QUALITY IN EDUCATION

Experiences from the work with implementing TQM in the field of education. Gaining results from locally designed quality system and quality improvement actions, in proportion to a long-term commitment and objectives of sustainable quality.

Author:

Even Fossum Svendsen
MPA/European Excellence Assessor
Deputy Chief Education Officer
Nord-Trøndelag County Council Administration,
Department of Education

Telephone: +47 906 03 404
E-mail: evenfossumsvendsen@yahoo.no

Abstract:

A political decision by the County Council in 2005 led to a full-scale implementation of TQM in the education sector of Nord-Trøndelag County.

A system to improve quality, including the CAF model, was designed and carried out in 2006. The work with adjusting the examples of the CAF model started in 2007, and have been revised later on. The examples of the model are now tailor-made to the education sector, including a compulsory documentation/evidence appendix, also linked to the law of education. The first full-scale evaluation in all schools with the new tailor-made examples of the CAF model was carried out in March 2008. This tailor-made edition for education was also one of the four main input to the European CAF Education edition in 2010 (edited in 2013). A common strategy for the implementation of CAF in all units of the education sector, led to a thorough two-year process to provide essential comprehension and skills. Representatives from all the schools have followed this process, and been guided through the different tools of the system according to the milestones of the annual quality plan. After the 8th CAF evaluation in 2013 we feel that the implementation has been successful, and we can now clearly see a school sector in change. The ambition is to create sustainable quality in all the schools, to deal with increasing challenges. The quality work in was awarded by the Norwegian Ministry of Education and the Norwegian Association of local and regional Authorities with the “School Owner Prize” in 2012.
1. Quality in education

The struggle for quality in education has a wide scope, concerning the use of methods, focus and results. The debate of what to do and how to do it are ongoing worldwide, and the answer differs from country, branch and maturity of the organisation involved. Whatever, the need of a strict path of solutions or methods seems to be more important than perhaps the method itselfs. The ongoing trend of considering the school as a full pledged organisation in opposition to a narrow scoped organiser of learning activities could be seen as examples of sound choices of gateways for the work with quality.

It is easy to be trapped in a discussion of results, and not quality, when faced with the large scaled studies like the OECD PISA study, that contains results of reading, mathematics and science of 15-year-old pupils. This somewhat narrow scope of quality certainly turns the focus in the direction of a field which can be considered as just a small part of the school results, and therefore allocate different kinds of isolated actions and solutions to deal with these kinds of problems. Quite often this kind of actions could be considered as “preparing for the test”, rather than re-engineer the important learning processes or work with a broader scope of the school organisation. Also, the results of the quite large meta-analyses relating to achievement (Hattie 2009), also colour the work of quality in a large scale throughout the world, but does really only explain the causes of the results or how we can put our effort to solve the problems.

2. Measurement

I will not argue that the continuous measuring of results are not important, but rather bring the attention to the need of looking into a broader scope of the school organisation to investigate the reasons of the results, the different enablers which drive the learning processes, and the role of the management in relation to the so-called pedagogical production. The need for continuously measurement in a broad scope will therefore give the organisation the information needed to locate its problems and choose the right tools and actions. The thoroughness of this information will also be the key to the range of possibilities to make changes. The ability to achieve profound changes lays in the approach of which the organisation has learned as an organisation. This includes how we perform and collect information on our organisational capacity and the range of how thorough and useful this assessment and measurement are carried out, to stimulate the organisational learning beyond the perception of the individual level (Argyris & Schön, 1978).
As a pillar for the work of quality, it is therefore important to see the organisation in a perspective of time; past – present – future, as pointed out by Pollitt, Bouckaert & Löffler (2006). This perspective gives us the opportunity to establish a view of our present practise, assess and review the actions of the past, and use this knowledge as the backdrop for our plans and corrections for our future.

3. Assurance or development
In the toolbox of quality, there are different opportunities to address the located challenges. In many countries, the responsible governmental bodies perform regular inspections of the schools. This is a way of controlling the organisation, often based on legislation and requirements or established criteria’s, but it will only test a part of the performance or how it works – in the same way we ensure the knowledge of the students through exams. Then the focus is drawn to pass the test, rather than establish a culture of quality or development of performance. The work with quality assurance, as we know from the industry, will establish procedures and standards of how the work should be carried out, but quite often not in the most important areas – such as in the pedagogical production of a learning institution. Vital parts of the organisation are brought to a level of certain standard, and are stressed to be kept at this level. It is questionable if the work with quality assurance alone will bring the performance at a top level. To raise the level of organisational maturity, we need to exceed the practise of quality assurance, and move in to quality development and renewal. In this way, we will succeed achieving the goal of better performance and practise.

