Integrated Management Systems and Sustainable Development

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Additional information is available at the end of the chapter

Abstract

Management system standards, optional for organizations, have started to be considered as a strategic tool for organizations seeking institutional success and adopting innovative approaches. Establishing and managing these standards independently for the same organization yield some difficulties for organizations. It would rather be a more rational solution to provide a holistic view to all standards, which is to integrate them all. As integrated management systems can be shaped according to the needs of the organization, they involve different management system standards. Therefore, there is no common model defined for said integrated standards. These systems offer organizations a management philosophy for the processes to be successfully managed and to achieve desired results. When the emerging management philosophy is internalized by management and employees, a corporate culture is formed. The effects of integrated management systems on the sustainable development of the organization can be categorized as management, people, market, production, environmental and occupational health and safety totaling in six categories. Integrated management systems provide organizations with a management philosophy that enables processes to be successfully managed and to achieve desired results. Despite the advantages of integrated management systems for organizations, they may also have some drawbacks.

Keywords: integrated management systems, sustainable development, ISO 9001, ISO 14001, OHSAS 18001

1. Introduction

Organizations that have to sell more each day and aspire to maintain or increase their current market share need to adapt laws such as occupational health and safety and consumer protection. Changing expectations of consumers and other stakeholders should also be

considered. Moreover, they have to be flexible in their upcoming competition-based strategies so as to adapt to these changes. This adaptation plays a vital role for organizations. Within the scope of new competition-based strategy, organizations need to observe the developments taking place in their milieu, evaluate the current information, and by making best use of its resources so as to maintain sustainable development. In addition, the quality of products and services offered by businesses today is no longer adequate alone. Owing to the increased environmental awareness, current technological processes, procedures, and policies focus on improving and optimizing tools and techniques to minimize the effect on the environment. Indeed, management system standards (MSSs) are regarded as a strategic tool in order to effectively deal with processes such as governance, personnel, and occupational health and safety [1–3].

There are two major milestones in the emergence of MSSs. First, there is the industrial revolution that facilitated mass production and thereby reduced cost. The latter is the World War II that caused a change in the perspective of industrialization and qualified staff of the states involved. In the aftermath of the war, new balances emerged in the world affecting quality development and the necessity of establishing certain standards [4].

MSSs are published by the International Standards of Organization (ISO). ISO was founded in 1947 with its main headquarters in Genova, Switzerland. It is an independent organization hosting members from 163 states. From 1947 up till now, ISO have published 21,623 international standards covering nearly all aspects of technology and trade [5].

There are a total of 57 MSSs currently in effect, developed by ISO for different coverage and areas of use [6]. Some of these standards (e.g., ISO 9001, ISO 14001, ISO 45001, ISO 27001) are applicable for all sectors. Apart from these, there are also sector-specific standards such as ISO 22000 for companies producing food, food equipment, and food packaging; ISO 13485 for companies producing medical devices; and ISO 16949 for automotive and subsidiary industry sectors.

The establishment of management system standards is optional for organizations. However, MSS has become a mandatory practice for organizations that want to keep-up with the developments in the world and gain prestige in trade [7, 8]. Various studies state that MSSs make positive contributions to the innovative performance of organizations when implemented constantly, systematically, and in the long run, it is also a vital tool for sustainable development. As a result, standards are becoming more and more important today [9–11].

Establishing and managing MSS in organizations independently of each other lead to some difficulties in organizations and do not yield the desired synergistic effect [12]. Instead, it would be a more rational solution to gather different MSS under a single roof and to provide a holistic view to all standards, which is to integrate them all. Today, integrated management systems are considered as a practical and a useful method for the future [13–15].

The purpose of this study is as such:

- to share the necessary knowledge to improve the effectiveness of the integrated management systems,

- to demonstrate its impact on sustainable development, and

- to lead the relevant stakeholders in choosing the best option

2. Literature review

2.1. Integrated management systems (IMS)

Before dwelling on the content of IMS, it is necessary to explain the concept of integration. Integration refers to "completion" and "aggregation" [16]. However, the term integration should not be confused with "combination" and "compliance" in terms of MSSs.

Compliance refers to parallel management system standards prepared for the same discipline despite showing great differences in terms of structure and content [17]. With regards to the term combination, it is the creation of a new system by adding different management systems to each other. According to the British Standards Institute (BSI), there is a four-step process in MSSs-integrated practice that goes from combination to integration [18].

1. Different management systems are implemented independently of each other in the same organization and in the same time frame (combination)

2. The organization prepares for integration by identifying common elements of different management systems after implementation

3. The organization eliminates the differences and removes the contradictions among different management systems. It adds new elements to the initial common elements. This step is about the combination of the systems

4. The organization creates a new meta-system that integrates all identified common elements

Integration, in terms of management systems, refers to owning each MSS content *per se*, which is prepared for certain disciplines. Being so, integrated management systems can be defined as a set of systems that are planned, applied and continuously revised, and improved in order to meet jointly multiple MSSs and other systems to which they have to comply [19–21]. In order for a company to conduct its operations systematically, it must comply with laws, MSSs, and customer conditions. It is therefore better to use the concept of integration of systems instead of integration of standards.

There are different views of integration in organizations [22–24].

- No integration: Each system exists with its own identity in the institution

- Partial integration: It refers to the harmonization of certain elements of each integrated system. It is projected at the middle management level that systems should be constructed according to business functions and be independent. It is assumed that systems should generally be compatible with each other, but this compatibility will not be 100%

- Full integration: Each integrated system loses its identity and a single multi-purpose meta-system emerges. It is assumed that systems will form a complete integration at executive and operational level

As IMSs can be shaped according to the needs of an organization, they are capable of including different management system standards. Therefore, there are still debates about IMS. However, literature review on IMSs show that ISO 9001 (QMS), ISO 14001(EMS), and OHSAS 18001(OHS) standards are the most researched standards [25–29]. It is possible to make different integrations by adding ISO 9001-ISO 14001, ISO 9001-OHSAS 18001, ISO 14001-OHSAS 18001, ISO 9001-ISO 14001-OHSAS 18001, or other standards that are specific to the sector. In other words, there is no limit to MSSs integration. An exemplary model of IMS is shown in **Figure 1**.

ISO 9001 quality management system: ISO 9001 defines the requirements for enhancing customer satisfaction by meeting the requirements of an organization's customers and legal liabilities. The general provisions of the standard are organizational chart, duties, authority and liabilities, efficient use of resources, interrelationship of the processes, product or service design and development works, customer satisfaction, internal audit, continuous improvement, and documentation. The main purpose of the system is to prevent errors or defects that may occur either in the final product or service, or reduce them to the acceptable levels via interim controls. Its final revision was made in 2015 [31, 32].

There are many studies highlighting the benefits of ISO 9001 for organizations. From an overall perspective to these studies, the advantages can be divided into two categories. Internal benefits include cultural change in employees, organized action, management efficiency, better documentation, increase in production efficiency, and reduction of costs.

External benefits include customer satisfaction and loyalty, increase in market share of the business, readiness for official audits, strengthening the organizational image, and increase in competitive power [33–35].

ISO 14001 environmental management system: At present, with resources being gradually depleted in an irreversible process, it is the author's view that all elements making-up the environment are under threat. It is now accepted by the whole world that the threat is not local or regional, but global. In both written and visual media, there are a lot of environment-oriented
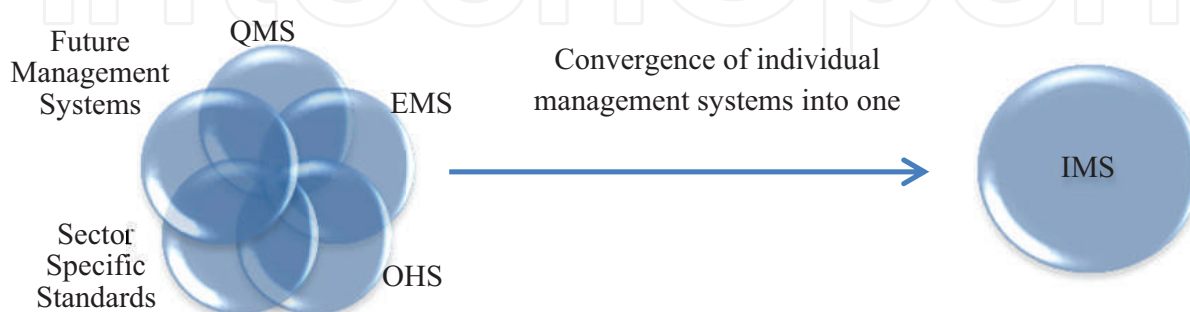
Figure 1. ISO 9001, ISO 14001, OHSAS 18001 IMS [30].

news and information. Today's consumers not only demand maximum benefits from the product or service they purchase but also seek applications that do not harm the environment or at least cause damage at minimum level. Therefore, a number of states prepared various regulations to reduce the harm to the environment. Many organizations review their activities regarding the environment. In order for these revisions to yield success, they need to be handled systematically. ISO 14001 is an international standard that methodically exposes the conditions that must be fulfilled by performing risk analyses for every hazard at every stage from the design to the consumption processes of the products or services. Its final revision was made in 2015 [36–38].

OHSAS 18001 occupational health and safety management system: Each year nearly 2.3 million workers have occupational diseases and more than 6000 workers lose their lives [39]. Organizations are more and more interested in occupational health and safety practices due to legal regulations, economic policies, and most importantly the safety of the employees. ISO 18001 is an international standard that assesses potential hazards that may arise during the conduct of business for an employee via risk analyses; its main purpose is to create a better working environment and protect the health of employees. Based on OHSAS 18001, ISO published the ISO 45001 [40, 41].

The main reason for placing an emphasis on these three standards in studies conducted on IMSs is that human health, environmental dimension, and quality have become an integral part of today's life. All three standards can be implemented in all the sectors regardless of activity type, size, and the number of employees of organizations. In addition, these standards cover different geographical, cultural, and social conditions [42].

ISO publishes the documentation statistics on ISO management systems on a regular basis (**Table 1**) [43].

The most common standards with the highest number of documentation globally are ISO 9001 and ISO 14001. They are followed by ISO 22000. The number of documentation increases in line with the increase in importance attached to management system standards. By observing **Table 1**, it can be stated that the reason why most studies are devoted to ISO 9001 and ISO 14001 among other integrated management systems is again evident in the number of certification.

Year	2010	2011	2012	2013	2014	2015	Total
ISO 9001	1,076,525	1,009,845	1,017,279	1,022,877	1,036,321	1,034,180	6,197,027
ISO 14001	239,880	243,393	260,852	273,861	296,736	319,496	1,634,218
ISO/IEC 27001	15,626	17,355	19,620	21,604	23,005	27,536	124,746
ISO 50001	—	459	2236	4826	6765	11,985	26,271
ISO 22000	18,580	19,351	23,278	24,215	27,690	32,061	145,175

Table 1. MSSs number of documentation by years.

2.2. IMS models

ISO did not publish an integrated management standard. However, based on performed research, 37 out of 57 that are currently in use can be applied in an integrated manner in terms of structure, content, terms, and definitions. There are common elements that facilitate MSS integration.

IMS can change according to the fields of activity, needs, mission, and visions of organizations. It is the author's view that this change is continuous in par with changing conditions. There are still various views regarding IMSs implementation. Hence, there is no common model defined. The most accepted models for IMSs in literature are listed below:

2.2.1. IMS model based on system approach

This model also has a system that uses all the resources in line with the same goals and objectives, so that the processes are compatible with each other. This system approaches each problem from a holistic point of view. This methodology helps to harmonize various functions of different MSSs. The integration in system approach can occur in different forms such as ISO 9001-based integration, ISO 14001-based integration, and ISO 9001-ISO 14001-based integration [44].
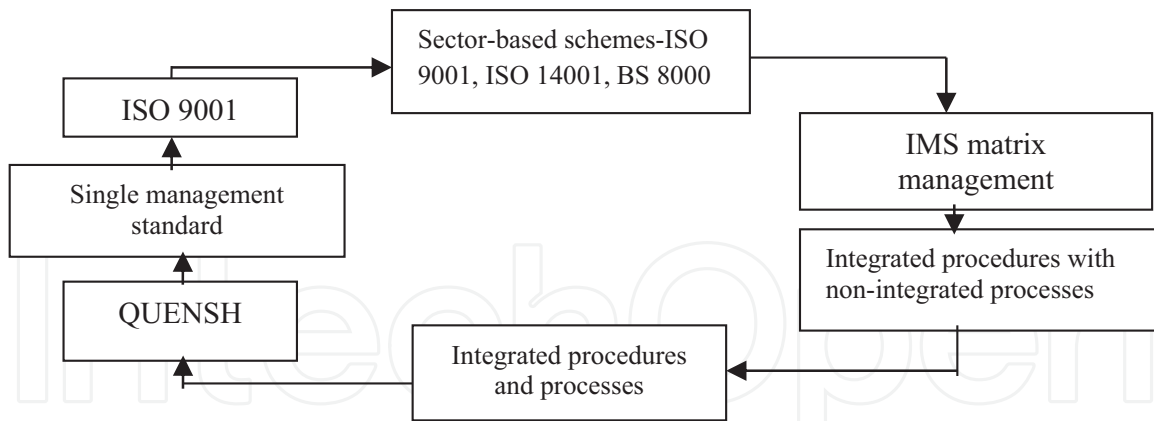
2.2.2. Management systems evolution model

This model makes an overall assessment of changes experienced by management systems in time, and creates a new model by assessing different integration models together. Management systems evolution model involves three phases namely standardization, rationalization, and integration. Renfrew and Muir [45] consider ISO 9001 as an initial point in terms of IMSs. Other sector-based cases were implemented later on. The next phase is the IMS matrix. The latter refers to the identification of similar elements among different MSSs. The fourth phase is the integration of procedures and processes. While it is possible to create integrated procedure for standards, it is rather difficult to attain this for processes. The next phase is QUENSH, which is the abbreviation of QU for quality, EN for environment, and SH for safety and health. Finally, a single management standard is formed (**Figure 2**).

2.2.3. IMS matrix

This model table shows the overlapping of elements. Its main purpose is to illustrate that different MSSs can be integrated [46]. **Table 2** shows an IMS matrix sample [47, 48].

There are different views in IMS matrix regarding the compatibility of elements between one another and their implementation by organizations. According to one point of view, there is a strong connection between ISO 9001 and ISO 14001, and it is possible to implement an IMS matrix in integration [49]. Another view suggests that standards have special functions pertaining to themselves, and problems are likely during an integration process based on IMS Matrix. [50].

Figure 2. Management systems evolution model of Renfrew and Muir [45].

Based on the findings thus far, it may be stated that the similarities between MSSs, especially among the quality management standards, are considerably higher than the differences. It is the author's view that an IMS matrix is important as it shows how compatible or incompatible the different MSSs are in integration.

2.2.4. European Foundation for Quality Management (EFQM) excellence model

The EFQM excellence model was prepared by the European Foundation for Quality Management in 1988 to enhance competitive aspects of European organizations. EFQM excellence model was developed in such a way that it can be employed as a quality system by all kinds of organizations regardless of differences in sector and capacity. The philosophy of this model is based on self-assessment by organizations themselves. This method enables organizations to identify their current situation and to develop new strategies to enhance processes. EFQM includes nine criteria, five of which are enablers, and the remaining four are results. These criteria are leadership, strategy, people, partnerships and resources, processes, products and services, people results, customer results, society results, and key performance results. There are 32 sub-headings under these criteria [51, 52] (**Figure 3**).

It is worth mentioning at this point that the EFQM excellence model was not developed for management systems integration. However, the criteria suggested by EFQM overlap to a great extent with MSSs. Therefore, integration is possible with reference to EFQM criteria.

2.2.5. ISO Guide 72

ISO Guide 72 defines all MSSs common elements and proposes a certain rational order for IMSs. Thus, it is possible to develop, review, compare, and revise many standards, while increasing in-between standard compatibility. **Table 3** shows common elements defined for MSSs in ISO Guide 72 standard [53].

Each of the MSSs is revised according to changing conjunctures and conditions. As the compatibility among standards is taken into account for the aforementioned revisions, one might expect an increasing number of similar standards in the future in terms of structure and

ISO 9001:2015	Standard number	ISO 14001:2015	Standard number
Scope	1	Scope	1
Normative references	2	Normative references	2
Terms and definitions	3	Terms and definitions	3
Context of the organization	4	Context of the organization	4
Understanding the organization and its context	4.1	Understanding the organization and its context	4.1
Understanding the needs and expectations of interested parties	4.2	Understanding the needs and expectations of interested parties	4.2
Determining the scope of the quality management system	4.3	Determining the scope of the quality management system	4.3
Quality management system and its processes	4.4	Environmental management systems	4.4
Leadership	5	Leadership	5
Planning	6	Planning	6
Actions to address risks and opportunities	6.1	Actions to address risks and opportunities	6.1
Quality objectives and planning to achieve them	6.2	Environmental objectives and planning to achieve them	6.2
Support	7	Support	7
Resources	7.1	Resources	7.1
Competence	7.2	Competence	7.2
Awareness	7.3	Awareness	7.3
Communication	7.4	Communication	7.4
Documented information	7.5	Documented information	7.5
Operation	8	Operation	8
Operational planning and control	8.1	Operational planning and control	8.1
Performance evaluation	9	Performance evaluation	9
Improvement	10	Improvement	10

Table 2. IMS matrix sample.

content. Hence, it is the author's view that implementation of different integration types will be even more easier in the future.

2.2.6. ISO 9001-based integration model

The history of ISO 9001 standard is older than the other standards. In addition, it is acknowledged that at present, companies initially establish this standard as it is applicable to all sectors. This is the most common model for IMSs establishment. System approach model, management
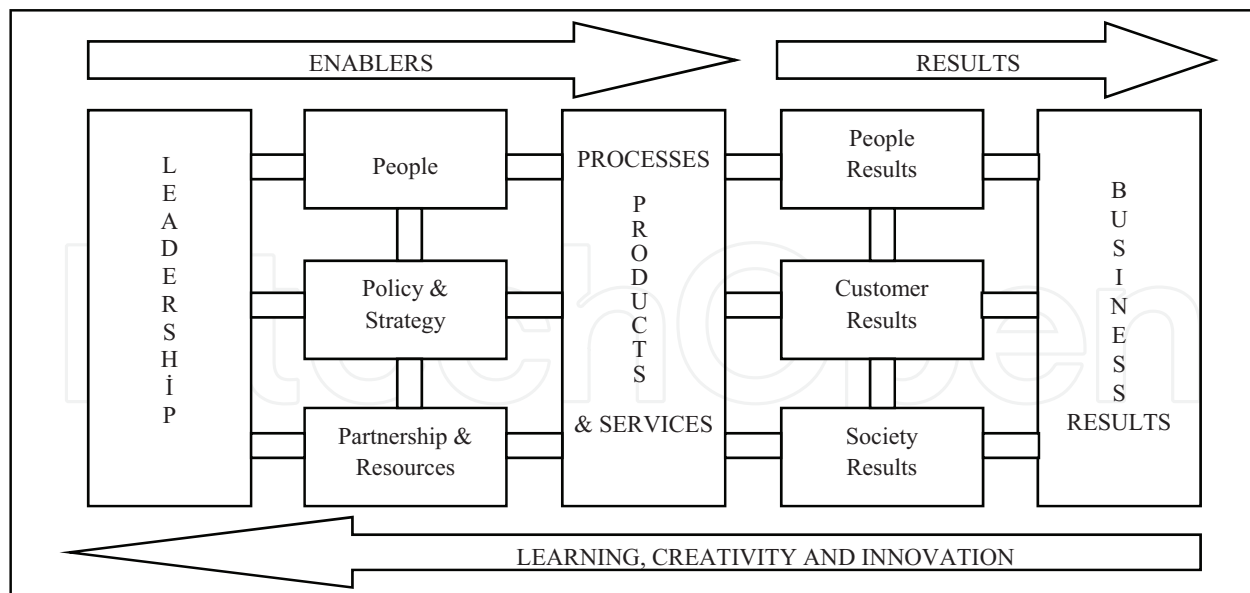
Figure 3. EFQM excellence model [52].

