

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

6-26-2020

Determinants of Quality Performance of Library Staff of Academic Libraries

Edward Asante

Koforidua Technical University, eddieasante59@gmail.com

Patrick Baayel

Koforidua Technical University, baayel.patrick@ktu.edu.gh

Kenneth Wilson Adjei Budu

Koforidua Technical University, akenneth.budu@ktu.edu.gh

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Library and Information Science Commons](#)

Asante, Edward; Baayel, Patrick; and Budu, Kenneth Wilson Adjei, "Determinants of Quality Performance of Library Staff of Academic Libraries" (2020). *Library Philosophy and Practice (e-journal)*. 3973.
<https://digitalcommons.unl.edu/libphilprac/3973>

Determinants of Quality Performance of Library Staff of Academic Libraries

Edward Asante

asante.edward@ktu.edu.gh

Koforidua Technical University, Ghana

Patrick Baayel

baayel.patrick@ktu.edu.gh

Koforidua Technical University, Ghana

Kenneth Wilson Adjei Budu

akenneth.budu@ktu.edu.gh

Koforidua Technical University, Ghana

Abstract

The study investigated the determinants of quality performance of library staff of selected academic libraries in Ghana. The study aimed at establishing the core determinants of quality performance and its sustainability in academic libraries. The study chose a quantitative approach where the questionnaires were used as instruments to collect data on information of determinants of quality performance of library staff in selected academic libraries in Ghana. Out of 151 questionnaires administered, 146 were obtained representing 96.6%. Smart PLS3 software was used to analyse the quantitative data collected. The convergent, discriminant validity assessment were all acceptable and within the thresholds. The hypotheses tested also indicated a positive relationship with the independent variables (Management Commitment, Training and Development, Employee Involvement, and Effective Communication) and the dependent variable (Quality Performance) except Strategic Planning. This implies that four out of the five variables measured has a significantly positive relationship with Quality Performance. As a recommendation it is prudent for management of the academic libraries to employ such critical success factors as they formed the core factors of quality performance in academic libraries.

Keywords: quality performance, university libraries, critical success factors, performance indicators, sustainability, library services.

1. Introduction and Background

Libraries are essentially learning organizations stimulating academic and research activities by providing access to world-class information resources (Manjunatha and Shivalingaiah, 2004). Libraries' performance over the world is a critical function irrespective of their size. The purpose of an academic library, for instance, is to support teaching, learning, and to promote services that enhance the research development capacity of its user community (Khan and Kamal, 2015). Every academic library needs to provide quality, prompt and effective service to its clientele (Khan and Kamal 2015). An area worthy of critical attention to an academic library which desires success in its operation is service quality. As part of the primary objectives of academic library, is always to maintain a level of service quality that brings satisfaction to users (Cook and Heath, 2001). In this regard, it is necessary for the academic library to consider delivery of quality service as key determinant of user satisfaction.

Nowadays, it is no longer enough to accept the 'goodness' of a library without offering justification based upon empirical evidence (Iwhiwhu and Okorodudu, 2012). In confirmation of the above, it has been established that the customer is the real authority who clearly dictates the quality of a product or service provided (Raza and Sohail, 2012). An assessment of how well a library thrives in today's information service delivery environment is largely dependent on the user as a judge of quality. Traditionally, the success of any library is measured in terms of the size of its collection, staff, and budget (Raza and Sohail, 2012). However, in the present day of competitive information world, libraries need to go beyond the traditional modes of assessments of success to a situation where application of marketing techniques are adopted to gain understanding of customer behavior and requirements. Customer focus in services delivery is essential for satisfying the customer's needs (Manjunatha and Shivalingaiah, 2004). The success of a product or service delivered will depend on customers' perceptions of the quality of those products and services provided by the personnel in libraries (Manjunatha and Shivalingaiah, 2004).

One decent solution to improved quality performance of a library is to provide right information to the right user at the right time. As a result, there is the need to apply certain determinants of quality which will yield quality performance. It is believed that this can be achieved by the application of quality assurance techniques. Quality performance is considered as an essential element at all managerial approaches (Khan and Kamal 2015). It is suggested that academic

libraries must critically consider cost and quality which are the measurements of organizational quality performance as critical determinants in the environment of academic library the determinants of quality performance must be the spring board for the delivery of quality services (Al-Qahtani, Alshehri and Aziz, 2015).

As library services rapidly transform in the digital dispensation, Patil and Sawant (2017) observe that library customers are now exposed to access of multiple sources of information of which they expect quality within the shortest possible time irrespective of the format of information. It therefore stands to reason that, libraries must provide quality service to their clientele, such that, they can hold on to, and possibly increase their client base. Ensuring quality service will boost the image of the library in what is now a competitive environment within the information provision industry.

Quality performance is essentially aimed to establish and deliver high quality products and services that cover all customers' demands and achieve a high level of customer satisfaction in the academic library as supported by (Ngambi and Nkemkiafu 2015). Quality services, therefore, means those which satisfy users' expectations and perceptions (Gharakhani, Rahmati, Farrokhi and Farahmandian 2013). Proper understanding of the determinants of quality performance is essential for library and information science (LIS) professionals to recognize the customer expectations. Umpiring from the ensuing discussion from literature on the service quality, there is the need to research on the determinants of quality service leading to performance of the academic libraries in technical universities in Ghana. This paper, therefore, briefly explains the concept of quality performance; highlight some results of quality management (QP) studies, with an objective to describe and identify the issues meriting attention by the library professionals to gear up the library products and services so that user communities get satisfied visiting academic libraries in technical universities in Ghana.

2. Problem Statement

Provision of quality service in the academic library cannot just happen unless it is linked to having certain quality determinants. The determinants of quality performance is the measure of specific factors that results in achieving overall productivity in the academic library in genera. As expected the academic library must support teaching, learning and research and by doing so there are certain determinants that should be quality assurance strategies available. The problem is that there seem

to be issues of staff turnover, staff output, work errors, user complaints, lack of impression from library staff as well as meeting expectations of users.

This has affected the expected delivery of quality service in the academic libraries which need to be investigated and addressed. The study seeks to find answers to perceive issues of absence of quality assurance strategies that enhance performance of library staff. The questions of the determinants of quality performance and how does it influence service provision in the academic libraries in Ghana is an issue of concern for this study. Judging from the discourse, the determinants of quality performance thus management commitment, employee involvement, training and development, effective communication, strategic planning (independent variables) and quality performance (dependent variable) were tested to establish a relationship with service provision.

