Exploring Library Service Quality Through Servqual: A Bibliometric Perspective

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The present study examines the pace of scholarly publications pertaining to the subject of "SERVQUAL" over a span of two and a half decades, specifically from 2000 to 2024. The dataset comprises a total of 391 research articles that have been published within the field of SERVQUAL throughout this period. An analysis and examination of various bibliometric parameters, including the distribution of publications over different years, articles, journals and the most productive authors. The results indicated that the year 2024 had the highest number of publications in the subject of SERVQUAL, with a total of 33 articles. Most publications are from research articles.

Keywords: SERVQUAL; University; Bibliometric, Service Quality; University Library.

INTRODUCTION

Quality in the management of any service industry, including libraries, is increasingly recognized as paramount for organizational success and survival in a competitive global environment (Datta & Vardhan, 2017). For higher education institutions, particularly those offering management education, providing and continuously improving quality education has a direct bearing on a country's economic future and an institution's competitiveness (Datta & Vardhan, 2017). In this context, libraries, as vital components of educational institutions, play a crucial facilitative role by providing resources and environments that foster intellectual, emotional, and social development, and enable customers to effectively utilize library resources (Long et al., 2019).

Traditionally, the quality of a library was often assessed based on its collection size, number of titles, breadth of subject coverage, and usage statistics (Nejati & Nejati, 2008). However, this traditional approach is no longer sufficient to meet the evolving demands and expectations of users, especially with the widespread adoption of Information and Communication Technology (ICT) (Sahu, 2007). Modern libraries are undergoing a drastic change from being mere storehouses of books to becoming dynamic "information generating factories" that process,

analyze, and repackage information (Haneefa et al., 2014). They now offer online catalogs, digital lending, virtual reference services, e-books, audiobooks, databases, and online journals, making vast digital resources accessible to users (Sharma et al., 2010). This shift towards digital services necessitates significant investments in digital resources and human competencies (Crișan & Ionescu, 2024). Furthermore, libraries serve as crucial community centers, providing diverse services beyond traditional book lending, such as digital literacy programs, health and well-being initiatives, and spaces for community events (Crișan & Ionescu, 2024). This expanded role means that libraries must adapt to meet an increasingly demanding array of public needs and proactively understand how the public evaluates their performance (Sharma et al., 2010).

The concept of service quality in libraries has evolved to focus on the assessment from the user's or customer's perspective (Haneefa et al., 2014). This user-driven view defines service quality as the difference between customers' expectations and their perceptions of the service received (Haneefa et al., 2014). A positive gap indicates quality service, while a negative gap suggests a lack of quality or unmet expectations (Haneefa et al., 2014). The primary goal of any library should therefore be to maximize user satisfaction and potentially exceed their expectations (Haneefa et al., 2014).

To quantitatively measure service quality, various models have emerged from the business sector, with SERVQUAL (Service Quality) being one of the most widely adopted instruments (Sahu, 2007). Developed by Parasuraman, Zeithaml, and Berry in the 1980s, SERVQUAL provides a robust theoretical framework for assessing service quality across various industries, including financial services, travel and tourism, retail management, and the mobile industry (Crișan & Ionescu, 2024) & (Datta & Vardhan, 2017). Its adaptability has led to its widespread application in the higher education sector and various library settings, including university, public, and special libraries globally (Sahu, 2007).

This paper aims to map the existing literature on the application of the SERVQUAL model in assessing service quality of libraries using a bibliometric approach. While the term "bibliometric approach" is provided in the query, the sources indicate an analysis of existing studies rather than a literal bibliometric study. Therefore, this paper synthesizes findings from various SERVQUAL studies in libraries to understand the trends, methodologies, key findings, and challenges reported in literature. This involves identifying recurrent themes, adaptations of the SERVQUAL model, commonly observed service quality gaps, and recommendations for improvement across different types of libraries and geographical regions. By systematically reviewing the research on SERVQUAL in libraries, this work seeks to provide a comprehensive overview of how this instrument has been utilized and its diagnostic value in enhancing library services.