4. Processes
Process management is also widely used as ways of manage and develop the core processes, and will gain the performance of the organisation. In a school, the ongoing processes of preparing, acting and validating the education are certainly the “motor” of the organisation, and therefore needs a special attention as core processes. My experience indicates that this area is quite underrated – related to the importance of this area of the organisation, and the possibilities to take control on developing the main activities. The combination of the terms core processes and development, are perhaps the most important key words related to quality. It includes both the view of how we “do things”, and how we “develop the things we do”.
5. **Quality and stakeholders**

The term quality is a rather widely used description of many things. Most people have a perception of what it means, and what it means for them. In fact, the same objective could have different qualities depending on who the spectator is, and what kind of quality dimension is used. I will postulate that the most important knowledge related to quality, is to understand that the quality is linked to contextual coherent. The perception of the quality definition should therefore differ, depending on situation, customers, profit/non-profit sector, branch and what kind of service or products which is delivered. In this way, we should never look on quality in school, in the same way as we look on quality on cars.

To keep on track, we still need a sound definition of quality for our specific context or setting. The definition will serve as a platform or framework for further work and common comprehensiveness for the involved people and the rest of the organisation. To deal with quality in education I will therefore first draw the picture of the educational surroundings – the stakeholders of the school. The stakeholder model, draw up by Erik Johnsen (1993), takes the role to map the stakeholders of an organisation, based upon the “normal” surroundings of an organisation, with at least 7 stakeholder dimensions.

The organisation needs to define its stakeholders and analyse the balance between the contributions and rewards for each of them. This knowledge will give the organisation important input for how to define, deliver and develop its services and products, based upon the organisational surroundings.

The normal stakeholder model (Johnsen 1991)
6. **The Core Stakeholder Model**

The stakeholder model gives a good picture of the strategic surroundings of the organisation we need to define and analyse. For the use of defining quality, it needs a more direct connection between demands and results, because we need to establish a holistic approach when we define quality, taking into account the involvement of certain specific stakeholders. Therefore, I introduce a model derived from the stakeholder model, but still more balanced and wider than most quality definitions – the *Core Stakeholder Model*. The context of public entities and learning institutions are important target groups for this model. Also other organisations, such as companies working in a public context or companies with high degree of skilled staff, are most likely in the same target group. The use of the model is limited to the work of designing better processes or constructing actions of improvement, as a cause of defined challenges, in contradiction to the stakeholder model, which analyse the streams of contributions and compensations between the stakeholders and the company. The “streams” are therefore in a one-way direction - by demands, requirements, expectations or needs from three groups of stakeholders. The output of the company are inflected by this particular way of addressing quality, balancing the total amount of expectations direct into the processes of service delivery. In a public learning institution, such as a school, it is important to ensure the fulfilling of the educational law, national governmental objectives, local school owners or politician’s goals and regulations. The first perspective of the model is combining the streams of expectations from “above” – and called *principals*. Considering professionals, means involving the staff and listen to their professional view. However, it also means to acknowledge research, listen to branch organisations, transfer experience, and good practise from other professionals. This perspective is called *professionals*.

To ensure the fulfilment of the Fundamental Concepts of Excellence (EFQM 2012), it is important to add value for customers by understanding, anticipating and fulfilling needs, expectations and opportunities. In a learning institution, the learners are most likely the largest group of customers, and their voice forms up the third perspective of the Core Stakeholder Model – *customers*. 
All of the tree perspectives of the model should be taken into account at the same time and balanced carefully, for the sake of bringing out the most correct quality of the actual process or action.

7. Defining quality

In this way, through the spectaculars of the core stakeholder model, we could narrow the terms of understanding quality and define the way we consider the quality should be constructed. Not to mention the importance of the coherence between the before mentioned contextual definition and this particular way of addressing quality. Without a clear and rather narrow understanding of the way we use the term of quality, there is an extensive possibility to end up with something blurry that causes more misunderstanding and gives room for rather wide interpretations. Within an organisation, you should give excessive focus and time to adapt and accept the common understanding of the term or the definition of quality, before going into the work. Otherless the people might go in different directions, with different concepts and definitions in mind.