4. Literature Review

4.1 Concept of quality performance (QP)

Alamri, Alharthi, Alharthi, Alhabashi and Hasan (2014), argued that organizational performance measurement has become more crucial for the survival of companies in today's globalization market. Basically, the development of the performance measurement system that satisfies the company's business requirement is necessary to enable the organisation to achieve its desired quality performance. Performance measurement allows organizations to pay more attention to the significant areas they are lacking. Alamri, Alharthi, Alharthi, Alhabashi and Hasan (2014) posited that quality performance has been calibrated with financial measures, operational measures, service performance and customer satisfaction measures by including multiple aspects of performance.

Al-Qahtani, Alshehri and Aziz (2015) suggested that one of the main elements to achieve an effective organizational management processes is the quality performance measurement. The quality performance of one organisation can be directly related to its ability to achieve their strategic and financial objectives. One fact that must be also mentioned is that the organizational quality performance could be measured either depending on operational performance which is referring to the whole quality performance of one organisation that includes financial performance, customer satisfaction and effectiveness of product quality.

In the discourse of Al-Qahtani *et al* (2015) measurement of quality performance is considered as an essential element at all managerial approaches. Al-Qahtani *et al* (2015) further raised concerns that cost and quality are the two main measurements of organizational quality performance which directly affected by the total quality management practices. Gharakhani, Rahmati, Farrokhi and Farahmandian (2013) posited that organizational quality performance especially in financial performance of organizations is critical.

According to Al-Qahtani *et al* (2015), the focus is on planning in strategic way, management of processes and employees, leadership, customer concern, and measuring on both internal and external customers' satisfaction level for the quality of perceived products and services. The research findings also indicates that there is a strong relation between topmanagement commitment and satisfaction of customers and quality performance.

According to Ngambi and Nkemkiafu (2015), a strategy that essentially aimed to establish and deliver high quality products and services that cover all customers' demands and achieve a high level of customer satisfaction should be under pinned by the determinants of quality. Alsmadi Almani and Khan (2014), studied the effect of using TQM practices on the operational performance of an organization, through production, performance improvement, employee morality and customer satisfaction. The results showed a strong correlation with customer focus and, employee relations, but negatively correlated with supplier quality management.

Alsmadi *et al* (2014), confirmed in a previous studies that there is a positive relation between the operational performance of organization and quality performance. Alamri, *et al* (2014) argued that the strategy of TQM that concentrates on enhancing the customer satisfaction levels will directly improve the organisational performances and that leadership commitment is considered a key element for guaranteeing a successful implementation of TQM practices in organisation.

Alghamdi (2018), stated that TQM has been identified as a key driver of organizational performance in public and private organizations. Organizational culture, along with TQM, has investigated to understand its contributions to organizational quality performance. Alghamdi (2018), examine the relationship between TQM and organizational performance, taking into account a moderating effect of organizational culture. The relationship between TQM and quality performance has been extensively examined, yet mixed results have been reported. Most of the previous studies concluded a positive relationship between TQM and quality performance

(Alghamdi 2018). TQM practices, in general, improve organizational quality performance (Sadikoglu and Hilal 2014).

The concept of quality and customer service is not a new phenomenon for library and information science (LIS) professionals as it is rooted in library philosophy and principles (Manjunatha and Shivalingaiah, 2004). But before assessments can be made of service quality in academic libraries, it is essential to investigate what connotes quality service performance in the minds of library users.

Sharma (2013), attempted to explore some aspects of quality aspects in relation to library science in India. The study is an interpretation of library quality literature which is produced by using various models of quality evaluation. The author expressed that it is very necessary for the librarian to understand the users, what they want, how they want, and when they want the documents and information. This understanding will help libraries to carry out their functions and responsibilities in leading the attempt to bring continual quality improvements (Sharma and Kadyan, 2016).

Dash and Padhi (2010), in their review discuss quality assessment process in library and information systems in modern age. Dash and Padhi (2010), posited that several approaches including SERVQUAL, LIBQUAL+, ISO 11620, and ISO 2789 have been made to quantify the library service quality. The authors concluded that any of the models as per suitability can be employed by libraries for quality evaluation.

Kulkarni (2012), used Herson and Altman Model as a basis to frame statements to elicit the responses in a previous study. The study was in regard of service quality expectations of library users from ATI (Administrative Training Institute) libraries. Kulkarni (2012), classified the attributes of library service quality into five groups which contain statements on— Resources, Staff, Services, Guidance and Environment. It was observed that the majority (75%) of the ATI faculty members give priority to the physical ‘Environment’ which included tangible elements of service quality like availability of computers, OPAC terminals, cleanliness, adequate light, proper ventilation, functional furniture, suitable library hours among others. The second priority was given to the ‘Services’ and ‘Resources’ rank as a third dimension.

4.4 Management Commitment and Quality Performance

The effect of top management commitment is an influential factor that accounts for quality performance of library staff. Mostly, efforts to implement quality often fail because top management does not lead and get dedicated. Top management instead pays lip service to the process. Dedication and personal involvement are needed from top management in academic library setting (Negi and Srivastava, 2015). Top management commitment tends to keep the system and methods functioning through encouraging the participation of all employees. Top management commitment enhances the use of performance indicators linked, directly or indirectly, to customer requirements and satisfaction, as well as employee remuneration (Negi and Srivastava, 2015). Fatemi, Wei and Moayerfard, (2016), argued that in many cases quality practices, especially in-academic libraries, fails because there is no strong support from senior managers in the organisation.

A study by Burn (2011), found that top management must outline quality goals, policies and plans according to the principles to be followed by staff who are the implementers. In the process, top management must also take into consideration the following issues: agreeing about goals, conditions and obstacles to the introduction of quality assurance measures. Top management must have the courage to break with tradition (Burn, 2011). Burn's research stressed that, in building up a new 'quality scheme', top management must appoint a manager for quality improvement who has direct access to top management.

