 1999
TLI	0.958	$\geqslant 0.90$	Hu & Bentler, 1999
RMSEA	0.067	$\leqslant 0.08$	Hu & Bentler, 1999

HYPOTHESES TESTING

Table 6 displays the results of the hypotheses tests and shows that three hypotheses were not accepted and two were accepted. Responsiveness ($\beta = -0.096$, $p < 0.05$), credibility ($\beta = -0.653$, $p < 0.05$) and reliability ($\beta = 0,223$, $p > 0.05$) were insignificant predictors of customer satisfaction. However, empathy ($\beta = 0.633$, $p > 0.05$) and commitment ($\beta = 0.649$, $p > 0.05$) emerged as significant determinants of customer satisfaction with online reviews. The findings show that commitment is the strongest contributor to customer satisfaction, followed by empathy.

TABLE 6: THE RESULTS OF THE HYPOTHESES TESTING

Alternative hypotheses	SRW	P-value	Result
H1: Satisfaction ← responsiveness	-0.096	0.634	Not supported
H2: Satisfaction ← Credibility	-0.653	0.000	Not Supported
H3: Satisfaction ← Empathy	0.633**	0.034	Supported
H4: Satisfaction ← Reliability	0.223	0.186	Not Supported
H5: Satisfaction ← Commitment	0.649**	0.000	Supported

GENDER DIFFERENCES

The objective was to establish whether statistical differences existed between male and female students on any of the five factors contributing to overall customer satisfaction towards the management of OCRs. The results of all the independent-sample t-tests are presented in Table 7.

TABLE 7: SUMMARY OF INDEPENDENT-SAMPLE T-TESTS FOR THE CONTRIBUTING FACTORS WITH RESPECT TO GENDER DIFFERENCES

Contributing factors	Female (M)	Male (M)	t-test	P-Value
Responsiveness	4.4497	4.5508	-0.474	.636
Credibility	4.7414	4.9995	-1.249	.213
Empathy	4.8048	5.0107	-0.978	.329
Reliability	4.4434	4.5674	-0.548	.584
Commitment	4.5872	4.7418	-0.716	.475

Table 7 shows that none of the P values are below or equal to 0.05, meaning that there are no significant differences between the scores for men and the scores for women with regard to all the contributing factors. The results suggest that gender does not influence students' satisfaction with the management of OCRs.

DISCUSSION

In higher education, satisfaction with learning is critical to the success of individual students as well as the success of institutions, especially in light of the current state of the world. In recent years, there has been increased competition in the higher education sector due to rapid technological improvements (Wong & Chapman, 2022). Consequently, many universities and colleges now prioritise on student satisfaction. The two main objectives of the study were to (a) determine factors that influence students' satisfaction with the management of mobile online customers' reviews, and (b) to establish whether statistical differences exist between male and female students on any of the five factors contributing to satisfaction with the management of OCRs. This was important because satisfaction leads to loyalty and positive word of mouth (Gogoi, 2021). Thus, the results of the study may provide invaluable insights to higher education institution management on how to strategically invest in the tertiary environment.

Several factors were investigated in the study. The findings indicated that the strongest predictor of student satisfaction is commitment. Commitment emerged as a significant predictor of satisfaction to corroborate Hassan et al.'s (2019) findings. This suggests that commitment from management to ensure they deliver on their promises is crucial to satisfaction. In the current study, commitment measured the relationship between the management of OCRs and students' expectations of experience. The findings therefore suggested that when higher education institutions are committed to offering students good experiences with online reviews, it results in student satisfaction, which can lead to student retention and ongoing support.

The results also showed a positive relationship between empathy and customer satisfaction, supporting finding by Tan, Muskat and Johns (2019) and Hassan (2019). The results implied that higher education institutions should be more empathic to students' needs as this leads to an improvement in customer satisfaction. Tan et al. (2019) reported that empathy is essential for achieving a high-quality customer experience in service environments such as higher education institutions. Tan et al. (2019) conducted a study to determine the role of empathy in the education sector, and they found that empathy is important to both students and staff and is crucial for value co-creation through service experience in learning. Therefore, empathy is crucial as it may create a long-lasting bond between students and staff, fostering the co-creation of learning experiences that result in satisfaction. Thus, empathy is a necessary variable that determines the success of service delivery in higher education institutions and should be given due consideration.

Contrary to the findings of Naznin (2019), the relationship between reliability and customer satisfaction was not confirmed in this study. This is particularly surprising since service companies that timeously respond to online reviews often have higher levels of customer satisfaction (Tan et al., 2019). In light of these unusual findings, higher education administrators ought to think about offering trustworthy responses to students who can voice concerns through online review sites in order to keep them satisfied.

It was also discovered that there was no significant relationship between responsiveness and customer satisfaction. This implies that according to the findings of the current study, an improvement in customer responsiveness by the service provider does not lead to a significant improvement in customer satisfaction. This is contrary to the

findings of De Jager and Gbadamosi (2013) who reported that responsiveness positively influences overall students' satisfaction. They suggest that organisations must have dedicated personnel to respond to customer reviews in the quickest times possible.