Origin and Core Dimensions of SERVQUAL, the **SERVQUAL (Service Quality)** instrument is a widely used and seminal tool for measuring service quality, introduced by Parasuraman, Zeithaml, and Berry (PZB) in 1988 (Crișan & Ionescu, 2024). Prior to the 1988 model, Parasuraman (1985) had initially developed a 34-item service quality scale comprising 10 dimensions, which included reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding/knowing the customer, and tangibles (Ramseook-

munhurrun et al., 2010). After further extensive research, these were refined and collapsed into the five core dimensions that define the SERVQUAL model (Awan & Mahmood, 2013).

These **five dimensions** are:

Tangibles: Encompasses the physical facilities, equipment, and appearance of personnel (Udem et al., 2020). This also extends to materials associated with the service, such as posters and schedules, being visually appealing (Crișan & Ionescu, 2024).

Reliability: Refers to the ability to perform the promised service dependably and accurately (Udem et al., 2020). In a library context, this includes giving correct answers to reference questions, making relevant information available, and keeping records consistent with actual holdings (Nejati & Nejati, 2008).

Responsiveness: Represents the willingness to help customers and provide prompt service (Udem et al., 2020). This can be seen in the timeliness of delivering needed information and quickly re-shelving books (Nejati & Nejati, 2008).

Assurance: Pertains to the knowledge and courtesy of employees and their ability to inspire trust and confidence (Udem et al., 2020). It includes valuing all requests for information equally and staff competency (Asadu, 2018) & (Nejati & Nejati, 2008).

Empathy: Reflects the caring, individualized attention the firm provides to its customers (Udem et al., 2020). This dimension can include approachability of staff, ease of contact, and understanding specific user needs (Asadu, 2018) & (Crișan & Ionescu, 2024).

The SERVQUAL model measures service quality as the discrepancy (gap) between a customer's expectations for a service offering and their perceptions of the service received (Haneefa et al., 2014). A negative gap score indicates that perceptions are lower than expectations, implying unmet quality(Haneefa et al., 2014).

Application of SERVQUAL across Industries and Libraries SERVQUAL has been extensively applied across various industries, from financial services and travel to retail and mobile industries (Datta & Vardhan, 2017). Its utility has also extended significantly into the higher education sector, with a particular focus on management education (Datta & Vardhan, 2017).

Literature Review

In the evolving landscape of information services, the quality of libraries has shifted from traditional metrics like collection size and usage statistics towards a user-centric perspective (Sahu, 2007). This change is driven by the rapid development of information technology and the increasing demands and expectations of users (Sahu, 2007). Service quality, in this context, is defined as meeting or exceeding customer expectations, or the gap between what customers anticipate and what they actually perceive they received (Datta & Vardhan, 2017). This focus is crucial for libraries to maintain relevance, attract new users, and ensure satisfaction (Dash & Padhi, 2010).

To measure this, the SERVQUAL model, developed by Parasuraman, Zeithaml, and Berry, has emerged as a widely recognized instrument (Kiran, 2010). Initially comprising ten dimensions, it was later refined into five core dimensions: Tangibles (physical facilities, equipment, and staff appearance), Reliability (ability to perform promised services dependably and accurately), Responsiveness (willingness to help and provide prompt service), Assurance (knowledge, courtesy, and ability to inspire trust), and Empathy (caring, individualized attention) (Datta & Vardhan, 2017). The SERVQUAL model is rooted in the Gap Theory of Service Quality, which identifies a perceived "service quality gap" (Gap 5) as the difference between customer expectations and perceptions of the actual service delivered, influenced by various internal organizational gaps (Datta & Vardhan, 2017).

Despite its widespread adoption, SERVQUAL has faced criticisms regarding its five-factor structure's universality and the necessity of measuring expectations (Dash & Padhi, 2010). Some researchers argue that perception scores alone (SERVPERF) are more reliable indicators of service quality (Ramseook-munhurrun et al., 2010). However, the developers defend SERVQUAL's adaptability, asserting it can be modified to fit specific service contexts (Sharma et al., 2010). This adaptability has led to various modified versions and alternative tools, such as LibQUAL+, which includes dimensions like "effect of service," "information control," and "library as place" (Kiran, 2010).

