

Title: Total Quality Management in Healthcare: The Importance of Learning and Knowledge Sharing to Support Implementation.

Abstract

Implementation of Total Quality Management (TQM) in healthcare has been affected by several shortcomings. Among these is the inadequacy of learning and knowledge sharing methods adopted to support TQM implementation. However, this aspect has been widely ignored in healthcare and the aim of this study is to explore how learning and knowledge sharing policies influence TQM initiatives in this sector.

To achieve this, an extended TQM model called “Ethical, Adaptive, Learning, and Improvement Model (EALIM)” was developed and implemented in a private healthcare organisation in the United Kingdom. Using action research, data was collected from 91 participants over a 21-month period from qualitative interviews, focus groups, and participant observations.

Findings include increased employee competence through practice-based training, reflecting the importance of tacit knowledge sharing. The prevalent blame culture changed to a learning culture through an appreciative management style that focused on what is done right. In addition, patients’ satisfaction and quality of care improved through community groups that were set up to address quality problems and patients’ needs.

The findings indicate that adequate knowledge sharing methods play an important role in improving quality in healthcare. Greater consideration should therefore be given to this widely ignored aspect when implementing TQM in healthcare.

1. Introduction

Delivering high quality care which improves health outcomes and patients' satisfaction is a key objective of modern health organisations worldwide. Although many quality improvement (QI) models have been adopted to achieve these objectives, "Total Quality Management (TQM)" is the most frequently implemented QI model in healthcare (Maritz et al. 2018). TQM originated in the 1950s and was initially applied to manufacturing. Its success in improving quality and financial performance of organisations attracted interest from the service sector including healthcare (Mosadeghrad 2014). Key principles of TQM include top management support, customer focus, continuous improvement, employee education and participation, along with statistical reporting (Powell et al 2009a).

TQM implementation in healthcare yielded mixed results and a significant number of organisations failed to achieve the expected positive outcomes (Powell et al 2009b; Gomes et al. 2010). Several factors have been blamed for TQM failure (Table 1) including lack of top management support, difficult adaptability to change, lack of employees' motivation and interest to TQM, and poor learning and knowledge sharing processes (Talib et al. 2011a; Mosadeghrad 2014).

Effective learning and knowledge sharing are key for successful TQM implementation. TQM brings significant changes to the way organisations operate and execute activities, which requires training of the workforce on quality, its standards, and the methods to achieve these (Mosadeghrad 2013a). Improving quality in a rapidly changing environment needs creativity and innovation, which is contingent upon effective knowledge development, sharing, and transfer. Furthermore, continuous improvement, a TQM pillar, depends on a workforce with multidisciplinary knowledge (Jackson 2005).

Despite this importance, many organisations failed to design adequate learning and knowledge sharing processes to support TQM implementation. Lack of learning culture, failure to apply learning to practice, absence of reflection, codified knowledge sharing methods ignoring “tacit” knowledge, and training methods focusing on means-end relationships preventing innovative thinking have all been cited as factors preventing TQM success (Beer 2003; Hsu and Shen 2005; Talib et al. 2011a; Mosadeghrad 2014).

These shortcomings are more problematic in healthcare as the “product” is intangible and its quality depends heavily on staff education, training, and abilities (Mosadeghrad 2013b). Healthcare delivery requires collaboration between different groups (clinicians, managers, administrators,...), hence the importance of cross-disciplinary knowledge sharing. Patients’ satisfaction, a key indicator of healthcare quality, requires better understanding of patients’ needs and preferences adding to the scope of learning and knowledge exchange beyond what is required for medical treatment (Mosadeghrad 2013b)

Although there is recognition that effective learning and knowledge sharing practices are key for TQM success in healthcare, their implementation is far from trivial (Hitch et al, 2019). The process is affected by many factors including organisational culture, employees’ commitment and motivation, management style and leadership, bureaucracy, resources availability, and professional “pride” (Hsu and Shen 2005; Mosadeghrad 2014). Against this background, it is surprising that research in healthcare quality has given little attention to the important learning and knowledge sharing aspects. The aim of this paper is to address this gap and explore how to implement learning and knowledge sharing processes to support TQM programs in healthcare organisations, which factors influence implementation, and the resulting impact on healthcare quality.

