The House of Competency
of the quality manager

Elín Ragnhildur Jónsdóttir

Thesis of 12 ECTS credits
Master of Project Management (MPM)

May 2014
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Thesis of 12 ECTS credits submitted to the School of Science and Engineering at Reykjavík University in partial fulfillment of the requirements for the degree of Master of Project Management

May 2014

Supervisor:

Dr. Helgi Pór Ingason
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Helgi Þór Ingason

Examiner:
ABSTRACT

In modern organizations the work of the quality manager is complex. What then should characterize an exemplary quality manager?

“The House of Competency” of the quality manager is a new conceptual model that can be used by quality managers who wish to broaden their understanding of the competencies needed in their work. It has been inspired by ICB 3.0 (International Project Management Association [IPMA], 2006). The House is built from conclusions drawn from the literature and from various studies aimed at compiling statements about the competencies, skills and knowledge considered an asset to quality managers.
THE HOUSE OF COMPETENCY OF THE QUALITY MANAGER

1. INTRODUCTION

The number of organizations certified in the ISO 9001 standard for quality management systems is increasing (Charlet, 2012), and hence also the number of those working as quality managers. The use of ICB 3.0 (IPMA, 2006) is widespread in Europe and provides thorough guidelines for project managers wishing to develop their knowledge and skills in order to increase their competency for the profession. Is it possible, therefore, to find similarities within the quality managers’ profession, i.e. is it possible to find a common denominator in terms of competency for a quality manager?

What should characterize an exemplary quality manager?

The role of the quality manager has changed over the course of time from an inspector role to an integrated part in organizations (Elg, Gremyr, Hellström & Witell, 2011). With this change of function has come a change of competency that a quality manager should possess.

Much has been written in the literature on the competency of the project manager and there are several country- and region-specific standards that can be used to test and qualify project managers on their competency for the job. However, the literature is much scarcer on the competency that a quality manager is supposed to possess. This is understandable as the professions are different in many ways. According to ISO 9001 (International Standards Organization [ISO], 2008), the quality manager should be one of the managers who, irrespective of other responsibilities, should have the authority to implement and maintain a quality management system. The standard thus assumes that the quality manager is a line manager. This is unlike the project manager who can be situated at various places in the hierarchy of an organization (Kerzner, 2009).

The actual role in the sense of tasks performed by the quality manager in a specific organization can be dependent on many factors, such as the size of the organization, the sector and the position of the quality manager in the hierarchy of the organization. It might also depend on the standard in use, be it an ISO-standard, some other specific standard or the Lean-management methodology. Many authors in the literature studied do not make any distinction between quality managers depending on the organizations where they operate or their role in the organization, although indications may be found in research (Sousa & Voss, 2001) that quality management practices are context dependent.

In this study it is assumed that there are some general traits that are important when working as a quality manager; and these are not contingent upon the actual role or position in a specific organization.
The aim of this study is to gather information on the competencies needed by the quality manager. The term “competency” is complex and may have different meanings in different contexts. A common understanding seems to be that it explains what is needed to do a job properly.

A recent article on human resource management by Niu explains the term by referring to its originator: “The concept of competency was first proposed in 1973 by psychologist David C. McClelland, a professor at Harvard University, in his article “Testing for Competency rather Than Intelligence”. Competency refers to deep-seated characteristics which distinguish the achievements from the mediocrities. It is a collection of motivations, traits, attitudes, and personality characteristics of self-cognition, knowledge or skills” (Niu, 2011, p.1).

In their study from 2011 (“The role of quality managers in contemporary organisations”), Mattias Elg et. al. (Elg, Gremyr, Hellström & Witell, 2011) mention that they haven't found any empirical studies related to the necessary knowledge and skills of a quality manager. This indicates that studies on the necessary competence of quality managers is an untouched field of research and deserves to be looked at in a more detail.