Bhatt (2012), also shares the same idea, by saying that the provision of vision, commitment and leadership is a mark that should be exhibited by management in the process of quality implementation. Kosegei (2014), concluded that it is for top management to concentrate fully on the implementation of quality processes by controlling the external and internal variables and also by providing guidance and spelling out all the responsibilities of all parties concerned. Kosegei (2014), further added that management must be committed through monitoring and evaluation of all the elements of quality assurance in order to sustain it.

Chauhan (2014), found that the absence of top management commitment could result in a situation of unrest in every organisation no matter the size and functions. According to the writer, quality performance portrays the image of an organisation in existence. Several attempts to implement

quality assurance practices often fail because top management leadership does not lead and does not show any visible commitment but, instead, delegates and pays lip service to the process.

Reddy (2012), recommended that top management support is an important factor in the quality process. Variety of support from leadership to the head librarians and subordinate staff should include adequate time, money as well as assistance from a quality expert. Top leadership and management must be involved in the quality process and the designing of policies and audits, not forgetting the inclusion of the library staff (Reddy, 2012). Besides showing full top management commitment in achieving the organisation's goals, mission and visions by management, it is crucial to allow a high level of employee involvement and with a considerable competency in the process of quality activities.

4.5 Employee Involvement and Quality Performance of Academic Libraries

Many studies confirmed that encouraging employees to get involved in quality decision and management decision making enables them to feel responsible for their duties and helps the organisation to make better decisions for their performance and quality improvement. Employee involvement has been associated with various management strategies including styles of leadership, total quality management, job performance and satisfaction. Several authors, for example, Karani and Bichanga (2012), Brito and Vergueiro (2013), Sathe (2015) Fatemi *et al.* (2016) and Negi and Srivastava (2015), claimed that employee involvement and encouragement are critical quality measure for implementation and sustainability in academic libraries.. In the process of continuous improvement and change, there is the need to allow all employees, irrespective of their level that is low, middle and high management, to be fully part of achieving the targeted goals, visions and missions of the organisation (Karani and Bichanga, 2012; Brito and Vergueiro, 2013). This is because personnel are an important resource and asset and quality comes from them (Dash 2008; Karani and Bichanga 2012; Brito and Vergueiro 2013; Sathe 2015). This rekindles the old but important saying of Deming, an expert in the field of TQM, "that 15% operator results and 85% management system" is the best (Cangemi 1993). Whiles, Ho (2011), accounts that employees' involvement in all work processes brings about a considerable level of competency and allows the change targeted to take place in the said situation just like the TQM process. Ater (2013) ,also argues that to "mitigate the challenges associated with the implementation of quality principles, there is the need to bring all on board by outlining the

responsibilities and duties of the employees and giving the directions of possible ways of doing them.

According to Moballeghi and Moghaddam (2011), successful quality assurance implementation should have committed and well-trained staff that will participate fully in all the quality improvement activities. The authors believe, to gain positive results, participation should be reinforced by “reward and recognition”. Ongoing education and training of all employees with support towards the drive for quality management is also paramount. Employees must be encouraged to communicate more effectively, act creatively and take more responsibility as well as being innovative during the process of quality assurance implementation.

4.6 Training and Development and Quality Performance of Academic Libraries

Employee training towards quality assurance implementation is very critical in the academic library. The employees of the academic library should be given the necessary training and development activities to make them conversant with their roles in the achieving of the goals, vision, and mission of the library. According to Sivankala and Yadav (2012), constant development of the work schedule must deal not only with improving results, but it must more importantly also deal with improving capabilities that will produce better results in the future. The authors stressed the five (5) major areas of focus for capability improvement, namely: technology, operations, people capability, demand generation as well as supply generation as factors of quality development.

Yapa (2012), also argues that the success of quality assurance activities cannot be possible unless they are tied to a regular organisation of training and development programmes. It is believed to rekindle the spirit of the employees towards performing as expected and meeting standards. Sharon (2012), was also of the opinion that training and development programmes with regards to quality implementations must not be for a short period but should be systematic to assist the employees to achieve the set target. Oluwatoyin and Oluseum (2008), argued that training and development help in preparing employees towards managing the quality of thought in the process of service delivery.

Oluwatoyin and Oluseum (2008), posited that training equips staff with the necessary skills and techniques of quality improvement. It is argued “to be a powerful building block of business in

the achievement of its aims and objectives”. Through training, employees can identify improvement opportunities as it is directed at providing necessary skills and knowledge for all employees to be able to contribute to the ongoing quality improvement process of production. Similarly, Rajesh (2012), reiterated that there is evidence that “lack of understanding and proper training and development exists at all levels of any organisation, and that it is a large contributor to worker resistance”. Quality management requires a well-educated workforce with a solid understanding of basic reading, writing and communication. Frequently, Duran’s warning against training for specific organisational levels or product lines are unheeded. For quality practices to be successful, organisations must commit to training employees at all levels. Quality management implementation should provide comprehensive training, including technical expertise, communication skills, small-team management, problem-solving tools, and customer relations (Rajesh, 2012). Altayeb and Alhasanat (2014), are of the view that without constant training and development activity in place the organisation could easily fail in achieving its goals. Lack of employee training are also a major obstacle to the development and implementation of quality initiatives.

Employee training and education are key components in the quality assurance programmes (Altayeb and Alhasanat, 2014). Employee training can result in a more satisfied workforce and an environment for innovation and creativity. Employee training provide the necessary knowledge, skills, and abilities for employees to do their job effectively, and diagnose and correct their daily problems at work (Mosadeghrad, 2013). Continuous improvement, according to several authors, for example Bon and Mustafa (2012); Talib, Rahman and Qureshi (2013); Chauhan (2014); Malik, Iqbal, Shaukat and Yong (2010); Moghaddam and Moballeghi (2008) and Sadikoglu and Zehir (2010), is considered one of the critical successes of quality management implementation. Bon and Mustafa (2012), in a previous study, ascertain that continuous improvement and innovation helped satisfy the customers and increase the complete advantage of the organisation.

4.8 Strategic Planning and Quality Performance in Academic Libraries

Strategic planning incorporates the development and deployment of plans, improve relationships with customers, suppliers, and business partners. SP helps in achieving long and short-term goals through participative planning (Teh, Yong, Arumugam and Ooi 2009). Though, there is no

evidence of several studies on strategic planning. Indeed, the few available literature known indicates that there is a significant link between strategic planning and quality performance (Prajogo and Brown, 2004), role conflict and knowledge management behaviour (Teh, Yong, Arumugam and Ooi 2009) and customer satisfaction (Sit, Ooi, Lin, and Chong 2009).

