



Improving Service Operations through Total Quality Management

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ABSTRACT

This study aims to improve the performance of BSRU's service operations through total quality management. This study conducted a quantitative analysis using a survey questionnaire administered personally and through Google Forms to the Faculty of Management Science, Bansomdejchaopraya Rajabhat University staff and students. The rationale of this study is to analyze the performance of existing operations to facilitate the development of feasible strategies using established concepts. The concepts of (1) various Attributes of Education, (2) Total Quality Management, (3) Service Operations, (4) Operations Performance, (5) Value Chain, and (6) Customer Relationship Management are used to analyze the operations performance. These analyses provide key findings that help develop strategic options to achieve the objective. Suitability, acceptability, and feasibility (SAFe) evaluation criteria were used to evaluate the strategic choices. Three key findings (KF) and three suggested strategic options (SSO) were identified: KF #1 is an enriched learning experience directly related to teaching effectiveness. The SSO #1 enriches students' learning experience by engaging suitable and qualified lecturers and improving the management retention power of outstanding lecturers. KF #2 is improving the efficiency of operations performance, thereby enhancing the service operations through total quality management. The SSO #2 is to embrace total quality management. KF #3 Customer satisfaction is the most important aspect of creating value for products and services, encouraging employees to practice an environment that focuses on the customer. The SSO #3 is to enhance its customer-centric technique.

Keywords: service operations, total quality management, operations performance, value chain, customer relationship management

1. Introduction

Service from the customer's perspective is the service given to and the impression of the service provided, their interaction, observation, and reaction to it, resulting in service outcomes such as products, benefits, emotions, judgment, and intentions (Jonhston et al., 2012). Customer service and satisfaction can be improved through processes fostered by a strong foundation of ethics, trust, and integrity. Procedures planned based on customer needs can also be a factor for improvement, and introducing practices designed according to the organization's culture is of relatively low importance. The experience is assumed from the viewpoint of a particular customer and is naturally personal in the customer's perception. Chase and Jacobs (2011) added that every service has a service package, a set of goods and services supplied in a certain environment.

Total Quality Management (TQM) has become a prerequisite in all types of an organization since the start of the 21st century. The role of the 'inspection department' in the 20th century suddenly became a hot issue between and among employees at all levels. Delivering superior quality at every level is a commitment of all organizations. The customer's viewpoint defines quality. Thus, each organization strives to equip its employees with management level down to the lowest rank in the hierarchy with the capacity to improve workflow productivity in terms of practices, schemes, and measures by embracing new dimensions of change and incorporating individual effort into the organizational processes.

2. Literature Review

Education is key to the human pursuit of living and existence. It has existed since the beginning of humanity and shall continue serving as long as mankind lives. There are several attributes of education, among them its importance, learning experiences, 21st-century knowledge skills, curriculum planning, and classroom management. Stiasny and Gore (2013) suggested that education in general and higher education, in particular, has been increasingly understood as a prerequisite for national development and global economic competitiveness. Education is of the highest value to humanity (Hajiyev, 2015). Education is a vital means in the modern world to thrive, as it alleviates the difficulties that humans are experiencing.

To gain and apply the necessary skills in the workplace, learners are expected to be exposed to various learning experiences. Learning experiences are more effective when there is effectiveness in teaching, and the learners enjoy what they are doing (Muijs & Reynolds, 2011). It is determined by the effectiveness of each lesson plan, instructional material, and teaching technique (Hinkel, 2015). In addition, teaching-learning approaches should develop learners' adaptive competencies, plan reflection activities, and support the development of communities (Lehner & Bredl, 2011). For effective teaching to take place, teachers must be competent in encouraging student behavior to take advantage of the time spent learning (Levin & Nolan, 2004).

To support the development of communities, learners should be armed with knowledge and skills. 21st-century knowledge and skills include competency in problem-solving, communication, use of e-tools, and interpersonal skills. This is on top of the key content knowledge and information technology that is the basic tool of the 21st century. The 21st-century knowledge and skills enrich opportunities to engage the learners in learning and thinking tasks with other learners (Bellanca & Stirling, 2011). Effective teaching incorporates 21st-century knowledge skills and various teaching activities facilitating learning experiences. Learning based on a problem or project concept is the foundation of 21st-century learning (Bellanca & Brandt, 2010). Teachers need to recognize the needs of the changing economy and the necessity to incorporate methods that will facilitate the use of 21st-century skills such as collaboration, communication, creativity, leadership, responsibility, and people skills. There is a need to integrate the teaching and use of 21st-century skills (Wan & Gut, 2011).

It is essential to have effective curriculum planning. It should establish lifelong learning competencies, alignment of instruction, standards, and assessments, and provide a way for ongoing revision and improvement to integrate the teaching and use of the 21st century. Kwo et al. (2004) suggested that the curriculum should introduce learners to a range of learning strategies that they could practice in class, and they should have the opportunity to plan, carry out, and evaluate a learning project of their own choice in class. The teachers must pay attention to key behaviors to provide learners with all their learning needs. These behaviors influence the curriculum's use in teaching and learning (Aquino, 1998). From the writer's point of view, curriculum planning would allow teachers to apply appropriate strategies that seemed suitable to the needs of the learners, and teachers would have to provide ongoing support in the form of preparation, advice, negotiation, and feedback.

Teachers must be made aware of the behavior of the learners while planning the curriculum, which is the basis of the success of the teaching and learning process, along with a good command of classroom management. Classroom management thus provides the foundation for all instruction. It is the teachers' actions to deliver exciting and dynamic learning experiences, maximize learning and cooperation, and maintain a positive environment conducive to learning (Garrett, 2014). These attributes of education are important in the development and success of learners, together with the good management of the administration.

2.1 Total Quality Management

The concept of TQM is broad, and in several instances, researchers have been known to form definitions based on the circumstances. Bounds et al. (1994) suggested that TQM is essential to a high-level strategy incorporating supply and customer chains. Slack et al. (2013) viewed TQM as an efficient approach to integrating quality of operations and maintenance and improving efficiency in operation performance to facilitate service at a lower cost, enhancing customer service and satisfaction. Wheelen & Hunger (2008) added that customer satisfaction and continuous improvement are essentials of TQM. Over the past few decades, quality gurus like Crosby, Deming, and Juran developed the concept of quality, and their propositions cultivate the foundation of total quality management (Aole & Gorantiwar, 2013). Kanji (1995) describes TQM as quality, which is the continued satisfaction of customer needs; total quality is achieving quality at a low price; and TQM is to attain total quality by linking everyone's everyday responsibility.

A successful TQM is a combination of Just in Time (JIT), Total Quality Control (TQC), Total Productive Maintenance (TPM), Kaizen, and 5S. This five-quality concept forms the TQM tree. The foundation of the tree is 5S which is a link to JIT, TQC, and TPM through Kaizen. The TQM tree shown in **Figure 1** represents the overall concept of total quality management.

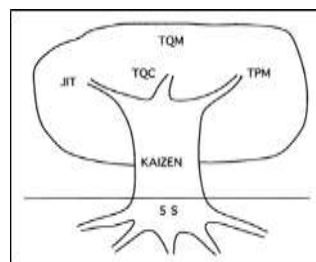


Figure 1.

TQM Tree (Source: Adapted from Kanji (1995))

The 5S refers to five Japanese terms: seiri (orderliness), seiso (clarity), seiton (tidiness), seiketsu (cleanliness), and shitsuke (discipline). It represents a high-productivity and high-quality workplace that delivers on time, is safe for employees, and has high morale (Kanji, 1995). It is attributed to increased work efficiency and effectiveness, which decreases time wastage (Mukherjee, 2006).

Kaizen is a continuous improvement process that involves all employees focusing on improving processes (Ortiz, 2009). It highlights building a process-oriented character determined to enhance an organization's function.

