

Exploring the Mediating Role of Organizational Culture in the Service Quality-Student Satisfaction Nexus in Higher Education

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Abstract

While service quality-satisfaction relationships are well-established in Western contexts, the mediating mechanisms through which these relationships operate in Islamic higher education remain unexplored, particularly regarding organizational culture's role as a dynamic, endogenous variable shaped by stakeholder experiences. This study investigates how organizational culture mediates the relationship between service quality dimensions and student satisfaction within Saudi Arabian higher education, addressing critical gaps in cross-cultural service quality research. The research employed structural equation modeling to analyze survey data from 1,534 undergraduate students at Umm Al-Qura University. Service quality was measured using the five SERVQUAL dimensions, organizational culture through Cameron and Quinn's four cultural traits, and student satisfaction via established multi-item scales. Bootstrap methodology with 1,000 samples tested mediation effects at 95% confidence intervals. Results revealed selective mediation patterns that demonstrate cultural specificity in service quality effects. Assurance, empathy, and tangibles showed significant positive relationships with organizational culture ($\beta = 0.393, 0.479, 0.556$ respectively) and significant mediation effects on satisfaction ($\beta = 0.237, 0.333, 0.386$ respectively). Reliability and responsiveness demonstrated non-significant effects on both

culture and satisfaction. The model explained 97% of the variance in organizational culture and 48% in student satisfaction, with excellent model fit indices (RMSEA = 0.057, CFI/TLI > 0.90). These findings extend attribution theory by demonstrating that cultural context fundamentally alters how students process service experiences, challenging universal assumptions about service quality frameworks. The research contributes to organizational culture theory by positioning culture as a mediating mechanism rather than static antecedent, while providing practical guidance for university administrators in culturally diverse contexts. The selective pattern suggests that effective service delivery requires cultural alignment rather than standardized implementation, with significant implications for higher education management in Islamic contexts.

Keywords: Student Satisfaction, Service Quality, Organizational Culture, Servqual Model, Saudi Universities

Introduction

In the contemporary landscape of higher education, the pivotal role of universities in advancing national development, enhancing the global reputation, and contributing to economic growth is well-established (Allioui et al., 2023). This critical function is further amplified by the global consensus on the importance of higher education in facilitating individual knowledge acquisition and career progression (Allmnakrah & Evers, 2020). Central to the expectations of students worldwide is the quality of services provided by these institutions, a factor that has been identified as a key determinant of student satisfaction (Howard & Sheth, 1968). The premise that superior service quality directly contributes to attracting students, thereby bolstering the institution's status and financial health, underscores the symbiotic relationship between service excellence and educational prosperity (Taylor, 2013a).

Despite the Kingdom of Saudi Arabia's (KSA) acknowledgment of higher education's strategic importance and its concerted efforts to enhance educational opportunities through improved service quality, the organizational culture within its higher learning institutions presents a nuanced challenge. A notable academic beacon in the KSA, the prevailing organizational culture serves as a prism through which students evaluate service quality and derive satisfaction (Jain et al., 2022). This phenomenon suggests a complex interplay between service quality, organizational culture, and student satisfaction, a nexus that remains unexplored in current academic discourse (Bailey et al., 2019).

Addressing this gap, the present study leverages the conceptual framework proposed by (Howard & Sheth, 1968), viewing culture as a perceptual construct ingrained in individuals and serving as a critical lens for decision-making. This perspective posits that service quality is not just a series of employee behaviors but is intrinsically linked to the organizational culture that permeates through the hierarchical structure of the institution (Novawan & Aisyiyah, 2020). However, existing literature predominantly examines the service quality-organizational culture relationship from a top-down approach, often neglecting the individual-level perceptions that significantly impact student satisfaction (Hanaoka et al., 1988). This study aims to fill this lacuna by investigating the service quality and organizational culture within the specific context of Saudi Arabian Universities, which are culturally rich and religiously significant.

The complexity of this relationship necessitates a comprehensive theoretical framework that can encapsulate the multifaceted interactions among service quality, organizational culture, and student satisfaction. While the SERVQUAL model (Parasuraman et al., 2005) offers a foundational lens for examining service quality, it falls short as a meta-theory capable of navigating the intricate dynamics involved in this study. Drawing on (Howard & Sheth, 1968) consumer behavior theory, this research adopts a meta-theoretical approach to elucidate the interconnections between these variables, thereby addressing the dearth of empirical studies that consider organizational culture from an anthropological perspective, where culture is seen as an endogenous variable shaped by and shaping external influences.

This exploration is critical, especially in the context Saudi Arabian universities strategic realignment under Vision 2030, which seeks to transition the institution from a historically bureaucratic and collegial culture towards a market-oriented model (Taylor, 2013b). This shift highlights the evolving role of students from passive enrollees to active stakeholders, a transformation that necessitates a deeper understanding of how service quality perceptions are mediated by the changing organizational culture to influence student satisfaction (Supervía et al., 2023).

By delving into the mediating role of organizational culture in the service quality-student satisfaction nexus, this study not only aims to bridge significant gaps in the literature but also seeks to offer actionable insights for policymakers, educators, and administrators. These insights are poised to inform strategies that align with the KSA's Vision 2030 objectives, aiming to enhance the educational experience and satisfaction of students. This study aims to explore the intricate relationships within the educational sector by focusing on several key objectives. Firstly, it seeks to scrutinize the relationship between the dimensions of service quality and organizational culture within higher education institutions. Secondly, it will investigate how organizational culture influences student satisfaction. Thirdly, the study intends to examine the mediating role of organizational culture in the relationship between service quality and student satisfaction. Lastly, it aims to develop and validate a model of student satisfaction based on the perceptions of Saudi Arabian students, offering a targeted insight into the factors that contribute to their educational experience.

Literature Review

Student satisfaction in higher education is a complex construct that significantly influences university competitiveness and sustainability (Hwang & Choi, 2019). It involves students' perceptions of various aspects of their educational experience, including the quality of instruction, curriculum, facilities, support services, and administrative processes (Arrieta & Avolio, 2020). Despite its critical importance, research on student satisfaction in higher education settings is less developed compared to elementary education contexts (Qazi et al., 2022). While student satisfaction research has proliferated in Western contexts, understanding satisfaction dynamics in Islamic and Arab higher education remains limited. Studies from similar cultural contexts reveal important variations in satisfaction determinants. Research in Malaysia and Indonesia demonstrates that collectivist cultural values significantly influence how students evaluate educational experiences (Hassan et al., 2020). In Gulf Cooperation Council (GCC) countries, student satisfaction research indicates that traditional hierarchical expectations and Islamic educational values create unique satisfaction frameworks distinct from Western models (Al-Mutairi & Al-Rashid, 2021).