Negi and Srivastava (2015), concluded that it is well known that quality assurance is a management method which libraries can benefit from in several ways and that by formulating a strategic plan and following it with a commitment to continuous quality improvement, library managers can transform and improve their organizations. Mosadeghrad (2013), argues that a successful implementation of quality assurance systems requires a long term strategic plan because lack of a detailed planning prior to the introduction of quality assurance in organizations is a key reason for its future failure. Again, it was echoed by the author that strategic quality planning is necessary for integrating quality objectives, requirements and targets into organizational operations and activities.

4.9 Effective Communication and Quality Performance in Academic Libraries

Communication refers to information sharing process between employees of the organization (Ooi, Bakar, Arumugam, Vellapan and Loke 2007). Managers and practitioners use effective communication to enlist the support of other employees towards achieving organization's objectives. Several studies noted that effective communication influence the organization to move systematically towards employees' involvement and customer satisfaction and improves organization performance (Teh, Yong, Arumugam and Ooi 2009; Yusuf, Gunasekaran and Dan 2007). Lack of effective communication was identified by Mosadeghrad (2013) as one of the variables that can impede smooth implementation of quality assurance systems.

4.10 Research Conceptual Framework

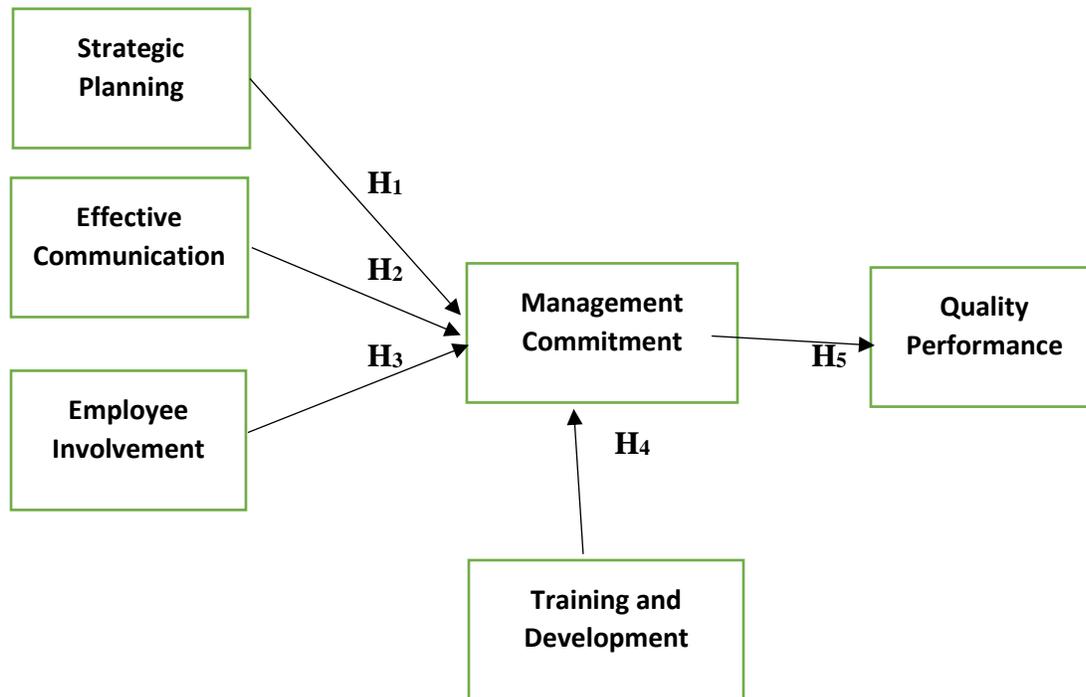


Figure 1. Conceptual framework

5. Research Methodology

The positivist approach was the driving philosophy of this study, while the data utilized was based on observable social reality. Also, an explanatory research approach was applied to identify and establish the fundamental relationships and linkages between the various constructs to provide further insight and broader perspective of determinants of quality performance in academic libraries environment.

Table 1: Operational definition of constructs and hypothesized relationships

Constructs	Operational definitions	Source	hypothesized relationship
Strategic Planning (SP)	Systematic planning and focus on achieving objectives of an organisation projected in thrust	Ngambi and Nkemkiafu (2015), Rajesh (2012)	SP→MC
Effective Communication (EC)	Dissemination of information using appropriate channels to make impact in organisation	Rajesh (2012), Bon and Mustafa (2012),	EC→MC
Employee Involvement (EI)	Bringing all employees to help in activities in the organisation especially decision making process	Brito and Vergueiro (2013), Sathe (2015), Fatemi <i>et al.</i> (2016) and Negi and Srivastava (2015)	EI→MC
Management Commitment (MC)	High support from executive level in organisation	Negi and Srivastava (2015) Moayerfard (2016),	MC→QP
Training and Development (TD)	Exposure of employees to forms of learning to enhance career advancement	Mosadeghrad (2013), Sadikoglu and Hilal (2014).	TD→MC
Quality Performance (QP)	Strategy essentially aimed to establish and deliver high quality products and services in organizations	Ngambi and Nkemkiafu (2015), Al-Qahtani <i>et al</i> (2015)	QP →MC

3.1.1 Measurement development

In this study, the development of the survey instruments was guided by Churchill's 1979 proposal for designing a survey instrument, in this case, ensuring constructs reliability and validity jointly referred to as "psychometric properties" of measurement scales (Bhattacharjee, 2012). To a large extent, the questionnaire was developed on the basis of the literature review and the adaption of previous items that have demonstrated rigorous and significant validity in the field of quality

performance, and more specifically, in the context of academic libraries.

The variables, namely; strategic planning, effective communication, employee involvement, management commitment, training and development, and quality performance were measured in the study. The questionnaire consists of two parts. Section A of the questionnaire relate to the demographic characteristics of the respondents such as; gender, age, highest educational qualification, type place of work, type of library system used. Section B relates to the research model's endogenous and exogenous variables questions, which were powered on a seven-point Likert Scale ranging from 1= 'strongly disagree' to 7= 'strongly agree'.