Looking at Harold Kerzner’s view of the quality manager, one find in his book “Project management” (Kerzner, 2009) his thoughts on what he calls quality leadership. According to him, project management and total quality management show close similarity in terms of leadership and team-based decision making. He defines the principles of quality leadership as

- Customer focus
- Obsession with quality
- Effective work structure
- Control yet freedom
- Unity of purpose
- Process defect identification
- Teamwork
- Education and training

He also lists seven items that are the principles of the total quality management program at a specific company that may be seen as closely related to the principles of project management, namely:

- Teamwork
- Strategic integration
- Continuous improvement
- Respect for people
- Customer focus
- Management-by-fact
- Structured problem-solving

The American Society of Quality (“About ASQ”, n.d.) is a global community headquartered in Milwaukee, Wisconsin, USA, with members from more than 140 countries, providing training, professional certifications and knowledge to the quality community in general. ASQ provides certifications in various fields of quality professions, quality managers, quality improvements agents, lean and Six Sigma
practitioners, among others. They have assembled a Body of Knowledge (BoK) ("Body of Knowledge, n.d.) to assist people in passing the certified quality manager exam run by the ASQ. The chapters in the BoK give an overview of the field it covers, namely:

- Leadership
- Strategic plan development and deployment
- Management elements and methods
- Quality management tools
- Customer focused organizations
- Supply chain management
- Training and development

The BoK deals with a wide range of knowledge that the quality manager must possess and the various kinds of tools and techniques needed to become a qualified practitioner.

Raj (Parthasarathy, 2009) considers it essential for the successful quality manager to possess emotional intelligence. He is of the opinion that emotional intelligence is important to all managers, but especially to quality managers as their line of work is complex and becoming even more so. For example, a quality manager has to interact with employees at all levels in the organization, as well as with other stakeholders, and be able to listen to various viewpoints and take decisions without letting emotions get in the way. Emotional intelligence is explained in the paper as being two-phased; firstly relating to personal competence (self-awareness, and self-management), and secondly to social competence (social awareness and relationship management). It is not considered to be acquired overnight, but something that develops with experience and time.

Lionel L Wilson (Wilson, 2000) emphasizes that the quality manager needs to have the following skills:

- Good communication skills, both oral and written
- Be able to plan and achieve objectives
- Function well under pressure
- Organize effectively with attention to detail
- Problem resolution
- Promote the acceptance of quality management activities

Jaclyn R. Jeffrey (Jeffrey, 1992) stresses three broad areas of management behavior that are essential for the quality manager when undertaking quality improvement in organizations, namely:

- Motivation and performance feedback
- Problem analysis and decision making
- Interpersonal managing

According to Jeffrey, the quality manager must be able to motivate employees, in a non-critical way, to take part in quality improvement and be able to give constructive feedback to link performance with organizational objectives. Quality managers must also be skilled in problem analysis and problem solution. They must help managers make better decisions based on facts, and support them in evaluating performance and give constructive feedback. Jeffrey also emphasizes the importance of interpersonal managing skills required by the quality manager in order to win over others to the quality process. In addition, an open and positive environment facilitates team building and reinforces motivation.
Brien Palmer explains (Palmer, 2006) how the classic topics for the quality manager of, *inter alia*, leading improvement teams, resolving customer complaints, analyzing data and managing audits, *i.e.* the technical skills, are not enough when often the quality manager is faced with the task of getting the management to buy into ideas of quality improvements. In Palmer’s view, the “best practice” for quality managers consists of the following:

- Aligning the idea of quality improvements to the corporate strategy
- “Business-izing” it, *i.e.* estimating the monetary value of the idea
- Using a team and a sponsor to promote it

Palmer stresses that it is not so much about persuading management to buy-in as it is about focusing on the skills of the quality managers and other factors that they can actually control.

