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Quality management – integrating leadership and quality methodologies

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Abstract

Background

In a research paper Ljungblom & Isaksson (2009) state that quality management literature in Sweden still seems to be relying heavily on quality methodologies and tools, rather than focusing on leadership and the human perspective. Ideally how to change behaviour and how to change structure would be integrated. It could be that the lack of leadership theory is overcome in quality courses by using other types of literature than the quality management literature previously studied.

Purpose

The main purpose of this research is to describe to what extent leadership and quality methodologies are integrated in Swedish university based quality education. Another purpose is to propose how integration could be done.

Methodology

Course plans for main quality courses offered in Sweden have been reviewed to assess to what extent leadership is included and how it has been integrated with quality methodologies. Focus has been on courses offered as separate courses; however a few programs have also been studied.

Findings

Preliminary findings indicate that quality management is seldom integrated with leadership and that focus is on quality methodologies and tools. A model based on values, methodologies and tools together with a change model are used to describe proposed quality management content for integrating leadership and quality methodologies.

Limitations

The study is limited to quality management education in Swedish universities.

Value

The paper highlights how the integration of leadership in quality management education is currently handled in Swedish universities.

Keywords

Leadership and quality methodologies, University quality education

Paper type

Research paper

Introduction

We live in a world of change. Globalisation, technological development and competition press for an ever increasing rate of change. Companies and even public organizations need to adjust to this or face the risk of extinction. Beer & Nohria (2000:133) claim that, "Not since the industrial revolution have the stakes of dealing with change been so high. Most traditional organizations have accepted, in theory at least, that they must either change or die". Obviously there is a need to be able to handle change on all levels.

It is not clear what role Quality Management has in Change Management. In Sweden the Quality Management, Quality Technology, Quality Sciences, Quality Development field at the university level is currently looking for a theoretical base and for a good description that could include most of the education offered. It could be claimed that Quality Management departments in different universities are at least partly followers of what the current interest in the market is. Many Quality Management departments are active outside the original scope of Total Quality Management (TQM) when running courses in 6Sigma and Lean Management and even courses in Corporate Social Responsibility. Many of the programs, methodologies and tools taught could be seen to fit under the broader field of Change Management, either as small continuous improvements (Kaizen) or in project based breakthrough improvement (Kaikaku). However, not all change is automatically part of TQM. It could be argued that focus in TQM is on improvement from a customer perspective. This view could be, and is often, extended to a focus on stakeholders where customers are one of the most important stakeholders, with others being such as shareholders, employees, society and nature, (Isaksson, 2006). This could be seen as improvement management where improvement is seen from a stakeholder perspective. This indicates that TQM could have an important role to play in making change happen and making it more sustainable, with focus on main stakeholders. With this interpretation of TQM it becomes logical to study to what extent leadership for change forms part of quality management courses and programs.

One way of describing TQM is to see it as a system based on values, methodologies and tools, (Hellsten & Klefsjö, 2000). Bergman & Klefsjö (2003) propose in the "Corner Stone Model" a set of six core values that support TQM. These are leadership commitment, letting everybody be committed, focus on customers, focus on processes, base decisions on facts and improve continuously. Ljungblom & Isaksson (2009) note based on a study of Quality Management literature used in Swedish universities that: "quality management still is relying heavily on quality methodologies and tools supporting the values of customer focus, decisions based on facts and continuous improvement". The interpretation is that less than 5% of the main literature used for quality management education in Sweden deals with methodologies and tool supporting the values management commitment and letting everybody be committed.

The results of the Ljungblom & Isaksson (2009) study are based on quality management literature used in basic courses that had the word quality in the course name or that were clearly focused on quality management. The main quality literature used was reviewed to look at the extent of leadership included. However, it could be that additional material with leadership content is used to complement quality literature. It could also be that more of leadership is included in programs with courses at a more advanced level. It is therefore of interest to dig deeper and look at the main quality management courses in more detail to assess the leadership component in quality management education. To the extent this integration is not done it is also of interest to explore how it could be done.

The main purpose of this research is to describe to what extent leadership and quality methodologies are integrated in Swedish university based quality education. Another purpose is to propose how integration could be done.