JIT (Just-In-Time) is a tool most commonly applied in the production and inventory system wherein the procurement of supplies is based on the requirements to meet the exact demand of the customers. The primary goal is zero defects, zero breakdowns, and zero inventories (Narusawa & Shook, 2009)

Total Quality Management (TQM) is a way of developing quality in the processes in which workers are accountable for the quality of their work. It aims to have zero defects in production (Chase et al., 2006).

Total Productive Maintenance (TPM) is an industry standard for production and provides a solid foundation, but it is purely an engineering tool intended to make equipment more reliable (Borris, 2006). One of the basic motivations of TPM is to conduct a minor group activity to detect the possible source and occurrence of essential equipment breakdowns. The ultimate goals of TPM are zero breakdowns and defects (Bhadury, 1998).

Total Quality Management (TQM) is one of the best-known methods for constantly improving processes. It influences organizations by putting the customer at the center of quality decisions and advancement (Johnston et al., 2012). Quality is an important factor that helps organizations do better than their competitors. Ethics, integrity, trust, teamwork, training, leadership, communications, and recognition are the elements that will guarantee the success of TQM (Milosan, 2014).

The key benefits of TQM (Charantimath, 2011) include improved efficiency, customer satisfaction, and better organizational development. It will also establish a good corporate culture where the customer is the main concern of the business rather than the department and improve the performance of employees through training provided by the company, which will increase productivity and efficiency. In addition, TQM will enhance the process effectively and eradicate common problems in work systems, lowering costs and creating flexibility in arranging personnel. Moreover, TQM focuses on major areas that need changes, redundant tasks and processes, and worthless operations.

TQM will encourage customer satisfaction by recognizing the best quality to match consumers' prospects, enhancing product quality and services. TQM hopes to deliver high-quality service to customers by foreseeing work process inaccuracies.

Performance indicators are used in various operations (Stadtler et al., 2014). They should be used as a decision-supporting tool that is expected to follow certain attributes: promote the right people's behavior and appropriate organizational culture, be visible to the employees, be accepted by the organization and shared within various departments, react according to minimal process performance deviation, and be easily understood by all stakeholders (Oliveira & Gimeno, 2014).

2.2 Performance Operations

Improving efficiency in operations performance would require the organization to adapt to opportunities and challenges of the rapidly changing technology and business processes, decrease errors and resources, be customer-oriented, uphold integrity, involve all employees, and make room for continuous improvement. In addition, the organization would also need to adapt to the opportunities and challenges due to constantly changing technology and business models. The performance of service operations is analyzed using the QSDFC model, which represents quality, speed, dependability, flexibility, and cost to satisfy all stakeholders (Slack et al., 2013).

Porter (1985) conceptualized a value chain that pertains to a firm that disaggregates into its purposely relevant activities so that the behavior of costs and the present and future basis of segregation would be understood. The most important characteristic of the service value chain is the integration of all functions that influence a company's ability to provide service to its customers, such as sales, marketing, and customer service. The key intention of the value chain is incorporating the value chain partners to enhance the efficiencies that would result in value creation for the stakeholders (Ilyas et al., 2006)

2.3 Customer Relationship Management

The organization's value chain influences its ability to maintain customer relationship management strategy (Baran et al., 2008). An organization's well-organized CRM approach can fall short if it does not consider the competencies and enthusiasm of value chain members. Sabri & Shaikh (2010) identified four key principles of the value chain, namely: (a) focus on customer success, (b) create a trusted environment, (c) eliminate waste or reduce non-value activities, and (d) continuous improvement. The focus on customer success is customer-oriented; the company customizes product and service offerings based on data gathered through interactions between the customer and the company. Creating a trusted environment for all stakeholders and encouraging the company to find out more than local enhancement and begin looking to remove waste and attaining continuing upgrading for all partners' benefits. A tightly aligned organization creates an environment of trust. Internal performance improvements and a trusted environment carry forward across external partners, making the entire value chain more reliable and trustworthy.

In improving competitiveness and profitability, suppliers and customers must be linked through Customer Relationship Management (CRM) to achieve better communication and coordination and to create and deliver value to them. CRM is the core business strategy that incorporates procedures, processes, and outside networks to establish and provide value to a specific group of customers (Buttle, 2009). It is grounded in high-quality customer-related details and made possible by information technology.

It is a method that deals with all phases of recognizing customers, initiating customer awareness, creating customer interactions, and influencing their views of the company and its products (Peelen, 2005). It is also processed to oversee the company's assets to produce the utmost expected experience and meaning for customers (Doole et al., 2005) while creating the maximum achievable returns and proceeds for the company. CRM is concerned with a customer-oriented environment that encourages going the 'extra mile' to exceed customers' expectations, promotes customer satisfaction, and provides on-time responses to inquiries (Bergeron, 2002).

A set of measurable performances should be outlined so the achievement or breakdown of the CRM plan can be measured regularly. The results can be used to trace the results versus objectives, identify areas that call for enhancement, and establish continuing improvements. Continuous measurement and improvement would be able to identify the training needed by the employee and measure its effectiveness. Continuous improvement is achieved by placing the necessary training to ensure the positive removal of problems, recognizing the source of the issues, and eliminating obstacles relating to performance, sections, procedures, and standardization. Standardization includes standardizing processes, practices, documents, contracts, performance measures, policies, and procedures across different business units or departments of the company based on best practices that may lead to giving awards and recognition. To ensure that the execution continues to follow, a performance measurement system would provide feedback and an opportunity to adjust the plan. Performance measurement systems will motivate people to act in a way that is aligned with corporate goals rather than limited and sometimes conflicting ones. It will also identify areas for improvement by conducting benchmarking and conveying what is important to the organization.

3. Research Methodology

Research Objectives

The main objective is to improve BSRU's service operations performance.

Research Design

This study employed a quantitative approach to investigate BSRU's service operations performance. This approach offered respondents the benefit of considering their responses thoroughly before submitting them while facilitating the recruitment of a wider participant pool due to the broad reach of the online survey questionnaire.

Data Collection

Data for this study was collected through a pre-validated survey questionnaire developed by the researcher. The questionnaire comprised 16 multiple-choice questions to gather information on BSRU's service operations performance. The survey was distributed through Online Google Forms, which allows for convenient access and completion by a geographically dispersed sample, and Self-administered paper versions, handed directly to participants by the researcher.

Sampling

A sample of 272 participants was recruited using convenience sampling to investigate BSRU's service operations performance. This sample size was chosen to ensure sufficient data collection while considering resource limitations.

SAFe Evaluation Criteria

Strategies can be assessed based on the three benchmarks of suitability perceived as organizational opportunities and threats, acceptability to key stakeholders, and feasibility in terms of capability for execution (Johnson et al., 2014). These criteria may conflict, and evaluation usually requires sensible judgment on how the differing requirements should be weighed against each other. These criteria could be used to evaluate strategies and in the formulation stage.

Suitability is one of the main principles of strategic analysis, which is to completely understand the organization and the environment in which it operates. Suitability entails the complete foundation of a strategy and focuses on the main opportunities and obstacles an organization faces. It involves the analysis of strengths, weaknesses, opportunities, and threats that face the organization and any potential that has a significant impact on strategic choice. Suitability is a criterion for assessing the degree to which the projected strategy suits the situation identified in the strategic analysis and how it would carry on or enhance the organization (Middlewood & Lumby, 1998).

Acceptability is the likely performance result of a planned strategy to meet the stakeholders' expectations. It assesses whether the organization's stakeholders will likely support the new approach and concentrate on the profits and threats implicated. Cultural understanding is also necessary to establish the organization's likely acceptance of the strategy. If the strategy is doubtful in offering the expected financial profits with the attempt and investment made, it may not be satisfactory to the organizational stakeholders (Jeffs, 2008).