The SERVQUAL model and its adaptations have been extensively applied in diverse library settings, including academic, public, and special libraries across various countries (Sahu, 2007). For instance, in the UAE, management education institutions revealed a significant negative gap between student expectations and perceptions across all five SERVQUAL dimensions, with the highest gap in assurance related to degree credibility and career opportunities, and the lowest in responsiveness (Datta & Vardhan, 2017). In Kerala, India, studies on university libraries consistently reported negative gap scores, indicating that user perceptions were lower than their expectations across most dimensions, particularly for physical facilities and technical processes (Haneefa, Mohamed., Aswaani, 2017). Conversely, library staff often received more favorable perceptions (Haneefa et al., 2014). Research in Bangladesh found public university library services falling short of expectations and identified unique service dimensions like effect of service (organizational and personal), collection and access, and library as a place (Ahmed & Shoeb, 2009). Similarly, Nigerian university libraries also exhibited unmet user expectations, with inadequacy of modern facilities (tangibility) being a critical desired yet unfulfilled area (Asadu, 2018). The knowledge, skills, and helpfulness of library staff are consistently highlighted as crucial for perceived service quality across studies (Sajna & Mohamed Haneefa, 2018). Ultimately, the literature emphasizes that continuous assessment of service quality is vital for libraries to adapt to evolving user needs and technological advancements, ensuring their ongoing relevance and value (Sahu, 2007).

OBJECTIVES OF THE STUDY

The following objectives of this study are as follows:

- To examine the research output on SERVQUAL Model.
- To examine the most significant publications on SERVQUAL model.
- To examine the most prolific article.

- To examine the most relevant source.
- To find out the most important keyword patterns.

RESEARCH METHODOLOGY

To identify the research output of SERVQUAL for a period of 25 years (2000–2024), the data were collected from the SCOPUS. The search strategy employed a combination of keywords related to SERVQUAL and universities. The search string used was: (TITLE-ABS-KEY("servqual") OR TITLE-ABS-KEY("servqual AND model") AND TITLE-ABS-KEY("UNIVERSIT*")) AND PUBYEAR > 2000 AND PUBYEAR < 2024. All the identified studies were exported to a text file. Data for this work was examined using VOSviewer and Bibliometrix (R-package). VOSviewer sees author cooperations, keyword co-occurrences, and citation networks. Driven by R, bibliometrix provides sophisticated statistical and graphical tools to enable exact bibliometric analysis. Unlike VOSviewer, it creates thematic maps and notes trending subjects in higher education leadership research. These instruments taken together gave thorough understanding of research subjects and publishing trends (van Eck & Waltman, 2010; Aria & Cuccurullo, 2017).

BIBLIOMETRIC ANALYSIS

COLLECTING AND CLEANUP

Scopus's search metadata was kept in CSV file form. A data curator's job consists of spotting and eliminating duplicates. In order to answer a research question or objective, this review follows the guidelines set in the PRISMA declaration (Page et al., 2021) and uses a methodical approach to extract the most relevant material from the literature in a particular topic. Excluded in total were 07 duplicates. One finds a study summary (PRISMA technique) in Figure. 1.
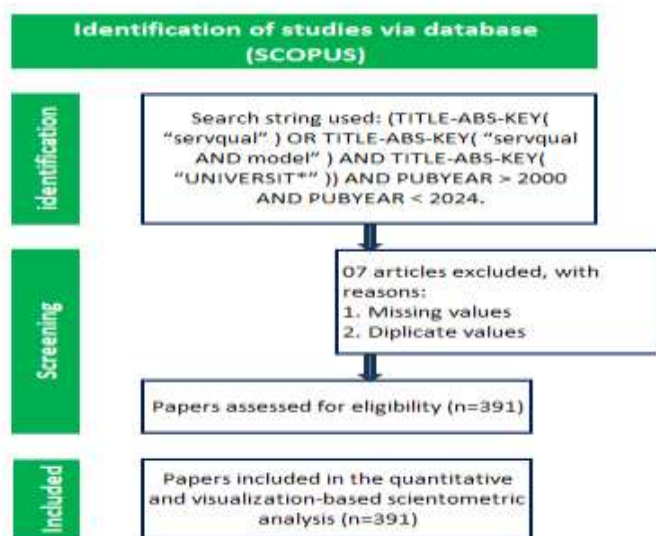

Figure. 1 Reviewing data using the PRISMA method.