2. Methods

To investigate the above research aim, a new quality improvement (QI) model called “Ethical, Adaptive, Learning, and Improvement Model (EALIM)” (Figure 1) was developed. EALIM addresses some TQM implementation shortcomings by integrating other management theories (Mosadeghrad 2013a), namely Corporate Social Responsibility (CSR), Complexity Theory (CT), and Knowledge Management (KM). Each of these management theories has a set of corresponding principles, which overlap and complement those of TQM. The integration of these principles provides EALIM tenets (Table 2), which include moral capitalism, servant leadership, collaboration, empowerment, practice-based learning, continuous improvement, and customer satisfaction (Sideras, 2017). Similarly, some of these theories’ methods, relevant to overcome TQM implementation barriers, have been included in EALIM. Their descriptions are presented in Tables 3, 4, and 5 for CSR, CT, and KM respectively.

Knowledge Management theory and methods, which represent the “learning” element of EALIM, overlap with TQM on aspects such as people-based management, collaboration, and teamwork (Hsu and Shen 2005). In addition, the KM principle of “getting the right knowledge to the right people at the right time” (Honarpour and Jusoh 2012) supports the healthcare quality principle of “doing the right things right” (Ribière and Khorramshahgol 2004). By incorporating implicit knowledge gained through contextual, informal, and practice-based learning, KM addresses the TQM limitation of recognising only explicit knowledge collected and disseminated through formal processes (Talib et al. 2011a,b).

2.1 Methodology

EALIM was implemented and evaluated in a healthcare organisation through Action Research (AR). AR is adequate because EALIM is a complex change affecting many interrelated organisational aspects (Dalmas and Azzopardi 2018). In line with quality improvement

principles, AR enables researchers to act as inside agents challenging current practices to achieve desired change (Coghlan and Brannick 2010). AR also adopts a participatory approach towards learning where participants can take responsibility for improving their own practice (McNiff and Whitehead 2011).

The research context is a private care organisation in the United Kingdom (UK) offering specialist residential and hospital care services to vulnerable adults with learning disabilities and mental disorders. The organisation has 270 employees and 74 beds in seven hospitals and three residential homes.

The AR involved three cycles: (i) EALIM pre-implementation (5 months) to establish a baseline for evaluation; (ii) EALIM implementation (12 months) introducing it in the organisation; and (iii) EALIM post-implementation (4 months) where its impact was evaluated. Data was collected from 91 participants through different qualitative methods. These included 60 interviews, 8 focus groups, and 37 participant observations (Table 6), with one of the authors having the role of participant, researcher, or both in many instances of data collection. The combination of many data collection methods from different locations at different times gives findings more credibility and validity (Bryman and Bell 2011).

Participants were selected from different disciplines and positions through non-probabilistic sampling methods, which included a purposive group deemed essential to the aims of the research and a snowball group of volunteers who expressed interest in EALIM's adoption. All the groups in the organisation were represented in the sample to avoid resistance to change caused by AR to organisational norms and power structures (Coghlan and Brannick 2010). These groups included 10 top managers, 8 middle managers, 4 administrators, 17 clinical professionals (13 nurses, 3 therapists, 1 psychologist), and 52 care workers. The data collection process covered themes reflecting EALIM such as the perceptive value of the

organisation, power relations, motivation, ethics, adaptability, learning, and improvement.

Ethical approval was obtained before the data collection process started.

3. Results

The data was analysed through a multitude of methods, namely Critical Discourse Analysis to explore how language is used as an instrument of power and dominance, Psychoanalysis to explore the motivations and emotional experiences of staff, and Template Analysis (TA). A reflexive diary was kept by the AR author to help with the analysis of the data and avoid bias. A number of concepts were identified through this analysis, but given the aim of this paper, the results description is restricted to the “Learning” concept. This is organised in line with the three AR cycles:

1. EALIM Pre-implementation: Results indicate that organisational learning strategies are based on codified and explicit knowledge sharing involving employees reading policies and procedures and attending centralised training programmes. This was based on top managers’ view that the organisation is a hierarchy where processes are initiated from the top and followed by everyone in the organisation. However, staff commented that this was counter-productive especially given the amount of information to be “learnt” was significant (the organisation had 225 policy documents, each 30 to 40 pages). They complained also about bureaucracy in the organisation, which discouraged experimentation and innovation.