Main subjects that are common to all MSSs	Common elements
1. Policy	1.1. Policy and principles
2. Planning	2.1. Identification of needs, requirements and analysis of critical issues
	2.2. Selection of significant issues to be addressed
	2.3. Setting of objectives and targets
	2.4. Identification of resources
	2.5. Identification of organizational structure, roles, responsibilities and authorities
	2.6. Planning of operational processes
	2.7. Contingency preparedness for foreseeable events
3. Implementation and operation	3.1. Operational control
	3.2. Management of human resources
	3.3. Management of other resources
	3.4. Documentation and its control
	3.5. Communication
	3.6. Relationship with suppliers and contractors
4. Performance assessment	4.1. Monitoring and measuring
	4.2. Analyzing and handling nonconformities
	4.3. System audits
5. Improvement	5.1. Corrective action
	5.2. Preventive action
	5.3. Continual improvement
6. Management review	6.1. Management review

Table 3. Common elements of ISO MSSs.

systems evolution model, IMS matrix model, and ISO Guide 72, all comply with ISO 9001-based integration. In this integration system, ISO 9001 is established initially, and other systems are integrated following its implementation. This model is based on process approach [54].

2.2.7. ISO 14001-based integration model

In this integration system, ISO 14001 is established initially, and other systems are integrated following its realization. It is the author's view that this is rarely implemented, as it is generally preferred by companies whose products or services are expected to yield severe harms to environmental conditions. It is possible to benefit from the IMS matrix in this model. The main objective of this model is continuous improvement as it is the case in the PDCA cycle [55].

2.2.8. Co-establishment of ISO 9001 and ISO 14001 followed by the integration of others

Initially, ISO 9001 and ISO 14001 standards are co-established as an integrated management system, and other systems are included in the integration later on [56].

2.2.9. Integration based on integrated procedures or integrated processes

The main purpose of this model is to prepare common documentation for each standard to be integrated. The main approach is continuous improvement. Firstly, common documents are determined for each standard. This mainly results in the full integration of procedures and the partial integration of processes. This is because each standard has its own processes. Then, the other documentation is integrated into the system. An IMS matrix can be utilized for this integration model. Moreover, this model is one of the phases of management systems evolution model [57].

2.2.10. Single management standard

IMSs yield more benefits to the organization than it would benefit from the implementation of separate standards. Therefore, some countries have published a single management standard for integration. Single management standard was prepared with reference to organizations that are already implementing two or more standards.

Britain-PAS 99: This is the first integrated management standard in the world, being prepared with reference to six general conditions of ISO Guide 72. PAS 99 is designed to provide a general framework for organizations in the act of integrating their systems. Therefore, PAS 99 standard does not provide the benefit that a single organization requires from a management system [58, 59].

Denmark DS 8001: Within the scope of IMSs development, the Danish motto is "Single business, single management". Danish Standards Foundation published DS 8001 to help organizations with two or more management systems transit to integrated management systems. DS 8001 involves ISO 9001, ISO 14001 standards and approaches specific to the EFQM model. The first section of the standard explains characteristics of a good management. The second section deals with common elements that should exist within a management system, while the third section includes terms that facilitate comprehension of the system [60].

Spain-AENOR: The Spanish Association for Standardization and Certification (AENOR) published an integrated management system standard based on the ISO 9001 and ISO 14001. This was the outcome of a number of studies that were initiated due to demands from companies. Two types of models, partial integration and full integration, are suggested in this standard [61].

Model	Scope	Model characteristics	Purpose	Limitations
The system approach	The requirements in the standards	An IMS based on both the PDCA circle and the process approach.	To avoid the problems regarding to different underlying models	Ignores culture
IMS Matriksi	The standards themselves	Harmonization of the elements in the standards	Show combinability	Aligned not integrated
ISO Guide 72	The common elements	The integration of common elements	Avoid duplication	Aligned not integrated
Integrated documentation	The documentation	One management handbook for all systems	Simplify and reduce documentation	Aligned not integrated
EFQM	Total quality management	Includes strategic and cultural management	Business excellence	Do not address the ISO certification requirements
ISO 9001-based IMS	The requirements in the standards	An IMS based on the process approach	An IMS based on the process approach	Ignores culture
ISO 14001-based IMS	The requirements in the standards	An IMS based on the PDCA circle	An IMS based on the PDCA circle	Ignores culture
The single management standard	The standards themselves	Based on only one common standard	One company, one system	ISO not exists, potentially inflexible, must be regularly updated

Table 4. Comparison of IMS models [57].

2.3. Comparison of IMS models

It is worth noting at this point that all standards are of equal importance. This is because each model has its own gains and drawbacks. The approaches of models toward the scope and integration are different from one another.

Moreover, some researchers [62] argue that the culture specific to any given society should be taken into account for integrated management systems or each system to be implemented. Hence, the need for developing new integration models still exists. **Table 4** shows comparison of IMS models.

3. Results and analysis

3.1. The advantages of integrated management systems and their contribution to sustainable development

The rapid increase in production, and consequently, consumption has made the concept of sustainability even more important today. Sustainability is a three-dimensional concept involving environmental, economic, and social issues.

Sustainable development for organizations can be defined as the ability to efficiently manage risks associated with economic, environmental, and social factors in order to create long-term value in organizations. By resolving the aforementioned risks from a holistic point of view, namely dealing with these risks via IMSs, it is possible to create positive contributions to performances and sustainable developments of organizations. In addition to benefits to organizations, it is revealed in many studies that IMSs have many gains that are closely relevant to sustainable development. Advantages influential on sustainable development can be summed up in six themes [63–72].

Management results:

- The image of the company was positively affected and it gained international prestige

- It improved management of relationships with suppliers and subcontractors

- A holistic perspective was offered to the events

- A transparent management approach emerged

- It saved time and costs by joint internal/external audits

- It facilitated the interrelationship of activities and co-ordination

- It attributed efficiency to internal and external communication

- It made risks easier to control

- It was beneficial for a clearer and explicit definition of liabilities and authorities

- It ensured efficient use of resources

- It facilitated strategic planning and decision making for executives

- Bureaucracy and procedures decreased while documentation got simplified

- The time and cost of implementing the systems decreased

- Incompatibility among ISO 9001, ISO 14001, and 18001 reduced

- Internal innovation increased

- An easier and more efficient management system was achieved

- Supplying capital became easier

- A continuous improvement process started

- The organization gains flexibility and speed for change

People results:

- Employee motivation and awareness increased

- Employees participated in system works at the highest level

- Employees adopted the system more

- Employees have more loyalty toward the organization

- Newly-employed staff adapted to the system more rapidly and easily

Production results:

- Productivity increased

- Scraps and wastes are reduced

- There is a considerable drop in error rate during process

- There is a cutback of production time

- Delivery process of productions is improved

- Costs decreased and profit increased

- Minimization in customer audits

Market results:

- There is an increase in customer demand

- There is a decrease in customer complaints

- There is an raise in customer satisfaction

- There is an amplification in quality perception of customers toward the organization

- Competitive power improved

- Market share and profitability grew

Environmental results:

- Complying with legal liabilities toward environment became easier

- The number of environmental damages decreased

Occupational health and safety results

- Adherence to legal requirements in terms of occupational health and safety became easier

- There is a decrease in the number of work-related accidents

3.2. IMSs drawbacks and difficulties of implementation

Though IMSs offer many advantages, it may also have disadvantages for organizations. These are as follows: [73–75].

- Focusing less on one or more than one of the standards constituting IMS

- Documentation and the management thereof become more complicated compared to previous actions

- Paper work and management associated costs increase

- Human resources were not used effectively

There are also certain difficulties in implementing IMS. These include, but are not limited to:

- Inadequacy of resources

- Lack of information

- Corporate culture

- Difficulties in focusing on different fields

- Constantly changing regulations and standards

- Lack of qualified staff

- Conflicts among employees and

- Difficulties in making changes.

In addition, some studies revealed that some administrators who work in organizations are opposed to IMS applications because they think that their expertise areas will lose their importance and that in integrated management systems, their positions will no longer be needed [76, 77].

4. Discussion and conclusion

From the agricultural age to the age of industry and finally to the age of information, all organizations operating in the public and private sector need new approaches to meet customer expectations, while differentiating from their competitors and succeeding in the market. Moreover, approaches that can meet the expectations of all stakeholders have gained importance. It is neither possible for an organization operating in a competitive market to ignore common values such as environment, social responsibility, and human resources, which should be protected as they may be regarded as a company's assets. Indeed, for a company to succeed in today's antagonistic marketplace, management systems standards and integrated management systems may be regarded as providing a holistic view of these standards. They are considered as an important tool for solving aforementioned problems and ambiguities.

Integrated management systems provide organizations with a management philosophy that enables processes to be successfully managed and achieve desired results. When the emerging management philosophy is internalized by executives and other employees, it has a positive impact on sustainable development as well as providing many benefits to the organization. Performed literature research indicates that integrated management systems have a constructive effect on management, employees, production, environment, market, occupational health and safety processes. However, these studies also highlight certain negative impacts that integrated management systems hold. Yet, if an assessment was made between the two, positive

effects of integrated management systems would outweigh the negative ones. Integrated management systems focus on medium- and long-term goals of companies rather than the improvement in short-term indicators and form a corporate culture to this end.

Different approaches to integrated management systems are still underway. However, studies focus on creating a common IMS model for all sectors in general. Instead, it is believed that creating a sector-specific IMS model will be more rational. Moreover, it is thought that this work may provide stakeholders with a building platform so as to broaden their interest in integrated management systems.

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Quality Management Systems in Education

Douglas Matorera

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Abstract

This chapter stretches the characterisation of quality management systems and models that is abundant in literature by assessing the capability of the most common of the systems and models. Multiple data gathering and processing techniques were used within the context of a constant comparative approach in which data, theories and cases were plugged into each other. Based on the performed research, obtained outcomes suggest the presence of numerous opportunities and benefits in using quality management systems. Based on the findings, further work needs to be done to create the conceptual, managerial and behavioural competences that should facilitate the embedment of the quality management models into the daily lives of education institutions. A critique of quality management through the lenses of the disciplines of team learning, systems thinking, shared vision and mental modelling and of the Six Sigma, roadmaps should engender a new approach to improving quality in education. It should be of interest to explore the potentials of hybridising quality management models in education.

Keywords: quality management systems, Six Sigma roadmaps, creative tension, systems thinking, mental

1. Introduction

Quality management systems (QMSs) abound in literature with much of it focusing on describing them and the contexts of their inceptions. Performed research indicates that a number of scholars have described social imageries of World Class Universities (WCU), Better Schools Programs (BSP), Star Schools Projects (SSP) and other versions of the imageries of types of best-performing education institutions. Literature has however, reported on numerous ingredients for high quality performance but remained ambivalent about whether there is a singular methodology of accomplishing high-level customer satisfaction in education. This chapter uses a synthetic-evaluative approach to critique the capability of the various QMSs used in education. It also explores how institutional quality performance can be bettered by paying attention to the

context in which the model is adopted. The next section starts by dissecting the concept of QMS, detailing the three constituent elements: quality, management and system. Understanding each component of a QMS in its individuality should help in building a picture of how a QMS can be at the service of a student-focused and market-oriented education delivery system. The chapter presents a comparative structural analysis of the various quality management models and critically analyses the meanings and implications in each category.

2. Quality management systems

There are three perspectives to QMS which will be discussed below so as to appreciate the scope of what a QMS should sound like in its philosophical perspective, methodological outlay and performativity implications. The perspectives are quality, management and system. Each acts as a gear engaging with the others and yet powered each by an overarching question about its purpose in a QMS infrastructure.

a. Quality—What is the institution's conception of quality and the methodology of doing 'quality'?

b. Management—Is the institution's strategy plan on quality integrated and aligned with its vision of quality?

c. System—How does the institution's strategy, culture, structure, rewards, behaviour, etc. support its own model of quality?

A QMS is as useful as its ability to serve as a coherent framework for systematically integrating, aligning and focusing institutional and business processes. The focusing of business processes should help the institution in accomplishing its network of objectives and infrastructure of goals effectively and efficiently. Effectiveness and efficiency of processes ensure maximisation of customer satisfaction. Such a scope of QMS has intriguing implications on the structure of the organisation, its culture, knowledge management practices and customs. It has further implications on the technological co-efficiency of the organisation at all levels of the processes deployed across the institution.

2.1. Quality

Literature variably refers to quality as 'slippery', 'mobile', 'elastic' and 'elusive' [1]. Notwithstanding, the chapter conceives quality as referring to an expression of satisfaction with the constitution, form and performance of a good based on the beholders' conditionality of time and space. The value or worthy a person assigns to a good can appreciate or depreciate dependent on time and environment or space in which one finds himself. Nonetheless, quality is generally perceived as a representation of complex mix-and-match of qualities and variables embodied in products and services. The functional relationship has been captured by [2] in Eq. (1).

$$EduQuali = \sum_{j=i}^{k} \left(P_{ij} = E_{ij} \right) \tag{1}$$

where EduQUAL is perceived education quality of student 'i', k is the number of education attributes/items, P is perception of student 'i' with respect to performance of an attribute 'j' of institution, E is the education quality expectations of student 'i' for an attribute 'j'.

It should be noted that customers do not always assign the same importance to any characteristic or feature permanently. The ever increase in the numbers and peculiarity of substitute and complimentary products/services and even features complicates the Education system's comprehension of the package of features that would best meet customer needs and wants. Thus, the measure of quality education depends on the skill with which the various stakeholder voices are integrated, processed and escalated into features of the institution and its related deliverables such as courses and programs. Such features include, but are not limited to:

a. institutional structure,

b. institutional facilities,

c. program and course content,

d. delivery modes and

e. instructional interaction at the student-teacher interface.

Defining quality in terms of the integration of different 'voices' disarms higher education institutions (HEIs) of the prerogative to define quality in their 'own terms' and the quality assurance agencies from single-handedly imposing the yardsticks of quality assurance (QA) [3].

2.2. Management

Management has been focused through the lenses of a planning process, provision of leadership, staffing, organising, monitoring and controlling, all with the aim of achieving effectiveness and efficiency across the institution. Good management is about boundary spanning and gluing people of same and different dispositions around the institution's vision, mission and operations. The proclivity for turf-warring, group-think and de-generation into clinches is high in multi-stakeholder and multi-layered institutions [4]. In such contexts, management needs to be good at dealing with political game-playing and the emergence of power-seeking mates. It therefore must be effective and efficient on two main strategies: encouraging and resourcing favourable ideas and actions and weeding elements of negative monolithic politics. Balancing the two strategies creates the space for maturation of quality management infrastructures. QMSs are more effective and efficient in the hands of experts and those willing to become better by de-learning, (re)learning and supporting alternatives to their own proposals as long as such alternatives are more sound and productive [5]. The personal quality of allowing personal positions to be contested and fecund by others (constructive vulnerability) is a critical success factor in consulting for and co-creating institutional values, missions and visions [6]. This disposition to defencelessly and proactively feel at ease with 'constructive vulnerability' however takes long to develop. There are some 14 Best Practice Principles (BPPs) that [7] argue that they smoothen the management for quality in institutions:

a. Being disciplined: this BPP refers to the application of a strong systems perspective in all structural, functional and behavioural aspects of the institution. The systems perspective must be vision-driven and buttressed by policy and standards.

b. Being time-based: this BPP means the institution values time as a competitive tool and resource of critical developmental value. Therefore time should not be wasted, for instance, in pursuing non-value creating ideas and activities.

c. Being up-front: a BPP that expresses employees' high moral probity in their valuing of honesty, humility and sincerity in all their interactions and relations.

d. Creating customer value: a BPP expressing the strength of the institution's mental model of customer needs and wants, and how management, products and services delivery should be derived therefrom. The implication is that management, teachers and everyone in the institution must treat the other as their customer and understand what the other treats as value at their role level.

e. Creating strategic capabilities: a BPP that expresses how institution-business capabilities are defined, understood and shared as key determinants of continuous improvement (CI) and customer satisfaction performance plans.

f. Embracing change: this BPP defines the institution's disposition to evolve and generate new ideas and built resources for continually pursuing customer satisfaction performance. The implication is that individuals, teams and roles need to be open, vulnerable and malleable in order to change from within their hearts and souls.

g. Ensuring integration of effort: a BPP expressing the institution's focus on value creation, management and delivery over functional needs and hierarchies.

h. Establishing a learning culture: this BPP expresses the robustness of the institution's developmental orientation as focusing on knowledge and skills updating through a shared customer satisfaction performance-driven knowledge management infrastructure.

i. Gaining alignment: a BPP that seeks vertical and horizontal congruence among strategy plan, key performance indicators and critical success factors.

j. Having the desire to be out front: a BPP that describes the institution's structural, functional and behavioural disposition to live well above and ahead of industry-business standards, norms and practices.

k. Linking the micro to the macro: a BPP, an expression of how employees manage their personal mastery in the understanding of how their individual efforts contribute to the wholesome business success.

l. Measuring, reporting and learning; a BPP that exhorts institutional sectors to measure, report on performance so that teams learn and better perceive the institution's atlas of improvement.

m. Resourcing for the medium-term measures the institution's ability to excel at accomplishing short-term objectives and turning them into resources for medium- and long-term goals.

n. Supporting distributed leadership: in this BPP employees take up roles with commitments to make careful decisions that fecund their own and others operational effectiveness and efficiency.

Good as they are, these BPPs need to be in vinculum with quality excellence principles upon which education is premised. In fact the BPPs must help in creating a context for optimisation of policies, procedures and standards used to deliver high quality education in institutions.

2.3. System

A system is an organised, purposive structure consisting of interdependent components that perpetually, but variably influence one another. Education and QM infrastructures are both deliberate purpose-driven systems. Any education is bestowed with a number of goals and objectives just as any quality management model is charged with a number of goals and objectives. A QMS applied to education should consist of a corpus of integrated, aligned, complex elements that relate in some sophisticated way. Educational systems consist of personal or human elements and impersonal or non-human components like buildings, machines, etc. While the 'hard elements' dealing exclusively with impersonal categories of systems are easy to measure, the personal issues or soft elements of a system (sociological, behavioural and relational aspects) are somewhat not measureable in simple quantitative terms. Because of this shortcoming, whatever standards are assigned in attempting to measure them will remain subjective, relative and therefore highly prone to contestations. Elements of a system can be further dichotomised into either quantitative or qualitative. The critical issue is that a systems perspective sees education as a collection of institutional-business processes focused on achieving quality policy and quality objectives designed to meet customer requirements and needs.

3. Making a quality management system serve education

A meta-synthetic analysis of research in both the private and public sectors indicate that the generic focus of QMSs is on the planning, directing, organising, monitoring and controlling of the education provision system or processes. At the input stages, the focus is on the selection of input factors of the highest quality. At the throughput stages, the focus is on the correct match-and-mixes that will provide the highest quality processes aligned with producing the correct and accurate outputs and outcomes. The throughputs routes and their inherent transformative activities must show concerns on wastage, increasing business opportunities, effectiveness and efficiency. At the output stages, the focus is on outputting products and services that satisfy and delights the customer. A clear institutional paradigm on quality education should determine the quality of inputs selected and how they get transformed in ways that approximates hypothesised quality as close to perceived quality as possible.

It is the author's view that the route to high quality education should be designed down from the institution's vision which must be explicitly clear on quality objectives and metrics. Subjecting educational outputs to the scrutiny and validation of the customers helps in setting and sharing meaning and standards against which to design a corpus of criteria for success. Modern industry-based QMSs like Six Sigma, Total Quality Management and quality function deployment among others have, since the 1980s, become widely used in education. The success of such adoptions depends partly on the ability of protagonists to make the focus of the QMS overlap with the focus of their education. Examining the alignment of the assumptions of a quality model with the key performance indicators in education would tell whether a

model suits the expected array of results. The quality management model must embody the sub-systemic issues that matter to quality education. Thus, an encompassing QMS must be hinged on a system-based mental model in which individuals accept responsibility to learn with others and to partake in a shared vision about how to create, manage and deliver quality. Models previously used in education are now stunted as they focus on small-scale aspects of the education system:

a. The four-level model and the goal-free evaluation model both focus on measurement.

b. The behavioural objectives approach focus on results.

c. The responsive evaluation model, the consumer-oriented approach and the empower-ment evaluation model focus on the customer.

d. The organisational learning model focus on knowledge management while.

e. The participatory/collaborative approach focus on partnerships.