Feasibility relates to whether a strategy can be successfully implemented. It entails the availability of finances, human resources, and information essential to executing the plan.

Research Question (RQ) and Survey Question (SQ)

RQ 1 Would an effective learning environment enrich learning experiences?

Learning experiences are more effective when there is effectiveness in teaching and students enjoy what they are doing (Muijs & Reynolds, 2011). RQ1 is supported by SQ1 to SQ4.

RQ2 Would total quality management improve BSRU's service performance?

Total quality management is an efficient approach to integrating quality operations and maintenance and improving efficiency in operation performance to facilitate service at a lower cost and enhance customer service and satisfaction. It is one of the best-known methods for constantly improving processes. It influences organizations by putting the customer at the center of quality decisions and advancement. RQ2 is supported by SQ5 to SQ8.

RQ3 What are the value chains within BSRU's primary activities of its service supply chain?

Improving efficiency in operation performance would require the organization to adapt to opportunities and challenges of the rapidly changing technology and business processes, decrease errors and resources, be customer-oriented, uphold integrity involving all employees, and make room for continuous improvement. The value chain consists of activities intended to plan, create, sell, distribute, and sustain its product. RQ3 is supported by SQ9 to SQ12.

RQ4 Would BSRU's CRM be enhanced through TQM?

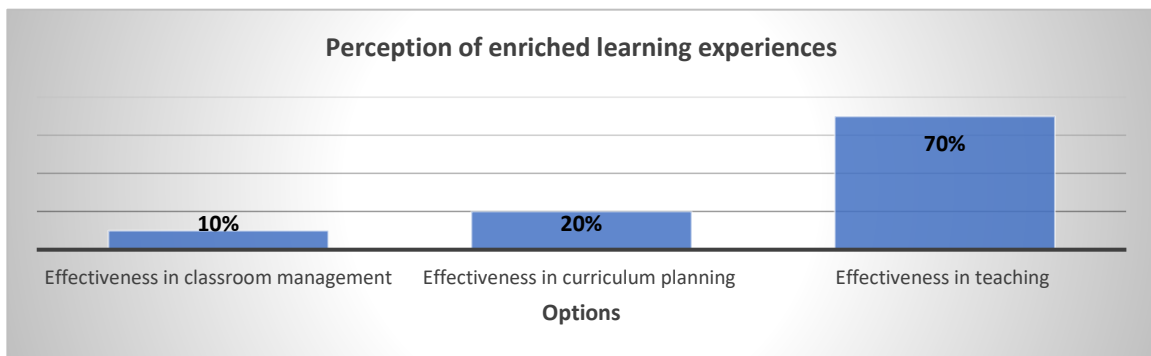
The organization's value chain influences its ability to maintain a customer relationship management strategy. Every business aims to deliver fast results, which can be achieved through well-managed customer relationship management. CRM aims to provide quick outcomes such as improved output, better customer recruitment, contentment and maintenance, and increased revenue. RQ4 is supported by SQ13 to SQ16.

4. Results and Discussion

4.1 Results

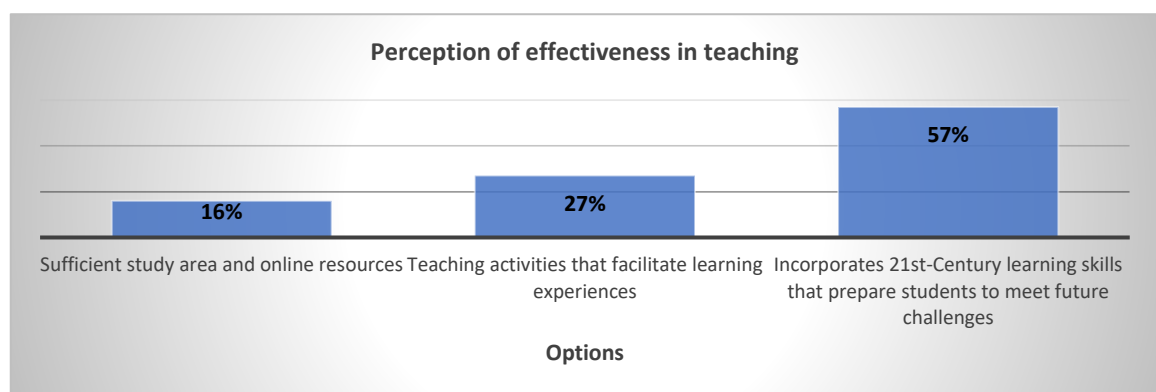
RQ1 Findings – SQ1 to SQ4 findings are analyzed and presented in Figures 1-4.

Figure 1. SQ1 Survey Results



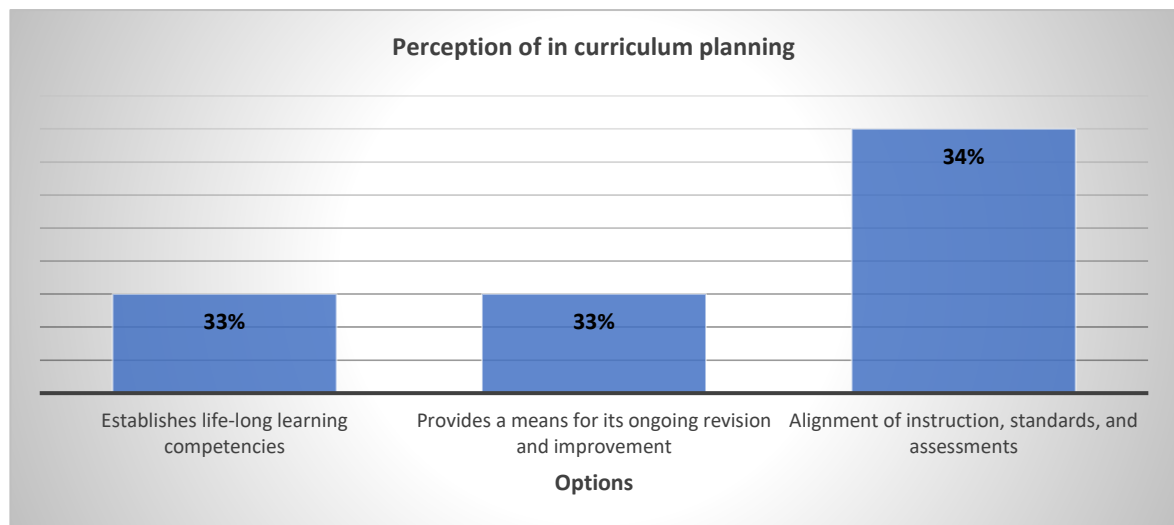
70% expressed that effectiveness in teaching enriched learning experiences, compared to 20% of effectiveness in curriculum planning. Enriched learning experiences are influenced by how effective teaching is delivered, while classroom management has little impact (10%) on enriching learning experiences. The finding signifies how important teaching effectiveness is and that the effect is very high to make enriched learning experiences occur.