Methodology

As a starting point courses were identified using the web-site www.studera.nu that presents all available university courses in Sweden. We searched for courses and programs using the official name for Quality Management in Swedish “Quality Technology” (Kvalitetsteknik). We excluded those courses that are given by Gotland University where we work. Results from Gotland University are later used as a starting point for discussing and proposing possibilities for integration. Out of the recorded hits for quality management we studied the leadership component. Since the first search did not produce as many hits as expected and since some of the known universities working with Quality Management did not appear we enlarged the search using the terms: Service Management and Quality Sciences. Since this did not result in any hits on the web-site studera.nu we looked directly at websites of universities known to conduct quality education. For those courses and programs where we found a leadership component we conducted a detailed study including interviews. Based on the results and based on courses carried out in Gotland University, where leadership forms part of quality management we have proposed a structure for integration.

Theory background

Models for change

Change could be divided into two steps, creating interest for change and improving processes, (Isaksson, 2006). In both steps leadership is needed. Isaksson & Taylor (2009) present a model for different perspectives of change, see Figure 1. Traditional Quality technology would mainly address improvements in how the technical processes of a company are running. Both the origins of TQM and Lean are found in Japan and in the manufacturing industry. With process management and an increased process view the functional hierarchies are put into question and TQM now addresses how organisations can be improved.

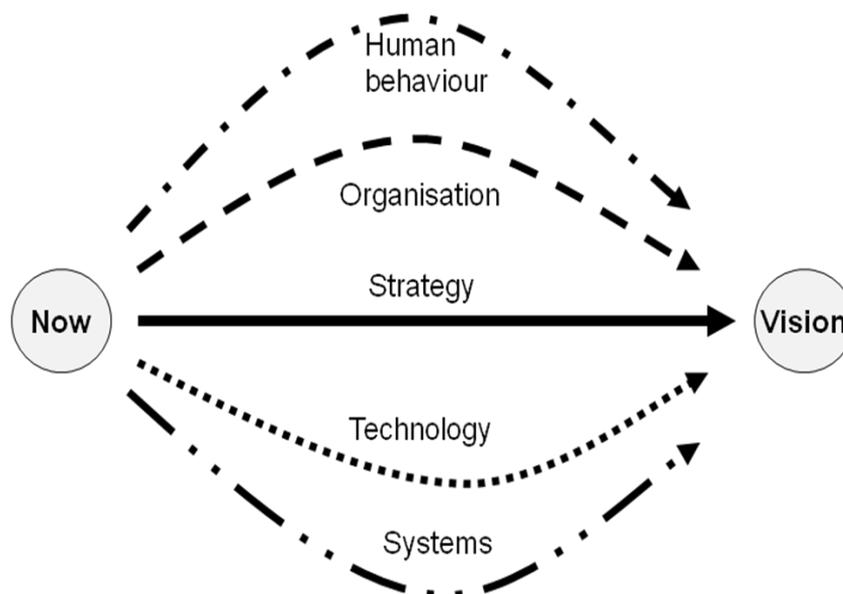


Figure 1. Proposed perspectives of change, adapted from Isaksson & Taylor (2009).

The Figure 1 is interpreted based on project based breakthrough change.

In quality literature some motivational issues surface but more as comments on how the leaders of the past will not fit into the new world of processes (Hammer, 1996). Human behaviour and how to change it could be described as methodologies and tools that support the values of letting everybody be committed and leadership commitment. This area could be seen to relate to Psychology in Deming's system of profound knowledge.

Many organisations respond to change challenges by reorganising. There are numerous examples of how many of these fail, see for example Beer & Nohria (2000). One of the reasons for failure could be that structural changes are carried out without taking into consideration the human perspective or the other perspectives. The issue of how to organise and control forms part of Business Administration core competence.

All the different perspectives need to change in some co-ordinated manner which is managed within the strategic change initiative. This could be seen as the core of change management. This is field which is much written of and which is dealt within several academic disciplines. It could be argued that change programs based for example on TQM, 6Sigma and Lean principles are represent different version of the change strategy. The change strategy also includes the chosen project management models used.