The author acknowledges that there is something of each model or approach in every other model but what matters is a clear mental model of how they integrate and sustain the effort for quality education. Because educational institutions are complex interactions of sub-systems, a model that improves a singular part of the entity will not accomplish the goal of overall institu-tional quality performance. The meaning and implications in managing the various aspects of educational delivery will be discussed in much greater profundity in the following sections.

3.1. Management of educational assessment: meaning and implications

There is need for a focused strategic approach to choosing assessment methods and in implementing them. This is because the mix-and-match of assessment techniques should respond to the age, curriculum contexts and teacher qualities among other factors. The assess-ment methods need to be the most appropriate and be accurately operationalized. An array of assessment methods, exemplified below, can be used on the same students, same programme and within same or staggered periods. An educational institution's assessment methodology should encompass direct and indirect strategies, techniques, tools and instruments for the collection of information that strategists use to measure the level, scope and depth of learning experienced by the student. The concurrent use of multiple data gathering and processing techniques in assessment of teaching and learning improves the quality of information asses-sors will gather from the students and other sources. The triangulation approach strengthens the relevance, validity and reliability of strategies derived from such data. Among direct assessment methods are:

a. Capstone course (projects)

b. Certification exam

c. Comprehensive test

d. Embedded techniques

e. Entrance interviews, etc.

Among the indirect assessment methods are:

a. Focus group

b. Institutional data

c. Reflective student essays

d. SWOT analysis

e. Syllabus review

f. Surveys (course evaluation, graduate, alumni and employer).

Assessment that asks students to demonstrate (direct) is as critical as those asking them to reflect (indirect) on their learning.

3.2. Management of quality control and quality assurance infrastructure: meaning and implications

Managing of the educational quality assurance infrastructure encompasses seeking the best fit among the various assessment methods and the rest of the activities that in their own ways determine quality of educational outputs and outcomes. Educational QA (quality assurance) has various activities, including assessments and quality controls (QCs) that are designed to track and resolve deficiencies, optimise inputs and processes to ensure that emergent customer needs and requirements are met continually. While QC (quality control) tends to focus on comparing inputs, throughputs and outputs against some scheme of criteria and specifications, quality assurance goes a little further in recognising that customer needs are complex, diverse and mobile [8]. Thus, in a fast-pacing world the need for focusing on quality assuring than QC is imperative. Because of globalisation, changes in resources types, processes and skillsets are giving rise to floods of styles and fashions. New Business Models have become more invasive in HEIs (higher education institutions) than in primary and secondary education institutions.

3.3. Management of resources/inputs: meaning and implications

The relation among inputs, processes and outcomes is not uncommon in educational management literature. The generic perception is that it is needful to ensure that the quality of inputs is as high as we would like the quality of outputs to be. Two assumptions come into play in this instance:

a. The quality or how well the processes will work out will be determined by the quality of the resources input into the transforming processes.

b. Assuming the input resources are favourable, the quality of outputs will be determined by the appropriateness and quality of the transforming operations.

But further to these assumptions is the need to ensure that the recruitment and selection of the inputs is subordinated to the framework of customer satisfaction performance. It basically means that the inputs and outlay of processes must be built from an analysis of the demands,

needs and wants of the student, industry-commerce and society. A framework by which output requirements can inform input requirements through the Six Sigma Roadmap can be referred to as 'designing down'. Among the touted inputs are:

a.   Quality of teachers often defined by their level of certification rather than by their ability to make their students acquire and perform particular skills;

b.   Quality of the buildings often rated by the imagery in them than their appropriateness as facilitators to a process of learning and transformation and

c.   Quality of students often perceived through lenses of some assessment system that is little aligned to what the student will develop along the institutional experience.

In essence the inputs in both quantity and quality must be derived from the 'voice of customer' and institutional vision on quality than anything else.

3.4. Management of educational processes: meaning and implications

Management of educational throughputs is a complex program because it calls for vertical alignment as well as horizontal integration of modes of thinking as of action. There is need to link the Strategy Plan from top-level goals to shop-flow operations and across the sectors and departments of the institution. It is therefore of paramount importance that strategists, managers and those at the operational-technical level appreciate the criticality of connecting every micro-activity with the bigger (macro-) picture of the institution. Linking the micro- to the macro- is a critical success factor in strategy implementation as it keeps every action looped with the strategy's objectives and goals. The positions of classroom practitioner, level head, head of department and upward have different job descriptions and assumed person competences that are, often in principle, 'proven' to facilitate good learning in the institution. These assumptions are combined to an array of standing and emergent policy regime that is meant to support or positively exploit the human skills. The delivery of high quality education may be constrained by inconsistencies in the policies and in their implementations.

3.5. Management of outputs: meaning and implications

'Management of outputs' may sound a rather inappropriate terminology for how the institution deals with the results of the learning-teaching processes. Educational outputs include the extant, the near and medium range results of an instructional experience. This includes the reflections undertaken by the teacher after encounters with the students and these focus on the reactions and responses of the learners. There is a need to differentiate educational outputs from educational outcomes. Educational outputs are more of the immediate and fairly near-term results of the education delivery system. Outcomes of an educational system and experience are rather difficult to winnow and claim in an exclusive fashion. Outcomes are a much delayed feature and their manifestation embodies the influence of other learning from society and the environment that the individual brushed with since the last instructional relationship. Outcomes reflect the deeper learning that resulted in the transformation of behaviour. It is important that the institutional process in the classroom does not limit itself to impacting content. It must as well focus on developing critical thinking skills, systems thinking and personal mastery. This transformative approach has implications on subject didactics and

school pedagogy [9]. The next section compares six quality management models, evaluating their biases and thus, assesses their capability of improving quality of educational delivery.

4. Comparative analysis of quality management systems

A comparative analysis of QMSs should help in assessing and evaluating why and how QM models fail or survive their brush with the gang aft agley of operational reality. A structural analysis of seven mostly used QMSs are ISO—International Standards Organisation; EFQM—European Foundation for Quality Management; MBNQA—Malcolm Baldrige National Quality Award; SQAF—Singapore Quality Award Framework; CFfBE—Canadian Framework For Business Excellence; ABEF—Australian Business Excellence Framework and TQM—Total Quality Management) show that (strategic) planning and a focus on both internal and external customers are of paramount importance (100% presence in the models).

Leadership, process management and business results came second with 83% presence among the seven models. Knowledge management, partnerships and information rate at 33% presence across the seven models. Measurement, policy, improvement, innovation and resources stand at 17% presence among the seven models. The five focus areas in Section 3 are in fact categories of the models shown in **Table 1**. In summary, the nine quality management models under Section 3 call on the education delivery system to respond to the needs of the student and the market of future employers (including self); the robustness of the metrics for success; the empowerment of the learner and the teacher to determine what constitutes a real learning chain or environment and the growth through collaborated engagement of the society, the institution and the student. The failure of most QMSs ubiquitous in education is based on their miniaturisation of education and focusing on small-scale issues of education [10]. Sections 4.1–4.11 will explain how the new public management (NPM) embrace these quality management models as categories within them.

4.1. Leadership in quality management systems

The content and processes of leadership at any institution is determined by the balance of interaction between top management and the led or followership, and the stage in evolution of the institution. Literature is awash with castigations of top-down, hierarchical and authoritarian leadership styles [11, 12]. Despite the castigations, these styles of leadership will continue to find relevance at various stages of institutional development. These styles may be used where resistance is anticipated and where quick fixes are required. Thus, a QMS while it may not exhort the use of such styles as a permanent mode of interaction between the leaders and their followership it should not repudiate their service to high quality performance at any level of the institution, at some (rare) occasions/time. Except for radical business process redesign (BPR), most quality models tend to encourage a mixture of bottom-up and top-down management system, with many authors arguing that a team-based structure would greatly favour success of most QMSs. Most strategic plans view education as an ongoing program of multiple subprograms and projects with each having multiple activities and objectives. Therefore, a QMS would work better if everyone was fully committed to work with and recognise the value of everyone else. Leaders, managers and strategists in QMS should facilitate in defining and

	Leadership	Strategic planning	Customer focus	Process management	Business results	Knowledge management	Improvement	Measurement	Partnerships	Information	Policy	Innovation	Resources	Number of categories
ABEF	X	X	X	X	X	X	X			X		X		09
CFfBE	X	X	X	X	X				X					06
EQFM	X	X	X	X	X				X		X		X	08
ISO	X	X	X	X	X	X	X	X						08
MBNQA	X	X	X	X	X	X		X						07
SQAF	X	X	X	X	X					X				06
TQM	X	X	X		X	X								05
	100%	100%	100%	89%	89%	57%	43%	29%	29%	29%	14%	14%	14%	

Table 1. Comparing QMS models by their key categories.

clarifying the different project priorities; inspire sufficient collaboration and participation; manage and catalyse change and deal with conflict. The transformation towards locally based, distributed or participative leadership is important [13, 14]. Inclusion of institutional members in modelling decisions multiplies their power to act on those decisions.

4.2. Strategic planning in QMSs

Strategic planning is a disciplined effort to produce fundamental decisions and actions that shape and guide what an institution is, what it does, where it wants to be and how it intents getting there. A strategic plan must clarify the 'what', 'why' and 'how' of the institution's life. The fundamental output of strategic planning is a strategy plan which is a documentation of what the institution is, what is undesirable about it and what it wants to be in some specific time. It also shows how it will traverse from current to the desired and why each of the 'how' is the best option as well as why the change is deemed desirable. The outcome of good strategic planning and implementation is institutional survival, growth and sustainability. Institutional growth may not always be measured in financial terms as there are many non-financial pursuits of the institution. Any desirable change, for instance, profound understanding of stakeholder requirements, substantial reduction in the frequency and content of customer complains can be interpreted as growth. Scholars [15] refer to five fundamental disciplines that form the bedrock of profound change:

a. systems thinking

b. mental model

c. shared vision

d. personal mastery and

e. team learning.

Framing strategy planning and implementation on the five disciplines improves the breadth and depth of understanding of related key performance indicators and critical success factors. With such understanding, the institution will be able to continually narrow its risk envelop [16]. The following sections focus on the meanings and implications of the five disciplines as relating to education.

### 4.2.1. Systems thinking in QMSs

Systems thinking in education are a mental tool of understanding how sub-components of a whole influence one another so that resolving problems within one part of education should neither negatively impact the performance of other areas nor create unforeseen consequences. Generating and maturing a systemic and complete vision of education or the institution can be enriched and perfected by use of such techniques as causal loop diagrams, links and loops, stock and flow modelling, archetypes and computer models among others. These tools help the institution examine and exchange hypotheses about institutional performativity. There is very little inclusion in masters' level curriculum of what managers and technicians will require

on the ground [17] and little taught in education are the core elements of Senge et al.'s five disciplines [18]. These are shown in **Figure 1**.

The five CSFs for cross-stakeholder engagement are co-creating a vision, learning together to co-create projects and programs and self-governance impact QM in a significant way. However, most education managers develop and diffuse systems thinking skills through casual experiences far late in their careers. Management that focus on quick fixes and quick results are less likely to sustain a quality culture. Notwithstanding, most management show high disposition to bring change by dealing with rules, work processes, information flows, physical facilities, material flows, control mechanisms and reward systems. Systems thinking create the vocabulary and language that help members see events, patterns of behaviour, systems and mental models in strong vinculum.

4.2.2. Mental model in QMSs

Mental model refer to the images, assumptions and stories which people carry in their minds about themselves, other people, institutions and every aspect of their environment. Because people are differently attracted by different details of any one system, they are bound to pay unequal attention to same issues. Consequently, they will have different intensities of emotions about the same components of a system. To have a complete picture of the ever-changing world, people need to be more reflexive and truthful about how they feel about what surrounds them. Reflecting and perpetually enriching and updating perceptions of the world and how these influence people behaviourally and psychologically improves humans' chances of taking correct developmental decisions. Mental models and attitudes are the make, maintain
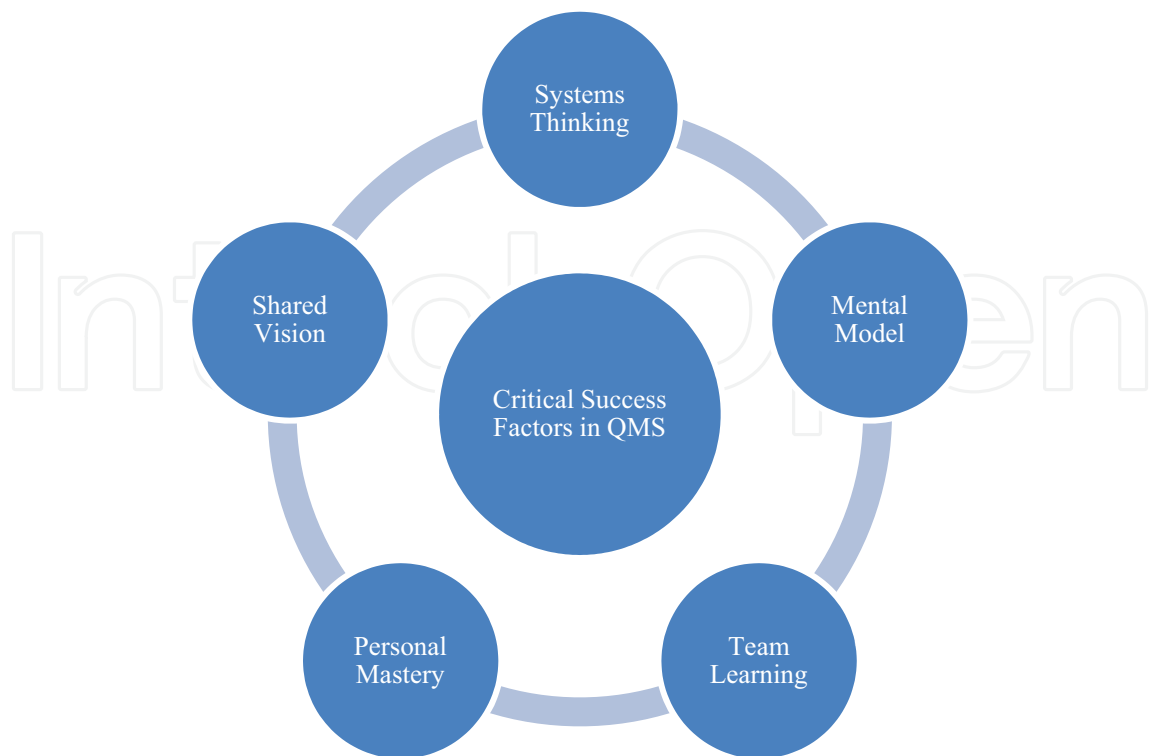
Figure 1. The five critical success factors in a quality management system.

and break of QMSs in education because they shape people's actions, reactions and responses to others, policy, rules and regulations. Institution-wide tendencies to fragment and compete 'for no sake' are not unusual [19]. Some of the factors likely to impede the institution's quality performance include therefore the inability to deal with divided staff that goes to 'war' over every small issues, the lack of skill to engage those at cross purpose as well as failure to diagnose beyond symptoms of conflict and dysfunction in institutions.

4.2.3. Personal mastery in QMSs

Personal mastery means the capability of learning to expand individual, team or institutional capacity to create own strategic capabilities in pursuance of personal, team and institutional goals. The individual is the basic unity of structure and function in the deployment of quality. It is therefore important that individuals in the institution appreciate the gaps in their behaviour, knowledge and skills so that they can map out an atlas of personal developments and improvement. The tools of personal mastery help to measure and analyse the gap between where one stands and where one want to be. Once people have a correct and accurately detailed picture of the scope of the gap people get to the thresholds of a creative tension. The creative tension now becomes the motivator for improvement. The power to resolve the creative tension arises from the relationship among the different elements of the institutional context. Institutions thus, need a workforce and strategists that help one another clarify and understand the current reality and chemistry of the creative tension. Creative tension means the felt gaps among components of a system and the gap between the current and the desired futures. **Figure 2** depicts the creative tension as a dynamic system of the context, the desired future and the pathway thereto.

Personal mastery relates to quality management in that if people are able to reflex truthfully they should be able to tell themselves how they are causing poor quality performance. They too should be able to say how they can contribute to quality education.

4.2.4. Team learning in QMSs

Lest people confuse team learning with team building, the latter's focus is about improving communication and team members' skills. Team learning is about how the organisation can
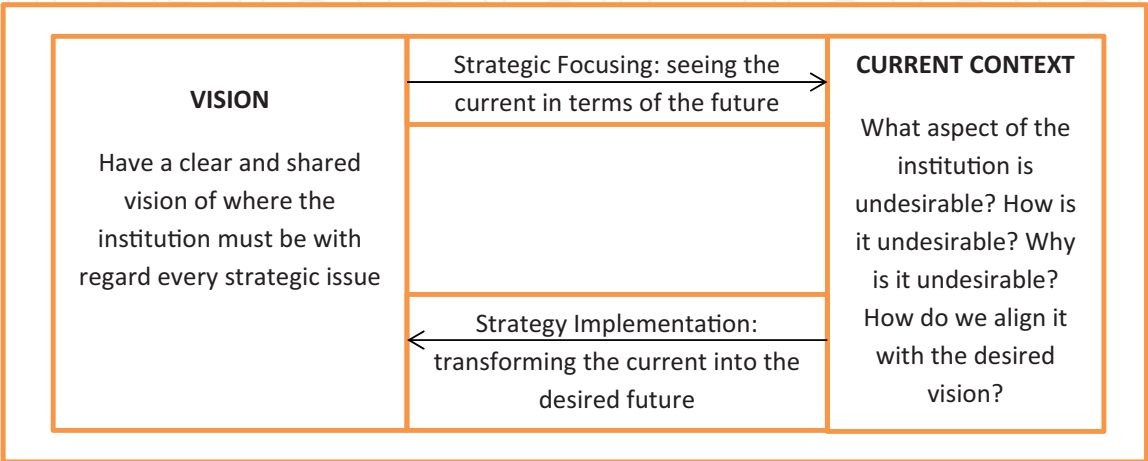
Figure 2. Creative tension: understanding the current in terms of the future and mapping how to get there.

work with internals and externals to create and share a coherent and relevant vision, think strategically on even the minor issues and build a mental model of a continuously improving institution. The crux of the discipline of team learning is to help teams re-create themselves in ways that sustain and self-reinforce gained strategic capabilities. In most pedestrian level it may seem that 'stakeholders' in education are at cross-goals. In reality, quality assurance agencies, industry, students and governments have as top of their agenda—high quality education. Applying the Six Sigma roadmaps should help stakeholders appreciate that working in some co-ordinated manner creates the strategic capacity of thinking, learning and acting in synergy. In a team, each needs the other to accomplish a result. The intricate relationship among the disciplines and each of them and the whole to strategic thinking and the strategic planning process itself cannot be overemphasised. The assumption of the model depicted at **Figure 1** is more complex than the schematic representation is.

The manner in which individuals conduct themselves in relationship to others and their contexts (personal mastery) determines their disposition to learn and grow themselves and others (team learning). The more they interact and converse about their experiences and the more they understand their contexts and the broader universe. The more people comprehend their contexts and incorporate such understanding systematically in their decisions the more they improve the quality of their universe and incorporate such understanding in their decisions (systems thinking). Profound personal mastery and a disposition for team learning and systems thinking help build strong and informed mental models that help people accomplish enlightened strategies of accomplishing win-more-win-more outcomes (shared vision). It benefits institutions to think and adopt strategic planning for quality education guided by the five disciplines. Much of the failure with the adoption of quality assurance measures are not in the models but in the incapability of conceptualising how workforce and stakeholders can draw up vectors of learning and improvement within the five disciplines. As long as this incapability persists, it is the author's view that there will not be improvements in the quality of education and institutions providing it.

4.2.5. Shared vision in QMSs

Sharing a vision about quality and its management into daily institutional practices is about connecting with the rest of the workforce and stakeholders, understanding what they are doing now that is constraining or improving quality of education. Open deliberations help people be truthful about their contexts and helps too in people talking frankly about what futures they desire and how much they are willing to give to achieve that future. The Six Sigma roadmaps shown in **Figure 3** is one such strategy of putting together different voices in building shared visions.