Middle managers concurred, stating they would prefer decentralised practice-based learning involving direct interaction between managers and staff in their workplace, as this would empower staff, and encourage innovation and creativity. However, nurses opposed this and refused the idea of knowledge sharing, perceiving this as a threat to their status in the organisation. Most employees adopted single loop learning with no reflection on their work

procedures and methods, with no self-questioning as to whether alternative quality improvement methods should be considered.

During this stage, a regulatory inspection took place in the organisation resulting in a negative report on patients' quality of care. The report highlighted the limited knowledge staff had on patients' treatment and safeguarding procedures, exposing the inadequacy of organisational learning and knowledge sharing policies. Top management was shocked about the findings of the inspection report, and some members commented that the implementation of EALIM learning methods should become a priority.

2. EALIM Implementation: Implementation was initially hindered by top managers who insisted EALIM should be implemented through written hand-outs – typical codified knowledge sharing methods. But after reviewing the recent inspection report, top managers agreed that diverse knowledge sharing methods should be used such as group discussions, direct conversations with staff, and short monthly briefings (Table 6).

EALIM implementation yielded several changes. Training became more practice-based and localised to each site through microteaching during shifts. This new training strategy was supported by a significant reduction in policies and procedures, signalling a move towards less codified knowledge sharing. The direct engagement of managers and clinical professionals in training was positively received by staff who stated these methods improved their understanding of job requirements and patients' quality of care.

To address organisational bureaucracy, a Quaker space was created, offering a safe environment for staff to express their ideas. The space promoted learning by moving staff from dependence to autonomy, as they were able to express ideas and recognise their mistakes without fear of blame or criticism.

Local community groups consisting of clinical and non-clinical staff were set up in each site to encourage cross learning, sharing of best practice, and solving quality problems. This was driven by top managers' recognition that redressing quality problems requires the collaboration of staff across the organisation. Patients also participated to help determine the services offered to them, an approach that led to significant improvement in their satisfaction with treatments and therapies. However, nurses resisted, claiming their allegiance was towards their profession, not to the organisation.

Reflexivity through double and triple loop learning resonated with middle and top managers. Although this was new to them, many began questioning the ways they were doing "things" and reflecting on the principles guiding their actions. This approach was a significant departure from single loop learning, which was dominant during EALIM pre-implementation. Managers' participation in community groups exposed them to ideas from staff across the organisation, leading them to delegate authority to lower levels, allowing decentralised decision-making in line with EALIM principles.

3. EALIM Post-implementation: Training and knowledge sharing strategies changed considerably following EALIM implementation creating a new learning culture in the organisation. Driven by practice-based learning, participation in training activities increased significantly, being seen by staff as more adequate to their needs. The on-site direct interaction with trainers motivated staff to overcome learning barriers and enquire about the best methods to improve patients' care quality. This impacted positively on staff knowledge and competence, and managers reported they were more aware of job requirements and provided better care for patients.

The blame culture that was widespread prior to EALIM implementation had also changed. This change created an environment where staff became confident in learning from mistakes to

improve care quality. Managers involved in practice-based training shifted their approach from focusing on what staff did wrongly, to praising them on what they did rightly and helping them to correct mistakes. This was part of the new “appreciative” management style that was adopted in the organisation following EALIM implementation.

Community groups were recognised as a positive EALIM outcome. Although not taken seriously at first, they quickly became successful once staff began participating in them and putting ideas into practice. The groups provided a space to experiment with new ideas, fostering organisational innovation. Patients’ participation added to the success of these groups, as their involvement increased their independence and shaped the care they received.

However, EALIM implementation was affected by nurses’, who refused to share knowledge, contribute to training, and participate in community groups. Their perception of reduced power and threat to their standing in the organisation should they adopt EALIM learning, principles was not altered. Furthermore, nursing staff continued blaming care workers for mistakes, and were resilient to management changes even after EALIM’s implementation.