Service quality is a fundamental determinant of student satisfaction, particularly as universities increasingly adopt a customer-centric approach (Jameson, 2021). The SERVQUAL model, proposed by Parasuraman et al. (2005), serves as the primary framework for evaluating service quality within various sectors, including higher education. This model delineates service quality into five distinct dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Reliability is characterized by the consistent and accurate fulfilment of service promises. Responsiveness embodies the eagerness to promptly address and assist students' needs. Assurance is conveyed through the competence and courtesy of staff, fostering a sense of trust and security among students. Empathy involves providing thoughtful, personalized attention to each student, acknowledging their unique needs and circumstances. Lastly, tangibles refer to the physical and digital resources available to students, encompassing everything from campus facilities to online learning platforms, all of which play a crucial role in shaping the educational experience. Yet, the discrepancy between objective service quality and its perception by students (Jameson, 2021) suggests that the SERVQUAL model requires careful adaptation for higher education environments (Abdullah, 2006).

The universal applicability of SERVQUAL has been questioned in cross-cultural research. Furrer et al. (2000) conducted seminal research demonstrating that SERVQUAL dimensions operate differently across cultural contexts. In high power distance cultures, reliability and responsiveness effects are attenuated, while assurance becomes more critical. This pattern has been replicated in studies across Arab countries (Abdullah, 2006; Sanjuq, 2014) and Asian contexts (Lee et al., 2016), suggesting systematic cultural moderations of service quality effects. Research in Islamic higher education contexts reveals additional complexity. Studies from Pakistan (Moosa & Imam, 2017), Malaysia (Asree et al., 2010), and the UAE (Bin Hassan et al., 2019) consistently show that empathy and assurance dimensions align strongly with Islamic educational principles, while reliability and responsiveness may be interpreted through the hierarchical cultural lenses. These findings suggest that Islamic educational philosophy, emphasizing holistic student development (Tarbiyah) and individualized attention (Ri'ayah), creates specific service quality expectations that differ from Western educational models.

Organizational culture, encompassing an institution's shared history, values, and behaviors, also plays a crucial role in shaping educational experiences (Kuh, 2001). Various models exist for evaluating organizational culture with competing values or functionalist approaches gaining prominence (Adams et al., 2018). A widely utilized framework views university culture across four trait dimensions - involvement, consistency, adaptability and mission. Involvement refers to participative dynamics like team orientation, capability development and ownership (Guillaume, 2016). Consistency reflects homogeneity in norms, values and coordinating abilities across dispersed stakeholders (Zollo et al., 2016). Adaptability indicates being responsive to evolving external changes rather than stability focused (Towards an Evolutionary Perspective on Regional Resilience, 2017). Finally, mission encapsulates clarity and alignment across organizational vision and strategic priorities, providing overarching direction (Mittal & Sridhar, 2021). Beyond overall culture, researchers also posit the notion of quality culture with shared commitments to continual improvement (Tung & Verbeke, 2010). Assessing such multidimensional cultural perspectives offers updated insight regarding the evolving state of universities (Vuong & Napier, 2015).

Organizational culture research in Arab higher education contexts remains sparse but reveals important patterns. Saudi Arabia Studies indicate that university cultures reflect broader societal values, including respect for hierarchy, collective decision-making, and Islamic principles (Alamri, 2015; Alomiri, 2016). The transformation of Saudi higher education under Vision 2030 has created cultural tensions between traditional collegiate models and market-oriented approaches (Allmnakrah & Evers, 2020). Traditional organizational research predominantly examines culture as an antecedent variable influencing performance outcomes (Schein, 2010). However, anthropological perspectives suggest a culture is simultaneously shaped by organizational experiences (Alvesson & Sveningsson, 2015). This bidirectional view aligns with Social Cognitive Theory (Bandura, 1991), suggesting that stakeholder experiences inform cultural perceptions, which subsequently influence satisfaction and commitment. This perspective opens avenues for exploring how service quality perceptions might reciprocally interact with and influence emerging cultural perceptions within universities (Trivellas & Santouridis, 2016). Although some studies have highlighted culture's mediating role in enhancing student satisfaction, such investigations are scant and seldom approach the subject from an anthropological standpoint (Leontev, 2017).

While extensive research examines direct service quality-satisfaction relationships, investigation of mediating mechanisms remains limited. Trivellas and Santouridis (2016) provided early evidence of cultural mediation in Greek higher education, demonstrating that organizational culture partially mediated service quality effects on satisfaction. However, this research adopted a Western cultural framework and examined culture as primarily exogenous. Several critical gaps characterize current literature. Most service quality-satisfaction research originates from Western contexts, with limited examination of Islamic or Arab educational settings. Existing research predominantly treats culture as a stable, exogenous variable rather than a dynamic construct shaped by stakeholder experiences. Limited research examines how students form cultural attributions based on service experiences, despite extensive attribution theory research in related domains. Few studies integrate service quality, organizational culture, and satisfaction within comprehensive theoretical frameworks suitable for cross-cultural contexts.

While attribution theory extensively explains individual behavior, its application to organizational culture formation remains unexplored. Weiner's (2006) framework suggests that individuals form attributions about organizational characteristics based on service experiences, but this process requires cultural contextualization. Research in collectivist cultures indicates that attribution processes may operate through group-based sense-making rather than individual cognitive processing (Triandis, 1995). The role of culture as a sense-making mechanism in higher education requires further investigation. Students interpret service experiences through cultural lenses, forming judgments about institutional values and priorities. This process is particularly complex in transitional contexts like Saudi Arabia, where traditional educational models encounter market-oriented reforms.

This review identifies three primary gaps that this study addresses. First, there is limited understanding of how service quality influences satisfaction through cultural mediation processes, representing a mechanistic gap in current knowledge. Second, insufficient research examines these relationships in Islamic higher education contexts characterized by high power distance and collectivist orientations, constituting a cultural gap. Third, there is a

lack of integrated frameworks combining Western service quality models with Islamic educational philosophy and cultural attribution processes, indicating a theoretical gap. This study addresses these gaps by examining cultural mediation of service quality-satisfaction relationships in Saudi higher education. Also, adopting anthropological perspectives viewing culture as endogenous and dynamic, integrating attribution theory with service quality and cultural frameworks, and providing cultural context for SERVQUAL application in Islamic educational settings. The investigation contributes to both theoretical understanding and practical guidance for university administrators navigating cultural transformation in higher education.

Theoretical Development

This research is based on a carefully crafted theoretical framework that draws on key ideas to provide light on several aspects of the study's main goals. The theoretical framework integrates the SERVQUAL Model (Parasuraman et al., 2005), (Cameron & Quinn, 2011), Weiner's Attribution Theory (Weiner, 2006), and Howard and Sheth's Theory of Buyer Behaviour (1968, 2001). These theories provide a comprehensive perspective for examining and comprehending the connections among service quality parameters, organizational culture, and student happiness.