Figure 2. SQ2 Survey Results



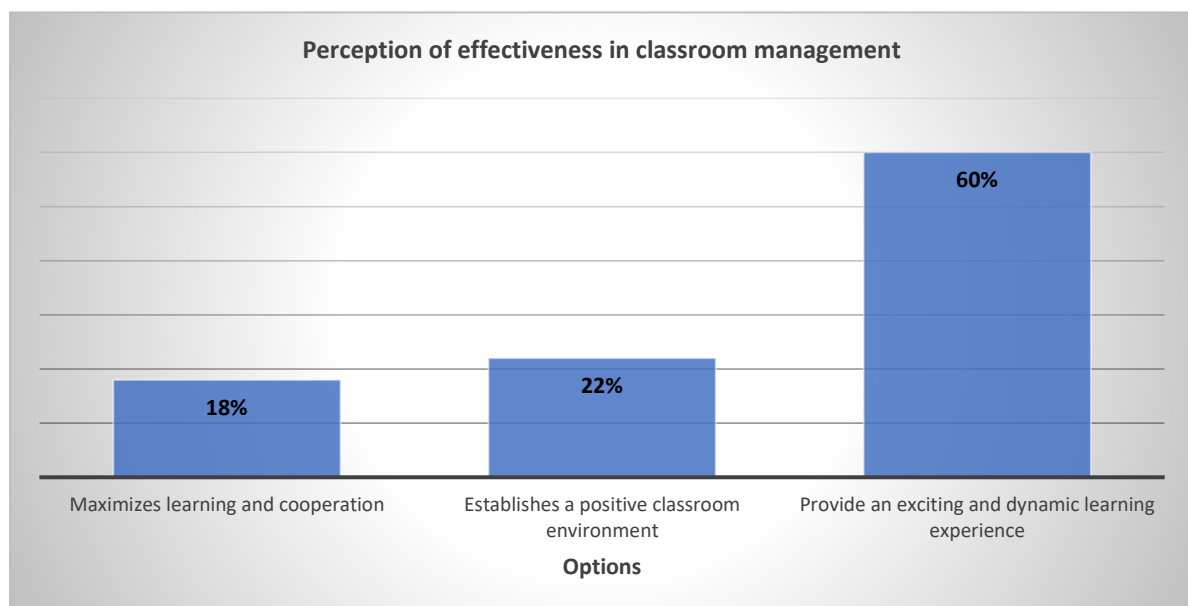
57% of the respondents expressed that incorporating 21st-century learning skills that prepare students to meet future challenges is essential for teaching effectiveness. In comparison, 27% expressed that teaching activities facilitating learning experiences are also necessary. 16% expressed that sufficient study area and online resources influence teaching effectiveness. The finding reveals the importance of keeping up-to-date regarding the demand for the knowledge and skills vital in today's education setting. It will assist the students to cope in a competitive working environment. The skills of the teacher are also relevant in facilitating learning experiences.

Figure 3. SQ3 Survey Results



Establishing life-long learning competencies and providing means for ongoing revision and improvement are equally significant in the effectiveness of curriculum planning, as expressed by respondents with 33% each. It is also noted that 34% of the respondents agreed that the alignment of instruction, standards, and assessments is also indispensable in the effectiveness of curriculum planning. Hence, all three options are important aspects in planning the curriculum.

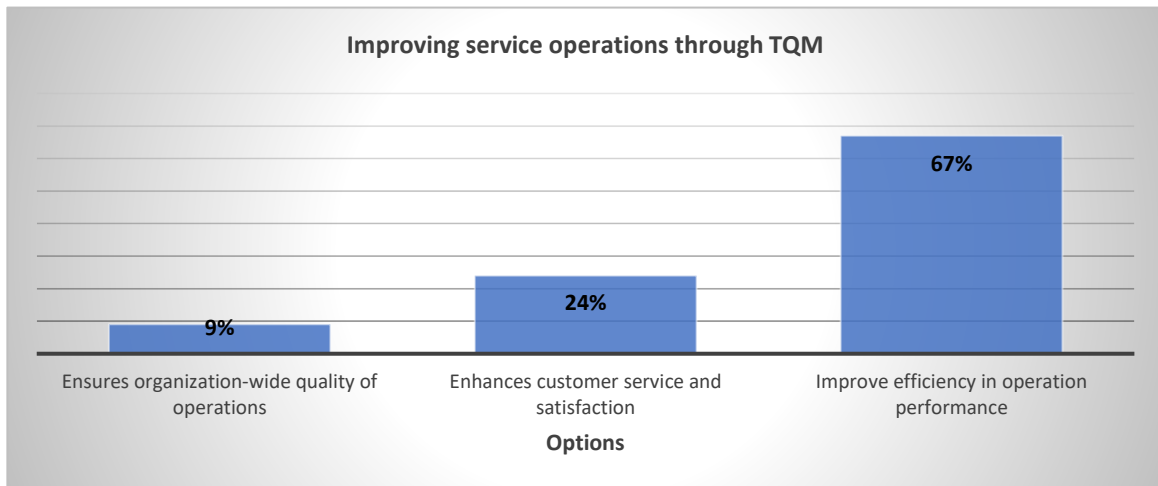
Figure 4. SQ4 Survey Results



60% of the respondents agreed that providing exciting and dynamic learning experiences facilitates effectiveness in classroom management. 22% expressed establishing a positive classroom environment, and 18% stated that maximizing learning and cooperation is important in effective classroom management. This finding suggested that the teacher should use the stimulating and lively technique to manage the class effectively.

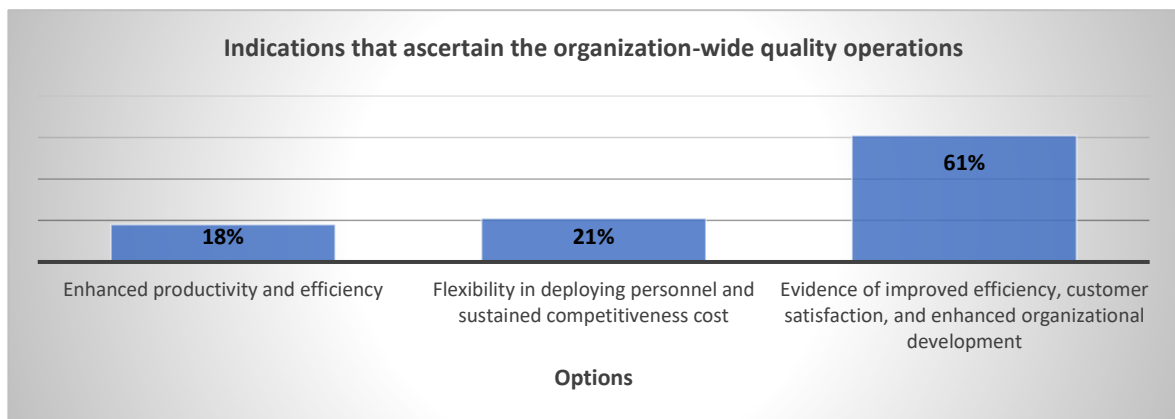
RQ2 Findings – SQ5 to SQ8 findings are analyzed and presented in Figures 5-8.

Figure 5. SQ5 Survey Results



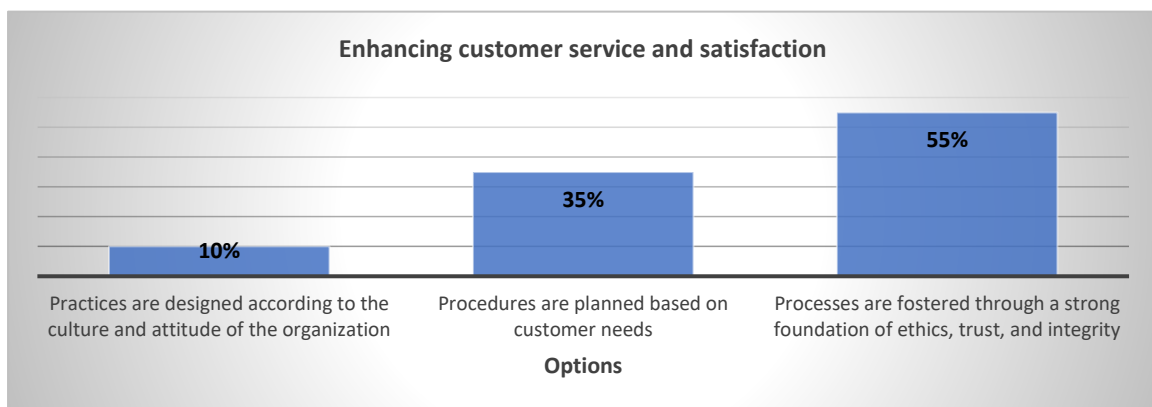
67% of the respondents agreed that TQM would improve operational efficiency, while 24% said it would enhance customer service satisfaction. Only 9% of the respondents believed it would ascertain the organization-wide quality of operations. The findings revealed that TQM will certainly improve operational efficiency. The outcome suggests that the main objective of the research is met.