3.1.3 Data collection

The questionnaire was hand delivered to a sample of 151 professional librarians practicing in academic libraries in Ghana. The reason for targeting head librarians, deputies and their staff were considered because of their experience and daily working in the library. The participants were asked to fill the questionnaire and the researcher collected the responses. This procedure was chosen because it allows better response rate, especially in situations where participants do not appropriately complete questionnaires unless the researcher urges them to do that on his/her presence. However, bearing in mind, minimum contact was made during the questionnaire filling process to reduce researcher bias. After a period of three weeks in administering the questionnaire, a total of 151 questionnaires were retrieved, out of which 5 were identified as unsuitable for further analysis because they were incomplete. Hence, 146 questionnaires were correctly filled, representing a highly acceptable response rate of 96.6%.

3.1.4 Data analysis

In testing the research model, partial least squares structural equation (PLS-SEM) technique, a second-generation multivariate analytic technique capable of processing latent constructs, and also, simultaneously assesses the measurement and structure models (Wold, 1982; Chin, 1998), was used. In order words, PLS-SEM simultaneously models structural path, that is, theoretical relationship between latent constructs, and measurement paths between latent constructs and its indicators (Ashill, 2011). PLS-SEM software, SmartPLS3 was used to analyze the data. Consequently, the two-step approach analytical procedures, proposed by, Anderson and Gerbing

(1988) was applied to the measurement and structural models. Besides, the bootstrapping method (5,000 resamples) was employed to test the significance level of path coefficients and loadings.

4.1 Results and Discussion

4.1.2 Evaluation of measurement model

To achieve valid results, the; reliability, convergent, and discriminant validity of the measurement model was assessed.

4.1.3 Convergent validity assessment

According to Hair, Black and Anderson (2010) convergent validity is the degree to which indicators of a latent construct converge or share high proportions of variance in common. Convergent validity is established when all indicator (observed) variables load highly on their assigned factors, for instance, 0.5 or higher. Thus, it measures the extent to which items are free from random error, and as such, capable of providing consistent results. As demonstrated in Table 1, all factor loadings are higher than the value of 0.6.

Alternatively, average variance extracted (AVE) which measures the variation explained by the latent variable to the random measurement error, is a commonly utilized criterion for assessing convergent validity. Thus, Fornell and Larcker (1981), recommended that an AVE value of at least 0.5 is an indication that the latent construct is on average able to explain 50 percent of the variance of its indicators, hence demonstrating adequate convergent validity. This requirement is fulfilled in this research, as it is demonstrated that AVE values for all the constructs shown in Table 2 are above the recommended threshold of 0.5. Finally, with regards to composite reliability, all the scores are well above the cutoff value of 0.7 as proposed by Hair et al. (2010).

4.1.4 Discriminant validity assessment

Discriminant validity assesses the degree to which the measures of different constructs differ from one another. The establishment of discriminant validity can be in two ways. The first method is by examining cross-loadings that are obtained by correlating each latent variable component values with all other items (Chin, 1998), while the second is by comparing the square root of the average variance extracted (AVE) for each construct with the correlations among constructs. If the square root of each AVE is much larger than any correlation among any pair of latent variables, and it should be higher than .50 (Chin, 1998; Fornell & Larcker, 1981), then the validity of the

measurement model is established. In this study, as demonstrated in Table 3, the correlation values are less than the square root of AVE values, hence, suggestive of acceptable discriminant validity.

Table 2: Results of convergent validity assessment

Model Constructs	Measurement Item	Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Effective Communication	EC1	0.882	0.914	0.727
	EC2	0.857		
	EC3	0.829		
	EC4	0.841		
Employee Involvement	EI1	0.742	0.862	0.558
	EI2	0.829		
	EI3	0.840		
	EI4	0.595		
	EI5	0.703		
Strategic Planning	SP1	0.835	0.890	0.623
	SP2	0.825		
	SP3	0.864		
	SP4	0.851		
	SP5	0.870		
	SP6	0.841		
Training and Development	TD1	0.777	0.885	0.668
	TD2	0.781		
	TD3	0.877		
	TD4	0.828		
Management Commitment	MC1	0.808	0.904	0.652
	MC2	0.783		
	MC3	0.829		
	MC4	0.786		
Quality Performance	QP1	0.880	0.922	0.748
	QP2	0.825		
	QP3	0.838		
	QP4	0.914		

Table 3: Results of discriminant validity assessment

	BL	GE	ICL	CSE	OL	SCD
Effective Communication (EC)	0.853					
Employee Involvement (EI)	0.659	0.747				
Management Commitment (MC)	0.721	0.713	0.808			
Quality Performance (QP)	0.774	0.726	0.859	0.865		
Strategic Planning (SP)	0.803	0.808	0.762	0.768	0.848	
Training and Development (TD)	0.850	0.844	0.787	0.847	0.913	0.818

4.2 Structural model and hypothesis testing

After the construct measures have been proved to be reliable and valid, the next stage is to assess the structural model results, displayed in Table 2. Prior to the assessment of the structural model, we conducted the test on all the variables for multicollinearity. The assessment of the variance inflation factor (VIF) demonstrated the non-existence of multicollinearity, and all variance inflation factors obtained were lower than 1.234, which is far less than the conservative threshold of 5.0, as recommended by (Rogerson, 2001).

Table 4: Results of structural model analysis and hypothesis testing

Hypothesis	Path	Standard Path Coefficients	Mean	Standard Deviation	T-statistics	P-Value	Supported
H1	EC→MC	0.210	0.231	0.139	1.508	.132**	YES
H2	EI→MC	0.188	0.204	0.136	1.383	.167**	YES
H3	MC→QP	0.859	0.862	0.029	30.025	.000**	YES
H4	SP →MC	0.182	0.176	0.160	1.138	.002**	NO
H5	TD→MC	0.284	0.259	0.223	1.282	.200**	YES