4. Discussion

Although TQM is the dominant QI model in healthcare, its implementation has been affected by many barriers. Among these is the learning and knowledge management processes characterised by codified knowledge sharing ignoring tacit knowledge, absence of reflexive learning, and lack of learning culture (Mosadeghrad 2014). This research explored these issues, which have been surprisingly ignored given their importance in healthcare. This was done through integrating KM and TQM principles as part of a new QI model (EALIM) and implementing it in an organisation to evaluate its impact. While KM has affinity with TQM in the way information is processed with applied knowledge, it differs in the sense of being more reliant on tacit knowledge sharing through experience and practice, as opposed to TQM’s

mechanistic and codified approaches, which can become barriers to learning (Ribière and Khorramshahgol 2004).

This study revealed that most TQM implementation barriers regarding knowledge sharing and learning were prevalent in the organisation. This is in line with what has been reported in the literature regarding the lack of awareness of the importance of KM principles to support TQM initiatives in different contexts including healthcare (Mosadeghrad 2013a; Talib et al 2011a,b). Consequently, healthcare organisations need to start recognising the importance of knowledge as an asset, adopt KM principles and methods, and design knowledge sharing and training activities according to these principles if TQM implementation is to be successful (Loke et al 2012).

Top management team behaviour and attitude have been instrumental in the successful adoption of EALIM learning and knowledge sharing methods. Initially, the team rejected these methods claiming that the industry is heavily regulated, which require centralised training and codified knowledge sharing. The subsequent implementation of EALIM methods was only possible once the team members changed their perception, accepted EALIM as a framework for quality improvement, initiated the organisational changes to enable its implementation, and created the environment where its knowledge sharing principles and methods were put in place. This provides evidence that successful integration of KM methods to support TQM programs is contingent upon top management support and active involvement (Talib et al 2011b; Ribièrè and Khorramshahgol 2004).

The results of EALIM implementation show that KM based methods such as practice-based training and community groups can improve staff learning, engagement, innovation, collaboration, empowerment, and job satisfaction, leading to better care quality (Table 7). Consequently, health policy makers should not just recognise the importance of learning and

training activities as enablers for TQM implementation, but design these activities to enhance staff knowledge, skills, creativity, and, consequently, the quality of care they provide to patients (Sideras 2015)

TQM in healthcare models emphasize the importance of focusing on patients (customers) and their satisfaction with care. However, patients are assumed to be passive receivers of the care (Galazka, 2019; Mosadeghrad 2013a; Talib et al 2011b). This research provides evidence that patients should be considered as a key stakeholder for successful TQM implementation. Participation of patients in community groups, an example of an organisational structure to achieve this, proved successful in enhancing patients' satisfaction and quality of care (Sideras 2015).

Findings also highlight the importance of participation from middle managers to achieve successful TQM initiatives. Their involvement in practice-based learning, knowledge sharing, community groups, reducing blame, and empowering staff contributed significantly to EALIM success. This confirms previous research findings that middle managers commitment is key for successful TQM implementation in healthcare. However, it is in contrast with what has been reported that middle managers in healthcare contexts tend to be either indifferent or do not consider TQM as a priority (Mosadeghrad 2014)

Conflicting cultures between different groups negatively affects learning and knowledge sharing, and consequently TQM success. Strong evidence of this emerged during this research between top and middle managers. While top managers leaned toward codified knowledge sharing and centralised formal learning, middle managers had a more progressive view, evidenced by their strong involvement in practice-based knowledge sharing, which empowered staff and fostered innovation. This finding underscores the importance of KM knowledge

sharing initiatives in TQM implementation, which could be a possible “missing piece of the quality puzzle” (Ribiere and Khorramshahgol 2004).

More evidence of conflict emerged from nurses who vehemently opposed knowledge sharing. This supports previous research regarding the importance of harmonising different sub-cultures for successful TQM in healthcare (Wakefield et al. 2001). Nurses’ resistance to participate in practice-based training and community groups betrayed a fear of losing power, and the tribal belief that their commitment is towards their profession, not the organisation (Rassin 2008). This is in line with studies, which identified clinicians’ lack of interest in, and conflict with TQM principles (Table 8) as a major reason for its implementation failure in healthcare (Short and Rahim 1998; Piligrimiene and Buciniene 2008) providing an additional argument for the need to address the cultural issues aforementioned.