Figure 6. SQ6 Survey Results



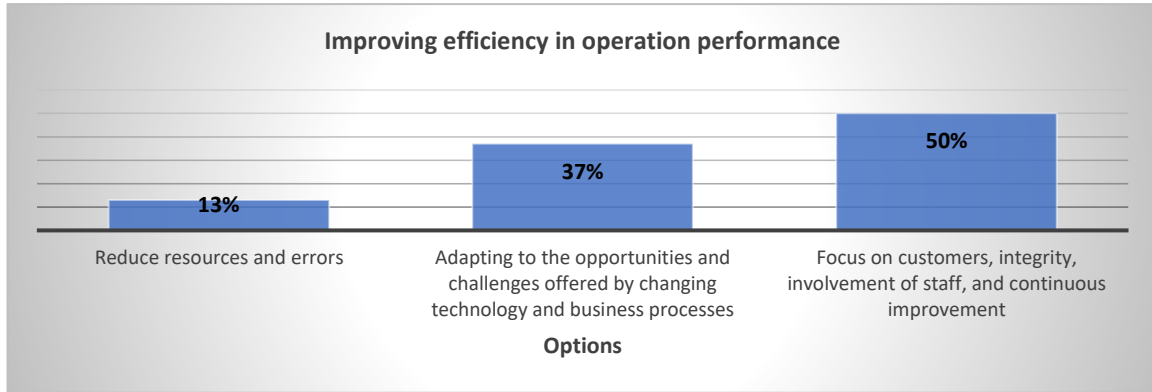
61% of the respondents agreed that evidence of improved efficiency, customer satisfaction, and enhanced organizational development is the primary indication of the organization-wide quality of operations. In comparison, 18% expressed that it will improve productivity and efficiency. 21% believed it would create flexibility in deploying personnel to sustain the competitive cost. The benefits of TQM are immeasurable when successfully implemented, as it will be able to satisfy the general objective of every organization, which focuses on efficiency, quality, productivity, and cost.

Figure 7. SQ7 Survey Results



55% of the respondents agreed that customer service and satisfaction are enhanced through processes fostered through a strong foundation of ethics, trust, and integrity. In comparison, 35% believed procedures should be planned based on customer needs. 10% felt that customer service and satisfaction could be enhanced by practices designed according to the culture and attitude of the organization. Enhancing customer service and satisfaction is the heart of all the improvements carried out by the organization. It should begin with a strong foundation of trust, integrity, and ethics to produce the desired outcome.

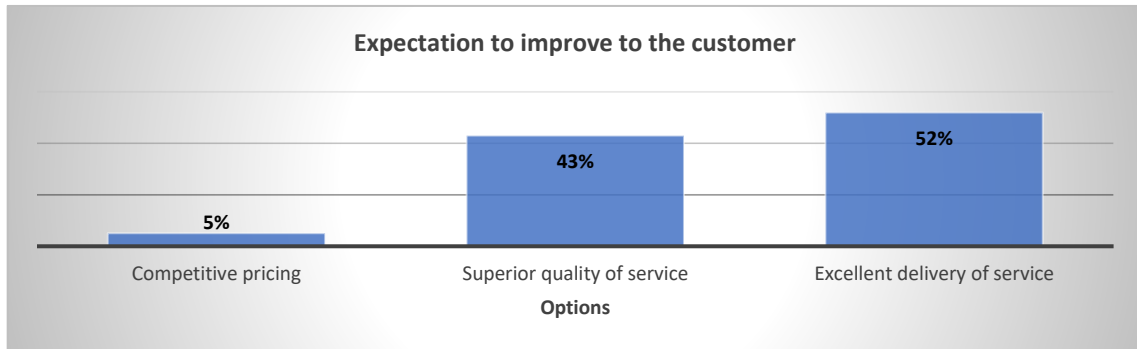
Figure 8. SQ8 Survey Results



50% of the respondents agreed that focusing on customers, integrity, the involvement of staff, and continuous improvement would improve efficiency in operation performance. In comparison, 37% believed that adapting to the opportunities and challenges offered by changing technology and business processes would also improve efficiency in operation performance. Thus, improving efficiency in operation performance will create an overall image of effective service operations due to the better services offered and enhanced customer satisfaction.

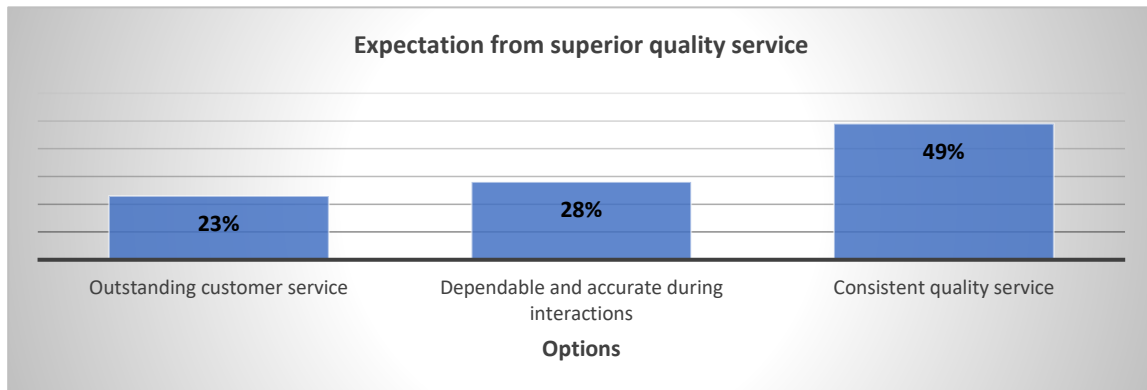
RQ3 Findings – SQ9 to SQ12 findings are analyzed and presented in Figures 9-12.

Figure 9. SQ9 Survey Results



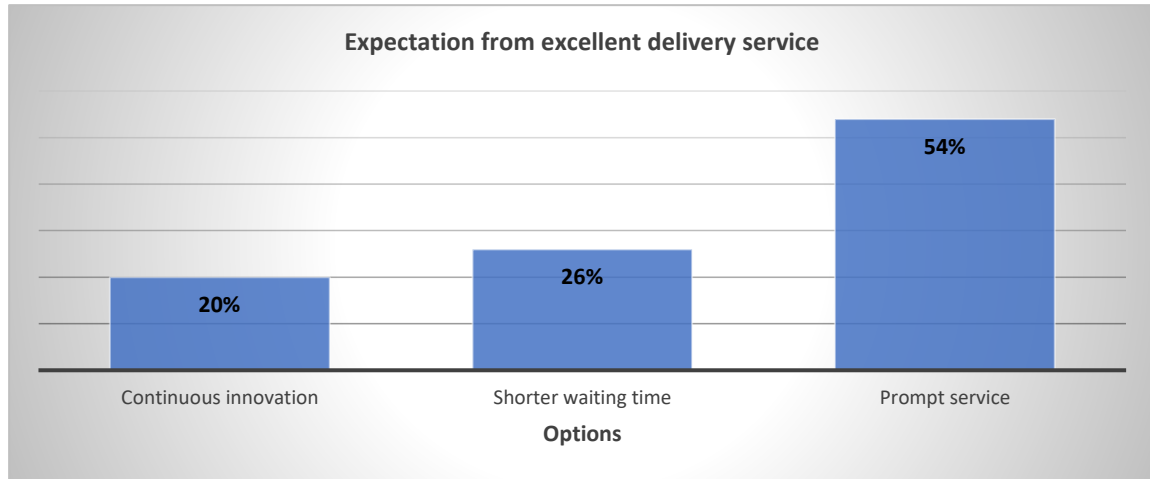
52% of the respondents expressed that they expected the company to improve the value to their customers through excellent service delivery. In comparison, 43% felt they were expecting a superior quality of service. Only 5% of the respondents expect competitive pricing to improve the customer's value. The findings suggested the importance of premium service customers expect from the organization to enhance their worth.