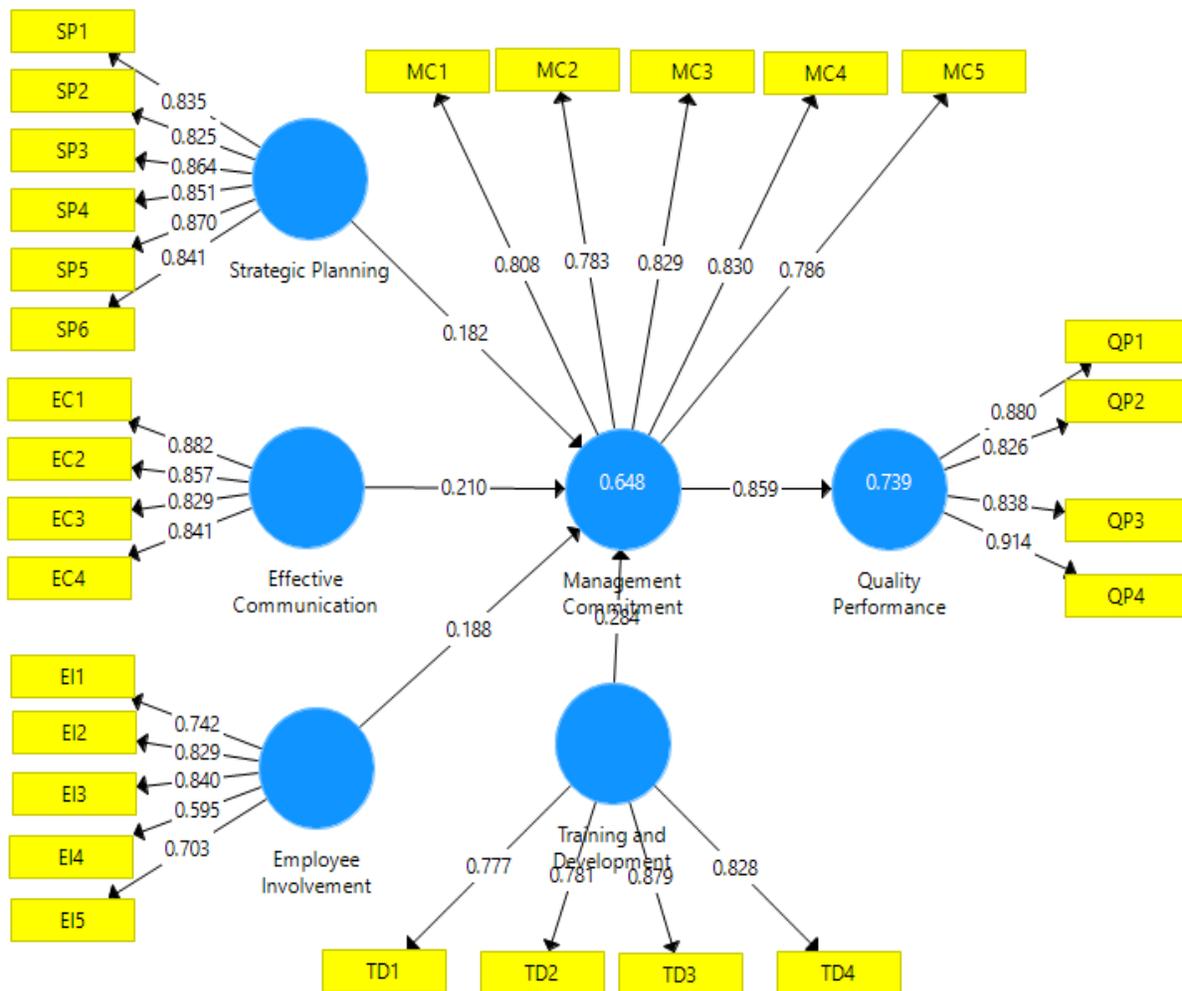


Figure 2: Path Estimation Results

The model explained 73.9% in the variation in Quality Performance, and 64.8% variance of Managements' Commitment. Out of the five hypothesized relationships stated in this study, four are supported. As postulated in H₁, Effective Communication positively and significantly impacts Quality Performance with a path coefficient of ($\beta = 0.210^{***}$). This implies it supports H₁. Also, H₂ states that Employee Involvement positively affects Quality Performance. This is confirmed by the path coefficient, ($\beta = 0.188^{***}$.) Similarly, Management Commitment positively influence Quality Performance path coefficient ($\beta = 0.859^{***}$), providing support for H₃. Although H₄ demonstrated a positive effect of Strategic Planning on Quality Performance, it was insignificant, thus not supported or confirmed path coefficient ($\beta = 0.182^{***}$). Furthermore, the results revealed a significant positive relationship of Training and Development and Quality Performance (path coefficient ($\beta = 0.284^{***}$)) thus confirming hypothesis H₅.

7. Conclusion and Recommendations

The study investigated the determinants of quality performance in academic libraries in Ghana. An evaluation on the measurement model was performed on reliability, convergent and discriminant validity. Correction analysis was performed to establish relationship between the independent and dependent variables. The reliability test was acceptable since there was consistency in the loading which were higher than the 0.6. The discriminant validity assessment was also within the acceptable level thus less than the square root of AVE values. All the hypothesis tested indicated a positive relationship with the independent variables (Management Commitment, Training and Development, Employee Involvement, and Effective Communication) and the dependent variable (Quality Performance) except Strategic Planning. This implies that these variables measured has a significantly positive relationship with Quality Performance except Strategic Planning. As a recommendation it is prudent for management of the academic libraries to employ such critical success factors as they formed the core elements of the determinants of quality performance.

