Quality Management Implementation: A Cross-cultural Study in European and Indian SME’s

Colin Bottomley* John Dalrymple** YK Bushan*** Asko Mietenen****

* Director, Leicester Centre for Enterprise, 49 Oxford Street Leicester
**Computing Devices Professor of Quality Management, Director, Centre for Management Quality Research, RMIT University, Australia.
***Director, Narsee Monjee Institute of Management Studies, Mumbai, India.
****Professor, University of Lappenranta, Finland

Introduction

This paper concerns the outcomes of collaboration between the University of Stirling and partners at the University of Lappenranta, Finland and NMIMS in Mumbai, India on the development of Quality Management systems in SMEs in those three countries. The three institutions have all introduced variants of a training programme designed to support the introduction of Quality Management systems in SMEs through the secondment, either internal or external. This paper compares and contrasts the process and outcomes associated with the programmes mounted by the three institutions on a longitudinal basis.

The initial work began in Scotland in the early 1990s at a time when there was a demand for the introduction of Quality Management systems, mainly ISO 9000 (BS 5750) amongst SMEs. This demand was in response, mainly, to the insistence of large corporate clients of SMEs who were making ISO 9000 certification a condition of contract. SMEs, though feeling coerced and also reluctant, saw the need to establish appropriate systems. The cost implications seemed very onerous – the cost of consultancy services was believed to be excessive and most SMEs could not justify the employment of a Quality Management expert. Experience of consultants was not encouraging. The programme was also a response to United Kingdom Government initiatives on Standards, Quality and International Competitiveness. From those initiatives a more efficient approach to quality management developed and quality became a business imperative.

It was in that context that the Scottish Enterprise Foundation and the Scottish Quality Management Centre at the University of Stirling developed a most cost effective and appropriate approach to quality in SMEs. They had been running Management Extension Programmes and their variants as a cost-effective means of supporting SMEs through the secondment of experienced but currently not-working senior executives to undertake growth oriented projects (usually six months) in local SMEs. Stirling decided that it could adapt this process to the area of Quality Management. A programme was designed and developed in which participants received intensive training in Quality Management concepts and techniques after which they took responsibility for introducing systems into local SMEs.

The concept proved to be very successful and a series of ten programmes were mounted over a four year period. The findings of the programme were disseminated at conferences throughout Europe. Through such presentations links were developed with the University of Lappeenranta in Finland which indicated that it would be interested in mounting a similar programme. Recession and downsizing meant that there was a supply of experienced personnel. In Finland the demise of the USSR was having a significant impact on the economy, resulting in a significant number of executives seeking new careers or to re-establish their careers.

The University of Stirling was linking with Narsee Monjee Institute of Management Studies in Mumbai, India with British Council support to explore ways of collaborating on enterprise and entrepreneurship. This resulted in establishing a number of joint programmes in Mumbai. Further, the interest in Quality Management in India meant that training programme for SMEs in the Mumbai conurbation were required. Clearly, cost implications were a major issue and the two partners were able to secure support from the UK Overseas Development Agency, now Department for International Development, to mount two programmes over a 2 to 3-year period.

Programme Structure

A number of objectives were detailed at the outset of the programme in Scotland, namely:

- To provide smaller, growing companies with an full-time, short term, extra resource in the form of an unemployed young graduate, young professional or experienced manager (but without prior quality management systems experience) to develop systems that would help the companies to apply for ISO 9000 certification in the overall context of introducing total quality systems.
• To provide participating companies with systems that would assist in protecting their markets in UK whilst exploiting new markets in Europe and elsewhere by assuring potential clients of the quality of their offer through ISO 9000 certification.
• To provide training for unemployed graduates and managers and professionals who wish to pursue a career in quality management, thus adding to the pool of quality management professionals.
• To provide a secondment in a small or medium-sized enterprises in which to practice the skills developed.

In setting these objectives a number of issues were being addressed: Many local SMEs were unlikely to have the requisite in-house skills to be able to introduce quality management systems:
• Owner-managers would have little time or inclination to dedicate to the introduction of quality systems
• A shortage of practitioners available to undertake such work, as entrepreneurs were reluctant to pay consultancy rates. This was despite a government initiative to provide subsidised consultancy. A short term consultancy was unlikely to prove successful since developing Quality management systems requires a sustained effort over an extended period, perhaps in excess of 1.5 years. This would be true where an SME was starting from scratch with no formal quality systems.