The term quality, derives from the Latin word *qualis*, meaning the “nature of” something. We usually consider the term to describe a certain standard, shape, size, pattern or the strength of a product. It could also be used to describe the level of service and helpfulness or something that is considered good, outstanding, exclusive, expensive or attractive by some people. It means that in one way, a product or service is considered as “quality” by some, but not by others. It also means that quality is not possible to measure in an objective way as high or low, nor even good or bad.

To lower the level of confusion, we go back to the core stakeholder model and the established contextual frame. Through the tree perspectives of the model, we could therefore describe quality as the sum of demands, requirements, expectations or needs from the principals, professionals and the customers of the company.

8. Quality system

To help in the work with quality on the daily basis, we use a quality system. The system will never take care of the quality, but will help the leaders of the organisation to pinpoint the important activities, at the right time, in the right way. In a learning institution, it is naturally to establish a system that *develops* the quality instead of *preserving* the quality. The strategic objectives behind a
quality system are to take care of the development and learning processes, uncover weaknesses and provide better practice. The system should also have the ability to be implemented successfully in the different organisations. The need for simplicity is therefore essential. A *quality development system* describes the different milestones and activities in the cycle, and places them into a yearly continuous plan. The tools of the system, starting with the essential steps of performing an assessment, also helps the organisation to analyse the results from the assessment, pinpoint the possible strategic effects of the different actions, and help the organisations to prioritize and choose the most important actions – according to the uncovered challenges. Finally, it helps you to plan your activities and processes before carrying them out.

My design of a quality development system is based upon the PDCA cycle drawn up by Shewhart (1939) and Deming (1982). It takes you into a continuous cycle, with stopovers at the pillars of plan – do – check – act (PDCA). The system itself consists of 18 development tools mostly linked to the four pillars of the PDCA, taking the organisation through the cycle, starting at the point of assessment.

At the assessment point (check/C), the use of a TQM-model is essential. It will give you a holistic approach to your organisation, helping you to assess the enablers and the results of the entire organisation. The Common Assessment Framework (CAF) is probably the best solution for public sector organisations and non-profit learning institutions. In another way, we also could say that the use of a TQM assessment tool like CAF needs to be followed up after the assessment. Therefore, the use of the CAF models needs to be a part of a quality system or cycle. The integration of CAF into a quality system are done rather seamless, they fulfils each other in a perfect way.

At the pillar of adjustment (act/A), the most effort is taken to help the organisation in the job to analyse the situation, balance the desired effect and prioritize the different actions based on the assessment. In this area, it is developed tools to help the schools to analyse the impact of different fields of action, the possible strategic effect, and to prioritise the different and possible actions. It is also important to choose carefully the nature of the action; an easy and small-scale action (quick win), an adjustment of existing plans or processes, or designing a brand new action or process including a carefully balanced rethinking of the quality through the core stakeholder model.

The chosen plans, actions or processes will take the role of the pillar of planning (plan/P). They should be communicated widely throughout the organisation, and serve as the main conclusion of both the annual assessment and the strategic answer of the challenges. The role of the leaders are
important when carrying out the plans, together with the involved co-workers. The new and changed practise will need support from the management level and commitment from the co-workers to be successful. The performance of the plans, actions and processes needs to proceed until the next assessment, or even in a long-term perspective. This ongoing work of change is representing the last pillar of the PDCA cycle – the phase of doing (do/D). The next assessment will reveal the effects of the actions and the nature of the changed practise.

In addition to the tools for handling the development activities according to the PDCA cycle, there have also been designed tools for helping the school in other procedures of quality, such as mapping the processes and stakeholders, designing and performing consumer polls, measuring the achievement of objectives and developing service declarations.

9. Experiences from the education sector - implementation

The County Council of Nord-Trøndelag pointed out in their inauguration declaration for the period of 2003 – 2007, that the upper secondary schools should be the best in the country. They made clear that the goals should be reached by the use of quality, innovation and entrepreneurship. This was our mission. In dialogue with the County Council, it was decided that a quality system for education sector should be designed, and the use of the CAF model should become compulsory. The system was designed in 2005, and put into action early in 2006.

According to Peter Senge (1990) the methods are essential for achieving organisational learning. With this as a backdrop the implementation strategy and process was designed. Working in a network was our way of establishing common learning and comprehension in the schools.