In John Addey’s paper on the modern quality manager (Addey, 2004), the key message is that quality managers need many different abilities in the “soft area”. They need to act as salesmen, teachers, psychoanalysts, doctors, consultants, detectives, policemen, social workers, researchers, designers, strategists, lawyers, customers and statisticians! He also claims that no one person can possess all these traits and that a team approach may be wise.

Elg *et al.* (Elg, Gremyr, Hellström & Witell, 2011) explore the landscape of quality managers and put forward the question of what is on the agenda of the contemporary quality manager. They explore the roles performed, activities practiced and the characteristics of the quality manager. From their survey, they list in order of relevance 7 roles of the quality manager that are considered most important to a large (212 responses) cohort of quality managers in Sweden, namely:

1. Expert support
2. Internal consultant
3. Analyst
4. Educator and trainer
5. Developer of methods
6. Auditor
7. Strategist

They also discuss the role of the quality department as being, in order of relevance:

1. Customer focus
2. Everybody’s participation in improvement work
3. Standardization
4. Cost focus
5. Competence development
6. Product leadership

They find that the role of the quality manager is at the crossroads and discuss how it might evolve over time, especially how the quality manager might become extinct in favor of Lean Six Sigma practitioners. Some authors have predicted that quality management will become a paradigm in future organizations rather than being confined to a special department.

Burcher *et al.* (Burcher, Lee & Waddell, 2008) make a comparison between British and Australian studies of the experience, satisfaction, aspiration and development needs of quality managers in these two countries. The main source of
job satisfaction for both groups is shown to be opportunities for the quality manager to improve efficiency. Also given a high rating but varying between countries is the opportunity for innovation, product/process development, problem solving, people interaction/feedback and demonstrating personal initiative. The study shows that quality managers seek to enhance their knowledge in special fields such as management in general, ISO 9001 practices, health and safety issues and computer skills. They also mention that formal education is not the main competency of quality managers. They also have to possess experience (applied knowledge), general technical skills, along with aptitude (ease in learning) and attitude. The authors also discuss that quality managers are referred to as “change masters” in that they should show the innovative skills and rapid flexibility which are necessary in a fast-changing world. It is also mentioned that the quality manager should be capable of problem solving and teamwork. Referring to a former study, they conclude that there are three variants of quality management: compliance-oriented, improvement oriented and business-oriented. These have to be balanced in accordance with the situation in each specific organization.

3. RESEARCH PROJECT

Project description and objectives

The research is aimed at compiling statements about the quality manager from the literature and focus group discussions, testing the thesis on a group of quality practitioners, and building a thesis of necessary competencies of the quality manager.

Research methodology

This study was carried out with various methods, both qualitative and quantitative, to gain a broad perspective on the field of research. A 4-step method was used. This involved, firstly, a literature-review, secondly qualitative research with a small group of practitioners in the field of quality management, and thirdly a quantitative research involving a bigger group of people that’s knowledgeable in the specific field. Lastly, the statements about the quality manager were compiled and set forth as a conceptual model that can be helpful to define the profession.

The first step was to elicit trends in the description of desirable traits of the quality manager in the somewhat scarce literature on the competency of the quality manager. The literature review shows trends in the terms used to describe the competency that people think the quality manager should possess as the same terms occur repeatedly throughout the texts. The terms were compiled and the occurrence of the same words/terms was counted in order to gain an idea of the most frequently used terms (Table 1). There is some ambiguity in how terms are used when describing competency. Some authors in the literature use “role” and other use “attributes”, “skills” or “traits” to describe seemingly the same things; thus approximation/assumption has to be used when matching terms. Care was taken to avoid picking up terms that refer to the specific role of the quality manager, as the role can be dependent on the size and sector of the organization.