4.3. Process management: meaning and implications

Process management is the set of methodological and management practices used in ensuring that business and institutional activities accomplish their allotted performance targets. Information technology (IT) enhances process management and continuous improvement thus turning processes into assets. Indeed the basis of quality assurance is in assuring that processes are optimised without compromising their focus, effectiveness and efficiency in pursuing
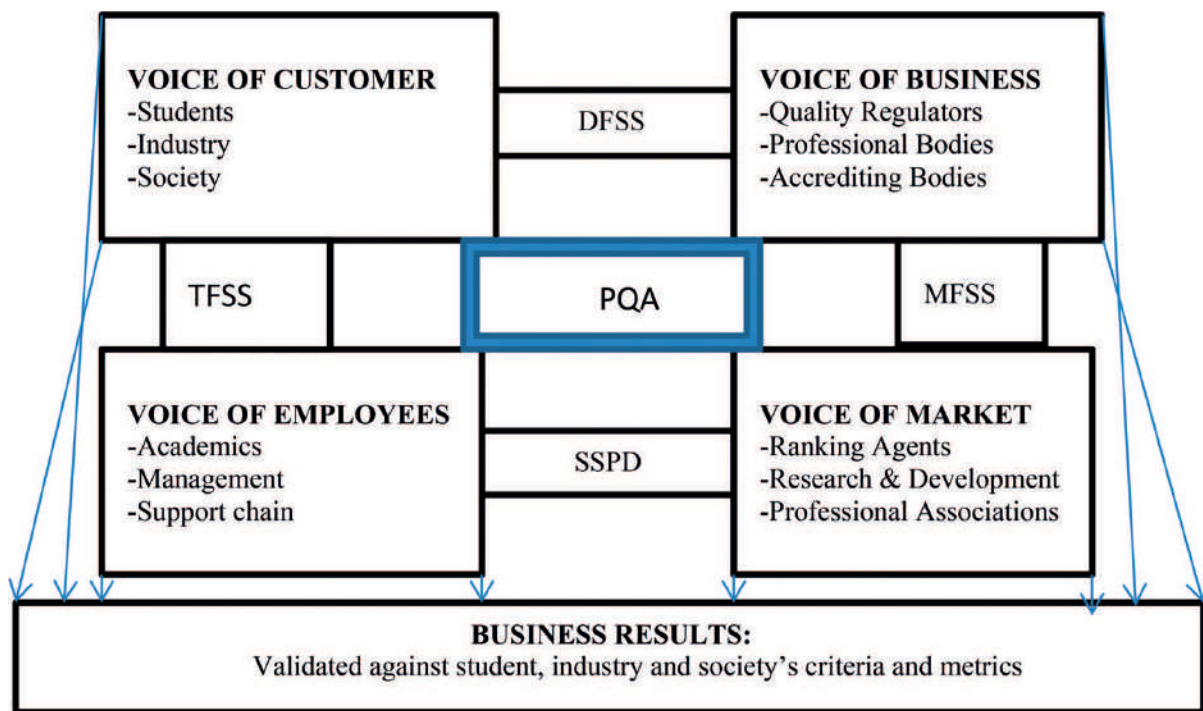
Figure 3. The combination of voices for program quality assurance.

customer satisfaction performance. Quality can only be assured with appropriateness of processes. Business process management systems can benefit the quality effort in a number of ways including pinpointing interface noise. Interface noise cause quality to decline. The Six Sigma roadmaps (**Figure 3**) in various ways improve quality of products and services by:

a.   Firstly, focusing institutional design and processes (DFSS) on operational target goals and objectives.

b.   Secondly, by aligning and integrating system-system, system-person and person–person processes (SSPD).

c.   Thirdly, by using technology in optimising utilisation of core and complementary resources (TFSS).

d.   Fourthly, by working only on value-creating processes (MFSS).

Processes that may have detrimental effects on value or do not add any are a liability to the institution. Setting-up a process improvement infrastructure should start from interviewing and surveying people throughout the institution to find out what they do, how they do it and why they like or dislike the experience. This however, needs honed skilful discussion competences on the part of management and the workforce. Well-developed competences in skilful discussion help to mine truth from behind workforce's fears, mistrust and doubts. People are more prone to hiding information and data when they are in fear, mistrust and doubtful. In times of poor quality performance, the temptation for corporate isomorphism or adoption of radical process and structural redesign or the use of consultants to fix the messy is high.

It is the author's view that neither of these strategies is likely to embed a permanent and relevant solution to poor institutional quality performance. In fact the institution may suffer a

duplication of activities, clogging of interfaces and exhaustion of workforce on valueless activities. This leads to overall decline in amount and quality of processes that directly create customer value. District offices and schools complain of too much work which would be greatly reduced were processes that created that work aligned, integrated and right-sized. Time saved can be re-arranged to encourage focus, concentration and intensive work or even afford workers 'free' or unstructured time. Quality of work depends somewhat on the amount of such unstructured time people spend ruminating about their roles and the assignment in their charge.

4.4. Customer focus: meaning and implications

In education the many customers to an institution may be allotted into one of the four categories below:

a. Voice of Customer (students, society and industry).

b. Voice of Business (quality regulator, accrediting agents, professional agents).

c. Voice of Employee (academics, supply chain staff, non-pedagogic staff).

d. Voice of Market (ranking agents, professional bodies, Research & Development).

Figure 3 illustrates the interaction of the four voices and they ultimately confluence into business results as measured by yardstick of student, society and industry satisfaction. In the ultimate instance, the Voice of Market, Voice of Business and Voice of Employee must focus on meeting requirements in Voice of Customer (students, society and industry) as in **Figure 3**. A focus on the customer should translate into a robust market-oriented philosophy or mental model and a pragmatic methodology of hearing, understanding, learning and responding to the four voices. Profiling and understanding the customer has a strong impact on how well the institution will develop and refine their processes, mission, values and consider development of their own vision sketch. A mental model of customer requirements informs the whole framework of training, skilling and refining of the institution's vectors for continuous improvement (CI). Vector of CI is meant a specification of how much and what direction a process, skill or competency needs to be improved so as to meet a customer requirement. The amount of change may be quantitative or qualitative. The direction of improvement may be negative (removal or reduction) or positive (addition or innovation). These three types of improvement vectors can be operated singly or may be executed within the same program. The important thing is that they are driven from the 'voice of the customer' and validated through a Six Sigma roadmaps approach.

The validation should be based on the impact the skills will make in DFSS, SSPD, TFSS and MFSS. Most institutions have strong and vociferous claims of customer-orientation yet the features of their product /service are determined by the institution or some other organ rather than derived from the voice of their customer [20]. In their isolation, these voices will not lead to much long-lasting change towards customer-focusing. To avoid reactivity to multiple and fragmented customer demands the voices can be combined, forming four Six Sigma Roadmaps as illustrated in **Figure 3**. Most institutions receive or do provide training and some sorts of skilling on customer care. The value of such budgets become questionable if the trainers, the content and

the purpose is alien to the contexts of the four Six Sigma roadmaps. Customer-focused training and skilling must be premised on creating strategic capabilities in the form of substitute quality characteristic (SQC) or technical competences (TC) and target values (TV). These three terms are meant conceptual, managerial, behavioural or practical capabilities that close the gap between P_i (intended performance) and P_o (observed performance) as illustrated in Eq. (2)

$$SQC_{gap} = P_{intended} - P_{observed} \qquad (2)$$

Note that the terms target value can be applied to non-human resources like tools and machines while the terms SQC and TC are often used in Ref. to human performance competences. In the ultimate instance, the strategic concern is for all the voices to feed into the needs and wants of the student, society and industry-and-commerce. This point is further illustrated in the comparative analysis of the structure of the different QMSs. In **Table 2**, it is shown that business results are measured in terms of customer satisfaction performance, wherein the customer is students, society and the institution. There are many techniques used to gather information and data from education's customers. These include interviews, student evaluation of teaching effectiveness (SETE) forms, observation schedules, records of complains, training needs analysis, learning needs analysis, etc. The data and information can be processed by use of brainstorming, tree diagrams, Kano diagrams, etc. Research has shown that copious amounts of data are collected by institutions but very little is done to process the data and make it influence hiring, procurement, budgeting and other management decisions [21]. Least done is the process of making the customers validate the information extracted from the data. Representatives from within the four voices can be used too in constructing and contenting the different data gathering instruments. Representatives from within the four voices can further be used to validate the list of needs and wants.

4.5. (Continuous) Improvement

Strategic planning must identify the improvement vectors within the disciplines of systems thinking; team learning; personal mastery; mental model and shared vision. With improvements

Focus of results Ficalora and Cohen [21]	Six Sigma customers Matorera [1]	EFQM-based results	Short-hand expected results Matorera [3]
Voice of customer	Student Society Industry	Customer results	Offered Quality supersedes expected Quality: $Q_o > Q_e$ therefore $Q_p > 1$ meaning positive CSP
Voice of employee	Academics Support staff Management	People results	Work-life balance, effective and efficient systems and institution
Voice of business	Quality regulator Accrediting agent Professional agent	Business results	The teachers, course outlines, courses, programs and the institution meet a threshold of criteria on quality as the constituents define it
Voice of market	Ranking agent Professional bodies Research & Development	Society results	The teachers, course outlines, courses, programs and the institution outsmarts the generic criteria of quality & creates unique competitive competences

Table 2. Relations among the different voices, EFQM and expected business results.

in these disciplines, there come earnest improvements in the institution's breadth and depth of the strategy plan. Improving skills in the five disciplines should increase relevance of the Change-Project Management schedule and appropriateness of the Framework of Implementation Strategies as well as comprehensiveness of the Strategy for Risk Management as shown in **Figure 4**.

The basis of continuous improvement is a creative tension that correctly and accurately details the undesirability of the current institutional context(s) and the aspired future state(s) (**Figure 2**). The creative tension itself sets the atlas of institutional change. Expert strategists, through intra-inspection (personal mastery), systems thinking, team learning and sharing visions of their institutions build mental models of what their customers really desire. Based on these mental models, the institution must be able to precisely define the desirable behaviour change indicators (BCIs), key performance indicators (KPIs) and critical success factors (CSFs) that improve quality performance of individuals, teams and the institution as a whole. Different institutions adopt different strategies of doing strategic planning. The third strand of the strategy focus wheel (SFW) is Change-Project Management which is supported by five BPPs (Best Practice Principles):

a.   Being time-based

b.   Creating customer value

c.   Creating strategic capabilities
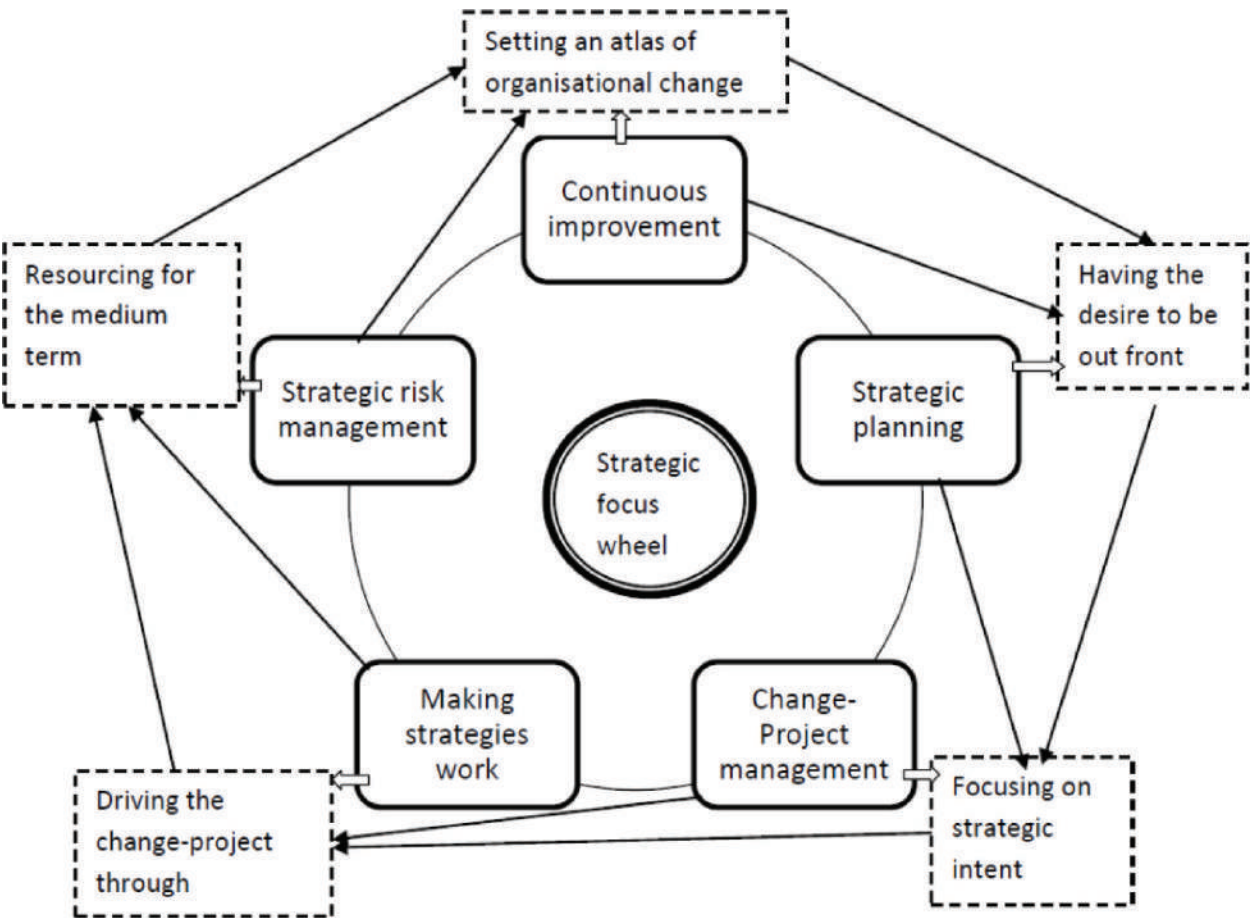
Figure 4. Strategy focus wheel applied to QMSs [3].

d. Gaining alignment

e. Linking the micro to the macro.

In this stage, special emphasis is brought on assessing the environment to identify strengths, weaknesses, opportunities and challenges; identifying and framing strategic issues; formulating strategies to manage the strategic issues; reviewing and adopting the Strategy Plan. It is logical that in seeking to manage quality, institutional members, at all cost, work from institutional contexts otherwise the strategies will not respond to the institution's quality necessities. One of the shortfalls is coming up with SWOT analyses as being an end unto itself. In quality management, a SWOT analysis is just but a tool for designing a set of strategic plans that should use institutional resources to deal with institutional challenges. The prime focus of the SWOT analysis should be to help the institution see how on a cost–benefit analysis the institution can utilise opportunities and its strengths to mitigate threats and weaknesses and drive change and projects through. Making strategies work is directed at driving change-projects through and hinges on the functionality of the seven BPPs:

a. Being disciplined

b. Being up-front

c. Embracing change

d. Ensuring integration of effort

e. Establishing a learning culture

f. Measuring, reporting and learning

g. Supporting distributed leadership

Done well, the main gains to the QMS would be an effective implementation process, and the establishing of an effective organisational vision for the future. While both radical and revisionist BPR (business process redesign/re-engineering) versions assume process owners can steer and direct implementation, TQM and Six Sigma assign this role to statistical tools. In educational QMSs, this role can be protagonised by Vice Chancellors right to front-line workforce helped by mathematical and statistical tools such as those used in descriptions of costs, enrolments, etc. Descriptive and predictive analyses can be used to identify future opportunities and challenges. This also constitutes strategic risk management whose focus is ensuring that strategies and the strategic planning process are reassessed continually. This ensures that every objective attained becomes a means or tool for accomplishing future goals and objectives. This is referred to as 'resourcing for the medium term'.

The revisionist BPR, TQM and Six Sigma models are based on the BPP of 'resourcing for the medium term'. Resourcing for the long-term confer moderate risk to activities of QMS. This is mainly because the idea of 'resourcing for the medium-term' examines the present in terms of the future. It further ensures that an objective achieved now should be a resource and means for achieving future institutional objectives. In contrast, radical BPR confers high risk to quality strategies as its habit of starting from scratch forfeits it of the historical success of the institution. Radical approaches to institutional difficulties and problems often quickly run out of steam, budgets and support as people are bound to feel short-changed.

In interviews with school managers, it emerged that at the moments of strategic planning the main huddle was focusing on strategic issues because there always would be arguments between 'theorists' and 'pragmatists'. Others sited problems of individuals being unresponsive to suggestions on their learning needs or performance deficiencies. A principal explained how after agreeing on performance improvement plans with teachers 'two full terms down, no action, no response and things remained the same if not worse'. A district manageress had an intervention visit to a school labelled in a complaint letter from a union a 'witch-hunting expedition'. But to help another one needs to understand where the deficiency is first. The aforementioned instances show how even when people share a vision of quality improvement their mental models about how to do quality improvement may be quite different. Even when improvement strategies were crafted from the institution, some felt their operationalisation would be swamped by regulations and requirements. Implicitly, this would compromise the institution's home-grown strategies as they are left without monetary, psychological and time budgets. Thus, locally grown change needs and projects would always be scantly driven through. By implication it means that much of institutional budgets are spend on chasing issues that are valueless in terms of continuous institutional improvements. It also implies that the risks (positive or negative) perceived by the institution or part thereof are not exploited as they are left to compete with those dictated from above by top management. It was not always that dictates from top-management are irrelevant at the middle or lower institution echelons. Despite the alignments there are many chances that the requirements are felt by both but enjoy different priority levels with each group. Differences in priority result in either over-budgeting or under-budgeting on each activity. Either way, over-budgeting or under-budgeting exemplifies lack of strategic risk management.

The priority given to the improvement of a target value must correspond with the amount of value the target value or CSF (critical success factor) will leverage towards customer satisfaction performance. Kano diagrams (Kano model) should accomplish this. Focusing on an improvement vector and target value and the prioritisation of related budgets is an important part of system thinking-based strategic categorisation activity. Strategic categorisation should see the institution build its critical strategic capability on a continual basis. The magnitude of 'improvement ratio' on any improvement vector depends on the strategic capabilities deployed on that vector.

4.6. Knowledge management: meaning and implications

By knowledge management is meant a process of generating, sharing, managing and using the know-hows and information of an institution. Great amounts of knowledge can be generated where there is strong teamwork culture and managers and leaders acting as knowledge nodes and knowledge distributors. The tools for knowledge management include among others:

a.   on-the-job discussions,

b.   mentorship,

c.   discussion forums,

d.   corporate libraries and

e.   professional training,

Knowledge management continue to be hampered by individual idiosyncratic make-ups or personal mastery and the structural and cultural peculiarities of certain institutions. If an individual feels that they can use information and knowledge for personal progression or other individualist benefits, they are more likely to hoard it and stop its flow even to persons who actually would use it more and better. The use of knowledge management technologies continue to be low among roles in the education system and the content of the communications, where it exists, tends to sway towards social relations and commentaries than professional growth. This may be caused by that social media platforms are the main forums through which professionals continue to interact [22]. In western-world literature and practice, the following technologies of knowledge management seem to be commonplace such as groupware, workflow, content management, enterprise portals, e-learning, Microsoft Outlook and Project (scheduling planning) and video conferencing, these may not be the case for the majority of African educational institutions. Technology-driven communication is important in the delivery of data and in its application in improving quality of education. A well-constructed knowledge management infrastructure should have robust knowledge management software that allows it to innovate, build and share knowledge that should help in improving customer experiences and satisfaction.

Large volumes of knowledge sources and information can be transacted via visual search models like: matrix search; tag cloud search; tree traversal; taxonomy navigation, etc. Low-developed nations with marginal electric power infrastructures would be least able to use these technologies. In some of the institutions, the reasons for low usage range from the strategic (top) through management down to the technical level of the institution. The institution-wide impediments can only be overcome when people learn to be frank in discussing what potentials they see in these knowledge management technologies and how their contexts constrain the adoptions of the technologies. At the strategic/institutional level, knowledge management systems may be considered expensive or a luxury and therefore top management lacks commitment to related budgets. Function-based, closed institutions with their propensity for tuff-warring, fragmentation, competitiveness and dysfunction may not have a 'good' reason to share with their 'rivalries'.