Further motivators related to the skills level of programme participants and the perceived increase in demand for companies providing products and services assured to national/international level quality assurance standards. For participants it provided opportunities to demonstrate their abilities to potential employers and the requisite vocational experience for further quality management training. Equally, participants identified that career opportunities for quality management practitioners were emerging and that those with experience would be in demand. This was perceived as a relatively inexpensive means of introducing quality management within SMEs whilst increasing the number of quality management practitioners in Scotland. Participating in the programme met the demands of corporate clients and, often, provided a marketing edge in the short term. Funding for the programme was provided through the Local Enterprise Company under its Adult Training Initiatives.

The programme was based on a six-week intensive training programme in Quality Management systems and techniques for a mix of experienced managers and younger graduates and professionals. It was believed that a range of skills/experience would help to stimulate the group. Following training the participants were seconded for a period of six months to introduce quality management systems into the host company. Most companies wanted to achieve certification, but that was not feasible for some in the timescale available. Progress towards certification for the company and employment for the participant with the host company were the ideal outcome in many cases. Although the content of the programme was broadly based with a total quality management approach the main focus was upon the quality assurance standards which formed the basis of most company needs. Themes were as follows:

<table>
<thead>
<tr>
<th>National Quality Campaign</th>
<th>Statistical Techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Assurance and Quality Control</td>
<td>Designing in good quality</td>
</tr>
<tr>
<td>Quality Management and Marketing</td>
<td>Quality Circles/employee involvement</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Project management</td>
</tr>
<tr>
<td>Interpersonal Skills Development</td>
<td></td>
</tr>
</tbody>
</table>

The programme was underpinned by an SME orientation and themes were taught from an SME standpoint emphasising the role of the participant working within the SME context.

The Scottish Experience

As indicated earlier the University of Stirling mounted some 10 programmes of the Quality Management variant. This meant that some 180 individuals were recruited whilst an equal number of organisations were recipients of support. Participants received no payment but were able to retain any unemployment and other benefits. Host companies contributed some £100 -£120 per week to the cost of the programme.

Recruitment:

Participants were a mix of young professionals and graduates and experienced senior executives with a broad range of disciplines and experience. Specific interest in the SME sector and quality management as a means of enhancing or starting a new career were prerequisites. Recruitment was based on informal interviews with two of the programme managers. The companies were recruited through the industrial liaison executives of the University of Stirling. Mailshots, direct contact and referral by other agencies were all used. The number of companies seeking assisting exceeded supply at the outset although this balance was not quite maintained over the whole series of programmes.
**Participant Findings**

*Training*

The taught part of the programme was managed by the expert staff at the Quality Management Centre with support from the Scottish Enterprise Foundation. Teaching was interactive and case study based. The focus was on what participants would need in their project work. Although there was a strong emphasis on ISO9000, participants were trained to adopt a total quality management approach. Empowerment of individuals to improve their own work and customer orientation were shared central. Quality improvement teams and the concepts of rewarding and recognising quality were also introduced. Over the series of programmes the training was extended from 4 weeks to 6 weeks in order to better prepare the group prior to joining their host companies. The input on the ISO 9000 standards was increased in response to requests from participants. The emphasis was on the practical aspects of the programme.

Each participant was allocated to a personal tutor during the secondment. The personal tutor provided support to the participant and to the owner-manager during the project. Meetings were held regularly though on a flexible basis, in-company or elsewhere. The process was driven primarily by the secondee. For the funding agency the major objective was to get experienced managers back into work and latterly, participation was restricted to individuals who had been out of work for a six-month period. A measure of success for them was the number of individuals who obtained gainful employment. For the institution aid to companies was important, with the job opportunity for the individual a close second. The funding rules also changed latterly to emphasise the agency’s ‘back to work’ objective.

*Evaluation:*

Each programme was individually evaluated, but it was decided to undertake a longitudinal study over a three-year period to measure the impact of the programme. Structured interviews were conducted with the groups who participated. Questionnaires which had been piloted were administered by direct interview. They were then adapted for structured telephone interview and for a postal survey. Direct interview was successful, but where this was not possible structured telephone interviews and postal arrangements were made. Traceability and persistence were important features of the work. The reception from target groups was very positive, ensuring appropriate data was obtained.

*Participant Findings:*

**Motivation and perception:** Most were interested in and committed to Quality Management and wished to pursue a career in quality management. Almost all participants regarded the programme as an appropriate mechanism to achieve their aims.

**Training Programme:** Participants indicated that the programme was presented in an environment favourable to learning whilst teaching techniques were equally helpful. The opportunity for group interaction was very positively created. The training programme, especially the extended variant, was sufficiently long and detailed to allow them to obtain a comprehensive toolkit to use during the project period, especially with tutor support.