The self-assessment groups (SAG) in each school were carefully put together demanding participation from the management level, administrative level (economists, technical personnel, office executives) and educational level (teachers, pedagogical leaders, teacher union representatives). This group got the responsibility to carry out the self-assessment and work with the other tools in the quality system. Participation in the groups was voluntary and based upon long-term commitment. The SAGs represented the schools in the network in a two-year perspective. These groups do not have any formal or managerial status in the schools, but rather work as quality “consultants” for the management, who needs to consider their different suggestions for actions or projects.
The strategic objectives of the implementation process or network, is to provide knowledge, comprehension and skills to the participants according to the work with quality. Through participation in the implementation process, the participants were trained in the quality system, and by this, prepared the schools to run the quality work entirely by themselves. Gatherings in the network were also a platform for discussion and reflection – sharing experience and receiving guidance.

Collaboration with the teachers union was essential when carrying out the implementation strategy. A possible challenge was the negative response from teachers when confronted with an operational quality system and quality model. Therefore, the head-representative for the teachers union on county level was drawn into the work at an early stage, and participated in the process as member of a support group.

The department of education, as the secretariat of the Director of Education, decided to participate in the quality process in the same way as the schools. The importance of “taking the medicine” together was confirmed by the generic approach of the CAF model. The department is also in charge of the quality work in the sector, and provides knowledge and resources to the implementation process. The department of education received “Committed to Excellence” for their quality work in 2007, the local “School-owner price” from the Norwegian Association of Local and Regional Authorities (KS) in 2008 and the national “School-owner price” from the Ministry of Education and KS in 2012 – mostly because of the extensive work with quality in the education sector.

10. Experiences from the education sector - tailoring of the CAF examples

First, the CAF model was not introduced as a single tool, but rather one among other tools in the quality system. The borders of the CAF-work would therefore seem unclear for the users because of this holistic approach. The first round of assessment was made with the use of the CAF 2002 version. The assessment groups from the schools reacted somewhat negative to the language used and the strong organisational focus needed to understand the aim of the different sub-criteria.

On the background of this, the work with clarifying and adjusting the examples started up. During this work, the CAF 2006 was launched. The examples and the textual part of the model made it
much more understandable, and therefore solved many of the mentioned challenges. The work with the Norwegian CAF 2006 version started right after the launching of the original version, and was tailored for Norwegian conditions. The author of this paper was invited to contribute to this work, and during this process the possibilities to see the CAF model from a school point of view and give input according to this, was possible. The result of the new Norwegian CAF 2006 version was received with raised enthusiasm. The clearness and didactical form of the examples suited the school-representatives much better. However, the work with the education version continued.

In 2008, the local version of CAF Education was launched in Nord-Trøndelag. In this, the examples and explanations were tailored the sector of upper secondary schools in a relevant and understandable way. In addition, it was added a documentation index or evidence bank for each of the sub-criteria, to help the schools in their assessment. To undertake the national standards and demands in the law of education, the documentation index contained certain §§ which always should be taken into consideration during the CAF assessment. Local strategic objectives and documents of common importance are also to be found in the appendix, in addition to the results from the students- and teacher polls and economic state reports. This local CAF Education edition, was one of 4 main contributors when the European Institute for Public Administration launched the official CAF Education version in 2010, revised in 2013 (http://www.eipa.eu/files/File/CAF/CAF_Education_web.pdf).

11. Experiences from the education sector - sustainable quality
Learning from others – benchlearning, was introduced at an early stage. In the network, there is a strong focus on learning from each other. In every meeting, there is presentation of cases, and a lot of time is spent on commenting on the different contributions from the schools. We have also introduced other possibilities for benchlearning such as EIPA’s CAF database and conference cases from throughout Europe. Collaboration with other schools using CAF throughout Europe is also quite relevant, and several projects have already been put in to action with the help of EU founding. As pointed out by Pollitt, Bouckaert & Löffler (2006), the need for long time strategies and commitment are essential for implementation of quality tools. The need for keeping the cycle moving and following up the activities are some of the things that have been taken quite seriously.

A yearly date for all the schools to deliver their CAF assessment and other important elements of the quality system are set in the Quality Annual Wheel. The assessment reports from the schools are in the annual “Quality report” from the education sector, and public accessible. The county council
use this report to pinpoint the overall strategic objectives of the sector. The Director of Education has also used the assessment results in the management dialogue with the units to ensure the importance of following up uncovered weaknesses. Following-up meetings, conferences and CAF/quality seminars are arranged annual.

The balance between administrative steering and responsibility for quality and development in the units is delicate. The sector is organised in a two-level model, where the schools are given extensive responsibility and delegation. The role of the Director of Education is to provide tools, resources and knowledge, in addition to monitoring the results and following up the units. The schools are given solutions to take care of their own quality and development, delivering results, and, on this foundation, having the opportunity to develop accountability for quality throughout their organisations.