In goods producing organisations with important capital investments in equipment, many change initiatives are driven by technological change. Risks in this kind of change are that the effects on human behaviour and needs for organisational changes are not getting enough attention. As an example in plant modification the pay back is often calculated based on personnel reduction. The manual low qualified jobs often disappear and are substituted by more qualified supervisory operator jobs. This puts pressure on competence increase and on the organisation, where often a foreman layer will disappear and instead self controlling groups might be introduced.

Understanding systems could be seen as important as a way to avoid sub-optimisation. Senge et al. (2008) claim that a revolution is needed to save the planet and that one part of this is to be able to relate events to systemic structures and mental models. Mental models are simple generalisations, such as "the market should decide this" (Senge, 1990). Another example is the belief that a technical solution is the only one ore that restructuring will solve all problems. With limited system understanding there is a risk that the apparent problem is only a symptom. A simple example could be when equipment is replaced because of unsatisfactory performance, but this does not solve anything because the problem is the raw material used or a dysfunctional maintenance organisation or both. A similar example could be when a person is fired because of errors, but where the reason is insufficient instructions and work overload. The human, organisational, strategic and technical perspectives are all systems by themselves but also form part of the entire organisation as a system. A well managed system perspective should probably be based on management systems that understand both the parts and the whole.

Here, we present some further comparison to Deming's system of profound knowledge consisting of understanding of variation, psychology, theory of knowledge and system understanding. The understanding of variation overlies all perspectives but is particularly important in the change strategy providing numerical tools for performance assessment and improvement. The theory of knowledge could be interpreted as knowledge management of the elements needed to manage a system. For describing systems in the steady states of "Now"

and “Vision” process based models could be used, see for example Isaksson (2006). The model in Figure 1 could be seen as a system change model.

What is leadership and how do we define it?

There is substantial empirical evidence from the past 20 years that shows us that leadership matters (O’Reilly et al. 2009). Most of us agree that leadership is important or in fact essential to achieve organisational success (Alvesson & Sveningsson, 2007). There are several definitions of leadership. Kotter (1996) states that “leadership is the ability to persuade a group of people to move in a certain direction without coercion” and he also claims that modern leadership is about developing and communicating visions as well as inspiring others to identify themselves with these visions. Thompson (2008: 290) argues that “leadership is the ability to influence people to achieve the goals of a team”. Forsyth (2006:376) in his turn claims that “leadership is the process by which an individual guides others in their pursuits, often by organizing, directing, coordinating, supporting and motivating their efforts”. Forsyth (2006) definition includes another part of leading definition management that others - Kotter (1996) for example – identify as another perspective than leadership. Also Thompson (2008) argues that there is a difference between leadership and management. Management is about function, planning, budgeting, evaluating and facilitating while leadership rather is about relationship, selecting talent, motivating, coaching and building trust. Management could be seen to belong to the organisational perspective where as leadership is needed to make change happen in the human perspectives and is more related to behaviour and psychology.

Research by Beer & Nohria (2000) suggests that there are two archetypes or change – theory E which is change based on directly improving company results and theory O which is based on building organizational capability. Both are valid models; they both produce results but also have some downsides. As a short description we can say that Theory E change strategies are the “hard“ approaches of change and those that make headlines. Shareholder value is the measure of successful change. Change in theory E often means drastic layoffs, downsizing and restructuring. Theory O change is less drastic and is to some extent more development than change. The goals in this “soft” approach are to develop corporate culture and human capability trough individual and organizational learning. Companies with this type of change have strong, long-held, commitment-based psychological contracts with their employees. In table 2 a comparison of the two theories compared to several key dimensions of corporate change: goals, leadership, focus, process, reward system and use of consultants.

Table 2: Overview of the central differences between Theory E and O (Beer & Nohria, 2000:137)

Dimensions of change	THEORY E	THEORY O
Goals	maximize shareholder value	develop organizational capabilities
Leadership	manage change from the top down	encourage participation from the bottom up
Focus	emphasize structure and systems	build up corporate culture: employees’ behaviour and attitudes
Process	plan and establish programs	experiment and evolve
Reward system	motivate through financial incentives	motivate through commitment – use pay as fair exchange
Use of consultants	consultants analyze problems and shape solutions	Consultants support management in shaping their own solutions

In fact few companies subscribe to just one theory – the most have a mix of both. But too often managers try to incorporate both theories in tandem without resolving the natural tensions between them. Beer & Nohria propose a combination of E and O with the objective of building a company that can adapt, survive and prosper over years. Beer & Nohria (2000) propose a best way to combine the two theories, see Table 3.