5. Conclusion

This research explored the learning and knowledge sharing aspects of TQM implementation as these have been widely ignored in the literature. The integration of KM with TQM has been advocated by some researchers (Mosadeghrad 2013a, Talib et al 2011b) to overcome some TQM limitations. This integration was achieved in the development of a new QI model called EALIM, which was implemented in a healthcare organisation. Findings showed significant improvements in organisational culture and patients’ quality of care. This research constitutes a template on how TQM could evolve in the future, beyond its original methods and by bringing other management theories and principles, to enable successful design and implementation of QI initiatives in healthcare. However, it is recommended to closely involve healthcare professionals in the design and implementation of TQM strategies from the early stages to avoid resistance to TQM success. It is also important that stakeholders are patient and resilient

as positive returns and performance improvement from TQM programs tend to materialise in medium and long terms.

References

- Beer M. 2003. Why Total Quality Management programs do not persist: the role of management quality and implications for leading a TQM transformation. *Dec Sci.* 34: 623-642.
- Bryman A, Bell E. 2011. *Business research methods*. Oxford: Oxford University Press.
- Coghlan D, Brannick T. 2010. *Doing action research in your own organization*. London: Sage Publications.
- Dalmas M, Azzopardi JG. 2018. Learning from experience in a National Healthcare System: organizational dynamics that enable or inhibit change processes. *Int J Qual Health Care.* <https://doi.org/10.1093/intqhc/mzy204>.
- Fotopoulos C B and Psomas, EL. 2009. The impact of “soft” and “hard” TQM elements on quality management results. *Intl J Qual & Reliab Mgt.* 26: 150–163.
- Galazka AM. 2019. Beyond patient empowerment: clinician-patient advocacy partnerships in wound healing. *Brit J Healthcare Manage.* 25: [Internet]. Available from <https://www-magonlinelibrary-com.iclibezp1.cc.ic.ac.uk/doi/full/10.12968/bjhc.2019.0030>
- Gomes CF, Yasin MM, Yasin F. 2010. Assessing operational effectiveness in healthcare organizations: a systematic approach. *Int J Health Care Qual Assur.* 23: 127-140.
- Hitch D, Pepin G, Lhuede K, Rowan S, Giles S. 2019. Development of the Translating Allied Health Knowledge (TAHK) Framework. *Int J Health Poly Mgt.* 8: 412-423.
- Honarpour A, Jusoh A, Nor KM. 2012. Knowledge Management, Total Quality Management, and Innovation: a new look. *J Tech Mgt & Inv.* 7: 22-31.
- Hsu SH, Shen HP. 2005. Knowledge management and its relationship to TQM. *TQM & Bus Excl.* 16: 351-361.
- Jackson S. 2001. Successfully implementing total quality management tools within healthcare: What are the key actions? *Int J Health Care Qual Assur.* 14: 157-163.

- Loke SP, Downe AG, Sambasivan M, Khalid K. 2012. A structural approach to integrating Total Quality Management and Knowledge Management with supply chain learning. *J Bus Eco & Man.* 13: 776-800.
- McNiff J, Whitehead J. 2011. All you need to know about action research. London: Sage Publications.
- Mosadeghrad AM. 2013a. Obstacles to TQM success in health care systems. *Int J Health Care Qual Assur.* 26: 147-173.
- Mosadeghrad AM. 2013b. Healthcare service quality: towards a broad definition. ? *Int J Health Care Qual Assur.* 26: 203-219.
- Mosadeghrad AM. 2014. Why TQM programmes fail? a pathology approach". *The TQM Journal.* 26: 160–187.
- Piligrimiene Z, Buciniene I. 2008. Different perspectives on healthcare quality: Is the consensus possible? *Eng Econ.* 25: 104-109.
- Powell A, Rushmer R, Davies H. 2009a. Effective quality improvement: TQM and CQI approaches. *Brit J Healthcare Manage.* 15: 114-120.
- Powell A, Rushmer R, Davies H. 2009b. Effective quality improvement: Recognising the challenges. *Brit J Healthcare Manage.* 15: 17-21.
- Rahman S. 2004. The future of TQM is past. Can TQM be resurrected? *TQM & Bus Excl.* 15: 411-422.
- Rassin M. 2008. Nurses' Professional and Personal Values. *Nurs Eth.* 15: 614–630.
- Ribière VM, Khorramshahgol R. 2004. Integrating total quality management and knowledge management. *J Mgt System.* 16:39-54.
- Short P, Rahim M. 1995. Total quality management in hospitals. *Tot Qual Mgt.* 6: 255–263.
- Sideras JD. 2015. Trans-disciplinary community groups: an initiative for improving healthcare. *Int J Health Care Qual Assur.* 29: 75-88.