**Financial rewards:** Participants regarded the lack of “income” during the programme as having negligible effect upon their work rate or enthusiasm. However, a modest stipend of about £100.00 per week would have been a satisfactory recompense for their involvement on the programme.

**Career development:** At the end of the three year study period almost 50% of participants were in full-time employment with 26% either between jobs or just about to take up a new post. Over 65% of the participants believed that the programme was beneficial in terms of determining their future career paths and in gaining full-time employment.

**Heightened quality awareness:** Almost 405 of participants were working in a quality management discipline either as a full-time or part-time employee or consultant. Many of those who had secured jobs with their secondment company were often found to be acting as quality manager but also in some other functional area. This broad spectrum of skills often contributed to securing employment.

*Host Company Survey*

**Motivation and perception**

The secondment providers indicated that they became involved in the programme because:

- It assisted in achieving cost/efficiency benefits that ISO 9000 would offer
- The acquisition of certification would act as a marketing tool.
- Offered good value for money.

**Effectiveness of Secondment Programme:** 65% of companies believed that third party certification would accrue from involvement in the programme, whilst the others felt that the programme had, at least moved
them along the path to certification. However, they agreed that their objectives had only been partially achieved, perhaps because of too high expectations in the timescale available.

**Retaining the services of the participant:** Just over 50% of companies did not retain their secondee. Success in achieving ISO 9000 certification stood at 15% (mid 1990’s) and the majority of the others were committed to quality assurance standards. Where the participant was not retained the cost of employing the person on a full-time basis was an issue. However, a number were able to fund the participant on a part-time basis. A number of participants took this path, finding other quality management work in other companies.

**Value for money:** In a number of cases the programme was not believed to entirely good value for money. The secondee leaving the programme for permanent employment was the main cause, since the owner-manager was left without support until the subsequent programme.

**Conclusion from Scotland**

In all the overall perception of participants and owner-managers was very positive and progress towards a new or revitalised career and/or towards third party certification was largely achieved. The funding bodies achieved good job related outcomes from the programme whilst the institution was able to forge sound links with the local SME community and help SMEs to improve quality assurance. Participants rarely expressed any real concern about the benefits that accrued from participation, apart from the fact that they receive no payment during the programme. Most were able to rationalise this as an investment in a new or improved career. Inevitably, the programme was not a foolproof guarantee of installing, maintaining and monitoring sound quality management systems, nor, of course a guarantee of achieving third party certification. However, in the vast majority of cases substantial progress was made in the quality field.

**The Finnish Experience**

The University of Lappeenranta became aware of the Scottish experience from a paper presented to an ESBS seminar. It was felt that the programme had relevance to the Finnish context when the level of unemployment was increasing. Following discussions with Stirling it was agreed that there was a fit with Lappeenranta’s own needs and the needs of the Finnish economyn and the Scottish model was adopted with just a few modest changes.

The programme was mounted in 1995-96 in Imatra, a few miles from the Russian border, where Lappeenranta University of Technology (LUT) has a training unit. The only significant model change was that tutoring was restricted to groups of 5 by limited resource. Imatra had a 20% unemployment level in the mid 1990s owing to the downsizing of large corporations in the traditional pulp, paper and metal industries – so not too many SMEs. The major objectives for LUT were to strengthen those SMEs that were already there and maintain survival through quality improvement. LUT continues to be active in the SME field including policy and practice despite the dominance of large corporations in that part of Finland. The Employment Service, which was involved in the programme, was keen to support well educated, unemployed executives. It perceived that training in quality management would give individuals an advantage in seeking a job.

Most participants fell into the 26-49 year age grouping and some had over 20 years of experience whilst some just a few years. The background was variable but many had technical backgrounds and training especially in the construction industry.

The evaluative survey of the programme at a time several months after the completion of the programme showed the following:

**Participants Survey**

**Motivation/perception:** All participants were very keen to obtain a job and quality management was an area in which new careers might be forged.

**Recruitment:** This occurred through mailshots and the Employment service. This was deemed to be acceptable and appropriate.

**Effectiveness of training programme:** Participants were mostly positive about the training programme and felt reasonably prepared for working in the host companies. The general climate during the training was felt to be very good and supportive. However, many of the participants believed that they did not spend enough time working in the company and a few said that they would have like more support from the company representatives – it was a bit lonely working on implementing the quality standards.