Table 3: How to combine Theory E and O (Beer & Nohria, 2000:137)

Dimensions of change	THEORY E and O Combined
Goals	Explicitly embrace the paradox between economic value and organizational capabilities
Leadership	set direction from the top and engage the people below
Focus	focus simultaneously on the hard(structures and systems) and the soft (corporate culture)
Process	plan for spontaneity
Reward system	use incentives to reinforce change but not to drive it
Use of consultants	consultants are expert resources who empower employees

For the strategic perspective often involving project based change it could be argued that both leadership and management are needed. Leadership would be more related to the theory O and management involving restructuring would be closer to theory E.

The Corner Stone model and a management system for TQM

According to Hellsten & Klefsjö (2000) a quality management system can be seen to consist of values, methodologies and tools and it should also have an aim, see Figure 2. The Corner Stone model defines the core values of TQM (Bergman & Klefsjö, 2003). These values are then linked to supporting methodologies and tools. For example the value of Focus on processes is supported by the methodology of Process Management, which relies on tools such as Process Maps. Ljungblom & Isaksson (2009) indicate that methodologies that support the values of leadership commitment and participation of everybody are largely missing in the current quality management literature. The reason could be that leadership as behavioural knowledge is dealt within the academic discipline of psychology. Managing change is cross functional and involves many disciplines. With focus on the competence needs of change it seems necessary to add some methodologies relating to leadership and the human perspective. This could be done using the model of values, methodologies and tools as a management model.

Research findings

Study of courses and programs

Search on the website www.studera.nu resulted in 97 hits for “kvalitetsteknik” (quality technology/quality management). This web-site lists courses and programmes from all universities in Sweden. Out of the 97 hits 25 were from our own university and department. These we excluded, which left 72 hits to study more thoroughly. After the second search based on the terms quality sciences and service management we got 11 additional hits resulting in a total of 83 courses or programmes. We studied course and program plans for the 83 hits looking for the subject Quality Management and if there was something that was devoted to leadership issues.

This resulted in 14 course plans out of the 83 studied or about 17%. We reviewed the 6 courses and 8 programs from 6 universities in more detail. We did a quick quantitative

analysis by studying the course literature and the course objectives and found that one of the courses was a 6Sigma/Black belt course and used common literature from 6Sigma and the remaining 5 of the 6 courses used common Swedish Quality management literature. This has previously been studied and found to include only limited parts of leadership - less than 5% based on number of pages (Ljungblom & Isaksson, 2009). One of the programs was specifically in Lean Production and in that program they used literature from lean, 6Sigma and Project management. We could not find any specific mention of leadership. In six of the remaining programs there was one called Master degree in Quality Management and Leadership. This program has a particular focus on leadership. The leadership part is managed by the psychology department. This could pose some problems of integrating the topics if the teachers from the different departments do not share common mental models. In order to find out more details we interviewed one of the lecturers on the program who claimed that the two subjects were well integrated. The students study psychology parallel with quality management. Additionally there are project courses where teachers from both subjects work and teach together.

When we split up all studied programs in the courses taught and add these together we end up with 192 courses. Out of these 49 (26 %) have at least some focus on leadership.

As a summary we can say that compared with the study of quality literature by Ljungblom & Isaksson (2009) who found mention of leadership in about 5% of the text this study shows a considerably higher integration of leadership in quality management courses.

Integration based on Gotland University

Here, we describe one proposed way of integrating TQM and leadership and discuss advantages and challenges. At our department at Gotland University we have built our education in Quality Management on traditional TQM and Quality technology as well as on human behaviour related to different organisational contexts. This covers the human and to some extent the strategic perspectives. The organisational perspective is presented only as a background and more detailed competence within this perspective would normally be provided by the Business Administration department. We have also worked with process based system models to address the importance of understanding the whole. This could include improvement processes on the organisational level and management systems. The technology perspective is worked with practical projects that involve some familiarisation of the organisation studied. We work with the assumption that leadership and human behaviour is an integral part of TQM. In our department we all have experience and knowledge from both sides – Quality Management and leadership even if each of us is specialist in one part.