The SERVQUAL Model, developed by (Parasuraman et al., 2005), is crucial for defining the aspects of service quality in higher education environments. This model is a methodical approach for assessing service quality based on several dimensions: tangibles, dependability, responsiveness, assurance, and empathy. The theory suggests that the difference between anticipated service and actual service provision significantly influences how service quality is perceived, laying the groundwork for evaluating the effect of service quality on student contentment.

Cameron & Quinn (2011) Competing Values Framework explains the complex nature of organizational culture. This paradigm provides a thorough view of how organizational culture acts as a mediating factor, impacting the relationship between service quality and student happiness. It highlights the importance of examining organizational culture through an anthropological perspective, where culture is both influenced by and influences the behaviours and perceptions of its members, such as students whose satisfaction can be greatly affected by their cultural environment (Cameron & Quinn, 2011).

Furthermore, Weiner's Attribution Theory, specifically his conceptualization, offers a deeper understanding of how humans ascribe reasons to their experiences, influencing their degrees of happiness. This hypothesis in the research explains how students' views on service quality result in judgements about organizational culture, which in turn affect their satisfaction. Students' happiness might be influenced by their perceptions of service experiences, which they attribute to the organizational culture (Weiner, 2006).

Moreover, Howard and Sheth's Theory of Buyer Behaviour (Howard & Sheth, n.d.) is the main framework that connects the fundamental themes of the research. This theory provides a detailed framework for comprehending how customers, namely students, make decisions by including motivations, different options, and decision influencers. Organizational culture is proposed to have a crucial role in connecting service quality and student happiness, which is

shaped by how students perceive and experience service quality (Howard & Sheth, 1968, 2001).

This study uses theories to provide a comprehensive theoretical framework to explore how service quality aspects and organizational culture impact student happiness, with a specific emphasis on the mediating function of organizational culture. The research intends to enhance the comprehension of the intricate relationship between service quality, organizational culture, and student happiness in Saudi Arabian higher education. This underpinning function of the meta-theory of buyer behaviour for the micro theories for service quality, organizational culture, and student satisfaction is graphically illustrated in Figure 1.

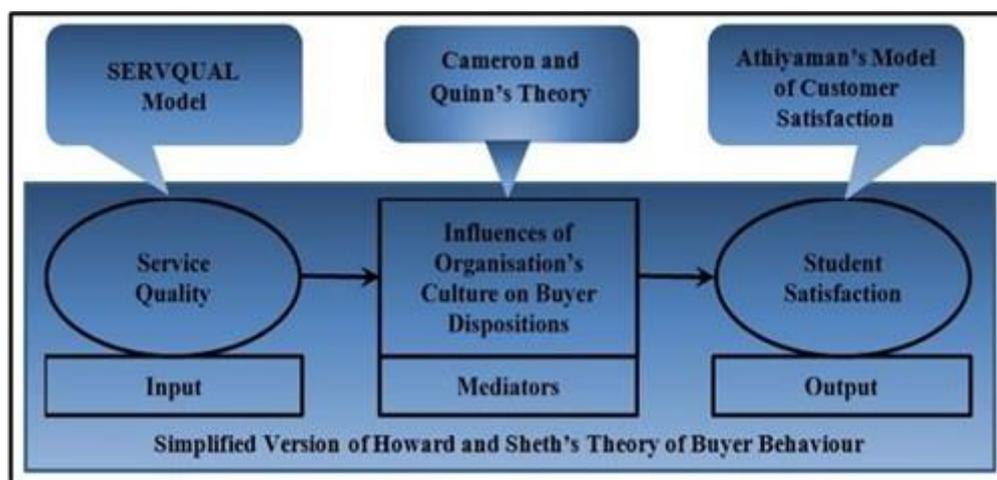


Figure 1: Theoretical framework

Conceptual Framework

The conceptual framework of this study intricately examines the interplay between service quality, organizational culture, and student satisfaction within Umm Al-Qura University, a leading institution in the higher education landscape of Saudi Arabia. Anchored in Howard and Sheth's Theory of Buyer Behavior (1968, 2001), this framework delineates a systematic exploration of the causal relationships among these variables, positioning service quality as the initial independent variable, organizational culture as a pivotal mediator, and student satisfaction as the ultimate dependent outcome.

Service quality, as conceptualized through the lens of the SERVQUAL model by Parasuraman et al. (2005), encompasses five fundamental dimensions: reliability, responsiveness, assurance, empathy, and tangibles. This model articulates the premise that the quality of service, as perceived by students, exerts a direct impact on their perceptions of the overall organizational culture and, consequently, on their satisfaction with the educational services rendered.

Organizational culture is examined as a unified construct through Cameron and Quinn's (2011) Competing Values Framework, encompassing the four cultural traits of involvement, consistency, adaptability, and mission. Rather than treating these as separate mediating variables, this study conceptualizes organizational culture as a higher-order construct that

captures students' overall perceptions of the institutional culture. This mediating variable embodies the informal, underlying forces that influence stakeholders' perceptions and valuations of the institution.

The framework posits that each service quality dimension influences students' overall perceptions of organizational culture, which in turn affects their satisfaction levels. This approach aligns with Weiner's Attribution Theory (2006), suggesting that students' attributions regarding service quality experiences inform their holistic perceptions of the organizational culture, thereby affecting their satisfaction levels.

Student satisfaction is conceptualized following Athiyaman's (1997) model, which identifies it as a result of students' emotions, attributions, and the confirmation or disconfirmation of their expectations. It represents the cumulative effect of the educational institution's service quality and organizational culture on the students' evaluation responses.

The structured conceptual framework outlined in Figure 2 posits that service quality dimensions directly influence overall organizational culture perceptions, which subsequently impact student satisfaction. The framework hypothesizes significant indirect effects of service quality dimensions on student satisfaction, mediated through organizational culture perceptions. This simplified approach eliminates the complexity of multiple mediating pathways while maintaining theoretical rigor and empirical testability.