References

- Alamri, A.M Alharthi, A.M Alharthi, D.K. Alhabashi, W.S. & Hasan, S. A. 2014. Organization performance improvement using TQM. *International Journal of Computer Applications* 108(9):29-33
- Al-Dhaafri, HA & Al-Swidi, A. 2016. The impact of total quality management and entrepreneurial and Services: User Satisfaction with the Edo State Central Library, Benin-City, Nigeria. Retrieved from <http://digitalcommons.unl.edu/libphilprac>
- Alghamdi, F. 2018. Total quality management and organizational performance: A possible role of organizational culture. *International Journal of Business Administration* 9(4): 186-200.
- Al-Qahtani, N. D, Alshehri, S.S.A. & Aziz, A.A. 2015. The impact of Total Quality Management on organizational performance. *European Journal of Business and Management* 7(36): 119-127.
- Alsmadi, M. Almani, A & Khan, Z. 2014. Implementing an integrated ABC and TOC approach to enhance decision making in a lean context: A case study. *International Journal of Quality & Reliability Management* 31(8): 906-920.
- Altayeb, MM. & Alhasanat, MB .2014. Implementing total quality management (TQM) in the Palestinian construction industry. *International Journal of Quality & Reliability Management*, 31(8):878 – 887 <http://dx.doi.org/10.1108/IJQRM-05-2013-0085>.
- Ater, JA. 2013. Challenges facing the implementation of total quality management practices in public secondary school in Kenya: a survey of schools in Migori County. Master's Thesis, School of Business, Kenyatta University.
- Baird, K. Hu, KJ & Reeve, R. 2011. The relationships between organizational culture, total quality management practices and operational performance. *International Journal of Operations & Production Management* 31(7):789-814, doi: <http://dx.doi.org/10.1108/01443571111144850>
- Begum, SSN. 2005. Total quality management in the academic library. *Library Philosophy and Practice* (e-journal) Paper 3. <http://digitalcommons.unl.edu/libphilprac/3>
- Bhatt, S. 2012. Total quality management: An effective approach for library system. *International Journal of Information Dissemination and Technology*, 2(4):266-269.
- Boateng-Okrah, E & Fening, FA. 2012. TQM implementation: a case of a mining company in Ghana. *Benchmarking: An International Journal* 19 (6): 743-759.
- Bon, AT. & Mustafa, E. MA. 2013. Impact of total quality on innovation in service organizations: literature review and new conceptual framework. *Procedia Engineering* 53:516- 529 Available at www.elsevier.com/locate/procedia. (Accessed on 15 June 2016)
- Brito, GF. & Vergueiro, WC. 2013. Quality evaluation of academic library: the LIBQUAL methodology and its perspective of implementation in Brazil. *BJIS*, (7):25-44.

Burn, A. 2011. *Total quality management: quality culture, leadership and motivation*. Master's Thesis: Total Quality Management. Politecnic Milano.

Cangemi, RR. 1993. Nature and evaluation of total quality management. *Journal of Food Distribution Research*. 24 (1)1-6.

Chauhan, H. 2014. Use of total quality management in academic library: A special reference to library system and services. (Accessed on 15 June, 2016).

Cook, C. & Heath, F.M., 2001. Users' perceptions of library service quality: A LibQUAL+ qualitative study.

Cook, C. Heath, FM. & Thompson, and B. 2001. Users hierarchical perspective on library service quality. LibQUAL +study. *College and Research Libraries*. 62:147-153.

Dash, N.K., & Padhi, P. 2010. Quality Assessment of Libraries. *DESIDOC Journal of Library & Information Technology*, 30(6), 12-23.

Diana, R. 2012. *The literature review: A step-by-step guide for students*. 2nd ed. Los Angeles, CA: SAGE.

Edvardsen, B. Tomasson, B. & Overtveit, J. 1994. *Quality of service: making it really work*. McGraw-Hill, New York, NY.

Ford, D. & Kinnell, M. 2001. Managing and marketing technology. Australia: Thomson Learning. *function deployment* – Practitioner workshop. American Supplier Institute Inc., USA.

Ghadiri, A. Bahari, MD. Bafani, F.A. Alaani, M. Farazaneh, M. & Timachi, M. 2013. The survey of relationship between total quality management and financial performance. *Interdisciplinary Journal of Contemporary Research in Business*, 5(2):590-596. Available at ijcrb.webs.com (Accessed on June 7 2016).

Gharakhani, D., Rahmati, H. Farrokhi, M.R & Farahmandian, A. 2013. Total quality management and organizational performance. *American Journal of Industrial Engineering*, 1(3):46-50.

Gideon, L. (2012), *Handbook of survey methodology for the social sciences*, Springer, New York, NY.

Golnessa, GM. & Moballeghi, M. 2008. Total quality management in library and information sectors. *The Electronic Library*, 26(6):912-922.

Hade, E.N & Lemeshow, S. 2011. *Probability sample* in: Lavrakas, PJ. (ed). *Encyclopedia of Survey Reassert Methods*. Thousand Oaks: Sage 1-5

Hinson, R. 2006. Marketing of Services: A Managerial Perspective. *Sedco, Accra*.

Ho, VP. 2011. *Total quality management approach to the ISDP: an empirical study*. PhD Thesis, Virginia Polytechnic Institute and State University. IFLA/UNESCO (2017), "Public library manifesto", available at: www.ifla.org/publications/iflaunescopublic-library-manifesto-2016 (accessed on 30 January 2017).

Iwhiwhu, B. E., & Okorodudu, P. O. 2012. *Public Library Information Resources, Facilities*

Karani, SR & Bichanga, WO. 2012. Effects of total quality management implementation on business performance in service institution: a case study of Kenya Wildlife Services. *International Journal of Research Studies*, 1(1):59-76.

Khan, M. and Kamal, M., 2015. Total quality management (TQM) for improving quality service in University libraries: A conceptual view.

Khanna, HK. Sharma, D.& Laroia, S. 2011. Identifying and ranking critical success factors for implementation of total quality management in the Indian manufacturing industry using POPSIS. *Asian Journal on Quality* 12(1): 124-138.

Kosegei, JM. 2014. Challenges facing the implementation of total quality management in Secondary Schools: A case of Eldoret East District, Kenya, *Global Journal of Human Resource Management*. 3(1):12-18. Available at www.eajournals.org (Accessed on 14 June, 2016)

Kulkarni, M. K. 2012. Survey of state administrative training institutes (ATI) libraries in India with special reference to library service quality expectations (Doctoral thesis). Available from Shodhaganaga. (<http://hdl.handle.net/10603/3778>) libraries.

Lidia, DW, Marek, MG. & Marzena, M. 2005. Quality of academic libraries-funding bodies, librarians and user perspective. World Library & Information Congress 7th Library Conference on Libraries: A voyage of discovery, 14-18 August, 2005. Oslo-Norway.

Majid, S., Anwar, M. A., & Eisenschitz, T. S. (2001). User perceptions of library effectiveness in Malaysian agricultural libraries. *Library Review*, 50(4), 176-186.