The second step of the research was to put together a focus group consisting of practitioners in the field of quality management. The five members of the group
were chosen for their mixture of experience of working in both the public and private sectors as quality managers, as well as working as consultants with quality managers in various sectors. The group was invited to a brainstorming session on the competency of the quality manager. The method was as follows:

- The research was explained to the participants for a few minutes, though information had also been sent in advance, explaining the research and “The eye of competence” (EOC) from ICB 3.0 (IPMA, 2006) which would be used for reference
- The participants were asked to sit in silence for five minutes and write down as many competencies as they could think of on separate notes
- The results on the notes were placed on the table for everyone to see
- The results were discussed and the participants grouped together the terms with similar meanings
- The results from the literature review written on specially marked notes were then introduced and also placed on the table to spur the discussion further
- The results were discussed and sorted under the three dimensions of EOC, i.e. technical, contextual and behavioral competencies
- Lastly, a final session was performed in silence for two minutes, where the participants wrote a few additional new notes to be added to the groups of competencies.

The results from the brainstorming session were categorized into the table of terms (Table 1) gathered from the literature. Four new terms emerged from the brainstorming session which did not fit under the terms from the literature, i.e. “contextual knowledge”, “project management knowledge”, “conscientious” and “system thinking”.

The third step in the research consisted of composing explanatory statements for each term from the literature, as well as for the four new terms from the brainstorming session. (See Table 2). Two terms from the literature were left out as they were considered to be connected to the role of the quality manager rather than to the competency. These were “managing audits” and “product leadership”. The statements were then tested by sending out a questionnaire to members of the Quality Management group which is a subgroup of Excellence.Iceland (Stjórnvisi, n.d.) - an association of managers in Iceland with nearly 2,000 members. The objective of the Quality Management group, which consists of 496 members, is to introduce what quality is and to exchange experience and enhance networking between those working in the field. They were asked to answer 24 questions by rating them on a five-level Likert scale (Likert, 1932) (“strongly agree”, “agree”, “neither nor”, “disagree”, “strongly disagree”). The Association of Quality Managers in Public Service was also sent the questionnaire. They have 25 members of whom three also belong to the Quality Management group. The sample thus totaled 518 people. The survey was carried out from 25-31 March 2014. The results can be seen in Figure 1.

ICB 3.0 (IPMA, 2006) is classified into three different sections namely:

- technical competence, which deals with the project management matter which the project managers are working on
- behavioral competence, which deals with the personal relationships between the individuals and groups managed in projects
• **contextual competence**, which deals with the interaction of the project team within the context of the project and with the organization.

ICB 3.0 presents the different sections in a graphical way as “the eye of competence” (EOC), which is said to represent the integration of all the elements of project management as seen through the eyes of the project manager (IPMA, 2006).

In the fourth step of the research, while trying to find a reference frame to capture the results of the gathered competencies considered necessary for the quality manager, EOC was the first model to be considered. It is in many ways a useful concept since the model is graphic, easy to understand and remember, and deserves attention for its uniqueness. In our study with the focus group, the competencies gathered from the brain-storming session were sorted under the three different sectors of EOC. Surprisingly, most of the competencies were considered to belong to the behavioral-sector of EOC. It was therefore decided to try to find other similar, but slightly different, terms to sort the results under. During this step the terms knowledge, skill and competency came up for consideration.

A definition of the terms knowledge, skill and competency that links them together can be found in the general section of the Icelandic national curriculum guide for compulsory schools (Ministry of Education, Science and Culture [MESC], 2014) while explaining the aim of compulsory education. Competency is defined as the ability to utilize knowledge and skills, but more thorough definitions are given to each term:

“**KNOWLEDGE** is an accumulation of facts, principles, theories, and methods. It is both theoretical and practical. Knowledge is acquired by watching, reading, listening, discussing or from experience through action.” (MESC, 2014, p. 37).

“**SKILL** is both intellectual and practical. It involves ability to utilize methods, practices and logical thinking. Skills are acquired through exercising methods and practices.” (MESC, 2014, p. 37).

“**COMPETENCE** involves an overview of and ability to utilize knowledge and skills. The prerequisites for competency are a sense of responsibility, respect, broadmindedness, creativity, moral awareness, and the individuals’ understanding of their own capabilities. Additionally, self-confidence and the ability to work autonomously are of importance.” (MESC, 2014, p. 37).