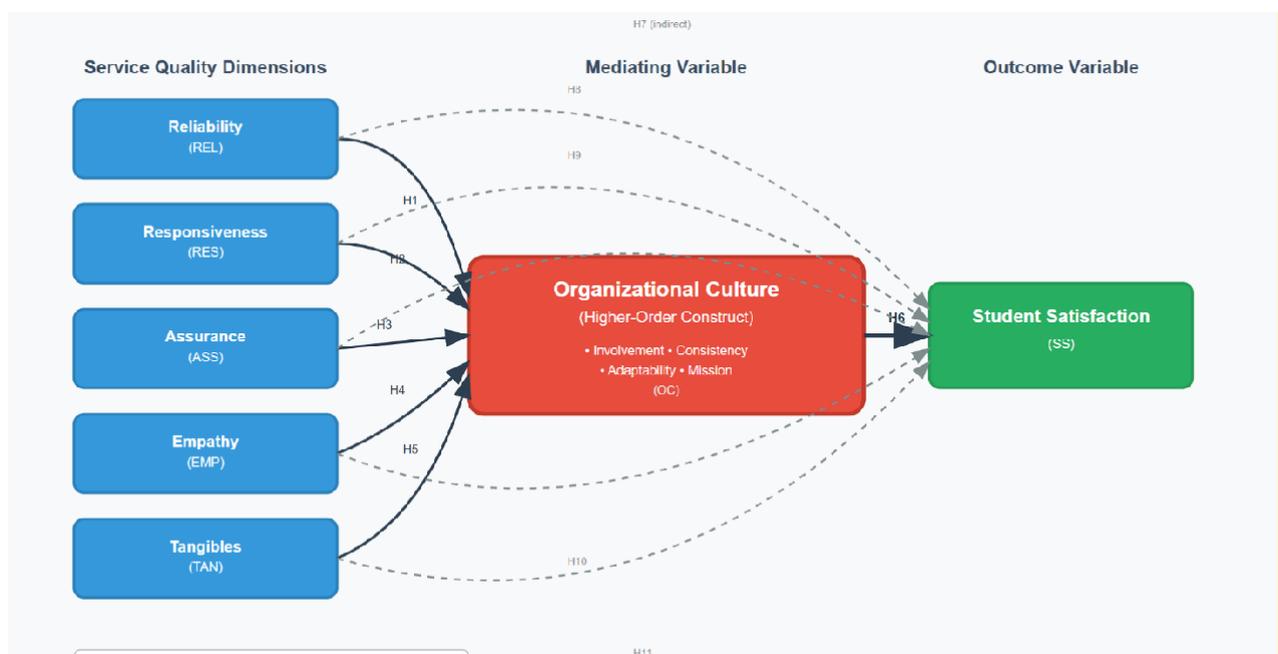


Figure 2: Conceptual framework

Hypothesis Development

Service Quality Dimensions and Perceived Organizational Culture

The development of hypotheses linking service quality dimensions to organizational culture requires careful theoretical consideration within the Saudi Arabian higher education context. Drawing on Attribution Theory (Weiner, 2006) and Social Exchange Theory (Blau, 1964), students form attributions about institutional values and organizational systems based on their service experiences. However, these attributions processes operate differently across

cultural contexts, particularly in high power distance, collectivist societies like Saudi Arabia (Hofstede, 2011).

Reliability, as a cornerstone of service quality, traditionally shapes organizational perceptions through consistent service delivery (Parasuraman et al., 2005). However, in high power distance cultures, students may attribute service delays to legitimate hierarchical processes rather than organizational inefficiency (Furrer et al., 2000). This cultural context suggests that reliability effects on cultural perceptions may be attenuated in Saudi educational settings, where formal authority structures and consultative decision-making processes are culturally valued (Alamri, 2015).

H1: Reliability is positively related to organisational culture.

Responsiveness represents a willingness to help students and provide prompt service. While generally positive in individualistic cultures (Trivellas & Dargenidou, 2009), excessive responsiveness may be perceived as bypassing appropriate hierarchical protocols in high power distance societies (Asree et al., 2010). Saudi students may interpret measured, consultative responses as more culturally appropriate than immediate individual attention, potentially moderating the responsiveness-culture relationship.

H2: Responsiveness is positively related to organisational culture.

Assurance, encompassing competence, credibility, and trustworthiness, transcends cultural boundaries as a universal driver of positive organizational attributions (Kelley, 2013). In uncertainty-avoidant cultures like Saudi Arabia, assurance becomes particularly critical as it addresses the fundamental needs for predictability and competence. Students form cultural attributions based on faculty and staff competence, viewing these as indicators of institutional values aligned with Islamic educational principles of excellence (Ihsan) (Bin Hassan et al., 2019).

H3: Assurance is positively related to organisational culture.

Empathy, representing individualized attention and caring service, aligns strongly with Islamic educational principles of student welfare (Ri'ayah) and personalized guidance (Tarbiyah). In collectivist cultures, empathy signals organizational values that extend beyond transactional relationships to encompass holistic student development (Alomiri, 2016). Students interpret empathetic treatment as evidence of institutional culture that values human dignity and individual growth, core principles in Islamic higher education philosophy.

H4: Empathy is positively related to organisational culture.

Tangible elements, including physical facilities, technology, and environmental quality, function as powerful cultural symbols in status-conscious societies like Saudi Arabia. Students interpret well-maintained, culturally-appropriate facilities as evidence of institutional respect for Islamic values and commitment to educational excellence (Jiewanto et al., 2012). The visual and aesthetic elements communicate institutional priorities and values, directly influencing cultural perceptions (Cameron & Quinn, 2011).

H5: Tangible is positively related to organisational culture.

Perceived Culture and Satisfaction

Organizational culture, as conceptualized through Cameron & Quinn's (2011) framework, serves as a proximal predictor of student satisfaction within Howard & Sheth's (1968) buyer behavior model. Culture represents students' internalized understanding of institutional values and priorities, functioning as a cognitive schema through which educational experiences are interpreted and evaluated (Alvesson & Sveningsson, 2015). In collectivist cultures, this cultural alignment becomes particularly important as students seek educational environments that reflect their values and social identity.

H6: Organisational culture is positively related to students' satisfaction. Perceived Culture as Mediator

The mediating role of organizational culture represents a significant extension of existing service quality research. While direct service quality-satisfaction relationships are well-established (Parasuraman et al., 2005), the cognitive and cultural mechanisms explaining these relationships remain unexplored, particularly in non-Western contexts. Drawing on Social Cognitive Theory (Bandura, 1991), organizational culture serves as the primary cognitive schema through which students process, service quality experiences before forming satisfaction judgments.

This mediation process operates through attribution mechanisms where students experience service quality dimensions, form attributions about underlying organizational values, develop cultural perceptions based on these attributions, and evaluate satisfaction based on cultural alignment. The strength of these mediation effects varies by cultural context and service quality dimension, with some dimensions (assurance, empathy, tangibles) more likely to produce positive cultural attributions than others (reliability, responsiveness) in high power distance contexts (Weiner, 2005).

The anthropological perspective adopted in this study views culture as an endogenous variable shaped by internal stakeholder experiences rather than a purely exogenous factor. This approach addresses calls for testing intermediate mechanisms linking service quality and satisfaction (Pham et al., 2019) while providing a cultural context for understanding these relationships in Islamic higher education settings.

H7: Organisational culture mediates the relationship between reliability and students' satisfaction.

H8: Organisational culture mediates the relationship between responsiveness and students' satisfaction positively.

H9: Organisational culture mediates the relationship between assurance and students' satisfaction positively.

H10: Organisational culture mediates the relationship between empathy and students' satisfaction positively.

H11: Organisational culture mediates the relationship between tangible and students' satisfaction positively

Methodology

This study used a quantitative, survey-based research approach to gather empirical data for hypothesis testing. The study included all 87,852 undergraduate students of Umm Al-Qura University from more than 30 schools. A systematic questionnaire was created for self-administration to gather data. The initial sample size of 384 students recommended by Krejcie and Morgan was expanded to 2,000 students to meet the needs of the structural equation modelling (SEM) analysis, which is more effective with higher sample sizes.