Figure 10. SQ10 Survey Results



49% of the respondents expressed that consistent quality service describes a superior quality of service. 28%, however, agreed that dependability and accuracy during the interaction process describe superior quality service, compared to 23% of the respondents who believed that outstanding customer service best describes superior quality service. Though the first option suggests that it best describes superior quality service, it is equally important to maintain accuracy and dependability, as they always come together when providing exceptional quality service.

Figure 11. SQ11 Survey Results



54% of the respondents agreed that prompt service implies excellent service delivery, while 26% believe it suggests shorter waiting times. 20% felt that excellent service delivery is linked to continuous innovation. The finding, however, revealed that delivering the product or service promptly and avoiding waiting time is fundamental. It is related to superior quality of service, which means that quality and speed are indispensable to having an overall exceptional customer service experience.

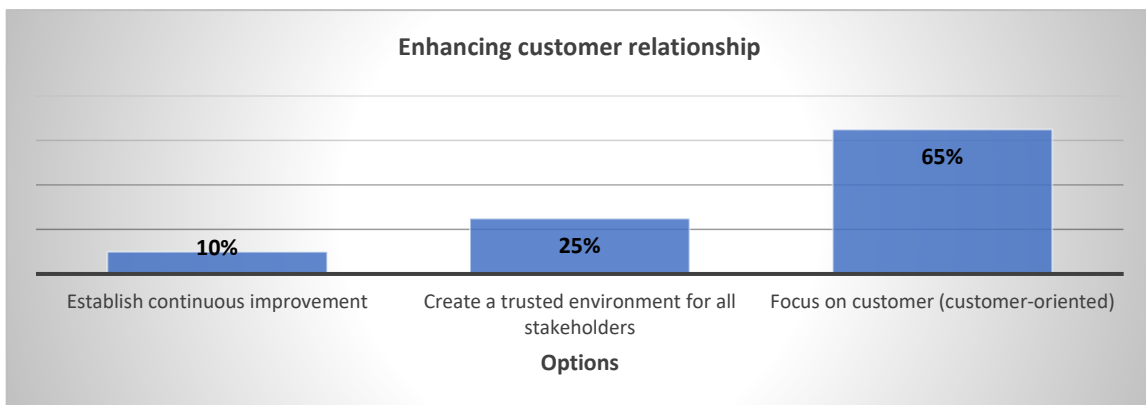
Figure 12. SQ12 Survey Results



40% of the respondents expressed that competitive pricing means the best value for money, while 40% also felt that it is lower in price but of high quality. 20% believe otherwise that competitive pricing is comparable to premium service with generous payment terms and extra features. The findings show that customers' impression of competitive pricing is related to the best value for money being lower in price but at the high-quality end.

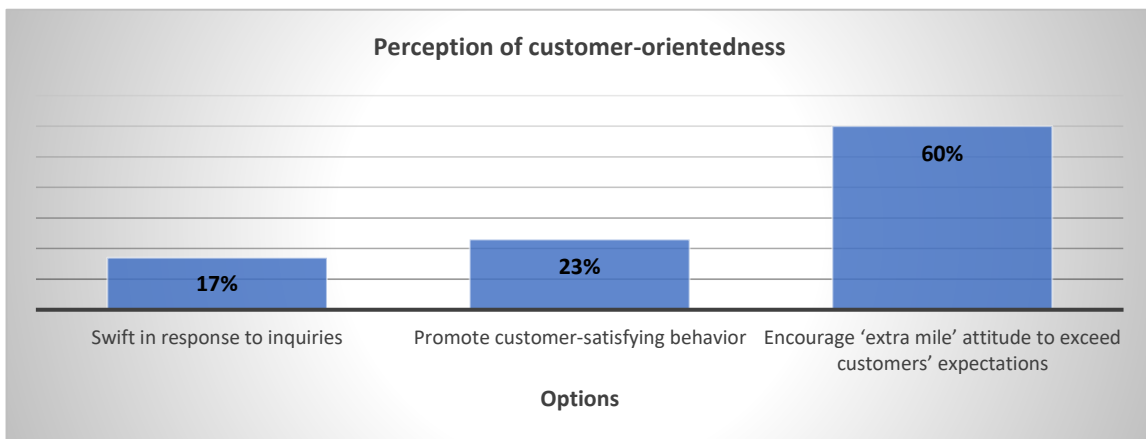
RQ4 Findings – SQ13 to SQ16 findings are analyzed and presented in Figures 13-16.

Figure 13. SQ13 Survey Results



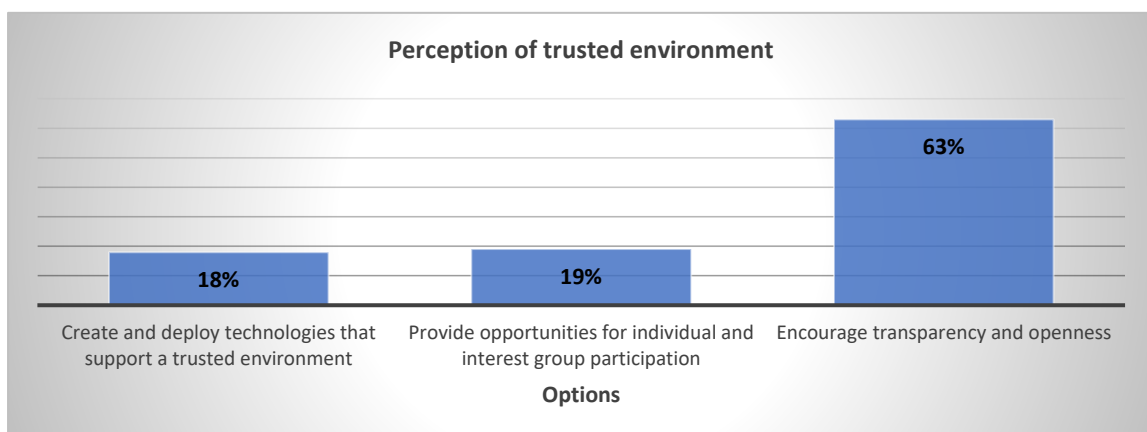
65% of the respondents agreed that enhancing customer relationships is associated with being customer-oriented, while 25% expressed that creating a trusted environment could enhance customer relationships. 10% of the respondents believed that enhancing customer relationships is linked to establishing continuous improvement.