Trend Analysis

In Table 1, the primary information of the collection that was analyzed is presented. This information comprises the primary information regarding the data, keywords, institutions, and authorship sources. According to Table 1, the sample consists of 391 publications that were published in **281** different sources. These articles were written by **1128** writers who were affiliated with **785** different institutions.

Table 1: Summary of result information

Description		Results	Description		Results
Main information about data	No. of Documents	391	Authors	Authors	1128
	Sources	281		Authors of Single-authored doc	55
	Annual Growth Rate %	8.18	Authors Collaboration	Co-Authors per Doc	3.07
	Average citations per doc	15.56		International co-authorships %	16.62
Document Content	Keywords Plus	993		References	12095

Source: Created by author

Annual number distribution and citations

Figure 2 clearly shows the temporal order and citation frequency of the 391 publications comprising the SERVQUAL research sample. Published papers show a constant increasing trend, a minimum of 5 in 2000 and maximum of 33 in 2024. Periods of notable increase indicate 2010–2013 and 2018–2021, therefore reflecting scholarly interest in the subject. Citations, meantime, show a more erratic trend. The highest citation count 572 recorded in 2000 most likely from important early publications. Following a continual decline, a peak in 2004 (553) followed which resulted in citations falling to 43 in 2024. This suggests that despite the volume of publications increased over time, the effect of citations changed, maybe suggesting changes in research significance. The data highlights changing research dynamics; contemporary studies have increased volume while nevertheless maintaining high citation rates. Publications in 2002 with an average of 10.75 citations come next: publications in 2019 with an average of 9.09, lowest in 2024 with an average of 0.71.

Figure. 2 Annual number publications and citations
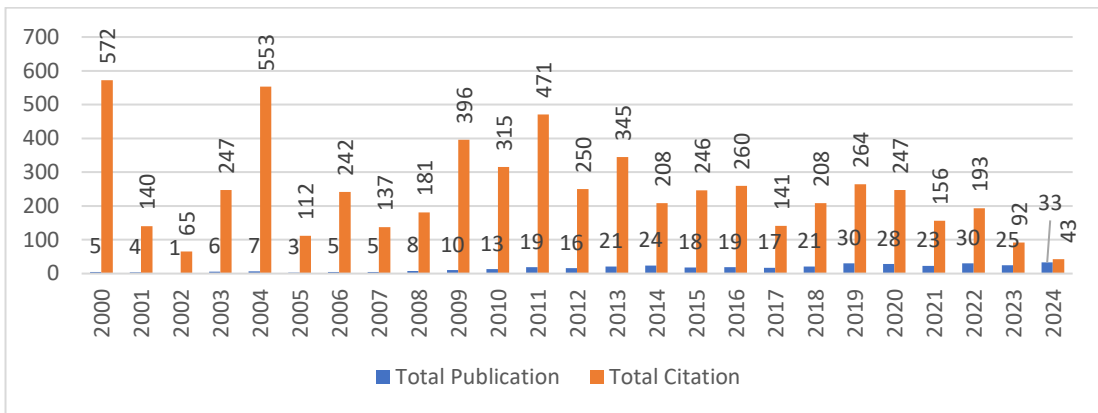
Source: Created by authors

TABLE 2 Number of Publications and citation

Year	Total Documents	Total Citations	Average Citation Per Year	Year	Total Documents	Total Citations	Average Citation Per Year
2000	5	572	9.40	2013	21	345	5.67
2001	4	140	2.30	2014	24	208	3.42
2002	1	65	1.07	2015	18	246	4.04
2003	6	247	4.06	2016	19	260	4.27
2004	7	553	9.09	2017	17	141	2.32
2005	3	112	1.84	2018	21	208	3.42
2006	5	242	3.98	2019	30	264	4.34
2007	5	137	2.25	2020	28	247	4.06
2008	8	181	2.98	2021	23	156	2.56
2009	10	396	6.51	2022	30	193	3.17
2010	13	315	5.18	2023	25	92	1.51
2011	19	471	7.74	2024	33	43	0.71
2012	16	250	4.11	-	-	-	-
						6084	**100.00**