At the management level [23] talk of the absence of Knowledge Management in the Strategy Plan and therefore absence of incentives, recognition, managerial direction and leadership as key impediments. Particularly at school and other operational levels, lack of skill and therefore the threat of exposure of those lacking skills to deal with vast amounts of knowledge may create avoidance or explicit resistance to adoption and diffusion of knowledge management technologies. The criticality of knowledge management in institutions cannot be overemphasised, with [24] lamenting that schools and local education authorities are notoriously poor knowledge sharers albeit being in the learning business.

### 4.7. Measurement, reporting and learning from business results: meaning and implications

Business results are characterised by the outputs and outcomes from the operation of sets of performance management and analytic processes across the institution. Such results can be at any point along the '*disappointing-to-delightful*' continuum where the Q_p (quality of business output perceived) depends on the difference between Q_e (expected quality) and Q_o (offered quality).

$$Q_{perceived} = Q_{expected} - Q_{offered} \tag{3}$$

Various assessment and measurements techniques can be used to measure business perfor-mance mid-course or at the end of an instructional period. **Table 2** indicates expected results if the Six Sigma roadmap was applied on the EFQM model. The value in deriving expected targets from the institution's key stakeholder groups is that the results analysis will impact strategic planning, the strategy plan and the many processes (QMS) that result in the (re) configuration of a strategy implementation infrastructure that created the sets of results. The impact will be twofold: reflection and feedback on how the QMS was rolled out and reflexion and feed-forward, that is, informing what can be done to make the future experience with QMS more fruitful. **Figure 5** illustrates this flow reasoning which however is far from being so structured and an exemplar of cause–effect relationship in real life.

4.8. Partnerships

The term partnership defines the 'relationship either, contractually supported or otherwise, between two or more parties, each of whom shares joint and several liabilities for the actions of the whole' say [25]. During examining, the potential benefits of partnering managers must look at and completely understand what is driving them into choosing partnering. They must run a similar assessment of the target partner and understand the positive and negative risks based on their own and others' vision. Understanding the others' drivers for partnership with your institution is a critical success factor not only for the project you are partnering in but also for the sustenance of your vision as well. In education, partnerships may be at the following levels:
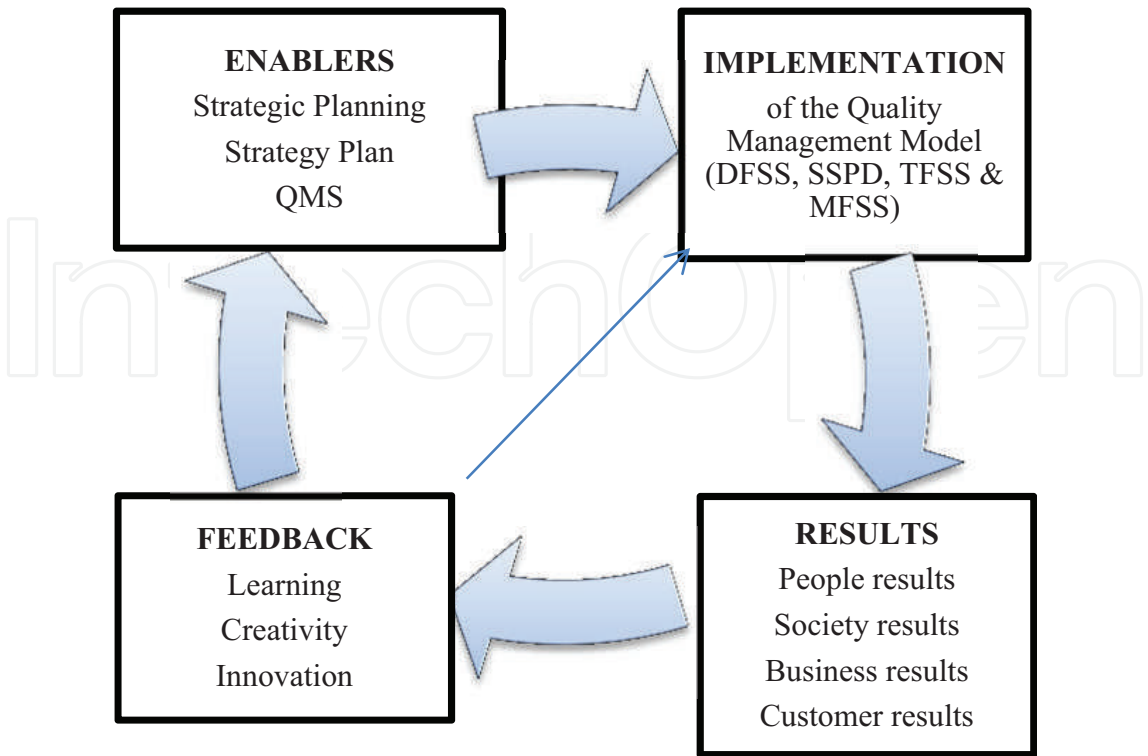
Figure 5. Relation among enablers, implementation, results and feedforward in QMSs.

a.   institution – institution;

b.   institution – department;

c.   department – department;

d.   department – individual(s);

e.   individual – individual level, etc.

Important in any such partnership is the gaining of a benefit in terms of improving quality of expected results. It becomes good practice then that in the gestation of the partnership parties review, feedback and feed-forward with an eye to improve management of quality. It is worth noting at this point that most partnerships in education are based on exchange and sharing of competencies and expertise.

4.9. Resources

Resources are a critical element in quality management. Quality education depends on the presence of a supply of resources at the strategic, management and operational levels of the institution. Learning resources are a critical success factor for quality scholarship just as are teaching resources. A number of factors variably influenced the quality and relevance of resources in institutions. These ranged from procurement (purchased or donated) of irrelevant resources, incompatibility of resources with the mentality of proposed users and/or with the extant infrastructure of the institution. Management were blamed for investing in facets that increased institutional visibility and image at the neglect of less impressive resources however important they would be in improving quality of teaching and learning.

4.10. Information management

Information management is defined as the planning, organising, processing, structuring, evaluation, controlling and reporting on activities relating to acquisition, dissemination and disposal of information. One of the cornerstones of quality management is management by facts and this makes the flow of information of high importance in strategy formulation and implementation. In quality management, it is also important that data transforms into information that is worked into knowledge usable for effective decisions. Decisions in turn, are effective to the extend they guide appropriate actions that in turn impact delivery of customer, business and societal results. Excellence in information management in the education sector should see institutions better aligning the volume and quality of acquired technologies with the institution's quality strategy. This deliverable is covered in the Six Sigma roadmap—Technology for Six Sigma. Schools that refuse students to use smartphones as learning resources are depriving their own students of a chance to get more information and presented in more animated and interactive forms than it would be in textbooks and on chalkboards. Early familiarisation with knowledge and information management technologies should expedite students' metacognitive skills as well as the institution's ability to catalyse and enable it. There is nothing that exemplifies information management than the learning process and TFSS becomes of immense importance to institutions as to students. i-Pads, smartphones, notepads should move into the centre of the instructional relationship in and out of the classroom. Most

critical learning conversations for the young 'digital natives' generation of learners are occurring online, anytime at any place with virtual mates thousands of kilometres away.

5. Conclusions

Understanding each component of a QMS in its individuality should help in building a coherent picture of how a QMS can be at the service of a student-focused and market-oriented education delivery system. However, efforts to build an infrastructure for quality management and quality assurance are often constrained by the apparent inability of the stakeholders to share at least a near-common vision of how to do 'quality' in education. One way forward would be starting at the level of personal mastery and change the deep-sited attitudes and developing skills in strategic thinking so that the cause for team learning and reconfiguring our mental models becomes more urgent. The chapter worked on seven quality management models showing how they converge on nine categories. For effectiveness, these categories must be implemented in the framework of the 14 BPPs discussed herein. Important would be for the institution to create strategic capabilities in each category and thereon has roadmaps for continual skills updating as the institution co-adapts with changing customer needs and wants. Profound co-adaptive change calls for consistent changes in strategic focus, set of key performance indicators, behaviour change indicators and the institution's bundle of critical success factors.

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Heidegger and Althusser on Quality Management Systems in Open and Distance Learning

Victor J. Pitsoe and Moeketsi Letseka

Abstract

The quality management system (QMS), as an intricate of interacting elements, is a fundamental property of higher education and is fluid and very complex in nature. With this in mind, this chapter explores the symbiotic relationship between the notions of QMS and open and distance learning (ODL). Our thesis is that the notion of QMS is not value-free. Yet, it is a fundamental pillar of higher education institutions and commercial organizations. Among other things, it shall be argued that (1) constructs of *Being* and *Becoming* are the hidden epistemological and ontological dimensions of QMS and (2) QMS is a carrier of ideology. And to borrow from Michel Foucault, it shall be postulated that QMS perpetuates docile bodies. As such, this work shall draw on the works of Martin Heidegger and Louis Althusser.

Keywords: quality management systems, open and distance learning, ideology, docile bodies, *Being* and *Becoming*, temporality, Heideggerian model of temporality

1. Introduction

Quality management system (QMS) is a fundamental property of higher education, more specifically the Open and Distance Learning (ODL) mode of delivery. This chapter is premised on the assumption that accomplishing quality in ODL is not just about fulfilling standards and criteria required by an external quality agency, but that it is about growing ODL practitioners and students' interest and obligation to teaching and learning. The chapter is philosophical in that it explores the symbiotic relationship between the notions of QMS and ODL. Notwithstanding its exploratory nature, the chapter contributes to the on-going debate on knowledge and *quality* in higher education. Hence, the authors attempt to defend the view that the notion of QMS is not *value-free* and that it is a fundamental pillar of higher education

institutions and commercial organizations. It is worth mentioning that both as a social and power relations construct, QMS plays a major role in ODL and has sparked ample discourses in and outside academia. Apart from the shifting definitions and contested understandings of QMS, the central thesis of this chapter is that QMS is a carrier of ideology and that it perpetuates docile bodies; the latter will be analyzed in greater detail below. Despite the fact that much has been written about QMS, one of the most noticeable gaps in many contemporary texts on the *dominant* QMS (in terms of ideas, values, norms, beliefs, and behaviors) is a failure to see it as an (a) ideology, (b) ontological and (c) ontological and epistemological problem.

Against this backdrop, one possibility is to unpack QMS, both as a discourse and *emancipatory* dialog. The works of Martin Heidegger (a German philosopher and a seminal thinker in the Continental tradition and philosophical hermeneutics), and Louis Pierre Althusser (a French Marxist philosopher) are significant to the understanding of QMS in the ODL sector. They offer diverse analytical frameworks to consider the meaning of quality in higher education. Among others, therefore, this chapter argues that constructs of *Being* and *Becoming* are the hidden epistemological and ontological dimensions of QMS. It is the authors' view that QMS is always in the state of *Being* and *Becoming*. It is in a temporal mode of *being* and fits through Heidegger's [1] lens of "thrownness" (*Geworfenheit*). Thus, the concept of QMS is central to ODL praxis. This chapter assumes that the QMS is a complex of interacting elements that are fluid in nature. It consists of "interrelationships of complex phenomena (as parts of the system) on the system as a whole" [2].

While exponents of the systems theory such as Ludwig von Bertalanffy, Talcott Parsons, and Norbert Wiener conjure that systems should be studied as a whole, this chapter starts with Aristotle's claim that knowledge is derived from the understanding of the whole and not that of the single parts. This chapter is divided into five sections. The first section begins by conceptualizing the notion of QMS in the context of higher education space. The second section presents Heidegger views on *Being* and *Becoming.* The third section reflects on QMS as a carrier of dominant class ideology. This reflection is against the backdrop of Althusser's *Ideology and Ideological State Apparatuses.* The fourth section presents QMS as a key pillar in the higher education industry. The fifth section proposes a (re)thinking of QMS through the Heideggerian lens of *temporality*. Finally, the conclusion gives a brief summary and the concluding remarks.

2. Conceptualizing the notion of QMS in the context of higher education space

To begin with, the notion of *quality*, as a virtue of professional practice, is not a new phenomenon in the higher education landscape. It is about content and intellectual innovation. It is noteworthy that in the higher education space, *quality* is conceived as an *exception*, *perfection*, *fitness for purpose*, *value for money* and *transformation* [3]. Notwithstanding the fact that *quality* remains an elusive and contested concept, in recent years, "there have been increased efforts to bring total quality management (TQM) to academia and make academics more accountable

for the quality of their product" [4]. Most importantly, TQM has become a critical component of higher education reforms; and plays a vital role in improving the performance of higher education. As Pratasavitskaya and Stensaker [5] point out, "historically, one could argue that quality management in higher education had already been introduced during the 1980s, and in the beginning of the 1990s the idea of applying the popular industrial quality models—such as TQM, aiming at customers' satisfaction—to the higher education area was also quite widespread".

The QMS has turned into a management thought for the government, funding bodies, and higher education institutions. The notion 'management' in this instance is compatible with Michel Foucault's framework of *Governmentality*. It denotes 'authoritative control over the affairs of others', or 'an act or instance of guiding'. From a Foucauldian perspective, governmentality implies the way in which the state exercises control over the body of its populace. It allows for the creation of *docile bodies* to be used in modern economic and political institutions. In *Discipline and Punish: The Birth of the Prison*, French philosopher Michel Foucault [6] comments as follows regarding the prison as a system that renders bodies 'docile': "…by locking up, retraining and rendering docile, it merely reproduces, with a little more emphasis, all the mechanisms that are to be found in the social body? The prison is like a rather disciplined barracks, a strict school, a dark workshop, but not qualitatively different" (p. 233). He further argues that "The labor by which the convict contributes to his own needs turns the thief into a 'docile' worker" (p. 243). In this chapter, QMS is regarded as a tool for (a) improving professional standards; and (b) helping organizations run effectively. It is appropriate for instruction in post-secondary educational institutions. In Faganel and Dolinšek's [7] words, "being quality minded in higher education means caring about the expectations of students and other customers as well as all involved parties, and ensuring they are met". They further argue that "quality systems in higher education have been important for decades to help higher education institutions improve professional standards by comparing them with international educational qualifications.

With this in mind, it could be argued that factors such as "competition, cost, and accountability have encouraged higher education's interest in quality" [8]. In her doctoral thesis titled *Applying Deming's philosophy and principles to the instructional process in higher education*, Jane Andrews [8] notes, "there are several major reasons why higher education institutions should adopt the quality philosophy, principles, and practices". First, survival is the first order of business for any organization. Second, colleges and universities are in a competitive environment. And third, students, like business customers, will simply take their business elsewhere if they are not satisfied (p. 3). Andrews furthermore argues that "besides competition, the cost is a prime consideration for students enrolling in higher education". For her, "when there are pressures for tuition increases, students are going to come down with a vengeance about [the *quality* of] what they are getting [for their money". Hence, QMS helps co-ordinate and direct an organization's activities to meet customer and regulatory requirements and improve its effectiveness and efficiency on a continuous basis. While implementing a QMS affects every aspect of an organization's performance, it is worthwhile mentioning that the QMS is complex, diverse and serves many purposes (including improving processes; reducing waste, lowering costs; facilitating and identifying training opportunities; engaging staff).

With these considerations in mind, one may suppose that teaching and learning are the nuclei of an educational institution. In recent years, higher education institutions have begun to follow William Edwards Deming's management philosophy. Although Deming originally applied his philosophy and principles to Japanese businesses after World War II, it could be argued that the philosophy and principles are applicable for the twenty-first century changing educational paradigms of colleges and universities and can be applied to college and university classroom instruction. Deming's management philosophy is foundational to TQM and its successor, QMS. Most scholars see Deming as "the Father of the Third Wave of the Industrial Revolution". His theories are premised on the assumption that "most product defects resulted from management shortcomings rather than careless workers, and that inspection after the fact was inferior to designing processes that would produce better quality" [9]. Most importantly, his emphasis is on meeting and exceeding customer expectations.

It should be mentioned that Deming's theory of management philosophy is grounded in systems theory. Deming [10] believed that "each organization is composed of a system of interrelated processes and people which make up system's components". For him, "94% of quality issues are caused by management problems". He writes, "Management's failure to plan for the future, he claims, brings about the loss of market, which brings about loss of jobs". Thus, "management must be judged not only by the quarterly dividend, but by innovative plans to stay in business, protect investment, ensure future dividends, and provide more jobs through improved product and service". Most importantly, Deming recognized that "improving quality will reduce expenses while increasing productivity and market share".

In his work *Out of the Crisis*, Deming offers 14 key principles that serve as QMS guidelines. These are:

1. Create constancy of purpose for improving products and services

2. Adopt the new philosophy

3. Cease dependence on inspection to achieve quality

4. End the practice of awarding business on price alone; instead, minimize total cost by working with a single supplier

5. Improve constantly and forever every process of planning, production, and service

6. Institute training on the job

7. Adopt and institute leadership

8. Drive out fear

9. Break down barriers between staff areas

10. Eliminate slogans, exhortations, and targets for the workforce

11. Eliminate numerical quotas for the workforce and numerical goals for management

12. Remove barriers that rob people of pride of workmanship and eliminate the annual rating or merit system

13. Institute a vigorous program of education and self-improvement for everyone

14. Put everybody in the company to work accomplishing the transformation

While his teachings on quality and productivity have elevated him a hero status in Japan, Deming believed that "quality narrows the wide gap between customer requirements and process performance". As he aptly puts it, "it is not enough to just do your best or work hard. You must know what to work on". It is the authors' view that Deming's 14 points are also applicable to higher education. They have the potential to improve quality, production, and service in ODL. Hence, implementing QMS can benefit ODL in "(1) meeting the customer's requirements, which helps to instill confidence in the organization, and in turn lead to more customers, more sales, and more repeat business. And meeting the organization's requirements, which ensures compliance with regulations and provision of products and services in the most cost- and resource-efficient manner, creating room for expansion, growth, and profit" http://asq.org/learn-about-quality/quality-management-system/

3. Heidegger views on *Being* and *Becoming*

German philosopher Martin Heidegger (1998–1976) was mainly interested in an ontology or the study of *being*. In his magnum opus, *Being and Time*, he outlines the notion of *being* (*Sein*) by means of phenomenological analysis of human existence (*Dasein*) with respect to its temporal and historical character. He postulates that "its temporal character is derived from the tripartite ontological structure: *existence, thrownness*, and *fallenness* by which *Dasein*'s *being* is described". He re-iterates his thesis, "this characteristic of *Dasein*'s Being – this 'that it is' – is veiled in its 'whence' and 'whither', yet disclosed in itself all the more unveiled; we call it the 'thrownness' of this entity into its 'there'; indeed, it is thrown in such a way that, as *Being-in-the-world*, it is the *there*". He emphasizes that the "expression 'thrownness' is meant to suggest the facticity of its being delivered over."

Perhaps, it is necessary to mention that *Being* and *Becoming* are both philosophical problems and policy imperatives in QMS. Heidegger [1] confirms that "*Being* and *becoming*" is neither simple nor static process—it is both an ontological and ontical inquiry and inquiry into *Being*". He suggests that *Being* is "made visible in its *temporal* character in the sense that time is part of the identity and character of things". For Heidegger, temporality dependents on existential spatiality, and not the other way round. Hence, Heidegger calls the being or 'essence' of *Dasein* 'existence'. Heidegger' works, *Introduction to Metaphysics* [11], *The Essence of Reasons* [12] and *Being and Time* [1] are relevant in discussing QMS in this chapter. For Heidegger "*Being* goes beyond particular things, it is rather the ground of all beings and the source from which all beings derive their being". In his book, *Introduction to Metaphysics*, Heidegger [11] asks the question *Why are there beings at all, instead of Nothing?* He maintains, "the human being is not the lord of *Beings*, but the shepherd of *Being*" [1]. Central to Heidegger's [1, 11, 12] thought is the assumption that the understanding of *Being* is itself a determination of the *Being* of *Dasein*.