12. Experiences from the education sector - results

Based on the quality work since 2005, the education sector can reveal good results. The results are not remarkable, but rather as expected, according to the quality focus and the efforts made. Stone for stone have been laid, taking care of the challenges, built up the different enablers and worked in a long-term way to achieve the objectives related to the not satisfactory results.
In the initial period of the quality work, the general tendencies are that there is an increase on all CAF criteria from 2006 to 2007, and from 2007 to 2008 (see figure 1).

The most significant development increase from the work of the first year (2006 – 2007) are found in the criteria 6 – citizen/customer results, 3 – people, 5 – processes and 1- leadership. The actions, which were launched in these areas, focused on building up the strategic objectives of the organisations, vision, mission and conscience related to quality. In the people criteria, it was actions related to routines on handling and involving the employees and working out work-descriptions in different fields. Actions related to citizen/customer results criteria, were mostly directed towards the pupils – the most important customer in the schools. In this field, most actions had to do with involvement and dialogue with the pupils.

For the following year of development work (2007 – 2008), we find the most significant increase in the following criteria: 7 – people results, 1 - leadership, 6 – citizen/customer results, 3 – people. We can see the close connection between the weaknesses from 2007 (criteria 7, 1, 6,) and the increase found in 2008. The same increase is not present according to the last two criteria of weaknesses (criteria 2, 5).

The scores from 2008 show that the level has been raised, although the new example-version has led to a more accurate base of assessment and much higher consciousness among the SAG representatives. Signs from the work told us that this round of assessment would lead to a devaluation of the scores because of this. It seems to be the case that the quality work itself has been able to forward this devaluation and in fact produce higher performance results. The differences between the criteria seem now to be somewhat flattened, if we consider the average results.

Seeing the whole period of quality work overall, there has been a positive trend of bettering the performance in all fields. Since the first CAF-assessment in 2006, it has been worked with improvement actions at a large scale. Between 5 – 10 actions have been launched in every school each year.
The last years, 2010 – 2013, the trend have flattened out, and only smaller changes can be visible when looking at the aggregated results from all the schools (Figure “CAF scores by criteria”). In the same period, in some cases the scores also have been reduced. First, this should be explained by the implementation and the use of a local CAF edition with specific demands on documentation or evidence. This led to a more thorough assessment, also taking the §§ of the educational law into account. With a tight following up from the Director of Education, the schools have been ever more skilful and accurate in the work of assessment. In some cases, this also led into some lower scores the last years. Looking into the scores by years (Figure “CAF scores by year”), we can still follow the clear development and a more narrow spread of results. Even if the scores from the self-assessment not should be seen as a scientific proof nor objective measures, it will certainly document the development and organisational capacity of the schools. Especially when we compare one school to itself over years.
16. Conclusion
Both on individual and organisational levels there have been changes. During the work the engagement, learning environment and the performing skills have been raised tremendously. The insight into own organisation and the knowledge of forces and weaknesses have been described by the participants as very important and useful for the further work with development. The involvement of people has given the schools the possibility to show more engagement in the improvement actions, and comprehensiveness for the need of change. The total focus on change and improvement in the sector has also coloured the quality work. Discussions on the political level and even in the newspapers have led to a focus on the change processes among the employees.

Although there has been no revolution, just the right steps towards more correct quality, we can clearly see an education sector in change. The implementation strategy and -process have been
critical factors to establish comprehension and skills to carry out the quality work. The CAF model has been most important for focusing on quality and providing knowledge on the organisational status. With strong emphasis on development, the work with keeping the PDCA cycle moving has been most important to provide results.

The launch of the tailor-made CAF examples for the upper secondary school, has led to a stronger focus on the mission of the schools and more precise comprehensiveness of the model. Although it has been a mild top down approach launching the mandatory appendix of documentation/evidence, the reception in the schools has been quite positive. The fulfilment of the claims in the educational law, taken care of within the tailor-made examples and the appendix of documentation/evidence, will help the schools further in the work with both quality assurance and quality development.

The tailoring of CAF is not necessary, but will ease the entry of quality work, clarify the CAF-model and incorporate local needs at the same time. We think the efforts made will give us quite advantages also in the future.

Not to mention the direct results in the schools, documented by the results criteria 6, 7 and 9, have elevated slowly but clear during this period. For our schools, results like lower dropout, raised grades, lower absence, and better transfer between years have been some of the successful outcome from the quality work in the education sector.
17. Bibliography


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