We have built two university programs, one on campus and one on distance, where students have a mix of traditional TQM methodologies and tools, change management issues and also leadership and group dynamics. In the three year campus program the plans was to integrate quality management, sustainable development and business administration. The program was called the business administration program leadership for sustainable development. The integration proved to be harder than we had expected. Even if we are a very small university with both of the departments concerned placed in the same corridor with us all knowing each other very well, we apparently did not have a shared vision or shared mental models. The business administration program – like most of all other programs – is based on a specific content and it proved impossible to take away any part in order to introduce new things. There is obviously interest for leadership, quality methodologies and sustainable development, which are of high relevance for economists. Still, following the practise of the traditional curriculum had first priority. This is understandable, since the question is of how credible an

education is. This is probably a general problem where it is hard for one department of university to change things too much without taking risks.

Integration of quality management, sustainable development and project management worked well since all this could be handled within our own department. The two year distance program called Leadership-Quality-Improvement has only been running for the first year, but seems to be a success with good student feedback and a high number of applicants for the second program start. The pedagogy is to quite some extent problem oriented. Students are mostly mature students with working experience who can use the theory in their organisation.

Proposed model for integrating leadership in TQM

The Hellsten & Klefsjö (2000) description of a quality management system as consisting of values, methodologies and tools can be used to describe the elements included. The values of the corner stone model could be discussed, but are here presented without any change. For the part of methodologies we have presented some modifications, see Figure 2. These consist of additions of methodologies that support the values of top management commitment and let everybody be committed. Ljungblom & Isaksson (2009) write that: “The starting point is the individual who should be willing to reflect and put into question his or her own behaviour”. As a methodology we call it here – learning self awareness. More specific methodologies for this are such as the Strength Development Inventory (SDI), working with Learning Styles and classification based on Myers-Briggs type indicators (MBTI). Self awareness also includes how we affect and are affected by a group. How to coach and motivate is important for leaders on all levels. For effective feedback on how management and leadership are working it is important to create a culture of openness. This ensures instant feedback when things are not working.

Aim: To make best use of resources with respect for all stakeholders

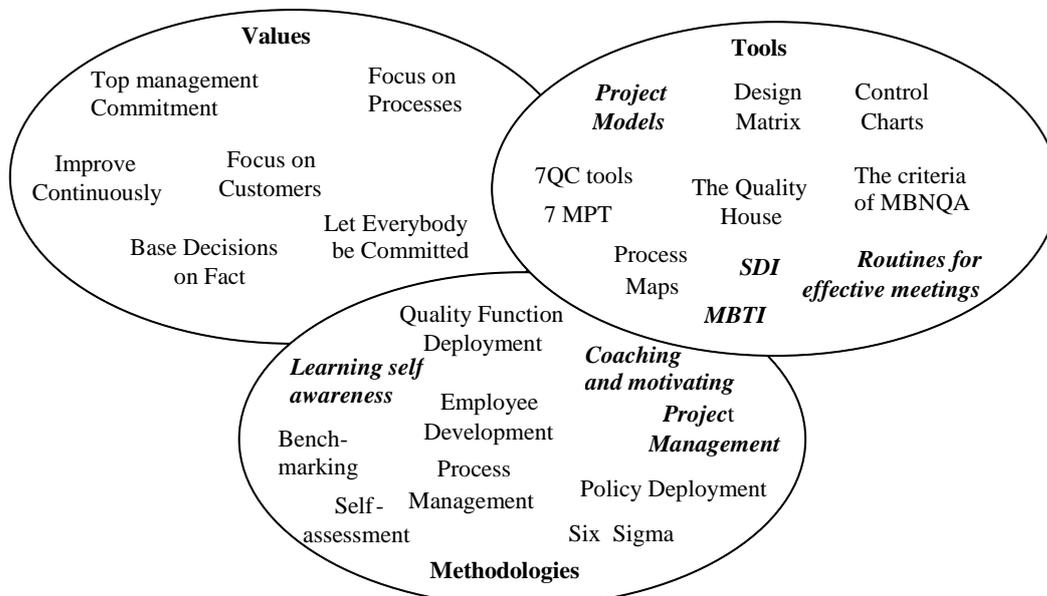


Figure 2. TQM as a management system, Bergman & Klefsjö (2003:400) adapted from Hellsten & Klefsjö (2000). Texts in bold italic are proposed additions.