The participants were selected using non-probability, purposive sampling based on two criteria: Saudi nationality and current enrollment as undergraduates. This strategy allowed for reaching the most relevant responders while simulating the advantageous outcomes of randomization at a reduced expense and time. The research analysed correlations among perceptions of service quality, organizational culture, and satisfaction at the individual level, using individual students as the unit of analysis.

The survey questionnaire had four components. The first demographic data obtained. The following assessed perceptions of service quality using the SERVEQUAL scale. Another part focused on how organizational culture is perceived and its many elements. Finally, a satisfaction scale measured the outcome variable. All scale items used 5-point Likert answer styles. In short, the technique allowed for the gathering of quantitative perceptual data from a specifically chosen group of undergraduate students at Umm Al-Qura University to examine the proposed model of organisational culture influencing the link between service quality and satisfaction. Structural equation modelling was scheduled for data analysis.

Measurement Scales

The measurement scales used in this study were adapted from established sources in the literature. Student satisfaction was measured using 10 items from (Athiyaman, 1997; Douglas et al., 2006; Hasani et al., 2020) capturing satisfaction with enrollment decisions as well as aspects of teaching quality, facilities, and support services. Organizational culture was adapted from the Denison Organizational Culture Survey (Ambrož & Praprotnik, 2008; Denison, 2006) with 20 items across involvement, consistency, adaptability and mission dimensions. Finally, service quality used the widely employed SERVQUAL scale (Parasuraman et al., 2005) with its five dimensions of reliability, responsiveness, assurance, empathy and tangibles represented by 22 items related to service delivery and support. In summary, previously validated scales were customized for the university context to measure the key perceptual constructs in this study - service quality, organizational culture, and student satisfaction.

Results

The overarching research question was whether students' perception of service quality had a direct influence on their satisfaction. Descriptive statistics, as well as tests of statistical assumptions, were presented in the first section of this section. This is followed by the two-step Structural Equation Modelling (SEM) analysis. Finally, tests of the hypotheses were reported, and the assessment of the structural model was presented.

Response Rate

A total of 2,000 questionnaire copies was personally administered to students at Umm Al-Qura University by the researcher. Of these, 1,584 completed questionnaires were returned, yielding a response rate of 79.2%. The returned questionnaires were examined for quality and completeness. 50 questionnaires containing outliers or substantial missing data were removed. The final analysis utilized 1,534 high-quality, sufficiently complete questionnaires. This sample size exceeded the recommended 10:1 ratio of observations to model parameters (Hair et al., 2010; Kline, 2011), indicating the adequacy to proceed with structural equation modeling. Missing data was not replaced or estimated as the extent exceeded the acceptable threshold of 5% (Hair et al., 2010). In summary, out of 2,000 distributed surveys, 1,534 valid and usable responses were obtained for a final usable response rate of 76.7% - deemed sufficient for robust analysis.

Sample Characteristics

In the survey conducted, 66.8% of the 1,534 respondents were male, indicating a higher participation rate among male students. The age distribution shows a concentration in the 21 to 23 years old bracket, representing 53.8% of the participants, followed by those aged 18 to 20, accounting for 29.6%. This suggests a maturity level that could influence the reliability of responses. Distribution across academic years was even, with a slight predominance of final-year students at 30.9%, while first-year students constituted the smallest group at 19.1%.

The academic department representation showed Da'awah, Shari'ah, and Social Sciences as the most represented, cumulatively accounting for 38.9% of responses. This was followed by Engineering and Arabic Language departments, with 7.7% and 6.6% respectively, while other departments formed the remaining responses. The majority of respondents, over 70%, were from the Main campus, highlighting a centralization of the response demographic, with Al-Adham and Al-Jamoum campuses contributing in the least, at 1.8% and 3.4% respectively.

This demographic distribution of respondents from Umm Al-Qura University encompasses a broad spectrum of students across different years of study and departments, albeit with a noticeable skew towards male students and those from specific faculties. This diversity is instrumental in assessing varied perceptions and experiences, offering insights into potential demographic influences on the study outcomes.

Data Analysis and Results

Normality

To determine the normality of the distribution, skewness and kurtosis values are analyzed, with 0 values indicating perfect normality, though this is rarely achieved in practice. (George & Mallery, 2018) suggest that skewness and kurtosis values within the range of -2 to +2 are acceptable. Furthermore, previous studies have established that Z-values for skewness below ± 3 and for kurtosis below ± 7 typically denote normal distribution (Estimates and Tests in Structural Equation Modeling., 2007).

Regarding sample size, (Hair, et al., 2016) note that smaller samples (under 50 cases) may adversely affect normality assessments more than larger samples (over 200 cases), recommending a critical cut-off value of ± 2.58 for both skewness and kurtosis. In this study,

all constructs fell within this acceptable range, with skewness and kurtosis values ranging from - 0.009 to 2.092, suggesting an almost normal distribution as detailed in Table 2.

Table 2

Skewness and kurtosis for constructs

Variables	Dimensions	Code	Skewness	Kurtosis	
Service Quality	Tangibles	TA	.092	.468	-.167
	Responsiveness	RES	.376		
	Assurance	AS	.316		
	Empathy	EM	.516		
	Reliability	REL	.153		
Organisational Culture	Involvement	INV	.337	.398	-.373
	Consistency	CON	.212		
	Adaptability	ADPT	.516		
	Mission	M	-.042		
Students Satisfaction		SS	.092		-.167

The Measurement Model*Reliability of Constructs*

To investigate the reliability status of the instruments, Cronbach's Alpha reliability analysis was performed for the dimensions used in the study such as service quality, organizational culture and students' satisfaction. SPSS version 24 was used to investigate the reliability (internal consistency) of the construction. The outcome of the reliability analysis showed that the service quality (tangibility, responsiveness, assurance, empathy and reliability), organizational culture (involvement, consistency, adaptability and mission) and students' satisfaction gave acceptable levels of reliability values. The result shows that all constructs' reliability values are above 0.7 which is the generally accepted cut-off point (Nunnally and Bernstein, 1994). The results are shown in Table 3.

Table 3

Reliability results

Factors	Dimensions	Code	No. of Items	Cronbach's Alpha	
Service Quality	Tangibles	TA	4	.744	.933
	Responsiveness	RES	4	.803	
	Assurance	AS	4	.836	
	Empathy	EM	5	.843	
	Reliability	REL	5	.765	
Organisational Culture	Involvement	INV	8	.930	.963
	Consistency	CON	5	.848	
	Adaptability	ADPT	5	.871	
	Mission	M	4	.870	
Students Satisfaction		SS			.907

Validity and Reliability

The confirmatory factor analysis generated factor loadings that measured the relationships between scale items and hidden latent variables. Loadings greater than 0.5 indicate that the scale item effectively represents the construction. In this instance, almost all questions had robust loadings over 0.6, indicating great convergent validity. The items successfully measure the targeted dimensions of service quality, organizational culture, and contentment. Greater loadings indicate stronger item-construct relationships. Low standard errors and critical ratio p-values < 0.001 support the statistical accuracy and importance of loading connections.