Figure 14. SQ14 Survey Results



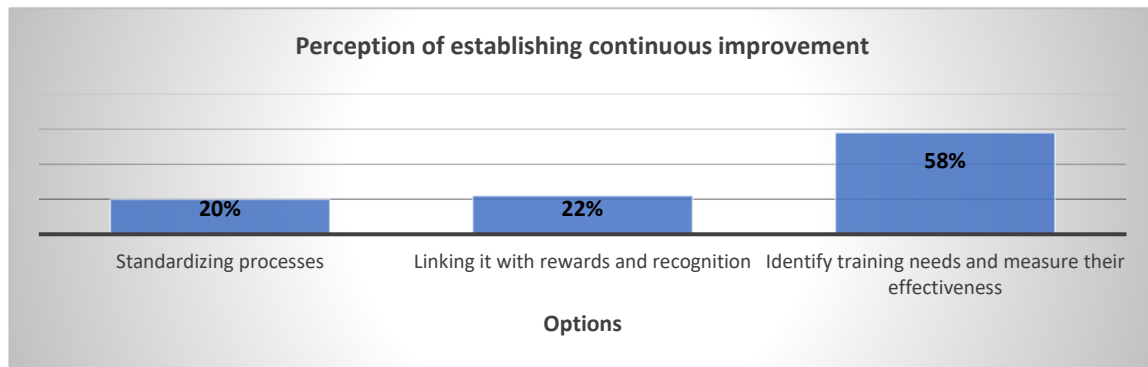
60% of the respondents feel that staff with an 'extra mile' attitude is customer-oriented, compared to 23% who promote customer-satisfying behavior. This finding is rather an 'expected' response from the customers, as they usually tend to be satisfied if staff goes the extra mile to meet their needs.

Figure 15. SQ15 Survey Results



63% of the respondents think transparency and openness are important characteristics of a trusted environment. 19% believe providing opportunities for individual and interest group participation is important, while 18% feel that creating and deploying technologies supporting a trusted environment is important. Therefore, a trusted environment should encourage transparency and openness amongst all stakeholders. It is essential for the business to grow and to promote customer loyalty.

Figure 16. SQ16 Survey Results



58% of the respondents believe that identifying training needs is vital in establishing continuous improvement. 22% of the respondents linked continuous improvement to reward systems and recognition, while 20% felt that standardizing processes are related to establishing continuous improvement. It is imperative to identify the training needs of its staff and to be able to measure the effectiveness of the training. The result also indicates that continuous improvement should be linked to rewards, recognition, and standardizing processes.

4.2 Discussion

4.2.1 Attributes of Education

- **Learning experiences**

Learning experiences are related to any interactions in which learning is taking place. It helps the teachers realign curriculum designs and education delivery to the students. It occurs not only while listening to a lecture or completing an assignment but also in various outside-of-school settings, such as doing internships or volunteering. This analysis is supported by SQ1's 70% of responses supporting effectiveness in teaching.

- **21st-Century knowledge and skills**

To prepare students for the global arena, 21st-century knowledge and skills should be incorporated into the curriculum using information and communication technologies. To realize this, the teacher should have the necessary knowledge and skills to impart and integrate these 21st-century knowledge skills. This analysis is supported by SQ2's 57% of responses, which support incorporating 21st-century learning skills that prepare students to meet future challenges.

- **Curriculum Planning**

Curriculum planning is the creation of a curriculum. It is vital for effective teaching, preparing instructional materials, standards, assessments, and teaching techniques, embracing life-long learning competencies, and providing ongoing revision and improvement. It involves preparing all activities geared toward the student's learning and development. This analysis is supported by SQ3's 34% responses for alignment of instruction, standards, and assessments and 33% each for establishing lifelong learning competencies and providing means of ongoing revision and improvement.

- **Classroom Management**

Classroom management is essential for effective lesson delivery and for learning to take place smoothly. It provides a dynamic learning experience for the students. SQ4's 60% of responses support this analysis to provide an exciting and dynamic learning experience.

4.2.2 Total Quality Management (TQM)

The primary benefit of Total Quality Management (TQM) is its role in effectively improving processes and removing common problems in the system, thereby enhancing the efficiency of operations performance. It focuses on major areas that need changes, redundant tasks and processes, and worthless operations. Successful TQM will recognize the best quality to match consumers' prospects, enhancing product quality and services and eventually elevating customer satisfaction. TQM's impact on organizational performance is reflected in better customer satisfaction, lesser operational costs, better productivity, flexibility in personnel movement, and cultivating organizational development. This analysis is substantiated by SQ5's 67% responses, which support improved efficiency in operation performance, and SQ6's 61% responses, which show improved efficiency, customer satisfaction, and enhanced organizational development.

4.2.3 Service Operations

Service from the customer's perspective is the service given to them, the impression of the service, and their interaction, observation, and reaction. This results in service outcomes such as products, benefits, emotions, judgment, and intentions. Customer service operations and satisfaction can be improved through processes fostered by a strong foundation of ethics, trust, and integrity. In addition, certain procedures can be planned and tailored to customers' needs. It will have a minimal effect on the culture and attitude of the organization. This analysis is supported by SQ7's 55% of responses support processes fostered through a strong foundation of ethics, trust, and integrity.

4.2.4 Operations Performance in Service Operations

Operations performance plays a vital role in service operations. It uses performance indicators that can be used as a decision-making guide. Efficient operations performance will improve the organization's integrity, give more focus to the customer, and achieve continuous improvement with the involvement of all employees. It works with certain attributes like promoting the right people's behavior and appropriate organizational culture. Adapting to the opportunities and challenges of fast-growing information technology and business processes will certainly add to the efficiency of the operation's performance.

The efficiency of operations performance in service operations is achieved based on these five performance indicators: quality, speed, dependability, flexibility, and cost. This analysis is supported by SQ8's 50% of responses support focus on customers, integrity, involvement of staff, and continuous improvement. Also, 37% of responses support adapting to the opportunities and challenges of changing technology and business processes.

a. Quality – Excellent delivery and superior quality of service are the basic foundation of some exceptional services, and this is what customers expect from service providers. A superior quality service is characterized by consistency in providing quality service. The high-end values the customers also expect are dependability and accuracy in the interaction process and outstanding customer service. This analysis is supported by SQ9's 52% of responses supporting the excellent delivery of service and 43% of responses of the superior quality of service. It also supports SQ10's 49% of responses of consistent quality service.

b. Speed – Speed increases the need to manage transformed resources as they pass through the operation. It is the immediate response and fulfillment of an identified need in the operations. Speed is the time for goods and services to move through the chain. Prompt service and shorter waiting times demonstrate excellent service delivery. This analysis is supported by SQ11's 54% of responses in support of prompt service and 26% of responses in support of shorter waiting time.

c. Dependability – doing things on time so that the customer receives their products or services exactly when they are needed or when they promised to receive them.

d. Flexibility – An agile supply chain can effectively deal with changes in customer demand or operations capabilities within the supply chain. Flexibility inside the organization is essential as it speeds up responses to change, saves time, and maintains dependability.

e. Cost – Every organization wants to keep costs low. Costs can be measured by productivity. It is generally the common goal of companies to keep costs lower. Costs involve a wide scope of operations, such as spending on employees' salaries, facilities, buying or upgrading technology and equipment, and consumable materials. SQ12's 40% of responses support this analysis, each supporting the best value for money and supporting lower prices but high quality.

4.2.5 Value Chain

The organization's value chain completely influences its ability to maintain a customer relationship management strategy. An organization's well-organized CRM approach can fall short if it does not consider the competencies and enthusiasm of value chain members. The organization's value chain directly affects its ability to implement and sustain a customer relationship management strategy. Creating a trusted environment for all stakeholders and encouraging the company to upgrade and remove worthless processes will attain continuous improvement. A tightly aligned organization creates an atmosphere of trust. This analysis is supported by SQ13's 65% of responses, which support the focus on the customer.

4.2.6 Customer Relationship Management (CRM)

CRM is the core business strategy that incorporates procedures, processes, and outside networks to establish and deliver value to a specific group of customers (Buttle, 2009). It is grounded in high-quality customer-related details and made possible by information technology. It is also concerned with a customer-oriented environment that encourages going the 'extra mile' to exceed customers' expectations and promotes customer satisfaction and on-time response to inquiries (Bergeron, 2002). This analysis is supported by SQ14's 60% of responses in support of encouraging an 'extra mile' attitude to exceed customers' expectations.