For Heidegger [1], "…*Dasein* itself – and this means also Being-in-the-world – gets its ontological understanding of itself in the first instance from those entities which in itself is not

but which it encounters 'within' its world, and from the *Being* which they possess". He theorized, "being the rational animal, man must be capable of thinking if he really wants to". Still, he argues, "it may be that man wants to think, but cannot" [1]. Heidegger [1] declares that:

> "What is meant by "Being-in"? Our proximal reaction is to round out this expression to "Being-in" 'in the world", and we are inclined to understand this Being-in as 'Being in something' ….as the water is 'in' the glass, or the garment is 'in' the cupboard. By this 'in' we mean the relationship of Being which two entities extended 'in' space have to each other with regard to their location in that space…Being present-at-hand-along-with in the sense of a definite location-relationship with something else which has the same kind of Being, are ontological characteristics which we call 'categorical.'

Informed by Heidegger's [1] work, the notions of QMS and *temporality* (Zeitlichkeit) have a symbiotic relationship. Closer to present time, QMS fits to be seen as the question of temporality – it carries the substance and attributes of *existence*, *thrownness*, and *fallenness*. While the notion of temporality is first hinted at in Aristotle's Physics, Heidegger [1] maintains the *Dasein*'s being is founded on temporality and Temporality. As Heidegger writes, "the term *Temporality* does not wholly coincide with the term *temporality* [Zeitlichkeit], despite the fact that, Temporality is merely the translation of Zeitlichkeit". He identifies the *three ecstasies of temporality as* the past, present, and future (retaining, representing, and expecting). Among others, he stresses that "in expressing itself, temporality temporalizes the only time that the common understanding of time is aware of". Hence, the ecstatic nature of temporality can be understood if we delve slightly deeper into the future, past, and present. Heidegger accepts that "time needs to be explicated primordially as the horizon for the understanding of Being, and in terms of temporality as the Being of Dasein" [1]. He concludes that (a) "the world is neither present-at hand nor ready-to-hand, but rather temporalizes itself in temporality" and (b) "Temporality is temporality as fundamental ontology" [1].

In summary then, from a Heideggerian perspective, it could be argued that ODL practitioners are always in the state of *Being* and *Becoming* – they are in a temporal mode of being. It is also worth noting that within the field of QMS ODL practitioners are 'thrown' into the world and that their Being-in-the-world aligns with Heidegger's [1] lens of 'thrownness'. For this reason, Heidegger's notion of *Being* and *Becoming* is hidden ontical and ontological dimensions of QMS. In the next section, QMS is discussed within the context of dominant class ideology.

4. QMS as a carrier of dominant class ideology

The history of QMS can be traced back to the 1920s. It is rooted in Frederick Winslow Taylor's (1865–1915) classical management theory. The QMS also derives from Foucault's [13, 14] notion of *governmentality*. Chen et al. [15] note that "regulating academic quality assumes *state sovereignty* in defining and enforcing academic standards through policy steering". This section draws on the work of French Marxist philosopher, Louis Pierre Althusser (1918–1990). Althusser's work provides conceptual tools for unpacking QMS as a carrier of the dominant class ideology. It is important to state at the outset that the notion of QMS, as a site of class struggle and a product of ruling ideology, perfectly fits the lens of *Ideological State Apparatus*

(ISA). It is the authors' view that, like other social practices of everyday life, the notion of QMS is fueled and imbued by ideologies.

The authors postulate that QMS is not "abstractions that merely represent some form of spiritual or non-materialistic reality, but are rather a direct result of the structures of the materialistic reality itself" [16]. It is important to state that ideology is a vague and controversial notion. As a subjective dimension of social life, the concept of 'ideology' has a very rich history and carries diverse connotations. As Schmid [17] aptly puts it, "ideology is a human condition, a medium in which and by means of which we live our lives" (p. 57). Schmid [17] emphasizes, "the term ideology usually refers to ideology as a systematic, elaborated and delimited systems of thought, like political ideologies or religious" (p. 57). Schmid's contention concurs with that of van Dijk. According to Van Dijk [18], "ideologies have something to do with systems of ideas, and especially with the social, political or religious ideas shared by a social group or movement".

Eagleton [19] states that "all ideology is teleological, totalitarian, metaphysically grounded (p. xii); passionate and rhetorical (p. 4) and has to do with legitimating the power of a dominant social group or class (p. 5). He argues that "a dominant power may legitimate itself by promoting beliefs and values congenial to it; naturalizing and universalizing such beliefs so as to render them self-evident and apparently inevitable; denigrating ideas which might challenge it; excluding rival forms of thought, perhaps by some unspoken but systematic logic; and obscuring social reality in ways convenient to itself" (p. 5). With this in mind, the authors depart on Shils's [20] assumption that "ideologies are characterized by a high degree of explicitness of formulation over a very wide range of the objects with which they deal; for their adherents, there is an authoritative and explicit promulgation".

Looking closely at Althusser's [21] work *Ideology and Ideological State Apparatuses*, conceptually the QMS, both as a social representation and the *basis* of social practices, is a carrier of ideology. Althusser furthermore argues that "ideology has a material existence because an ideology always exists in an apparatus, and its practice, or practices; and always manifests itself through actions, which are *inserted into practices*". He remarks, "all ideology hails or interpellates concrete individuals as concrete subjects, and ideology represents the imaginary relationship of individuals to their real conditions of existence". Althusser concludes by saying that ideology, "as a material practice, depends on the notion of the subject." His propositions are that "there is no practice except by and in an ideology" and "there is no ideology except by the subject and for subjects".

From a Heideggerian view, an interpellation is a temporal form. As Althusser [21] aptly puts it, "*becoming-subject* happens even before we are born". He further declares, "an individual is always-already a subject, even before he is born, is […] the plain reality, accessible to everyone and not a paradox at all". With this in mind, the main purpose of QMS as a carrier of ideology is in constituting concrete ODL practitioners as subjects – "individuals are always-already subjects". Althusser concludes that, "the individual is interpellated as a (free) subject in order that he shall submit freely to the commandments of the Subject, i.e. in order that he shall (freely) accept his subjection, i.e. in order that he shall make the gestures and actions of his subjection 'all by himself".

For van Dijk [18], "ideologies form the basic social representations of the beliefs shared by a group, and precisely function as the framework that defines the overall coherence of these beliefs". Thus, "ideologies allow new social opinions to be easily inferred, acquired and distributed in a group when the group and its members are confronted with new events and situations" (p. 15). Notwithstanding the fact that QMS ideologically is biased, it is critical to mention that QMS serves as a tool for social reproduction, ideological control, and regulation.

In summary, from an Althusserian perspective, QMS as a carrier of ideology has the function of constituting concrete individuals as subjects, that is, of enlisting them in any belief system. It also has a function of interpellating ODL practitioners as subjects. It could, therefore, be concluded that the individual is interpellated as a (free) subject in order that he shall submit freely to the commandments of the Subject. In the section that follows, it will be argued that higher education industry is driven by consumerist tendencies.

5. QMS as a key pillar of the higher education industry

Notwithstanding the fact that *The Universal Declaration of Human Rights* of 1948, declares (in Article 26) that "everyone has the right to education" and further declares that higher education "shall be equally accessible to all on the basis of merit", it can be reasonably argued that in the 21st century higher education has become definitely a *commodity* that is up for sale. It is critical to mention that higher education is *market-driven* and underpinned by what Slavoj Žižek, Ernesto Laclau, and Chantal Mouffe call a *consumerist* ideology. For instance, Žižek [22] argues that "the very act of egotist consumption already includes the price of its opposite". Nonetheless, calls for quality in the higher education industry today are loud and clear. It is correct that higher education industry as a "business", must embrace the notions of *quality*, TQM and best business practices in order to remain competitive and financially sustainable. While the cost of providing higher education continues to rise, higher education institutions face overwhelming challenges to long-established business models. Further worsening this challenging climate, the public is beginning to question the *quality* of higher education.

The notion of quality in higher education is as old as medieval ages and is traceable to the 13th century [23]. Hitherto, the definition of *quality* that "prevails in industrial/business environments, based on the idea of satisfying customers' needs and expectations, is problematic in higher education" [23]. It is worth mentioning that in recent years, higher education institutions have encountered growing pressure to operate like businesses. Nonetheless, higher education institutions must change to meet the needs of its 21st century students; and embrace the notions of *efficiency*, *productivity*, and *innovation*. It is the authors' view that the students are customers of higher education institutions. The authors equally assume that if the customer is satisfied, the product has good quality. Notwithstanding that the term 'customer' is central to Total Quality Management (TQM), our thesis is that in order to be effective higher education organizations must be customer-driven. The TQM is potentially the solution as to how to improve the quality of the services provided by higher education institutions – its central theme is the importance of meeting customer needs.

For Taiwo [24], "customer-oriented organizations are successful because they have a unified focus on what they do and who they serve. Taiwo continues by noting that "customers have wants, opinions, perceptions, and desires which are often referred to as the voice of the customer". He argues that "the voice of the customer can also be defined in technical terms as the "standardized, disciplined, and cyclic approach to obtaining and prioritizing customer preferences for use in designing products and services". Despite the fact that quality is defined as meeting or exceeding customer expectations, it is critical to ask the question, *to what extent are higher education sectors are meeting or exceeding customers' needs and expectations*? As Deming rightly puts it, "the customer is "one who gets your work."

Willis and Taylor [4] observe that "quality concerns have spread from manufacturing and service businesses to the public sector including public and private educational systems". They further argue that "an increasing number of higher education institutions are adopting a TQM approach to enhance the school's ability to attract and retain students by implementing processes to continually improve quality. In line with this, the authors argue that the fundamental purpose of QMS models is to serve the customer better. Even though QMS models were established mainly for manufacturing and industrial sectors, within higher education sectors they can contribute to the process of standardization of academic degrees. In spite of the fact that "TQM models developed for higher education are consistent with models frequently used in the manufacturing, business, and service sectors" [25], it is the authors' view that the QMS and ODL have a symbiotic relationship. Like contact universities, the ODL institutions are the "key drivers in the knowledge economy and thus, are encouraged to develop links with industry and business in a series of new venture partnerships" [25].

As Chen et al. [25] observe, "universities are generally facing fiscal constraints and increased competition, increased calls for accountability, growing demand through growing enrolment and student diversity, and challenges from developing technologies". They argue that "universities and higher education systems, in general, are expected to have a sophisticated approach to documenting performance excellence that is accountable, evidence-based, outcomes-focused and geared towards continuous improvement in spite of contextual challenges". While QM principles are more widely accepted within the university today, Chen et al. [25] postulate that "the difficulty in translating TQM into an educational setting stems from the difficulty in measuring learning because the core processes of learning are too subtle to be measured meaningfully". They emphasize that "some of the notions of quality management (QM) do not have simple equivalents in higher education such as managerial responsibility for quality, empowering staff for quality improvement purposes, setting standards to reflect customer requirements, and avoiding error/minimizing variation".

In summary, many would believe that QMS in higher education has been important for decades. Notwithstanding that there exist many models of QMS, different quality tools and standards, the rise of QMS in higher education remains "a product of market ideologies of the 1980s and the managerialism that accompanied it" [26]. As Faganel and Dolinšek [7] write, "quality management systems in higher education have been developed for a number of years to improve professional standards". They conclude, "several attempts have been made

to develop methods that would be modeled on ISO 9000 and TQM, but some of these models were developed to evaluate a business process in the quality field".

6. (Re) thinking QMS through the Heideggerian lens of temporality

Despite the fact that Heidegger was overwhelmingly captivated by the concept of *being*, his commentaries are fundamental to re-imagining QMS (as a temporal phenomenon) in higher education. In his seminal work, *The Science of Being and Art of Living*, Maharishi Mahesh Yogi [27] provides an account of the concept *Being*. He writes, "as the omnipresent, essential constituent of creation, *Being* lies at the basis of everything, beyond all relative existence, beyond all forms and phenomena". He further argues that "Being is the most glorified, most precious, and most laudable basis of all living. Being is the basis of cosmic law, the basis of all the laws of nature, which lies at the root of all creation and evolution". His thesis is that "the conscious basis of Being is like a ship without a rudder, ever at the mercy of the tossing sea".

Against this backdrop, the *being*-ness of QMS is a philosophical problem deeply embedded in existential temporality. Standera [28] contends that "temporality, as a fundamental condition of the possibility of our experience, unifies all the structures that comprise our particular way of *Being*, which includes *Being*-in-the-world". For him it is the crucial glue binding all the elements and processes that Heidegger ascribes to our existence into a coherent whole, providing "the unitary basis for its existential possibility"; it "regulates the possible unity of all *Dasein*'s existential structures". This corresponds with Orr's (2014) view. He conjures, "whatever exists in the mode of temporality does not possess its being but receives it ever anew as a gift". From the Heideggerian view, temporality should be conceived not as "clock-time", but "ecstatically". As Heidegger [1] notes, "ecstatic temporality is a process with three dimensions which form a unity; and confers unity on one's entire existence, and not simply episodes in one's conscious awareness". His temporality provides a spectrum or factor for classifying cognitive complexity that establishes a radical continuity through the shared participation. Hence, temporality provides "a kind of framework or medium in which *Dasein*, which literally means 'Being-there', pursues its existence" (Orr's 2014).

From a Heideggerian perspective, the notions of *being* and QMS have mutual connections and are tightly intermingled. The *being*-ness of QMS, as a phenomenon of life in higher education space, takes its meaning in *temporality* and *historicity*. Heidegger's thesis is that temporality is not an entity, not a sequence of self-contained moments that move from future to present to past, and not a property or feature of something, but is, rather, akin to a self-generating and self-transcending process. He observes, "temporalizing does not signify that ecstasies come in a 'succession'. The future is not later than having-been, and having-been is not earlier than the Present. Temporality temporalizes itself as a future which makes present in a process of having been".

It is prudent to believe that QMS, as a social construct, is neither a simple nor a *static* process. On the contrary, it is a fluid and changing the concept that is in a perpetual state of *Being* and *Becoming*. From a philosophical perspective, the QMS carries categorical ontological and

epistemological attributes/appeals of temporality, spatiality, being-in-the-world, worldliness, nearness, disclosedness, and thrownness). It is the authors' view that the notions of temporality, spatiality, and thrownness influence the *being*-ness of QMS. It is worth mentioning that the ontology of the *being*-ness of QMS is rooted in the phenomenon of time.

Given the fact that the 21st century ODL is trapped in *temporal flux*, among others, it calls for Heidegger's model of temporality, which unifies and enables practice and purposiveness. It is critical to mention that the Heideggerian model of temporality strongly resonates with the temporal dimension of meaning-enacting cognition [28]. Standera as such, emphasizes that the Heidegger model of temporality.

> *"invites us to understand purposiveness as inherently temporal and temporality as shaped by purposiveness; to view the futural dimension as having a special significance, one that can be cashed out in terms of a radical indeterminacy that transcends mere predictive or anticipatory models of futurity; and, finally, to take temporality as being structured by and structuring the self-concern that defines Dasein".*

As Stendera [29] points out, the *Heideggerian model of temporality* "is thick enough to accommodate and account for the valance and can connect self-concern with future-directedness in a way that makes sense of precariousness". It is the authors' view that Heidegger's model of temporality requires a regiment of critically reflexive ODL practitioners and leadership with temporal and disclosedness attributes. Gordon & Howell [30] recount that "the need for competent, imaginative, and responsible leadership is greater than ever before; the need becomes more urgent as the business grows ever more complex and as the environment with which it has to cope continues to change at an accelerating tempo."

In summary, Heidegger's model of temporality presents an alternative view of how the temporality makes meaningful experience possible. It has a critical role to play in the re-imagination of QMS in the 21st century; and captures the originary, and overarching sense of temporality. Its attributes are complex, inextricable entanglement with purposiveness; an emphasis upon radical futurity; and a fundamental connection to self-concern. Most importantly, the model of temporality has the prospects of guiding and informing the interpretation of ODL practitioners' experience of the world, changing from pragmatic temporality to what Heidegger calls *existential temporality*.

7. Conclusion

This chapter has argued that QMS is a set of intricate and interacting elements that are fundamental to higher education. It is the authors' view that while QMS plays a vital role in improving the performance of higher education it can also serve as a management tool by the government, funding bodies, and higher education institutions, to engender a controlled, and an unquestioning environment. This paper attempted to show, using Foucault's perspective, that as a form of control, QMS can be regarded as a tool geared towards the creation of *docile bodies*, that is, like the prison system, QMS requires unquestioning compliance, which can be attributed to docility. The building platform of this study drew on the work of Heidegger to

argue that ODL practitioners are always in the state of *Being* and *Becoming*. That is, they are in a temporal mode of being. This work showed that ODL practitioners are 'thrown' into the world and that their Being-in-the-world aligns with Heidegger's lens of 'thrownness'. In this regard, Heidegger's notion of *Being* and *Becoming* projects hidden ontical and ontological dimensions of QMS.

Drawing on Althusser's *Ideology and Ideological State Apparatuses* the authors suggested that QMS can be regarded as a carrier of ideology in that it functions to constitute the individuals as subjects, and of interpellating ODL practitioners. It was noted that the rise of QMS in higher education is the product of market ideologies of the 1980s and the managerialism that accompanied it. However, the authors suggested that Heidegger's model of temporality can be regarded as an alternative view of how the temporality makes meaningful experience possible. This paper called for a re-imagination of QMS using both Heidegger and Foucault, given that QMS' attributes are complex, inextricable entanglement. Finally, it was argued that the model of temporality has the potential to guide and inform the interpretation of ODL practitioners' experience of the world, drawing on what Heidegger calls *existential temporality*.

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TQM Is Alive but Not as We Know It: The Use of a Novel TQM Model in a Private Healthcare Company

James D. Sideras

Additional information is available at the end of the chapter

Abstract

UK healthcare has been facing an unprecedented quality crisis in recent times. In this context, the author setout to develop and evaluate the use of a novel total quality management (TQM) model in a private healthcare firm with the aim of improving patient care. By integrating contemporary organizational theories with TQM, an innovative model called EALIM—ethical, adaptive, learning and improvement model—was devised. Using an action research study, qualitative data were gathered in three research cycles, (1) pre-implementation, (2) implementation, and (3) post-implementation. Initial results showed EALIM's adoption generated a moral organizational perception among employees, increased organizational commitment, emergence of a learning culture, and improvements in patient self-advocacy and independence. However, other findings indicated poor leadership produced variability in service quality. Although outcomes from this study clearly indicated that EALIM generated organizational improvement, commitment from all internal stakeholders is required to achieve sustainable quality patient care.

Keywords: TQM, quality improvement, healthcare, corporate social responsibility, organizational complexity, knowledge management

1. Introduction

Providing quality goods and services to satisfy customer needs has been a long-term strategic goal for both manufacturing and service organizations. Indeed, it may be argued that it is due to the basic fundamentals of quality policies and principles that organizations are successfully competing in an ever-growing antagonistic marketplace [1]. Whether it is an automobile recall, a failed medical operation or a poorly performing school, the consequences of poor quality underscore the significance of quality management. A particular quality management approach that emerged in the latter part of the twentieth century was total quality management (TQM). Though many descriptions of TQM exist, it can be defined as "Total—everyone associated with

the company is involved, Quality—customers' expressed and implied requirements are fully met, and Management—executives are fully committed [2]." However, unlike its many definitions, little disagreement exists among authors on TQM's key principles, which include top management leadership, customer focus, continuous process improvement, employee education and participation, statistical reporting, as well as recognition and reward.

Largely spawned by the success of TQM in reversing Japan's broken post war economy, during the 1980s and 1990s a global TQM revolution emerged. Consequently, many western companies adopted TQM principles into their corporate strategies to boost competitiveness and financial performance. However, by the early 1990s, empirical investigations began to emerge, asserting that most TQM efforts failed to produce desired results, including TQM initiatives in healthcare. By the late 1990s, critics had grown, claiming TQM had lost its dominance, emphasizing the need to focus on more contemporary management approaches [3–5]. Although various authors have attributed TQM failures to implementation issues, others have been more critical, pointing to theoretical limitations. Nonetheless, a number of scholars commonly agree that the underlying reason for TQM's decline was its incompatibility with a postmodern organizational context [6, 7]. This point suggests TQM requires reform to become a contemporary management approach, fit for the 21st century.

Over the last 10 years, UK healthcare has been encountering an unprecedented quality crisis, especially considering the overwhelming challenge of improving patient care in the face of growing demands and budget constraints. These bottlenecks gave rise to research the development of an innovative and sustainable TQM model that could yield quality patient care. The target organization used to conduct the research was a private healthcare provider, offering specialist services to adults with learning disabilities and mental health disorders in London and the Home Counties.