It was decided to use this reference frame to fit the results from the literature study into. The objective was to build a conceptual model of the competencies of the quality manager which could be a framework for quality practitioners to gain a deeper understanding of the profession. (See Figure 2).

### 4. RESEARCH RESULTS AND INDUSTRIAL IMPACT

**Results**

Table 1 below shows the results from the compilation of terms from various documents found in the academic literature. The results from the brainstorming session are also mapped in the table. The assignment of a position for a term in the table is speculative in many ways, because of the ambiguity of the use of the terms.
Only those terms or words that came up more than once have been kept in the table. Thus, many terms that only occurred once have been omitted in the results, including terms such as “motivation”, “legal knowledge”, “technical competence”, “standardization” and “internal consultant”. Many terms were positioned under “emotional intelligence”, such as “flexibility”, “attitude”, “psychoanalyst” and “social worker”.

The BoK from ASQ (“Body of knowledge”, n.d.), gets the most hits in the table and might be very close to a full-blown mapping of the competencies necessary for a quality manager.

Table 1. Compilation of terms of competencies for quality managers from the literature and brain-storming session. The frequency of occurrence of the terms is also shown.

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Emotional intelligence</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>7</td>
</tr>
<tr>
<td>Problem resolution</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>7</td>
</tr>
<tr>
<td>Strategist</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Promoting acceptance of QM activities</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
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<td>5</td>
</tr>
<tr>
<td>Leading improvement</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Teamwork</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Communication skills</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
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<td>4</td>
</tr>
<tr>
<td>Analysing data</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Educator and trainer</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Customer focus</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
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<td>4</td>
</tr>
<tr>
<td>Cost focus</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>x</td>
<td>x</td>
<td></td>
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<td></td>
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<tr>
<td>Planning</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>3</td>
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<tr>
<td>Achieving objectives</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
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<td>3</td>
</tr>
<tr>
<td>Managing audits</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
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<tr>
<td>Product leadership</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
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<td>Quality management tools</td>
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<td>x</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Performance feedback</td>
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<td>x</td>
<td>x</td>
<td>x</td>
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<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Statistics</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
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<td>2</td>
</tr>
<tr>
<td>Functioning under pressure</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
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<td>2</td>
</tr>
<tr>
<td>Effective organization</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
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<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Experience</td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Leadership</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Table 2 shows the statements composed in order to explain further the meaning of the terms from Table 1. It also demonstrates how the statements were assigned a type from the three types: competency, knowledge and skills (MESC, 2014). The assignment of type is somewhat speculative and might be challenged.
The statements shown in Table 2 (omitting the further explanations) were sent out in a survey to the Quality Management group (Stjórnvísi, n.d.). 84 people, out of 518 on the mailing-list, answered the survey. The results are shown in Figure 1. The participation rate was 16%, which is low, but the size of the group participating is considerable and should give an indication worth considering.

The answers are sorted according to the score for the highest agreement i.e. strongly agree.