The composite reliability above 0.7 and average variance extracted estimations over 0.5 for all constructs demonstrate strong internal reliability and the variance explained by the measurement models. The comprehensive investigation of the measurement model indicates strong evidence of reliability and validity. The substantial factor loadings indicate that the survey questions effectively measure the targeted theoretical constructs. The measuring instrument has strong psychometric qualities due to its reliable construct and extracted variance. Table 4 below illustrate the standard factor loadings of all variables.

Table 4
Standardized factor loadings

Construct	Dimensions	Items	Factor Loading	S.E.	C.R.	P	CR	AVE
Service Quality		REL1	0.643	NA	NA	NA		
	Reliability	REL2	0.745	0.048	24.01	** *	0.78 2	0.47 5
		REL3	0.762	0.046	24.413	** *		
		REL5	0.592	0.041	19.977	** *		
	Responsiveness	RES1	0.504	0.043	19.105	** *		
		RES2	0.801	0.035	31.13	** *	0.82 4	0.54 8
		RES3	0.864	0.034	33.626	** *		
		RES4	0.741	NA	NA	NA		
		ASS1	0.792	0.037	31.114	** *		
	Assurance	ASS2	0.704	0.038	27.413	** *	0.83 8	0.56 4
		ASS3	0.762	0.036	29.829	** *		
		ASS4	0.743	NA	NA	NA		
		EMP1	0.793	0.029	33.739	** *		
	Empathy	EMP2	0.832	0.02	35.97	** *	0.87 1	0.62 7
				9	2	*		
		EMP3	0.75	0.028	36.091	** *		
		EMP4	0.791	NA	NA	NA		
		TAN1	0.54	NA	NA	NA		
	Tangibles	TAN2	0.663	0.061	16.049	** *	0.62 5	0.35 9
		TAN3	0.587	0.061	15.172	** *		
Organisational Culture		CON4	0.662	NA	NA	NA		
	Consistency	CON3	0.698	0.048	24.415	** *		
		CON2	0.772	0.045	26.526	** *	0.83 8	0.51
		CON1	0.764	0.047	26.359	** *		
		CON5	0.666	0.043	23.474	** *		

	PAR4	0.855	NA	NA	NA		
	PAR3	0.85	0.023	43.436	** *		
	PAR2	0.82	0.023	40.76	** *		
Involvement	PAR1	0.829	0.022	41.482	** *		
	PAR5	0.829	0.023	41.634	** *	0.93 8	0.65 3
	PAR6	0.764	0.024	36.423	** *		
	PAR7	0.719	0.026	33.208	** *		
	PAR8	0.79	0.025	38.41	** *		
	M4	0.772	NA	NA	NA		
Mission	M3	0.769	0.028	36.323	** *	0.85 6	0.59 8
	M2	0.715	0.033	29.093	** *		
	M1	0.832	0.031	34.92	** *		
	ADPT 1	0.808	NA	NA	NA		
Adaptability	ADPT 3	0.784	0.045	27.82	** *	0.84 8	0.58 3
	ADPT 2	0.683	0.037	32.726	** *		
	ADPT 5	0.774	0.041	26.847	** *		
Students' Satisfaction	SAT5	0.731	NA	NA	NA		
						0.85	0.45 1

The Assessment of the Structural Model

The final structural model for the study has achieved a satisfactory outcome for the indices of the model. It was revealed from the result that, the total model fit was robust (as shown in Figure 3), the validated measurement model was transformed into the hypothesized structural model by replacing inter-construct correlations with causal paths. Initial estimation revealed some inadequate fit indices (RMSEA = 0.061; CFI = 0.876; TLI = 0.869) and low factor loadings. After iterative modifications such as removing problematic items, the final structural

model demonstrated improved fit - the chi-square value ($\chi^2 = 4479.201$), degrees of freedom ($df = 751$) and p-value ($p = 0.000$) indicate model fit. Additionally, the RMSEA value of 0.057 and CFI/TLI values exceeding 0.90 now meet recommended thresholds.

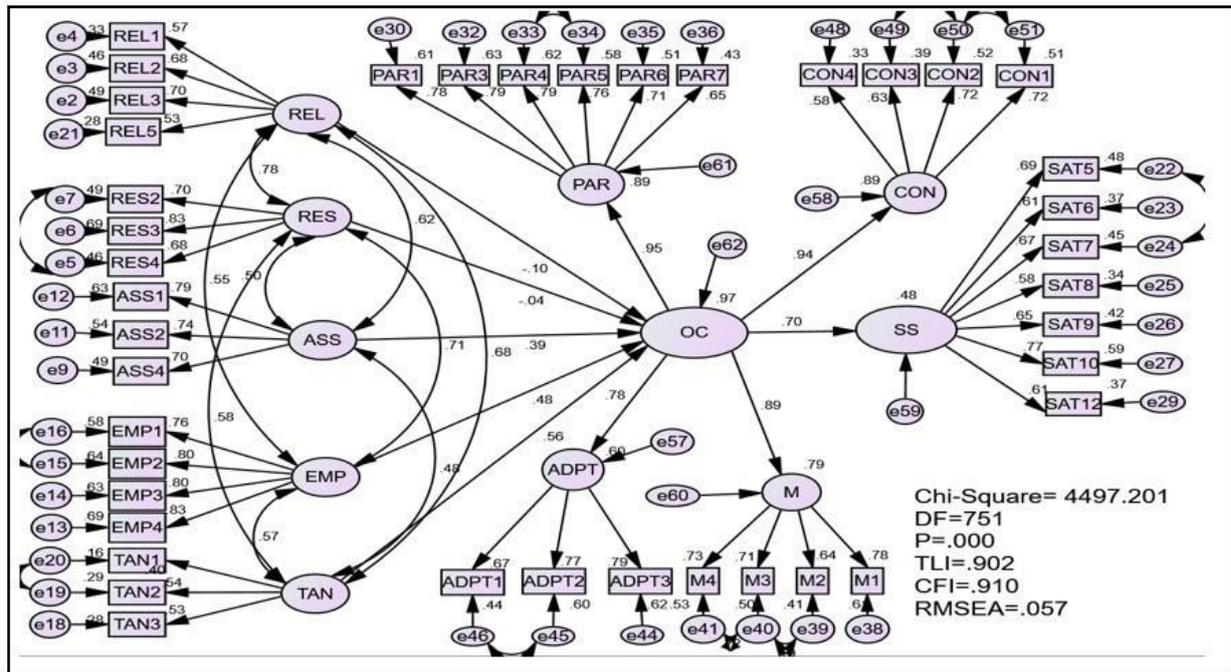


Figure 3: Revised structural model

Squared Multiple Correlation (R²) of the Structural Model

In addition, the squared multiple correlations or R^2 of the structural model on organisational culture and students' satisfaction were 0.97 and 0.48 respectively. Hence, the result shows that service quality (tangibility, responsiveness, assurance, empathy and reliability) explained 97% of the variance in organisational culture and 48% of the variance in students' satisfaction as shown in Figure 3 and Table 5.