Leading sources
The sources of SERVQUAL research that have had the greatest significant impact on SERV-QUAL (service quality) are listed in Table 2. These ten publications are considered the most pertinent and prominent sources in the field of SERVQUAL research. With a total of 704 citations and 9 publications, the "Quality Assurance in Education" has topped followed by "International Journal of Health Care Quality Assurance" with 377 citations and 6 publications and "Managing Service Quality" with 281 citations and 2 publications.

Prominent articles

The ten papers that have received the most citations are listed in Table 4, along with their respective authors, affiliations of the first author, sources, and information regarding citation metrics. A total number of citations is used to determine the order in which these articles are rated. According to the findings of our investigation, the paper that was written by Oldfield, Brenda M. and titled " Student perceptions of service quality in a UK university business and management faculty " was the one that obtained the maximum number of citations, which was 281 followed by Lim, Puay Cheng with titled "A study of patients' expectations and satisfaction in Singapore hospitals" has received 204 citations.

Table 3. Top Sources of SERVQUAL in research

SOURCES	TP	TC
Quality Assurance in Education	9	704
International Journal of Health Care Quality Assurance	6	377
Managing Service Quality	2	281
Performance Measurement and Metrics	8	249
Quality in Higher Education	1	169
Library Review	3	154
Total Quality Management and Business Excellence	3	147
Information and Management	1	139
International Journal of Quality and Reliability Management	3	128
International Journal for Quality in Health Care	2	117

Table 4. Top articles of SERVQUAL in research

R	Document title	Author	Source	First Author Institution / Country	Total Citations
1	"Student perceptions of service quality in a UK university business and management faculty"	Oldfield, Brenda M.	Quality Assurance in Education	Manchester Metropolitan University, United Kingdom	281
2	"A study of patients' expectations and satisfaction in Singapore hospitals"	Lim, Puay Cheng	International Journal of Health Care Quality Assurance	University of Leicester, United Kingdom	204

| 3	"Comparing alternative instruments to measure service quality in higher education"	Brochado, Ana	Quality Assurance in Education	University of Porto, Porto, Portugal	183
4	"Student satisfaction and quality of service in Italian universities"	Petruzzellis, Luca	Managing Service Quality	Università degli Studi di Bari, Italy	176
5	"Service quality in higher education using an enhanced SERVQUAL approach"	Tan, Kay C.	Quality in Higher Education	National University of Singapore, Singapore	169
6	"Perceptions about the quality of web sites: A survey amongst students at Northeastern University and Erasmus University"	Van Iwaarden, Jos	Information and Management	Northeastern University (NEU), Boston, United States	139
7	"Enhancing the assessment of tangible service quality through the creation of a cleanliness measurement scale"	Barber, Nelson	Managing Service Quality	University of New Hampshire, Durham, United States	105
8	"A study on service quality of virtual community websites"	Kuo, Ying-Feng	Total Quality Management and Business Excellence	Shu-Te University, Taiwan	101
9	"SERVQUAL in Malaysian universities: Perspectives of international students"	Shekarchizadeh, Ahmadreza	Business Process Management Journal	Universiti Teknologi, Malaysia	100
10	"A fuzzy SERVQUAL based method for reliable measurements of education quality in Italian higher education area"	Lupo, Toni	Expert Systems with Applications	Università Degli Studi di Palermo, Italy	95

Co-Word Analysis

Identifying the thematic scheme of a certain subject is often accomplished through the utilization of keywords; this is done based on co-occurrence. A co-occurrence network of the collection has been generated using VOSviewer, which we have applied to the collection. The emerging issues that have been replated to SERVQUAL research are displayed in Figure 3. These emerged topics were collected from the author's keywords. For doing keyword analysis, we decided to put the minimum frequency at two, and we chose to highlight 25 of the 883 keywords that are used the most frequently in this domain.