This chapter draws upon that five-year research in two main parts:

The first part deals with the conceptual development of the model, which began by reviewing the literature to identify the theoretical and implementation issues of TQM. These findings were then used to inform the selection of contemporary organizational theories for integration with TQM that could ameliorate the issues identified. Following this process, three contemporary organizational theories were selected:

- corporate social responsibility (CSR),

- complexity theory (CT) and

- knowledge management (KM).

The reasons for choosing these, along with their distinct advantages and conceptual links with TQM, are stated. For the purpose of this study and within this context, organizational theory is defined as a body of thinking that conceptualizes organizational phenomena based on specific principles and assumptions [8]. By integrating these three organizational theories with TQM, a novel model called EALIM—ethical, adaptive, learning and improvement model—was devised, an acronym that captures the nexus of each theory. The ethical part of the model relates to the integration of CSR, the adaptive part to CT, the learning part to KM and the

improvement part relates to TQM. This part of the chapter ends by presenting the main principles of EALIM, along with its methods that link to each of its theories, forming a coherent conceptual framework.

The second part of this chapter provides a research overview of EALIM's implementation within the target organization. An action research (AR) methodology was chosen, since it holds features congruent with the author's professional practice and the participatory context of implementing the model. A qualitative strategy of gathering data was used as this seemed best suited for understanding contextual factors and explaining the internal logic of human action in response to interventions. Data gathering methods included depth interviews, participant observation and focus groups, which fall within the scope of qualitative research. Data were gathered over an 18-month period in three AR cycles. In the first cycle, data were collected to form a baseline assessment of the firm.

In the second cycle, a collaborative action plan was developed and EALIM's implementation was examined. In the third cycle, further data were accumulated and findings were evaluated against the baseline assessment to identify EALIM's overall impact.

Although other authors [9, 10] have conceptually developed healthcare-specific TQM models, a dearth of research exists with regards to the implementation and evaluation of such models. It follows that the research presented in this chapter addresses this paucity. Moreover, since no other conceptual framework fully integrates corporate social responsibility, complexity theory and knowledge management within TQM, EALIM can be relied upon as an original contribution to TQM theory. In essence, EALIM presents a broadening conception of TQM that could yield better results, since it is more suited to a postmodern organizational context.

2. Theory building and model development

The research began with a qualitative review of the organizational literature to identify key issues with TQM theory and implementation in manufacturing and service industries. The initial search located about 400 studies. However, after a narrative review, only 41 were selected for analysis because the other studies did not adequately critically review TQM. Thematic analysis was then applied to the selected studies, using open, axial and selective coding. This coding involved comparing the textual accounts of each study to identify codes, forge connections between codes, and organize them into meaningful thematic categories [11]. Results from this analysis are depicted in two tables. The first is **Table 1**, which describes seven commonly reported TQM implementation barriers.

Although some studies found the use of TQM had yielded increased levels of product quality and organizational performance, most studies reported mixed results or high failure rates caused by implementation issues. For example, while Joss's study of TQM initiatives in UK healthcare reported some success in improving teamwork, these initiatives failed to make a direct improvement in service quality because of implementation obstacles like the lack of top management commitment and a disregard of cultural factors [12]. Barriers like these, not only give insights about why TQM efforts were disbanded,

Barrier 1	**Lack of top management commitment and ethics**
Description	TQM message is incongruous with the behavior of management. Conflict between the espoused message of TQM and its practice. Lack of visible participation by top management.
Barrier 2	**Limited stakeholder approach from top managers**
Description	Emphasis on customers and suppliers at the expense of other stakeholders. Managers fail to recognize their organizational responsibilities to society. Insufficient employee participation.
Barrier 3	**Lack of adaptability to change and unintended outcomes**
Description	Lack of spontaneity to unpredictable events. Slow response to changing customer requirements creates market drift. A controlling culture inhibits staff from adapting to dynamic customer needs.
Barrier 4	**Too much emphasis on hard TQM factors**
Description	Too much focus on the technical and analytical aspects of TQM. Statistical process control (SPC) is inadequate for evaluating metaphysical attributes like attitudes and motivation, warmth, care, etc.
Barrier 5	**Disregard for contextual factors**
Description	Top managers hold taken for granted assumptions about controlling culture. TQM dogma and framework is applied as a universal approach without adapting it to fit the organizational context.
Barrier 6	**Middle management resistance**
Description	Middle managers lack involvement and place too much reliance on a quality manager or department. TQM is perceived as a political threat to their authority.
Barrier 7	**Inadequate learning**
Description	Lack of a learning culture. Failure to apply knowledge in practice. No reflexive learning. Managers fail to learn how their leadership methods and actions contribute to implementation problems.

Table 1. Key TQM implementation barriers in manufacturing and service firms.

but also highlight differences between the rhetoric and reality of TQM adoption. Even in cases where TQM had succeeded, studies show this was after a 5-year implementation period, far too long for executives who require more immediate results [13]. Hence, for achieving sustainable TQM success, the newly developed model ought to address all the implementation barriers identified.

From the studies that problematized TQM theory, nine TQM theoretical limitations were identified, as depicted in **Table 2**. Most of these studies took a postmodern approach of making explicit TQM theory's unstated philosophical assumptions. For instance, Boje and Winsor argue that TQM methods are designed as social and psychologically engineered tools to efficiently extract maximum output from labor resource [6]. From this view, TQM is predicated on theoretical assumptions of scientific management, i.e., Taylorism—an approach that tends to disregard employees' emotional and psychological needs. Other limitations like TQM's managerial obsession with statistical process control reveal a technocratic ideology that treats workers akin to machine parts, at the expense of employee discretion and dignity [7]. These sorts of theoretical limitations lead to the conclusion that TQM is incongruous to a postmodern age of pluralism, uncertainty, organizational interdependence, employee knowledge and autonomy, because it emerged from an era of modernism where the emphasis was on labor resource efficiency and managerialism. This change in emphasis underscores the need to adapt TQM to fit within a postmodern organizational milieu. As previously discussed, the approach toward achieving this is to integrate more contemporary organizational theories with TQM that can address its theoretical and implementation issues.

Limitation 1	Investment and consumer capitalism
Description	Limited to serving shareholder interests and customer needs. Fails to adequately address the quality of experience of other stakeholders.
Limitation 2	Formal rationality
Description	Simple means-ends calculation using rules and laws. Lacks regard for the personal qualities of individuals and the impact decisions have on their wellbeing.
Limitation 3	Utilitarian rationality
Description	The efficient use of resources to achieve maximum output. Disregards employees' emotional and psychological needs, consequently harming quality efforts.
Limitation 4	Executive vision
Description	A vision constructed and imposed by executives. Reinforces control and undermines collaboration.
Limitation 5	Technocratic ideology
Description	Emphasizes following technical processes and systems. Removes employee discretion from work processes, treating them akin to machine parts.
Limitation 6	Single loop learning
Description	Restricts learning to means-end relationships. Occludes new ways of thinking and learning.
Limitation 7	Newtonian paradigm
Description	A linear and reductionist worldview. Cannot work in disequilibrium where cause/effect is non-linear.
Limitation 8	Codified and explicit knowledge sharing
Description	Reliant on the systematic sharing of express information. Occludes knowledge sharing that is informal and context dependent.
Limitation 9	External customer focus
Description	Emphasizes satisfying consumers. Lacks regard toward other key stakeholders.

Table 2. TQM's theoretical limitations.

The process of selecting contemporary organizational theories for integration with TQM, involved a broad review of the organizational literature. Qualitative methods of analysis were deployed as purported by Golden-Biddle and Locke [14], which included constructing inter-textual coherence (i.e., focusing on key contributions and forging connections between concepts), and problematizing the literature (i.e., identifying key issues that have not been addressed and presenting arguments for alternative perspectives). From the 20 or so organizational theories examined, three were selected based on the following criteria: (1) their fit with a postmodern context, (2) their potential to overcome TQM's theoretical limitations and implementation barriers, and (3) their conceptual links with TQM. This criterion was chosen because it would enable the expansion of TQM with organizational theories better suited to current contexts, while redressing the barriers and limitations previously identified. A description of each theory, reasons for selecting them, and their fit with TQM, are given in the next three subheadings. The number assigned to each finding from **Tables 1** and **2** have been included in parenthesis, to systematically account for how these theories redress TQM's shortcomings.

2.1. Corporate social responsibility (CSR)

By adopting concepts like stakeholder management, employee welfare, philanthropy and ecological sustainability, CSR can be defined as an organizational approach that demonstrates ethical regard for people, society and the planet [15]. Unlike CSR, TQM theory neglects the

importance of corporate philanthropy and ecological sustainability because its key premises are based on creating value for shareholders and meeting customer expectations. It follows that integrating CSR with TQM would enable a shared vision among a wider range of stakeholders. This approach could address TQM theory's prevalence on investment and consumer capitalism [Limitation 1], its restriction to an executive vision [Limitation 4], and its confined external customer focus [Limitation 9]. Since CSR involves a stakeholder approach, its integration could also overcome TQM's implementation issue of a limited stakeholder approach from top managers [Barrier 2]. Therefore, by conflating the instrumental activity of TQM and the ethics of CSR, a moral form of capitalism can be achieved, linking the success of the organization to the prosperity of its environment.

As noble as CSR sounds, it has been criticized for ignoring the wellness of employees. Lay-offs, long working hours, work–family conflict and inequality, are often overlooked in both the CSR and TQM literature [16]. To address these shortcomings, a CSR approach that includes socially responsible business practices on employee wellbeing should be adopted. This type of CSR approach denotes a Kantian duty ethic, where people are treated as both the means and the end [17]: a more humane rationality than TQM theory's utilitarian rationality [Limitation 3].

The adoption of a Kantian CSR approach can result in several outcomes: namely, it can enable managers and workers to understand their jobs are not merely a means for generating shareholder wealth, promote a sense of pride in the organization, and create awareness that their work is producing a far greater end for the human race, resulting in opportunities for commitment and action. These outcomes have the potential to redress two particular TQM implementation issues: lack of top management commitment and ethics [Barrier 1], and middle management resistance [Barrier 6].

2.1.1. CSR's fit with TQM

Although distinct differences exist between CSR and TQM, some mutual conceptual links have been identified, making their integration possible. For instance, while Ahmed and Machold argue that CSR's moral philosophy is incompatible with quality models that use rational economic principles [18], McAdam and Leonard contend TQM's focus on quality has affinity with CSR, since both are founded on respect for employees and customers [15]. Moreover, CSR principles like employee empowerment, responsibility and collaboration also have affinity with TQM, indicating that TQM can exist in a symbiotic relationship with CSR. It follows that TQM could provide a strong foundation in which to embed CSR values, since they share the common principle of "doing the right things right [19]." Finally, by coalescing the two theories, a more substantive rationality can be realized, a point that redresses TQM's formal rationality [Limitation 2], which tends to overlook the impact decisions have on people's wellbeing.

2.2. Complexity theory (CT)

Proponents of CT generally regard it as a body of concepts explaining the dynamic interaction of interdependent variables and how these generate bifurcation at the edge of chaos (i.e., disequilibrium), leading to unpredictability and emergence [20]. In organizations, its use has been focused on conceptualizing how local human interactions produce organizational,

societal and global patterns that are paradoxically linear and non-linear, predictable and unpredictable, for developing new ways of thinking about how organizations cope with conditions of uncertainty.

Various authors [21–23] have argued that because TQM was largely designed through a Newtonian paradigm of reductionism, objectivism and linear causality [Limitation 7], it fails in its contingency toward chaos, unpredictability and non-linear events of major change. It follows that a CT approach could overcome TQM's Newtonian limitations and foster new decision-making capabilities, an advantage particularly useful when organizations are subject to dynamic conditions. Since the lack of adaptability to change has been a common TQM implementation issue [Barrier 3], adopting a CT perspective could also enable organizational members to better adapt and self-organize in an environment of disequilibrium.

Although a number of complexity theories are presented in the literature, a complex responsive process theory was selected because it regards a corporate social ethic as a durable quality [24], which fits well with CSR. This may also be justified that unlike other complexity authors who adopt a mechanistic system view of organizations, Stacey predicates his view on communicative interaction among people: a humane ideology that addresses TQM's technocratic ideology [Limitation 5].

2.2.1. CT's fit with TQM

Although TQM's Newtonian and linear concepts have paradigmatic differences with CT's ideology of non-linear causality and unpredictability, some links can be made between the two. Dooley *et al*. have argued that TQM factors such as collaboration and empowerment have affinity with CT, in terms of encouraging emergence and self-organization [21]. For example, collaboration allows divergent and emergent thinking on the alternative routes individuals can take at bifurcation points, and empowerment enables individuals to spontaneously make decisions on their own when facing an unpredictable reality. Another link can be found in the way TQM cross-functional team members interact to develop new products in the face of changing customer needs, which has similarity with CT's focus on the interaction of organizational variables as a source of influence. Although some authors claim that TQM is contingent on equilibrium and CT on disequilibrium, Stacey contends the tension between the two is necessary. Stacey argues that managers should be effective in both paradigms because organizations exist in a paradox of predictability and unpredictability, certainty and uncertainty [20]. From this view, TQM and CT can co-exist, as they are not mutually exclusive.

2.3. Knowledge management (KM)

KM can be defined as a body of theory involving sharing, creating and applying explicit and tacit knowledge to advance organizational objectives [25]. For the purpose of clarity, explicit knowledge is knowledge made "explicable" and tacit knowledge "is that which has not or cannot be made explicit [26]." Since TQM relies heavily on a codified approach of collecting and disseminating explicit knowledge through formal processes [Limitation 8], it fails to properly consider tacit kinds of knowledge typically shared through experiences, practice, storytelling and informal networks. Hence, adopting a KT approach of tacit knowledge

sharing would allow individuals to acquire "know-how, expertise, experience and savoir faire [27]." Inferred aspects such as these are difficult to acquire through a codified approach because this treats knowledge as an external object that people transfer through purely cognitive means—an underpinning assumption of TQM theory [see limitation 8]. In contrast, a knowledge-as-practice perspective treats knowledge as something interpreted and inseparable from human activity. Thus, by integrating practice-based learning within TQM, employees could develop tacit understandings of work processes. Since inadequate learning has been identified as a common TQM implementation issue [Barrier 7], especially in terms of failing to apply knowledge in practice, adopting practice-based learning could redress this issue.

While tacit knowledge is fundamental to acquiring know-how, Collins asserts three different kinds of tacit knowledge that are seldom differentiated in the literature: "relational, somatic and collective [28]." According to Collins, relational tacit knowledge (RTK) is acquired through human relationships and guidance over an extended period of time—factors that can ameliorate TQM's implementation problem of placing too much emphasis on hard factors [Barrier 4]. On the other hand, somatic tacit knowledge (STK) involves the use of individuals' physical bodies and is more difficult to explicate, since it is derived through demonstration— analogous to practice-based learning. The third kind, collective tacit knowledge (CTK), is a domain of knowledge with a strong resistance to being made explicit, since it involves learning cultural nuances (i.e., savoir faire) that are only acquired by embedding one's self in society. As such, adopting an approach that elicits CTK could enable people to gain increased knowledge of cultural factors, ameliorating the TQM barrier of disregarding contextual factors [Barrier 5].

Another important reason for selecting KM is that its body of theory supports double and triple loop learning, addressing TQM's one-dimensional use of single negative loop learning [Limitation 6]. The problem with single loop learning is that it restricts individuals to correcting actions toward one's goals, whereas double and triple loop learning are reflexive, allowing individuals to critically question their goals and practices, leading to transformation [29].

2.3.1. KM's fit with TQM

According to Zhao and Bryar, some principles of KM have affinity with TQM in respect of the way information is taken as inputs and processed with applied knowledge to produce outputs [30]. Although TQM has been described as more mechanistic than the living system of KM, Zhao and Bryar contend that both theories share principles of empowerment, collaboration, teamwork and customer centricity. Additionally, the KM strategy of "getting the right knowledge to the right people at the right time [27]" could be used to support TQM's aim of continuous improvement and customer satisfaction. Hence, combining KM with TQM could help solve a missing piece of the quality puzzle.

2.4. EALIM's key principles

In conceptual model building, principles provide structure and serve as rules for its operation, creating a paradigmatic boundary in which other constructs can be added. To advance the model building process further, 10 key principles were inductively conceived from the

literature, which reflect the synthesis of EALIM's four organizational theories (CSR, CT, KM and TQM).

1. **Moral anchor:** a Kantian duty ethic that treats people as both the means and the end. This ethic not only reflects CSR's regard for the wellbeing of people and the planet, but also grounds the model in a moral form of capitalism.

2. **Exemplary leadership:** an approach to leading that models service and trust. This approach is epitomized in servant leadership, defined as a way of leading by serving others in the absence of extenuating personal benefits, which empowers followers to become healthier, autonomous individuals. This kind of leadership denotes a CSR approach that encourages wellbeing and links with CT's notion of self-organization.

3. **Boundaryless collaboration:** removing boundaries across disciplines, hierarchies and cultures through effective stakeholder collaboration, which can promote mutual trust and wide organizational support. Collaboration also promotes knowledge sharing and interdependence among stakeholders, prerequisite elements of both CT and KM.

4. **Empowerment and democracy**: devolving power to employees and finding democratic ways of working. The importance of empowerment and democracy cannot be overstated, since numerous studies have found these to be critical for TQM success, factors that also feature in CSR, CT and KM.

5. **Emergence and self-organization:** encouraging new patterns of social order to emerge that allows people to adapt and innovate in the face of change. This CT principle is critical for surviving in a complex environment, and links to KM because it promotes the application of knowledge from learning communities.

6. **Learning communities and team working:** sharing explicit and tacit (relational and collective) knowledge, as well as creating new knowledge to produce innovation. Learning communities are KM groups that are either homogenous (e.g., practitioner-based) or heterogeneous (e.g., intra-disciplinary), and team working is a key factor for successful problem solving in TQM applications.

7. **Practice-based learning:** learning derived in and through practice, which provides both context and experience for learners. From a KM perspective, this kind of experiential learning enables individuals to develop somatic tacit knowledge, resulting in increased know-how and expertise.

8. **Continuous improvement:** incremental improvements to work processes by everyone. Improvement is continuous because it is a never-ending journey of detecting and preventing errors. This TQM principle is critical for nurturing a quality culture, and can also include breakthrough improvements such as redesigning an entire system.

9. **Quality chain:** deems every employee as an internal customer and supplier. This process involves employees obtaining what they need from their internal suppliers, to satisfy the needs of their immediate internal customers. Forming strong quality chains is vital to the success of TQM, as any weak link or error could find its way to the external customer at the end of the chain.

10. **Customer satisfaction:** the end goal of TQM and critical to any organization, for without it, no organization could prosper in a competitive market place. Attaining customer satisfaction requires commitment from all organizational members toward identifying, meeting and reviewing customer needs. This process must involve capturing the voice of the customer through feedback and suggestion schemes.

2.5. EALIM's methods

To implement EALIM, suitable methods need to be selected that can translate its principles into practice. Since numerous methods exist in the organizational literature, those chosen are by no means exhaustive, and neither are they written in stone. Methods can be changed or added to, as long as they fit EALIM's principles and link to any one of its organizational theories.

The methods listed here have been carefully selected to provide a synergetic blend of soft and hard factors. The soft factors reflect the people-oriented elements of organizational culture, i.e., leadership, people and communicative interaction, while hard factors relate to the analytical and technical processes people use. Selecting the right blend is important because various authors claim a balance of soft and hard factors produce a higher probability of success [31, 32]. Fotopoulos and Psomas go further on this point by asserting successful quality improvement efforts are more influenced by soft factors than hard [33]. Accordingly, most of the following methods are expressive of soft factors, capable of advancing EALIM's principles.

2.5.1. CSR methods

Shared vision: a CSR vision that is commonly shared by stakeholders, as opposed to one imposed by management. This could create social legitimacy and enable employees to realize the impact of their personal work beyond the organization's primary task.

Stakeholder approach: the crossing of boundaries between internal and external stakeholders through collaboration in order to create mutual trust and wide organizational support.

Corporate philanthropy: discretionary cash contributions direct to charities and social causes, which can build strong community relations, motivate the workforce and significantly enhance people's quality of life.