Table 5
Results of analysis for the hypothesized model

Endogenous Variables	Determinants	Hypothesised Model		
		R ²	Coefficient	
			Direct	Indirect
OC	REL	.97 (97%)	-.104	N.A
	RES		-.043	N.A
	ASSU		.393	N.A
	EMP		.479	N.A
	TAN		.556	N.A
	OC		.695	N.A
	REL		N.A	-.070

SS	RES	.48 (48%)	N.A	-.029
	ASS		N.A	.237
	EMP		N.A	.333
	TAN		N.A	.386

The Direct Hypotheses

Structural equation modeling analysis tested six direct hypotheses. Among these, the relationships between reliability and organizational culture ($\beta = -0.104, p > 0.05$) and between responsiveness and culture ($\beta = -0.043, p > 0.05$) were statistically non-significant. However, positive effects emerged between assurance and culture ($\beta = 0.393, p < 0.05$), empathy and culture ($\beta = 0.479, p < 0.05$), tangibles and culture ($\beta = 0.556, p < 0.05$) as well as between culture and student satisfaction ($\beta = 0.695, p < 0.000$). Thus, of the six proposed direct relationships between the constructs of service quality, organizational culture and student satisfaction, four were supported with the latter link between culture and satisfaction showing a particularly strong effect. Non-significant paths involving reliability and responsiveness indicate these service quality dimensions may not directly inform cultural perceptions. Overall, the analysis provided partial empirical evidence aligning with several hypothesized relationships. The structural model assessment as shown in Table 6 indicates that the hypotheses test, namely estimates of t-values and p-values.

Table 6

Direct hypotheses testing result of structural model

Hypo	Exog.	→	Endo.	β	T-Value	P-Value	Status	Result
H1	RE L	→	OC	-.104	-1.509	.131	N.S	Not Supported
H2	RE S	→	OC	-.043	-.558	.577	N.S	Not Supported
H3	ASSU	→	OC	.393	5.534	0.000	Sig	Supported
H4	EM P	→	OC	.479	5.491	0.000	Sig	Supported
H5	TAN	→	OC	.556	5.624	0.000	Sig	Supported
H6	OC	→	SS	.695	19.923	0.000	Sig	Supported

Indirect Hypotheses

According to results of bootstrapping procedure, among the five indirect relationship in the model, two relationships have turned out to be statistically not significant are shown in the Table 7. These are relationships between reliability and students' satisfaction through organisational culture ($\beta = -0.070, SE = .078, p > 0.01$), and between responsiveness and students' satisfaction through organisational culture ($\beta =$

-0.29, SE = .066, $p > 0.01$). However, the other three indirect hypothesized relationships were all statistically significant at the level less than 0.01. These are the relationships between assurance and students' satisfaction through organisational culture ($\beta = 0.237$, SE = .065, $p < 0.01$), between empathy and students' satisfaction through organisational culture ($\beta = 0.333$, SE = .062, $p < 0.01$) and between empathy and students' satisfaction through organisational culture ($\beta = 0.386$, SE = .072, $p < 0.01$).

Table 7

Bootstrap results: Standardized indirect effect

Hypo	Exog	Hypo →	Endo	β	SE	95% Conf. Interval		P. Value	Result	
						Lower	Upper			
H7	REL	OC	OC	SS	-.070	.078	-.170	.024	.228	Not Supported
H8	RES	OC	OC	SS	-.029	.066	-.128	.079	.589	Not Supported
H9	ASU	OC	OC	SS	.237	.065	.157	.371	.003	Supported
H10	EMP	OC	OC	SS	.333	.062	.181	.443	.003	Supported
H11	TAN	OC	OC	SS	.386	.072	.292	.507	.003	Supported

Discussion

This study successfully explored the intricate relationships between service quality dimensions, organizational culture, and student satisfaction within the Saudi Arabian higher education context, yielding findings that advance both theoretical understanding and practical applications. The results provide compelling evidence for the mediating role of organizational culture in service quality-satisfaction relationships while revealing important cultural moderations that challenge universal assumptions about service quality effects.

The hypothesis linking reliability to organizational culture (H1) was not supported, presenting a finding that, while initially unexpected, provides valuable insights into cultural attribution processes. This result diverges from positive connections found in Western contexts (Sukdeo et al., 2020) but aligns with emerging research in high power distance cultures. The distinctive power distance characteristic of Saudi culture (Alamri, 2015; Hofstede, 2011) offers a compelling explanation for this phenomenon. In hierarchical societies, students may attribute service delays to legitimate bureaucratic processes rather than organizational inefficiency, as suggested by Furrer et al., (2000) who documented negative reliability effects under high power distance conditions. This finding extends Attribution Theory (Weiner, 2006) by demonstrating that cultural context fundamentally alters the attribution process itself. Students in Saudi Arabia appear to form attributions about reliability through cultural lenses that expect and accept hierarchical decision-making processes, thereby neutralizing potential negative effects of perceived unreliability on cultural perceptions.

Similarly, the rejection of the responsiveness-culture hypothesis (H2) provides important theoretical insights. This finding reflects patterns observed in Malaysia by Asree et al. (2010), where high power distance negated responsiveness effects, contrasting sharply with positive effects documented in lower power distance contexts like Spain (Trivellas & Dargenidou, 2009). The theoretical implication extends beyond simple cultural moderation to suggest that rapid responsiveness may actually violate cultural expectations about appropriate organizational behavior. In Islamic educational contexts, measured consultation (Shura) and respect for authority structures represent core values that conflict with immediate individual responsiveness. These findings challenge Western-derived assumptions about service quality universality and supports the need for culturally-grounded service quality frameworks.

The strong support for assurance (H3), empathy (H4), and tangibles (H5) hypotheses reveals a theoretically coherent pattern that aligns with Islamic educational philosophy and collectivist cultural values. These findings resonate with studies from Iran, Pakistan, and Greece, highlighting the cross-cultural robustness of these particular service quality dimensions. The theoretical significance lies in understanding why these dimensions transcend cultural boundaries while others do not. Assurance addresses fundamental uncertainty avoidance needs that intensify in collectivist cultures where individual risk-taking is discouraged. The competence and trustworthiness conveyed through assurance align with Islamic concepts of excellence (Ihsan) and reliability (Amanah), creating natural, cultural resonance. Empathy's strong effect reflects the Islamic educational emphasis on individualized attention (Ri'ayah) and holistic development (Tarbiyah), suggesting that culturally aligned service dimensions produce stronger attribution effects than culturally neutral ones.