The proposed additions in Figure 2 should be seen as examples. The set of methodologies needed could vary between organisations depending on needs.

In Table 4 we exemplify methodologies that could be needed when working with project based change. In the table we have linked Figure 1 and 2.

Table 4 Examples of methodologies for system based change.

Perspective of change	Description	Methodologies	Comments
Human behaviour	Change of competence including motivational aspects of employees and management	Group dynamics Self Awareness Leadership and management suited to the situations Behavioural and psychological understanding	Teaching of the topics included could be done by different academic functions as long as there are shared mental models of how things are supposed to work
Organisation	Understanding targeted organisational structure and management model; understanding project organisation for change	Applying organisational theory and project management theory; Process management theory	Competence mainly from Business Administration but with support from quality management relating to process management
Strategy	How to go from now to the visionary state. Choice of model for change.	Applying change programs	Change programs that involve all perspectives might need to be developed
Technology	Knowledge of the specific organisations to be changed and its technology	Linking persons with inside information but also training external consultants in the basics of how the organisations works	Improvement theory could be more effective when it is adapted to the conditions of the organisations, which requires a good understanding of the organisation
Systems	Understanding all previous four perspectives as systems and how they all fit together	Using system models; Training key persons in how all systems work – providing everybody with a big picture view; Using integrated management systems; Knowledge management that identifies what knowledge needs to be managed and how	According to Deming a system cannot understand itself, which would indicate that an outsider's view is required, which again requires insights - this dilemma could partly be overcome by developing agreed and understandable system models including all necessary elements

Conclusion

Effective change needs both managerial and control capacities as well as an understanding of the human motivational issues, (Beer & Nohria, 2000). Kotter & Cohen (2002) states that change require both heart and mind, but that heart comes first. That is we are not convinced by good analysis only, but we need to feel for the proposed change. Seeing TQM as part of Change Management leads to the conclusion that quality technology based methodologies and tools need to be complemented with leadership methodologies.

Results from the study of Swedish universities show that there is some integration of leadership, but that in many cases it is completely missing and that only about every fourth course in quality management takes up leadership. It is at this stage impossible to suggest any particular proportion of leadership and quality methodologies in a change education. However, we conclude that there is a need to considerably reinforce leadership and change management education in TQM courses and programs.

Using the model by Hellsten & Klefsjö (2000) we have proposed a simple structure for a modified TQM system that more clearly includes change competence, see Figure 2. We have also looked at more of the details in the five proposed perspectives of change presented, see Table 4. Partly these proposals are already being realised in the two year full time distance program called Leadership – Quality – Improvement. Results so far indicate that integration of traditional quality management and leadership is received positively.

These results are based on studies of Swedish universities and cannot be generalised for other countries without further studies.

Discussion

There seems to be obvious benefits in adding leadership methodologies to TQM. The question is why this does not seem to be happening more than it is. One reason could be the very traditional functional organisation of universities and the disciplines taught. Change is apparently multi-functional, which is well understood by management consultants that are forced to adapt to their client's needs by simultaneously providing structural, strategic and motivational support. TQM is a young discipline and can quickly be accused of getting into the playing field of other disciplines when taking up topics such as management (Business Administration) and behaviour (Psychology). Even quality based statistical methods could be challenged by the Mathematics and Statistics department.

Another possible reason for lack of leadership methodologies could be a slight flawed mental model that can be described as: "TQM already includes leadership". This could be based on the fact that leadership is mentioned quite often, like in Deming's 14 points. However, in most cases this only amounts to how things should be, that is presenting objectives without telling how to achieve them.

It could also be that universities mostly are laggards and not leaders. There are plenty of examples where change methodologies only become interesting when there are good examples to study in practise as for example Business Process Reengineering, 6Sigma and Lean Management. It could be that systemic management of different perspectives including leadership only become interesting when there are companies that have practised this that can be studied.

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