Sideras JD. 2017. TQM is alive but not as we know it: The use of a novel TQM model in a private healthcare company. [Internet] In Quality Management Systems. A selective presentation of case studies showcasing its evolution. London. Intechopen. [cited 15 April 2019]. Available from <https://www.intechopen.com/books/quality-management-systems-a-selective-presentation-of-case-studies-showcasing-its-evolution/tqm-is-alive-but-not-as-we-know-it-the-use-of-a-novel-tqm-model-in-a-private-healthcare-company>

Talib F, Rahman Z, Qureshi MN. 2011a. Analysis of interaction among the barriers to total quality management implementation using interpretive structural modeling approach. *Benchmarking: An Int J.* 18: 563-587.

Talib F, Rahman Z, Azam M. 2011b. Best practices of Total Quality Management implementation in healthcare settings. *Hlth Mark Quar.* 28: 232-252.

Wakefield BJ, Blegen MA, Uden Holman T, Vaughn T, Chrischilles E, Wakefield DS. 2001. Organizational culture, continuous quality improvement, and medication administration error reporting. *Amr J Med Qual.* 16: 128-134.

Table 1: Barriers to TQM implementation in healthcare

<p>Lack of top management commitment and ethics</p> <p>TQM message is incongruous with the behaviour of management. Conflict between the espoused message of TQM and its practice. Lack of visible participation by top management.</p> <p>(Beer 2003; Mosadeghrad, 2014)</p>
<p>Limited stakeholder approach from top managers</p> <p>Emphasis on customers and suppliers at the expense of other stakeholders. Managers fail to recognise their organisational responsibilities to society. Insufficient employee participation.</p> <p>(Beer 2003; Talib et al.2011 a)</p>
<p>Lack of adaptability to change and unintended outcomes</p> <p>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.</p> <p>(Mosadeghrad, 2014; Rahman, 2004)</p>
<p>Too much emphasis on hard TQM factors</p> <p>Too much focus on the technical and analytical aspects of TQM. Statistical process control (SPC) is inadequate for evaluating attributes like attitudes and motivation, warmth, care, etc.</p> <p>(Fotopoulos and Psomas, 2009)</p>
<p>Disregard for contextual factors</p> <p>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 organisational context.</p> <p>(Mosadeghrad 2014; Rahman 2004)</p>
<p>Middle management resistance</p> <p>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.</p> <p>(Beer 2003; Mosadeghrad, 2014; Talib et al. 2011 a,b)</p>
<p>Inadequate learning</p> <p>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.</p> <p>(Beer 2003; Mosadeghrad, 2014; Talib et al. 2011 a,b)</p>

Table 2: EALIM Principles and Tenets

Principle/Tenet	Description
Moral anchor	Ethical values that ground the requirement of healthcare practitioners to be patient-centred, as well as guide decision-making and behaviour
Exemplary leadership	Servant leadership that role models service and trust
Boundaryless collaboration	Removing boundaries both internally and externally
Empowerment and democracy	Devolving power, removing conflicts and finding democratic ways of working
Emergence and self-organisation	Allowing patterns of social order and organising to evolve through local human interaction
Learning communities and team working	Sharing existing explicit and tacit (relational and collective) knowledge, as well as creating new knowledge to produce innovation
Practice-based learning	Learning derived in and through practice, allowing organisational members to develop and share somatic tacit knowledge
Continuous improvement	Applying kaizen steps and break through improvements to support the delivery of quality care
Quality chain	Customer-supplier concept
Customer satisfaction	Satisfying the needs of internal and external customers

Table 3: EALIM Corporate Social Responsibility Methods.