The tangibles finding provides particularly rich theoretical insights. Physical facilities and environmental quality function as powerful cultural symbols that communicate institutional values and priorities (Jiewanto et al., 2012). In status-conscious cultures like Saudi Arabia, tangible elements signal institutional prestige and commitment to excellence, directly influencing cultural attributions. The Islamic aesthetic and architectural principles further enhance this relationship, as students interpret well-maintained, culturally-appropriate facilities as evidence of institutional respect for Islamic values. This extends Symbol Management Theory by demonstrating how cultural congruence amplifies symbolic effects. The strong positive relationship between organizational culture and student satisfaction (H6) provides crucial validation for the anthropological perspective adopted in this study. With a beta coefficient of 0.695, culture emerges as the most powerful predictor of satisfaction, supporting Howard & Sheth's (1968) proposition that perceptual constructs serve as proximal predictors of evaluative responses. These findings challenge traditional approaches that treat culture as a distal antecedent and instead position it as a primary mechanism through which students interpret and respond to their educational experiences. The theoretical implication suggests that satisfaction formation operates through cultural sense-making processes rather than direct service evaluation, fundamentally altering how we understand student satisfaction development.

The mediation results provide the study's most significant theoretical contribution. The rejection of mediation hypotheses for reliability (H7) and responsiveness (H8) demonstrates that not all service quality dimensions operate through cultural pathways. These null findings

are theoretically important because they suggest that negative or neutral service experiences may bypass cultural processing mechanisms. When students attribute reliability problems to legitimate hierarchical processes, these attributions do not inform cultural perceptions, thereby eliminating mediation pathways. This extends Mediation Theory by identifying boundary conditions where mediation effects fail to materialize due to alternative attribution frameworks.

Conversely, the strong mediation effects for assurance (H9: $\beta = 0.237$), empathy (H10: $\beta = 0.333$), and tangibles (H11: $\beta = 0.386$) demonstrate robust cultural pathways for culturally-aligned service dimensions. These findings support Social Cognitive Theory's proposition that environmental stimuli influence behavior through cognitive processing mechanisms. Students experience these service quality dimensions, form positive attributions about organizational values, develop enhanced cultural perceptions, and subsequently report higher satisfaction. The mediation process validates the anthropological perspective by showing how cultural perceptions emerge from stakeholder experiences rather than existing as static organizational properties.

The pattern of results provides compelling evidence for cultural specificity in service quality effects. The selective mediation pattern suggests that universal application of Western-derived service quality models, requires careful cultural calibration. Service quality dimensions that align with local cultural values (assurance, empathy, tangibles) demonstrate strong effects, while those that conflict with cultural expectations (reliability, responsiveness) show attenuated or null effects. This finding has profound implications for Cross-Cultural Management Theory, suggesting that service frameworks require cultural embedding rather than simple adaptation.

Conclusion

This investigation successfully demonstrated that organizational culture functions as a critical mediating mechanism linking service quality perceptions to student satisfaction within Saudi Arabian higher education, challenging traditional assumptions about universal service quality effects. Through systematic examination of 1,534 undergraduate students at Umm Al-Qura University using structural equation modeling, the study revealed that cultural context fundamentally alters how students process and respond to service experiences.

The research employed a quantitative survey approach grounded in Howard and Sheth's buyer behavior theory, integrating SERVQUAL dimensions with Cameron and Quinn's cultural framework to examine mediated pathways. The structural equation modeling analysis yielded a coherent pattern of results that illuminates the cultural specificity of service quality effects. While assurance, empathy, and tangibles demonstrated strong positive relationships with cultural perceptions and significant mediation effects on satisfaction, reliability and responsiveness showed non-significant impacts—a finding that proves theoretically illuminating rather than problematic.

These selective effects reveal that service quality dimensions aligned with Islamic educational values and collectivist cultural orientations (assurance's emphasis on competence and trust, empathy's focus on individualized attention, tangibles' symbolic representation of institutional commitment) successfully influence cultural perceptions and subsequent

satisfaction. Conversely, dimensions that conflict with high power distance expectations (reliability and responsiveness, which may violate cultural norms about hierarchical decision-making and consultative processes) fail to generate positive cultural attributions. The 97% variance explained in organizational culture and 48% in student satisfaction demonstrate the robustness of these culturally-grounded relationships.

This research makes several significant theoretical contributions that advance, multiple domains of scholarly inquiry. The study extends Attribution Theory by demonstrating that cultural context fundamentally alters attribution formation processes, with students interpreting identical service experiences differently based on cultural frameworks. The anthropological perspective on organizational culture challenges conventional wisdom by positioning culture as an endogenous variable shaped by stakeholder experiences rather than a static contextual factor. The demonstration of selective mediation effects advances Service Quality Theory by revealing that universal application of Western-derived frameworks requires cultural embedding rather than simple adaptation. These findings have profound implications for Cross-Cultural Management Theory, suggesting that effective service delivery demands cultural alignment rather than standardized implementation.

From a practical standpoint, the research provides university administrators with evidence-based guidance for cultural transformation and satisfaction enhancement. The results indicate that leaders should strategically focus resources on assurance-building measures (competence development, trust-building initiatives), empathy-enhancing programs (individualized attention systems, personalized services), and tangible improvements (facility enhancement, technological upgrading) rather than pursuing Western-style rapid response systems that may be culturally inappropriate. This guidance proves particularly valuable for institutions navigating the cultural tensions inherent in Saudi Arabia's Vision 2030 educational transformation.

The study's focus on a single institution and cross-sectional design, while providing depth and rigor, creates boundaries for generalization that future research should address. The reliance on student perceptions, though theoretically appropriate for examining cultural sense-making processes, suggests value in incorporating multiple stakeholder perspectives to enrich understanding of cultural mediation dynamics.

Future research should pursue longitudinal designs to examine how service experiences shape cultural perceptions over time, providing stronger evidence for causal relationships. Multi-institutional studies across diverse Saudi universities would illuminate whether these patterns hold across varying institutional contexts and cultural intensities. Cross-national comparative research examining Islamic countries with different cultural characteristics would establish the boundary conditions of these findings and their applicability across the broader Islamic higher education landscape. Mixed methods approach combining quantitative mediation analysis with qualitative exploration of attribution processes would provide deeper insights into the cognitive mechanisms underlying cultural mediation.

This investigation demonstrates that understanding student satisfaction requires moving beyond universal service quality frameworks toward culturally grounded approaches that recognize the fundamental role of cultural sense-making in educational experiences. The

findings suggest that successful higher education management in diverse cultural contexts demands a sophisticated understanding of how cultural values interact with service delivery to shape stakeholder perceptions and responses. By revealing these mechanisms, this research contributes to both theoretical advancement and practical improvement in higher education management across culturally diverse contexts.

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