Community volunteering: empowering employees to volunteer their time and talents toward social causes, for the purpose of integrating with community organizations and effect positive change in the world.

Socially responsible business practices: support of human and ecological sustainability in order to protect the wellbeing of employees and the environment.

2.5.2. CT methods

Complexity mental model: the adoption of a mental model that welcomes disorder as a partner, uses instability positively, sees change as a necessity and understands that complexity is unavoidable.

Planned strategy: a long-term business strategy that enables stable and incremental change with clear goals designed to advance the organizations primary task.

Emergent strategy: spontaneous strategies of a novel kind that allow the organization to self-organize, adapt to uncertainty, and engage in revolutionary change.

Ordinary management: the deployment of rational, formal and analytical management methods within a constant shared paradigm, i.e., single loop learning.

Extraordinary management: the use of creative, informal and intuitive management methods that alter the shared paradigm, i.e., double loop learning.

2.5.3. KM methods

Triple loop learning: single, double and triple loop learning that allows individuals and groups to engage in (1) improvement, by learning new ways of doing, (2) reflection, by learning new ways of thinking, and (3) transformation, by learning new ways of learning.

Communities of practice: practitioner-based (homogenous) groups for mutual support, knowledge sharing, and learning of best practices.

Project teams: intra-disciplinary (heterogeneous) teams for specific projects, problem solving, knowledge creation and building innovation.

Storytelling and narratives: the use of storytelling and narratives among organizational members for the purpose of creating identity, deep meaning and tacit knowledge sharing.

Knowledge brokers/boundary spanning: organizational members who act as sources and facilitators of knowledge, due to their interaction with different communities of knowledge and discipline.

2.5.4. TQM methods

Voice of the customer: the continuous monitoring of dynamic customer requirements, so changes can be rapidly identified in order to avoid customer dissatisfaction and market drift.

Force field analysis: the identification of factors that block movement toward a goal, i.e., restraining forces, and factors that support movement toward a goal or solution, i.e., driving forces.

Nominal group technique: a democratic technique for acquiring group ideas for the detection and correction of errors.

Affinity diagram: the collaborative arrangement of a large number of ideas into groups for review and analysis, to stimulate creative improvement.

Pareto principle: data analysis of the vital few and the useful many, which helps identify the biggest problems to solve.

2.6. EALIM's conceptual framework

The conflation of EALIM's four organizational theories, 10 principles and methods, form a coherent conceptual framework as illustrated in **Figure 1**. The framework's permeable boundary has two meanings: first, it symbolizes the removal of barriers to teamwork through collaboration and second, it represents the boundaryless connection and reciprocal flow of influence between an organization and its external environment. The dynamics between these two domains emerge from two types of feedback loops: negative (self-correcting) loops that balance change and positive (self-reinforcing) loops that amplify change. The bi-directional
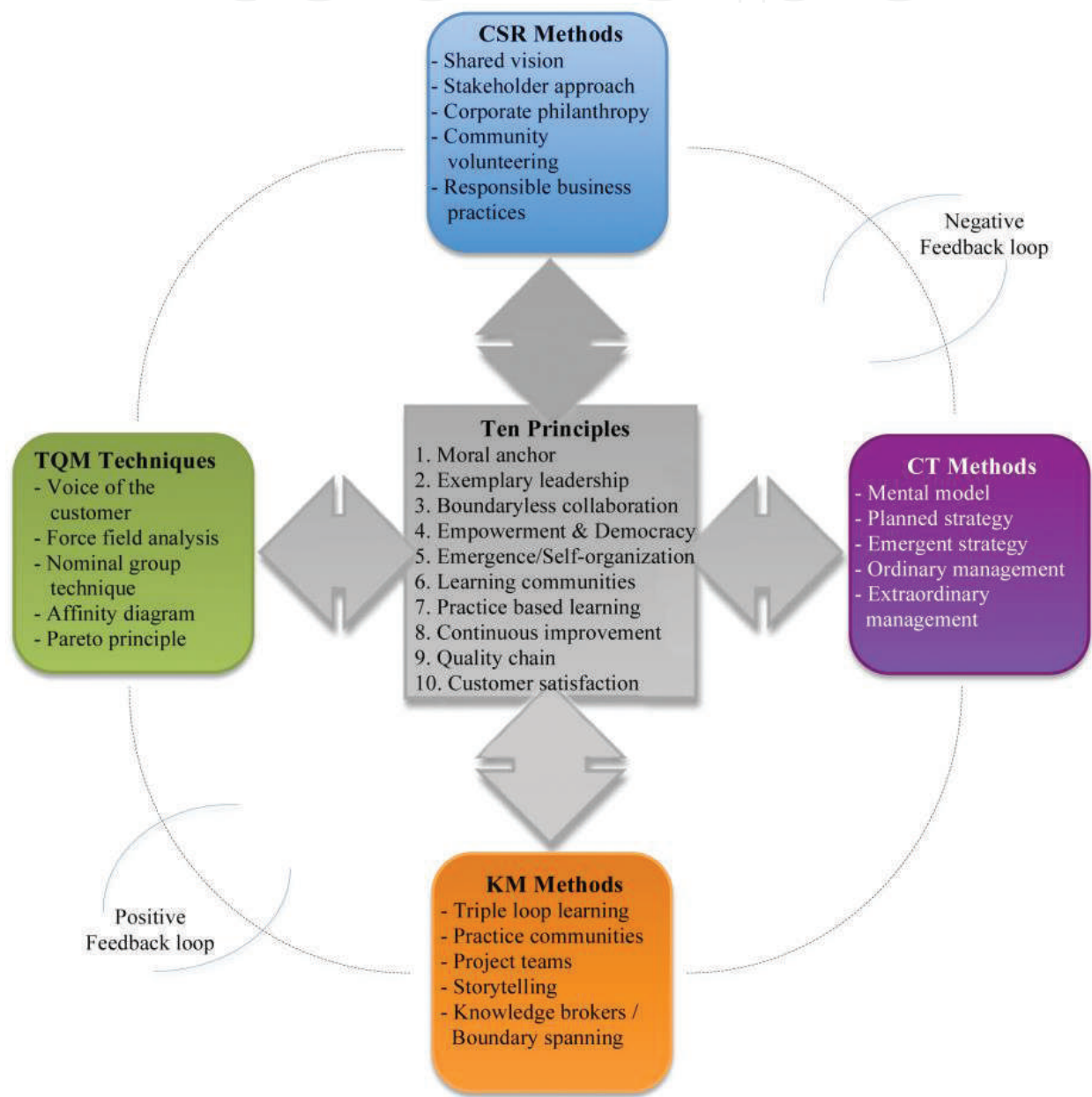
Figure 1. Conceptual framework of EALIM.

arrows between the 10 tenets and 4 theories connote how they shape and are shaped by each other, allowing the model to adapt reflexively.

2.7. Advantages of EALIM's conceptual framework for theory

Although authors have examined conceptual links between TQM and CSR, TQM and CT, and between TQM and KM, no other authors have fully integrated all four of these organizational theories into one coherent conceptual TQM framework. On this basis, EALIM can be regarded as a novel contribution to TQM theory. As previously discussed, integrating CSR, CT and KM with TQM present advantages that address TQM's theoretical limitations. **Table 3** presents a summary of these limitations and the elements of EALIM that hold advantage over them.

Conventional TQM	EALIM
Investment and consumer capitalism	Moral capitalism
Formal rationality	Substantive rationality
Utilitarian rationality	Kantian rationality
Executive vision	Shared vision
Technocratic ideology	Humane ideology
Single loop learning	Triple loop learning
Newtonian paradigm	Complexity paradigm
Codified and explicit knowledge sharing	Explicit and tacit knowledge sharing
External customer focus	Stakeholder focus

Table 3. Limitations of conventional TQM addressed by EALIM.

3. Implementation of EALIM

The target organization used to implement EALIM employed 270 people and provided care services to 74 patients. The fieldwork involved 91 participants spread across 10 hospitals and care homes. The structure within the organization consisted of top managers (executives), middle managers (hospital and care home managers), staff nurses, care workers and a multi-disciplinary clinical team. Participants were selected from different disciplines and hierarchical positions using non-probability sampling techniques (i.e., opportunistic, convenience and snowballing): techniques congruent with participatory research [34]. The broad selection of participants allowed insights into the divergent perceptions and experiences of organizational members, and to generate a broad in-depth analysis of organizational culture. In terms of participant's ethnicity, 46% were white British, 32% were black African, and the others were composed equally between Asian and black Caribbean. The largest age group was 22–29 (37%), while the 30–39 and 40–49 age groups made up 29 and 24%, respectively. The remaining participants fell into the 50 and above category.

Data were generated between July 2011 and January 2013 in three AR cycles. The first cycle involved gathering data for 4 months prior to the adoption of EALIM and was critical for developing a baseline assessment of the organization, as well as constructing a collaborative action plan with top management. In the second cycle, EALIM was implemented over a 12-month period and data were gathered with a focus on examining participants' acceptance and resistance to its interventions, along with its impact on organizational improvement, if any. In the third cycle, data were gathered over a final 3-month period and findings were evaluated against the baseline assessment from the first cycle. This allowed me to identify the overall impact EALIM had on organizational culture and improvement.

As previously stated, the methods used to gather data included depth interviews, participant observation and focus groups. Depth interviews were generally informal and involved open questions with a low degree of structure to allow participants the liberty to talk about what is important to them. A total of 45 participants were interviewed of differing rank, discipline, location, gender, age, ethnicity and length of service. Although my selection of interview participants was not a proportional reflection of the population, it nevertheless produced an illustrative profile that included a diversity of participants from management and non-management positions.

Participant observations involved prolonged periods of social interaction with the researched, and included board meetings, informal and formal discussions, luncheons, and EALIM seminars. The idea is to study participants' everyday experiences, thinking and actions, which may include talking to them about their feelings and interpretations. The total number of observational cases selected from fieldwork notes and transcripts amounted to 37 entries. The author's level of participation ranged from a total researcher—full observation without participation in the flow of events, to a total participant—completely involved in activities.

On the other hand, focus groups were used to collectively generate future action and gain insights into the divergent views of participants. A total of eight groups were held during EALIM's implementation, with an average of five participants in attendance in each group. While an interested volunteer group of snowball participants attended, top and middle managers were invited with the intention of forming a strong political alliance toward EALIM's adoption. In fact, many of the ideas for EALIM's adoption came from focus group participants, a feature that became a success factor for EALIM's implementation. Another success factor was the commitment of senior executives, of whom several consistently attended focus groups and actively implemented agreed action plans. This finding supports many other studies showing top management commitment is a key factor for TQM success. The following sub-headings setout the key research findings as a result of EALIM's implementation.

3.1. Increased moral perception of the organization

During EALIM's implementation, executives agreed to fund the construction of an orphanage in India and publicize the project to its employees. During interviews, when participants were asked about their views on the company's philanthropy in India, most middle managers and frontline staff implied the India project had increased employees' moral perception of their employer. Their responses include "People need to know the company is not just about shareholder wealth," "They are doing a good job helping the ones in need … it changed my

perspective of [the organization]," "Giving back to society is such an important aspect of the company," and "The company is not profit orientated and willing to give back." These responses suggest that because employees identified their employer's philanthropy as a moral ideal, they perceived their employer to be moral. This organizational perception is a significant improvement from that identified in the first cycle, when employees held the view that the company valued profit more than staff.

3.2. Increased organizational commitment

Corporate philanthropy under EALIM had generated greater organizational commitment among employees. For example, during an interview one middle manager claimed, "One staff was moaning about her wages, but after realising what the company was doing in India, she wanted to volunteer her pay rise to help projects like this." This middle manager's claim was consistent with comments from most frontline staff, particularly care workers. For instance, when care workers were asked what they thought of the India project, their responses include "It changed me. Nothing will make me leave … I appreciate the work this company does," "It made me feel good and inspired me to work more so they can support the countries outside" and "It drew me to the company." Compared with the low care worker commitment found in cycle one, these responses indicated an increase in organizational commitment and that corporate philanthropy inspired motivations to act toward the good of the organization.

3.3. Emergence of a learning culture

Under EALIM, an initiative called microteaching was introduced to promote the principle of practice-based learning. Spawned from a focus group participant, this initiative involved clinicians' role modeling, observing, and providing feedback to employees during their shifts. Instead of relying on classroom training courses, this initiative focused on increasing the knowledge of staff in practice through a question and answer approach during the shift.

Participant responses indicated that a learning culture had emerged as a result of microteaching. Interview responses from top and middle managers that support this finding include "There is a lot more emphasis on learning," "The culture allows for people to learn from their own desire and effort," and "There's now a theme of learning in the organization." The perception of a learning culture was shared by focus group participants, who gave insights as to why they thought a learning culture had emerged. These include "Learning in the organisation has increased because we are microteaching on the unit and staff make a proactive effort to develop their knowledge … it's certainly changed the culture," "Staff are asking more detailed questions," and "What I've observed is staff get to see the people that deliver the training around the units and ask them questions about this or that during the shift." These responses suggest an increased commitment to learn was stimulated by meaningful interaction between educators and employees, who found practice-based learning more relevant to their learning needs than classroom training courses.

Interview responses from care workers appeared to support the views of focus group participants. These include "Microteaching is helpful…they [trainers] show us how to do the MDT notes and complete incident reports," "Trainers show us how to look after clients" and "Local

training is more specific to clients." These responses indicated the use of practice-based training had created greater tacit knowledge among employees.

3.4. Improved patient self-advocacy

During a focus group at the start of EALIM's implementation, participants were asked to share ideas on how EALIM's principles could be adopted in the organization. An idea shared by the chief operating officer (COO), was to launch the use of community groups. He described them as 20-min daily morning meetings that could take place in the main communal area of hospitals and care homes, so local patients and staff could collectively discuss ideas and agree "what's going to happen for the day." He stated that community groups could "…bring the important decision-making of the unit to staff and patients, rather than the typical hierarchy of management." His idea resonated with EALIM principles of empowerment and democracy, emergence and self-organization, as well as learning communities and team working. The following month, the COO reported that community groups were implemented.

Three months later, the use of community groups was reviewed during a focus group. In that discussion, a director described being "really surprised" after he attended a community group the previous day, where he observed a patient who instead of "normally sitting in the background without saying much," was "quite assertive about what she wanted to do." A care worker who attended the focus group also added, "This morning one of the patients chaired the community meeting…you can really see it's boosting her esteem really. It was just nice that she could sort of have the conversation with her fellow service users and speak to them, because usually she's quite intimidating to the others and for her to be able to talk to them reasonably rather than shouting was really encouraging." According to these empirical accounts, patients' participation in community groups enabled greater confidence in their self-advocacy and more meaningful interaction with others.

3.5. Improved patient independence

Interview responses also indicated an increase in patient independence. One middle manager claimed, "Before EALIM was introduced, we were making the decisions and the focus was on nursing, instead of creating independence. What we now do is let people [patients] do things for themselves." Her claim was consistent with responses from several care workers, such as "…before, we had a different approach. It was like our job was to babysit clients as opposed to now, where it's more therapeutic," "Staff are working more to help patients as opposed to keeping them" and "The care approach has changed from care-taking patients, to helping them become independent." These kinds of responses support the finding that EALIM's adoption contributed to an improvement in patient independence.

Several participants also implied community groups played a role in improving patient independence. Two care workers remarked, "In community meetings, we'll ask clients what they need" and "Community meetings involve patients in making decisions," while one middle manager claimed, "We do community meetings daily. The difference it's making is patients are more involved in making choices and planning their activities."

3.6. Poor leadership was a barrier to consistent service quality

Although there had been organizational improvements during EALIM's adoption, several top managers stated that there were inconsistencies in service quality because of poor leadership. For example, one top manager stated, "There are inconsistencies across the units because of the way managers lead, especially at [hospital X]. When I'm on call, the majority of calls are from there." This view was supported by another top manager who stated, "EALIM has been welcomed by everyone but it hasn't been successfully implemented at [hospital X]."

Interview responses from care workers at hospital X supported the view from top managers. When care workers were asked to describe their experience of the way their manager leads, their responses include, there are problems here, clients are ignored and people don't feel safe. If a person pulls the alarm it could take five minutes for somebody to come…when I first joined [two months ago] I was told I would meet with the manager every month, but that hasn't happened, and "I feel there is no leadership here, someone needs to say 'this is what's going to happen'." These accounts suggest the manager's lack of clear leadership and visible commitment was detrimental to the wellbeing of patients and staff.

4. Conclusion

The development of EALIM presents an evolutionary step in TQM theory. While it possesses theoretical features congruent with TQM, it goes beyond its paradigmatic boundaries by adopting divergent organizational perspectives. Rather than build a new model by comparatively analyzing extant TQM frameworks, the eclectic model building approach used here proved useful in two ways. First, it provides different organizational perspectives without annulling each other, achieved by identifying distinct viewpoints from each theory while highlighting their interrelatedness with TQM. Second, the interplay between these organizational theories offers different perspectives that enable a broader understanding of organizational processes, since any one theory only offers a restricted view of a complex phenomenon.

The synthesis of EALIM's four organizational theories makes explicit links between theoretical constructs that are excluded from other TQM models. As such, EALIM's development is a move toward a more complete gestalt of quality improvement theory. In addition to making a theoretical contribution to TQM, this model holds the prospect of increased success toward organizational improvement, since it is better suited to a postmodern organizational milieu. Although other QI models include CSR principles (e.g., EFQM, Baldrige) within their frameworks, EALIM's integration of a Kantian ethic presents a step further, in that it forms a novel moral anchor that binds organizational members to altruistic decision-making and behavior. Not only does this moral anchor connect stakeholders to a social ideal judged as intrinsically good, but also forms the basis for promoting a moral kind of capitalism, epitomizing the next stage in the evolution of quality.

Research findings from EALIM's implementation reveal its capability to achieve organizational transformation, evidenced by the development of a moral organizational perception, increased organizational commitment, and the emergence of a learning culture. Various authors agree that learning organizations hold advantages, which include increased innovation, sustainability and competitiveness [35, 36]. A prerequisite for promoting a learning culture was the adoption of practice-based learning, which holds greater potential for human development than codified and explicit knowledge sharing. Practice-based learning also had a positive impact on employee commitment to learn, a finding noticeably absent from the TQM literature, perhaps because TQM theorists do not commonly advocate practice-based learning.

The finding that EALIM's adoption improved patient self-advocacy is also novel since a search of the literature yielded no evidence of this from any quality improvement initiative. This finding is particularly important for patients with a learning disability or mental illness because they typically lack opportunities to contribute to their own lives and shape the service they receive. From this perspective, this finding demonstrates an essential element of research quality: namely, "quality as engaging in significant work [37]."

Improved self-advocacy and independence among patients show a direct improvement in patient care. Since most TQM healthcare studies do not indicate a direct improvement to patient care, this study demonstrates an original contribution to TQM practice. Despite these improvements, inconsistencies existed in local services due to poor local leadership. However, some inconsistencies among local services are to be expected, especially since services are prone to variability because of their heterogeneous nature [38]. On this basis, the commitment of all internal stakeholders would be required to achieve sustainable service quality.

4.1. Limitations and implications for future research

A limitation of this study is that its findings should not be generalized across all healthcare sectors, as each environment is bound by its own contextual factors. Nonetheless, in contexts where there is wide commitment to EALIM's principles, the results of this study could be replicated. Researchers may wish to take this study further by examining EALIM's applicability in contexts outside of healthcare, especially where ethics are at the fore (e.g., financial services). Alternatively, others may wish to use this research to explore various themes, such as the adoption of complexity perspectives in management, or the use of practice-based learning. Furthermore, EALIM could be of particular interest to managers working in environments with a high degree of disequilibrium (e.g., capital markets) or innovation (e.g., technology industries), because its CT and KM methods promote emergence in the face of instability, and knowledge creation in highly competitive markets.

As a final point, decision makers wishing to adopt EALIM should be aware of what it is they are committing to and what barriers they may encounter. To avoid inconsistency between the message and practice of EALIM, top managers are recommended to not only espouse EALIM's principles, but also particularize them in their everyday work with others: thus providing a personal exemplar of action. As William Shakespeare wrote in Coriolanus, "Action is eloquence, and the eyes of the ignorant more learned than the ears [39]."

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