Manjunatha, K. and Shivalingaiah, D., 2004. Customer's perception of service quality in orientation on organizational performance. *International Journal of Quality & Reliability Management* 33(5):597-614, doi: 10.1108/IJQRM-03-2014-0034 Permanent link to this document: <http://dx.doi.org/10.1108/IJQRM-03-2014-0034>

Mehralian, G., Jamal A., Golnaz, NN, Rasekh, HR. 2017. TQM and organizational performance using the balanced scorecard approach. *International Journal of Productivity and Performance Management* (66)1: 111-125, doi: 10.1108/IJPPM-08-2015-0114 Permanent link to this document: <http://dx.doi.org/10.1108/IJPPM-08-2015-0114>

Moballegghi, M. & Moghaddam, GG. 2011. Linking TQM and Financial Performance. *12 IPEDR*, 12:417-421

Moghaddam, GG. & Moballeghi, M. 2008. Total quality management in library and information sectors. *Journal of The Electronic Library*, 26(6):922 (Available at <http://dx.doi.org/10.1108/02640470810921664>) (Accessed 20 August 2015)

Mosadeghrad, AM. 2014. Why TQM does not work in Iranian healthcare organizations. *International Journal of Health Care Quality Assurance* 27(4): 320-335. doi: 10.1108/IJHCQA-11-2012-0110 Permanent link to this document: <http://dx.doi.org/10.1108/IJHCQA-11-2012-0110>

Negi, AS. & Srivastavam, JP. 2015. Total quality management (TQM) and its applications in academic library and information services. *International Journal in Management and Social Sciences (IJMSS)* 3(2): 676-688 Available at www.irjmss.com (Accessed on 20 June 2016)

Ngambi, M.T & Nkemkiafu, A.G. 2015. The impact of total quality management on firm's organizational performance. *American Journal of Management* 15(4): 69.

Oluwatoyin, A. & Oluseun, A. 2008. *Total quality management: a test of the effect of TQM on performance and stakeholder's satisfaction*. Master's Thesis Proposal. School of Management: Belkine Institution of Technology, 74

Ooi, KB, Cheah, WC. Lin, B. & Tech, PL. 2012. Total quality management practices and knowledge sharing: an empirical study of Malaysia's manufacturing organizations. *Asia Pacific Journal of Management* 29(1): 59-78

Pantouvakis, A. & Bouranta, N. 2013. The interrelationship between service features satisfaction and customer satisfaction: evidence from the transport sector. *The TQM* 25(2):186-201.

Patil, S. and Sawant, S. (2017). *Service quality expectations of academic library users*. In a National Conference on enhancing the role of the Library in Teaching and Learning, Pune, 24-25 January 2017. [Conference paper].

Prajogo, DI & Cooper, B. 2017. The individual and organizational level effects of TQM practices on job satisfaction. *International Journal of Manpower* 38(2): doi: 10.1108/IJM-12-2014-0240 Permanent link to this document: <http://dx.doi.org/10.1108/IJM-12-2014-0240>

Raza, M. M. & Sohail, M. (2012). Measuring service quality in Dr. Zakir Husain Library, JMI, and New Delhi: A Survey. *Library Philosophy and Practice*.

Reddy, TR. 2012. Total quality management and knowledge management integrations in library and information centers: a study, 2(11):292-298. Available online at www.interestjournals.org/JRIBM. (Accessed on 26 July, 2016).

Sadikoglu, E & Hilal, O. 2014. The effects of total quality management practices on performance and the reasons of and the barriers to TQM practices in Turkey. *Advances in Decision Sciences* 20141-17.

Sadikoglu, E. & Zehir, C. 2010. Investigation the effects of innovation and employee performance on the relationship between TQM practices and firm performance: an empirical study of Turkish firms. *International Journal of Production Economics* 1275(1): 13-26

Salhieh, L. & Abu-Doleh, J. 2015. The relationship between total quality management practices and their effects on bank's technical efficiency. *International Journal of Commerce and Management* 25(2):173-182. doi: 10.1108/IJCoMA-03-2013-0027 Permanent link to this document: <http://dx.doi.org/10.1108/IJCoMA-03-2013-0027>

Sathe, VS. 2015. Total quality management in Libraries. *Knowledge Librarian*, 2(1):2394-2479.

Saunders, M, Lewis, L & Thornhil, P. (2016). *Research methods for business studies*. 9th edition. New York: Pearson.

Sharma, C. (2013). Quality management in libraries: An Outline. *International Journal of Enhanced Research in Management & Computer Applications*, 2 (8),1-4.

Sharma, C. 2013. Quality management in libraries: An outline. *International Journal of Enhanced Research in Management & Computer Applications*, 2(8):1-4.

Sharma, C., & Kadyan, S. (2016). Examine total quality management in engineering College Libraries: An evaluative Study. *Pearl: A Journal of Library and Information Science*, 10(4), 215-223.

Sinha, N. Ajay, K. Garg, SD., & Dhall, N. 2016. Mapping the linkage between organizational culture and TQM: The case of Indian auto component industry, Benchmarking: An International Journal, Vol. 23(1):208-235. doi: 10.1108/BIJ-12-2014-0112 Permanent link to this document: <http://dx.doi.org/10.1108/BIJ-12-2014-0112>

Sivankalai, S. & Yadav, TKS. 2012. Total quality management in academic libraries: A study. *International Journal of Educational Research and Technology*, 3 (1): 66 – 72

Talib, F Rahman, Z. & Qureshi, MN 2011 A study of total quality management and supply chain management practices. *International Journal of Productivity and Performance Management* (60):3 268-288. <http://dx.doi.org/10.1108/17410401111111998>

Talib, F., Rahman, Z. & Z Qureshi, MN. 2013. An empirical investigation of relationship between total quality management practices and quality performance in Indian service companies. *International Journal of Quality & Reliability Management* 30(3): 280-318, doi: 10.1108/02656711311299845 Permanent link to this document: <http://dx.doi.org/10.1108/02656711311299845>

Wang, I. M., & Shieh, C. J. (2006). The relationship between service quality and customer satisfaction: the example of CJCUC library. *Journal of Information and Optimization Sciences*, 27(1), 193-209.

Yapa, S. 2012. Total quality management in Sri Lankan service organizations. *The Total Quality Management Journal*, 24 (6): 505 – 517

Zivo, C. N. (2012). User perception on library services and information resources in Kenyan Public Libraries. *Library Review*, 61(2), 110–127. <https://doi.org/10.1108/00242531211220744>