<table>
<thead>
<tr>
<th>Type</th>
<th>Statements</th>
<th>Explanation of statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>competency</td>
<td>Emotional intelligence is a necessary trait in the quality manager</td>
<td>A mixture of self-awareness, self-management, social awareness and relationship management</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager must be objective-driven</td>
<td>Sets clear objectives and meets them</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager has a mindset for problem resolution</td>
<td>Detects problems and brings them up for a solution</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager must promote the acceptance of quality management throughout the organisation</td>
<td>Convinces everybody in the organisation of the benefits of QM</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager must have an analytical mindset</td>
<td>Is able to see trends and patterns and to analyze various data</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager is competent in giving constructive feedback</td>
<td>Motivates people by giving performance feedback in improvement work</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager has the competency to work under pressure</td>
<td>Is able to show self-control in stressful situations</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager is experienced in a general way</td>
<td>Applied knowledge that comes with experience as in contrast to formal education</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager shows leadership behavior in an appropriate manner</td>
<td>Chooses the appropriate leadership style and level in a specific situation</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager is conscientious</td>
<td>Pays attention to details</td>
</tr>
<tr>
<td>competency</td>
<td>The quality manager is competent in system thinking</td>
<td>The ability to see how things connect into a system</td>
</tr>
<tr>
<td>knowledge</td>
<td>The quality manager has good knowledge in the use of traditional quality management tools</td>
<td>Uses documented change-management methods</td>
</tr>
<tr>
<td>knowledge</td>
<td>The quality manager must have thorough understanding of customer needs</td>
<td>Identifies the customers outside the organisations and how their needs link to QM</td>
</tr>
<tr>
<td>knowledge</td>
<td>The quality manager must always keep in mind the cost aspect</td>
<td>Is able to identify the cost aspect, i.e. the monetary benefits of QM</td>
</tr>
<tr>
<td>knowledge</td>
<td>The quality manager has good knowledge in change management</td>
<td>The 7 basic quality tools: Cause and effect diagrams, flowcharts, check sheets, Pareto diagrams, histograms, control charts and scatter diagrams</td>
</tr>
<tr>
<td>knowledge</td>
<td>The quality manager has knowledge of statistical analysis</td>
<td>Knowledge of classical statistical methods</td>
</tr>
<tr>
<td>knowledge</td>
<td>The quality manager seeks to understand the context of the organisation</td>
<td>Pays attention to the context and its influence on the QM-work</td>
</tr>
<tr>
<td>knowledge</td>
<td>The quality manager has excellent knowledge of project management</td>
<td>Knows how to apply the project management concepts</td>
</tr>
<tr>
<td>skill</td>
<td>The quality manager must have excellent communication skills</td>
<td>Both communication techniques, such as verbal and written, and interpersonal skills</td>
</tr>
<tr>
<td>skill</td>
<td>The quality manager must possess skills in effective planning</td>
<td>Makes a plan and carries it out successfully</td>
</tr>
<tr>
<td>skill</td>
<td>The quality manager is a skilled strategist</td>
<td>Makes a strategy for implementing QM and links it to business strategy</td>
</tr>
<tr>
<td>skill</td>
<td>The quality manager must have skills in educating and training co-workers</td>
<td>Is able to train and educate the staff in QM matters</td>
</tr>
<tr>
<td>skill</td>
<td>The quality manager possesses excellent skills in teamwork</td>
<td>Builds a team, leads it and works with it successfully</td>
</tr>
<tr>
<td>skill</td>
<td>The quality manager is skilled in organizing effectively</td>
<td>Efficient organization with attention to detail</td>
</tr>
</tbody>
</table>
According to the survey (Figure 1), communications skills are the skills that most members of the Quality Management group agree as being a necessary trait. Teamwork and promoting QM were also ranked highly. This indicates that when recruiting a quality manager one should look for these traits as they seem to be important for practitioners in this field. All these traits could be called "soft skills" in contrast to "hard skills" i.e. technical skills. This indicates that soft skills are highly valued in the field of quality management.

Looking at the results in Figure 1, the conclusion can be drawn that the members of the Quality Management group have the least agreement with the statements saying that the quality manager should have cost aspects in mind and knowledge of statistical analysis. Next in order are statements that the quality manager should be experienced in a general way and be a skilled strategist.

In every organization cost calculations must be very much a focus of attention for top management. Why is it then that quality managers don’t find it necessary to look at the cost aspects? It is hard to put a cost label on quality work as the benefits are not always obvious. Might it be that quality managers fail to estimate the cost aspect of quality work and thus miss out on the opportunity to "business-ize" their
work? The ability to promote the acceptance of quality management throughout the organization is ranked very highly in the competency survey. Is it possible that quality managers don’t get the much-needed support from top management because they fail to consider the cost aspect in promoting quality work?