The results of the current study also indicated that the correlation between customer satisfaction and credibility was statistically insignificant. These findings implied that an improvement in customer credibility does not result in an improvement in customer satisfaction. These findings are surprising and inconsistent with those of Khan, Nawaz and Khan (2013), who found that responsiveness, empathy, commitment, and reliability are considerably related to service quality and customer satisfaction.

In relation to establishing whether statistical differences exist between male and female students on any of the five factors contributing to satisfaction with the management of OCRs, a t-test was conducted to establish the means of the five factors that contribute to customer satisfaction. The results indicated that none of the P values were below or equal to 0.05, meaning that there were no significant differences between the scores for men and for women with regard to all the contributing factors. The results suggested that gender is not relevant when considering students' satisfaction with the management of OCRs. This result contradicts the assertion made by Mansoora (2017) that the satisfaction of male consumers with online communication is significantly higher than that of female consumers. The findings of the current study therefore suggested that higher education institutions should handle OCRs from male and female students in the same manner.

MANAGERIAL IMPLICATIONS

The findings suggested several implications for marketing managers who should ensure student satisfaction is at the forefront of their operations. The results of the current study confirmed the importance and relevance of higher education institutions being committed and empathetic as this culminates in customer satisfaction. There is more to students' contentment with their educational experiences than how they feel about the calibre of the educational support they receive (Wong & Chapman, 2023). The results implied that overall contentment as a university student necessitates fulfilment in areas beyond what most schools presently offer their students. Management should show they are duly committed to students by addressing issues related to technology, academic, social, and service support in a way that enhances student satisfaction. To show commitment, managers must constantly monitor online review platforms to quickly identify student online reviews in order to timeously address any concerns.

The findings of the current study suggested that managers in higher education institutions must appreciate the role of empathy in relation to students' satisfaction. This is particularly important because empathy enables both staff and students to connect with one another on an emotional level (Tan et al., 2019). Thus, managers should know what matters most to students and endeavour to provide personalised attention to enhance satisfaction. This will ensure competitiveness, profitability, and sustainability. It is important for management to engage in activities that ensure customer satisfaction regarding OCRs to ensure students' continued support.

The findings of the study implied that an improvement in customer credibility, responsiveness, and reliability will not result in an improvement in customer satisfaction, which means that management in higher education institutions should not invest much in credibility, responsiveness, and reliability programs as these do not seem to result in student satisfaction in the context of higher education in South Africa. The findings implied that the higher the empathy and level of commitment from management, the higher the satisfaction with the services provided by the institution.

STUDY CONTRIBUTIONS

The study makes both theoretical and practical contributions. The theoretical contributions are three-fold. Firstly, the study reveals that pertinent factors that directly influence the satisfaction of students in higher education institutions are empathy and commitment. These factors have also been reported in prior research as significant predictors of satisfaction (Tan et al., 2019; Wong & Chapman, 2023). Secondly, while most of the previous studies were conducted in other sectors of the economy, such as travel and tourism (Dekay, 2012), this study focussed on OCRs in the context of the higher education sector, which has seemingly been neglected by researchers. Investigating students' reviews

in the higher education sector is important because it improves students' experiences, thereby enabling education institutions to retain their customers and remain competitive. Thirdly, this study drew from the social exchange theory (Cook & Rice, 2014) and the justice theory (Cook & Rice, 2014) that, according to the authors' knowledge, have not been applied to the study of OCRs in the higher education sector before, thus contributing to the existing body of knowledge in relation to OCRs

From a practical perspective, this study provides information that can potentially influence higher education institutions to invest in setting up open communication channels and platforms that effectively engage students, thereby creating positive experiences. Positive experiences culminate in customer satisfaction.

This study also contributes towards the practical refinement and development of existing ways in which various stakeholders, like the marketing managers and information technology staff in higher education institutions, are managing the communication affairs. Communication channels should be built around empathy and commitment to enhance student satisfaction. For instance, institutions should acknowledge negative reviews, apologise and act, use the human voice that is empathetic in acknowledging negative reviews, and customise negative responses to specific individual consumers. Furthermore, institutions should use not only use multiple social media platforms to engage with students but also develop policies to guide the management of online communication and proactively solicit feedback from consumers. This will enable them to serve students' needs in a way that enhances satisfaction.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The sample of 244 respondents that was drawn exclusively from respondents learning in higher education institutions in Gauteng implies that respondents from other provinces were omitted. As a result, the sample is not representative of the broader population of students in higher education institutions in South Africa. The research used a convenience random sampling method, and although this method is designed to select cases that best enable the respondents to correctly answer the research questions, the results collected using this method are difficult to replicate and cannot be generalised. This means that the feedback received from the respondents is only useful from an individualised point of view, but the method cannot offer information about an entire group of people being investigated.

Future research can concentrate on studying other higher education institutions and students in several other towns and provinces throughout South Africa. Alternatively, it would be interesting for future research to be done over an extended duration, for instance, six months (longitudinal study) because this will help researchers note possible trends in students' perceptions over an extended period of time. As stated by Wong and Chapman (2023), student satisfaction with the management of OCRs can change over time, and since no single study can fully capture how satisfaction among students changes over time, research on the topic should be ongoing.

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