CRM has four major elements: developing a customer-centric strategy, creating a customer-centric culture, utilizing customer information, and integrating technology (Peelen, 2005). These are necessary so businesses can get the most value from CRM, create a trusted environment for stakeholders by promoting transparency and openness, provide opportunities for individuals, and deploy technology to support this environment. This analysis is supported by SQ15's 63% of responses, which encourage transparency and openness.

In Continuous Measurement and Improvement, products are developed, and people deliver services using system processes. To continually improve the quality of products and services, which is the fundamental goal in a total quality setting, it is necessary to improve the systems continually. Continuous measurement and improvement would be able to identify the training needed for BSRU employees and measure its effectiveness. Continuous improvement is achieved by placing the necessary training to ensure the positive removal of problems, recognizing the source of the issues, and eliminating obstacles relating to performance, sections, procedures, and standardization. This analysis is supported by SQ16's 58% of responses, which support identifying training needs and measuring its effectiveness.

5. Conclusion and Recommendations

5.1 Conclusion

Key Findings (KF) and Suggested Strategic Options (SSO)

KF #1 and SSO#1

Key finding 1 reveals that an enriched learning experience is directly related to teaching effectiveness. With all the hours spent in the classroom, the learning environment mutually affects teachers and students. The teacher would need to create an interactive, interesting, personalized, and relevant classroom environment to have meaningful learning experiences for the students. Thus, the skills and expertise of the teacher in delivering the lesson would impact the students' learning experiences.

The Suggested Strategic Option (SSO) #1 enriches students' learning experience by engaging suitable and qualified lecturers and improving the management retention power of outstanding lecturers. The suggested strategic option was evaluated according to suitability, acceptability, and feasibility.

The suggested strategic option is suitable because it takes advantage of opportunities and avoids threats. Opportunities include retaining good and qualified lecturers, their strong commitment, the delivery of enriched learning experiences to the students, and the high quality of the teaching staff. BSRU can take advantage of opportunities and avoid weaknesses.

The acceptability of the suggested strategic option will be based on the 3Rs: risks, returns, and reactions of the main stakeholders. There is a low level of risk, or it is within the limits of acceptable risk if the suggested strategic option is adopted. The appreciation scheme could be done yearly; hence, it will involve little investment. The potential returns if the suggested strategic option is implemented is that BSRU can retain the students and encourage more students to join the programs as a result of providing an enriched learning experience.

The feasibility of the suggested strategic option is based on the cost of implementation. There will only be a minimal amount of money involved if the suggested strategic option is executed.

KF #2 and SSO#2

Key finding two is improving the efficiency of operations performance, thereby enhancing the service operations through total quality management. The key finding is significant as it met the research objective. TQM will improve BSRU's processes effectively and eliminate common problems, thus enhancing operations performance. It will also ensure the organization-wide quality of operations, eventually increasing customer satisfaction. In addition, TQM will decrease operational costs and boost staff productivity. Moreover, the continuous improvement of the product and services is another benefit of TQM.

The Suggested Strategic Option (SSO) #2 is to embrace total quality management. The suggested strategic option was evaluated according to suitability, acceptability, and feasibility.

The suitability to embrace TQM is to exploit the opportunities and avoid its threats in the context of SWOT analysis. As TQM involves the participation of all staff, there will be an efficient re-evaluation of job scope and the ability to identify the training needs of individual staff. From an operations perspective, TQM will certainly fit BSRU processes.

The acceptability of embracing TQM is determined by its effect on the main stakeholders' risks, returns, and reactions (3Rs). If BSRU embraces TQM, there is a low level of risk. The financial risk could be minimal as BSRU already has a system in place, and embracing TQM will aid in streamlining the processes.

The feasibility of BSRU embracing TQM is high as it would not incur a higher cost when implementing TQM.

KF #3 and SSO#3

Key finding 3 is that customer satisfaction is the most important aspect of creating value for products and services, encouraging employees to practice an environment that focuses on the customer. The value chain comprises activities that create value for the product or services. The organization's value chain directly affects its ability to implement and sustain a customer relationship management strategy. BSRU's value chain within its primary activities in the service supply chain includes services in product development, customer service, student recruitment, and academic and non-academic recruitment.

The Suggested Strategic Option (SSO) #3 is to enhance the customer-centric technique. The suggested strategic option will be evaluated according to suitability, acceptability, and feasibility.

The suitability to enhance BSRU's technique on customer focus is to get the full advantage of the strengths and avoid its weaknesses from a SWOT analysis perspective. The strengths of the 'customer-centric' method include customer loyalty, high-quality service, best customer experience, personalized service, product and service differentiation, strong brand image, and growing reputations. Weaknesses include the higher cost of products and services, limited budget, and complexity of operations.

The acceptability of enhancing customer-centric technique based on the 3Rs (risks, returns, and reactions of the main stakeholders) would be low in risk as it would involve mostly internal processes.

The feasibility of BSRU in enhancing the customer-centric technique is high as it would not incur a higher cost when implementing TQM.

5.2 Recommendations

Following the analysis and evaluation of data, three different strategic options (SSO#1, SSO#2, and SSO#3) were developed using success criteria from Johnson et al. (2014). Recommendations relating to the analysis findings were presented for consideration, together with the benefits derived.

SSO #1 enriches students' learning experience by engaging suitable and qualified lecturers and improving the management retention power of outstanding lecturers. By implementing this strategic option, BSRU would benefit by attracting more potential students because students will be attracted to enroll where there is effectiveness in teaching that leads to enriched learning experiences.

SSO #2 is to embrace total quality management. BSRU would be able to improve its service operations performance, which will eventually lead to higher customer satisfaction. Its quality of service and speed of delivery will greatly improve, and a better system will be in place. BSRU should engage all its employees and develop continuous improvement methods to implement TQM successfully. It would also require training and support structure for reward, recognition, and strategic alignment. By implementing this strategic option, BSRU would also be able to identify and improve the primary activities of its service supply chain through TQM.

SSO #3 enhances customer-centric techniques. It is recommended because the customer-centric strategic option complements total quality management and enhanced learning experiences strategic options.

The core of these three SSOs is the customers. This strategic option aims to enhance customer experience and quality of service. It will focus on customer-oriented service and create a personalized service that will differentiate BSRU from other universities. Implementing this strategic option would benefit BSRU by promoting customer-satisfying behavior and improving service quality.

Limitations of the Research

1. Sample Size and Generalizability – One limitation of the research could be the sample size and the specific focus on a single institution (BSRU). The findings may not be generalizable to a broader population or other industries in the Southeast Asian region. Future research could benefit from larger sample sizes and diverse organizational contexts.

2. Methodological Approach – Relying on survey questionnaires as the primary data collection method may be limited in capturing the complexity of service operations and quality management practices. Qualitative methods such as interviews or case studies could provide a more in-depth understanding of the phenomena under study.

3. Contextual Factors – The study may not have fully explored the influence of contextual factors such as cultural differences, regulatory environments, and market dynamics on implementing TQM and service operations improvement strategies. Future research could explore these contextual factors to enhance the applicability of the findings.

4. Long-Term Impact Assessment – The research may not have addressed the long-term impact of the suggested strategic options on organizational performance and customer satisfaction. A longitudinal study or follow-up evaluation could provide insights into the sustainability and effectiveness of the proposed interventions over time.

While this research makes valuable theoretical contributions to the literature, it is essential to acknowledge the limitations related to sample size, methodology, contextual factors, and long-term impact assessment. Addressing these limitations in future research can further enhance the understanding of TQM practices and service operations management in Southeast Asia.

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