Method	Description and Explanation
Corporate credo	Publication of company ideals and ethics that connect stakeholders to values judged as intrinsically good, which could generate inspiration and motivation.
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 realise the impact of their personal work beyond the organisation's primary task.
Stakeholder approach	Crossing boundaries between internal and external stakeholders through collaboration in order to create mutual trust and wide organisational support.
Corporate philanthropy	Discretionary cash contributions direct to charities and social causes, which can be a source of significant support to community projects and enhance peoples quality of life.
Corporate social marketing	Promotion of behaviour change campaigns that can improve public health and safety.
Community volunteering	Employees volunteering their time and talents toward social causes, in order to enable integration with community organisations and to effect positive change in the world.
Socially responsible business practices	Business practices that support human and ecological sustainability, in order to protect the wellbeing of employees and the environment.

Table 4: EALIM Complexity Theory Methods.

Method	Description and Explanation
Complexity mental model	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.
Emergent strategy	Spontaneous strategies that allow the organisation to adapt to uncertainty and engage in revolutionary change.
Ordinary management	Rational, formal and analytical management methods that enable single loop learning.
Extraordinary management	Creative, informal and intuitive management methods that allow double loop learning.

Table 5: EALIM Knowledge Management methods.

Method	Description
Triple Loop Learning	Single, double, and triple loop learning that allows individuals and groups to engage in: -improvement by learning new ways of doing, -Reflection, by learning new ways of thinking, Transformation, by learning new ways of learning.
Communities of practice	Practitioner based (homogenous) groups for mutual support, knowledge sharing, and learning of best practice
Project teams	Intra-disciplinary (heterogeneous) teams for specific projects, problem solving, knowledge creation, and building innovation
Story-telling and narratives	The use of story-telling and narratives among organisational members for the purpose of creating identity, deep meaning, and tacit knowledge sharing
Knowledge brokers/boundary spanning	Organisational members who act as sources and facilitators of knowledge, due to their interaction with different communities of knowledge and discipline

Table 6: List of Action Research activities during the 3 EALIM cycles

AR Activity	Cycle 1: Pre-Implementation	Cycle 2: Implementation	Cycle 3: Post-Implementation
Board Meetings	2	2	0
Qualitative Interviews	26	0	34
Informal Discussions	3	4	0
Formal Discussions	3	4	0
Focus Groups	1	6	1
Evaluation Meetings	0	3	1
EALIM Seminars	2	4	0
EALIM Mini Seminars	0	7	0
EALIM Articles	0	9	1

Table 7: Key Changes in learning and knowledge sharing due to EALIM implementation

Pre-Implementation of EALIM	Post-Implementation of EALIM
No learning culture	Emergence of a learning culture
Rigid hierarchical management style deciding about training needs and delivery methods	Delegation of power to middle management and clinical professionals to make decisions regarding training needs and delivery methods.
Considerable number of policy/procedure documents	Limited number of policy/procedure documents
Centralised Training	Decentralised on-site training
Codified knowledge sharing	Tacit knowledge sharing
Classroom based training	Practice based training/microteaching
Blame culture focusing on what staff do wrongly	Appreciative management focusing on what staff do rightly
No tolerance of mistakes	Learning from mistakes to take corrective actions
No experimentation with ideas	Ability to experiment with new ideas
No space for informal discussions of ideas	Quaker space to discuss ideas without fear of blame
No involvement of patients	Patients involved in design of care
Single loop learning	Double and triple loop learning
No community groups	Community groups to discuss quality problems collectively
No collaboration between different functional groups	Collaboration between different functional groups

Table 8: Conflict between clinicians and TQM concepts (Source: Short and Rahim 1995)

Clinicians	TQM
Individual responsibilities	Collective responsibilities
Professional leadership	Managerial leadership
Autonomy	Accountability
Administrative authority	Participation
Professional authority	Participation
Goal expectations	Performance and process expectations
Rigid planning	Flexible planning
Response to complaints	Benchmarking
Retrospective performance appraisal	Concurrent performance appraisal
Quality assurance	Continuous improvement