Knowledge of statistics is also ranked very low in the survey. One can only speculate on the reason, as well as the impact that this has on the work of the quality manager. This lack of interest in statistics is in contrast to the highest ranked competency, i.e. the communication skills, as use of statistics can be helpful when communicating, especially to top management.

In the survey the participants mentioned some other traits they thought were also necessary for the quality manager, such as skills in process design, understanding internal audits, patience, good listening skills, understanding the PDCA-cycle, knowledge how to use performance measurements, choosing the right people to work with and being quick to solve problems. One comment was on the different roles played by the quality manager in different organizations e.g. dependent on the size of the organization. Thus, the bigger the organization, the more strategic the role of the quality manager. The necessity of the independence of the quality manager was also stressed.

Based on our study, we have now come up with a new conceptual model to present the findings from the research, namely "The House of Competency" of the quality manager (the House). The House was put together by using the terms from the literature and then sorting them into types from Table 2. In the different ranking of the terms in the survey (Figure 1), no clear indication was given on highly inappropriate terms. Thus, all the terms coming from the literature were kept in the House, but they were put in order of preference i.e. the most agreed upon put highest, and the least agreed upon lowest. It was also decided to use the findings from the survey to add to the competency list the term "knowledge of the PDCA cycle" and to reinstate the term "skills in internal audits", which had been abandoned earlier in the survey.

The two pillars that the House rests upon are "knowledge" and "skills", though on top lies the "roof of competency". The construction of the House symbolizes that the pillars have to be strengthened, i.e. the quality manager has to work on gaining knowledge and developing skills in various fields in order to be able to gain the desired competency. The quality manager has to strive to balance the knowledge and skills to prevent the House from becoming lopsided. The roof of competency needs to rest on strong pillars and if the goal is to broaden the roof it must be done by strengthening the pillars of knowledge and skills.
Figure 2. A new conceptual model presenting the findings from the research: The House of Competency of the quality manager.

Comparing ICB 3.0 (IPMA, 2006) with the House is not straightforward. Many terms are found in both the ICB standard and the House, but other terms are more difficult to correlate. An indication on most of the terms in the House can be found in the standard, but the importance and weight they are given seem to vary.

Implementation and exploitation

The House of Competency can be a useful tool for quality practitioners and those with an interest in quality practices. It can be used as a method for quality managers to evaluate their own competencies and understand where they are lacking. It can give an indication on where to put in some effort to develop knowledge and skills in order to gain further competencies. The House could also be used by organizations to understand what competencies should be sought when recruiting quality managers. In organizations with various quality practitioners, the House can be used to rank the quality competency in situ.
Limitations

The ambiguity in the use of terms describing competencies might have given misleading results in the literature review, resulting in some terms being mistakenly omitted and others getting a higher count than deserved (Table 1).

The response rate in the survey at only 16% limits the reliability of the survey. An additional limitation is the possible different interpretations of the statements by the participants due to incomplete explanation of terms. The different experience of quality management, because not all members of the group work as quality managers, might also have affected the reliability of the answers.

Finally, a different understanding of the main terms competency, knowledge and skill might also affect the position of terms in the House and can be challenged.

5. CONCLUSIONS

“Rome wasn’t built in a day” and neither was the House of Competency. No single individual can possess all the competencies described in the House in copious and equal amounts. Nevertheless, quality managers can benefit from entering the House, as it can help them to gain an understanding of the competencies needed and hence give an idea on how to reinforce the House of Competency.

Further research with a larger sample has to be performed to gain a more thorough understanding of the desirable competencies of the quality manager and thus to further strengthen the construction of the House. It could be interesting to broaden the sample in the survey by asking the recruiters of quality managers and their bosses to rank the statements of the competencies in order of significance.

6. ACKNOWLEDGEMENT

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7. REFERENCES