An examination of research concerning SERVQUAL demonstrates that three keywords — SERVQUAL, Service Quality and higher education—are prevalent. This is seen in figure 3, which depicts the highlights of the analysis. As an additional point of interest, the topic is linked to a few other major concepts, including student satisfaction, expectations Customer satisfaction and quality.

Table 4 contains written documentation of the keywords that are depicted in Figure 3, as well as the frequency at which they were found in the investigations that were carried out. It is clear from looking at table 4 that the word "SERVQUAL" is the most frequently used keyword in relation to the topic at hand, as it appears 220 times followed by "Service Quality) with 177 times and "Higher Education" with 72 times.

Figure 3. Keyword co-occurrence network
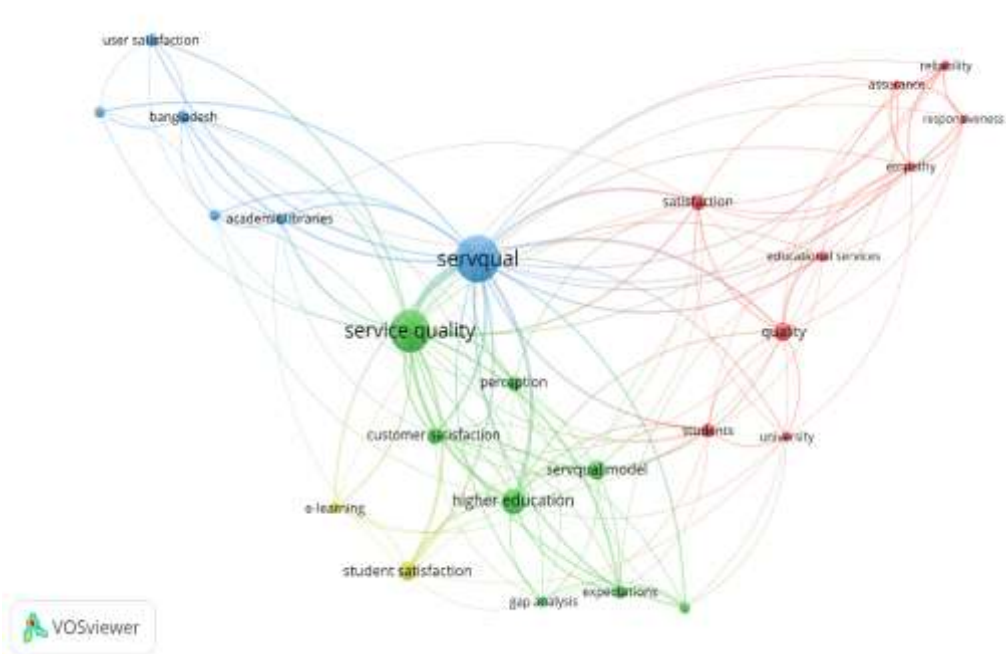
 Source: Created by authors using Biblioshiny

Table 4: Top keywords

Keywords	Occurrences	Total Link Strength
SERVQUAL	161	220
Service Quality	133	177
Higher Education	47	72
Student Satisfaction	26	39
Expectations	14	38
Customer Satisfaction	20	37
Quality	25	37
Satisfaction	19	37
Bangladesh	12	29
Empathy	7	28

Source: Created by Authors

Conclusion

The bibliometric analysis of library service quality of the SERVQUAL model indicates that the research environment is always changing and expanding. SERVQUAL, with its five dimensions – tangibility, reliability, responsiveness, assurance and empathy has been widely adopted to assess and enhance library services across globe. The study highlights a steady growth in scholarly interest, particularly in academic libraries, where service quality directly impacts user satisfaction and institutional reputation.

The bibliometric view also shows important authors, journals, articles, and organisations that contribute to the field, showing that it is collaborative and cross-disciplinary. New concepts including service quality, expectancies, happiness, and empathy imply that the SERVQUAL framework should be enlarged to better satisfy the demands of libraries of today. More research on hybrid service models, tailored services driven by artificial intelligence, and inclusive service design can help libraries even more to provide better services.

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