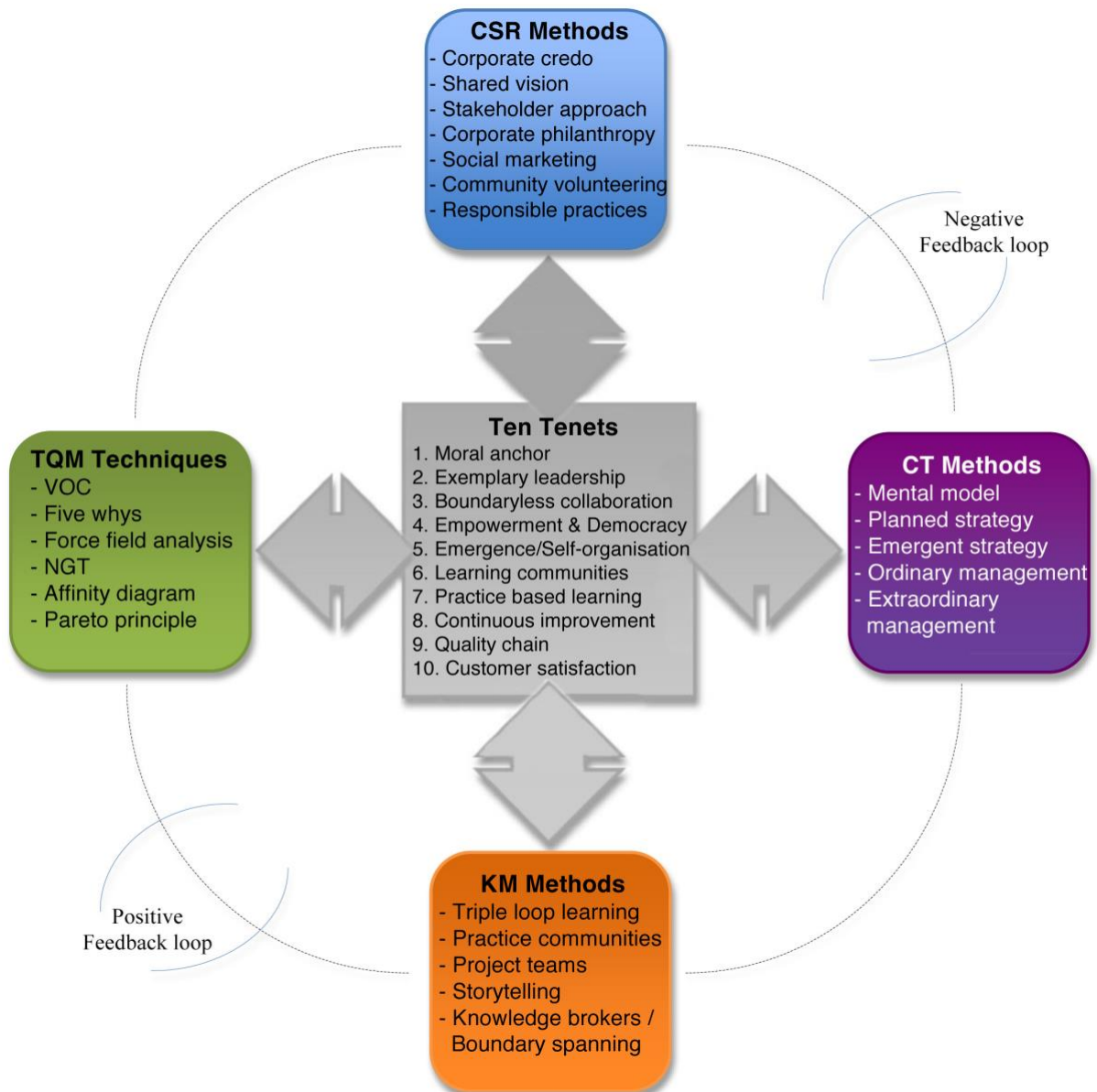


Figure 1: EALIM Conceptual Framework (Source: Sideras 2017)