**Career development:** Some six months after the programme some 65% were in employment, with 40% working for their host company whilst 25% were in other training, 10% were still unemployed and one participant was on maternity leave.
**Host Company Survey**

**Motivation/perception:** Companies generally speaking became involved because they had a quality improvement project that needed to be completed, but had insufficient skilled resource to complete it. They were looking for a cost-effective way of achieving success in this area.

**Meeting company objectives:** Although for the majority of organisations the objectives were reasonably well met, a number had rather high expectations of what the programme could achieve for them. At first sight therefore, they had, perhaps, some reservations about success, but were able to see how much was achieved in a relatively short time scale after the completion of the programme. The fact that some 40% had retained their secondee was indicative that they generally believed that the programme was successful in terms of quality improvement and in acquiring a good member of staff.

**Value for money:** Despite high expectations the fact that in all cases but one the companies stayed with the programme throughout was an indicator that the programme offered value for money.

**Conclusions from Finland**

The overall impression of the Finnish version was that it worked well for both participants and companies and that with little real modification to Stirling programme the project was successful. It may be that the level of recession in both countries was similar in the early to mid-1990s and that both the Central Scottish and Eastern Finnish economies are dominated by larger corporations in peripheral regions of the EU. Perhaps, too, cultural differences were not significant between the two regions.

**The Indian Experience**

The Indian version of the quality management programme was being considered at about the time that the Finnish programme was starting. The interest in India for such a programme revolved around the fact that in the mid-1990s the Indian economy was significantly changed and liberalised by the then government. The result of liberalisation policy was that an increasing number of non-Indian corporations were setting up businesses and joint ventures in the Indian economy. Such entrants were creating competition for local businesses and the SME, often sub-contractor to large corporations was beginning to be pressurised into seeking ISO 9000 certification. In order to protect local markets and to satisfy the needs of key clients Indian small scale industries needed to consider how they might achieve certification. Further, this ingress of new competition forced Indian companies to seek markets outside of India. ISO 9000 certification was perceived to be an appropriate means of providing a marketing edge.

Through the links between University of Stirling and Narsee Monjee Institute of Management Studies (NMIMS) in Mumbai a good working relationship in the quality management field had developed. NMIMS was developing a reputation in the SME field in the Greater Mumbai conurbation to add to its existing reputation as a leading Business School in the top 10 of Indian Business Schools. The programme was chosen as an appropriate collaborative project. At the time of the first pilot programme the Indian economy was buoyant with relatively low levels of manager and graduate unemployment, a situation which continues.

Thus, despite a clear need being identified, the “Stirling model” based on the skilled unemployed was not appropriate. It was decided that programmes in which “internal secondees” were utilised as the putative quality manager ought to be considered. A member of staff, sometimes the owner-manager himself/herself would receive training in quality management on a part-time basis over an extended period, after which he/she would carry out the quality systems installation and monitoring in the company. The participant would receive tutorial support from the quality management experts from NMIMS in a similar way to participants of the Scottish and Finnish programmes. In the Indian context there was no resistance to ISO 90000 standards. The motivation of the majority of SMEs in the Indian programmes was for certification. Two programmes were completed by March 1998. Evaluation of both was in Spring 1998.

Participants attended in the evenings and at weekends and were happy to attend over the weekend as travelling is easier. Participants travelled from many parts of the Mumbai conurbation to the training centre. The Indian programme was the only large city based programme. Following the first programme a small number of modifications were made to ease the problems associated with running the training part-time and the relatively high charge to the companies for participation and for tutoring. The tutoring on the second programme was offered as an option. This was undertaken for marketing reasons.

**Participants Survey**

**Motivation and perception:** Some participants were selected by the owner-manager to join the training programme whilst some volunteered and 15% of participants were owner-managers themselves. However, over 80% of participants indicated a desire to be better quality practitioners and 75% believed that involvement in the programme would aid career progression (one became a third party assessor for an
international certification agency). Some were so motivated that they volunteered and paid the training fees themselves.

**Effectiveness of training programme:** The participants were most supportive of the training, feeling that the interaction of individuals through the practical parts of the programme was very positive. A slight bias for manufacturing industries in the training was noted by some service sector participants, though this did not detract from the overall effectiveness. Lecturers and tutors were believed to be very supportive and instructive with good case materials. The focus upon ISO9000 standards was not perceived to be inappropriate. Indeed, this approach was believed to be logical – that for them total quality management approaches fitted better on a post ISO9000 certification process. A request was made for the introduction of company visits during training to see quality improvement plans in operation.

**Career development:** Following the evaluation, some 12 months after the completion of the first programmes all organisations had made progress. In all cases the participant was still working with the parent company including work on quality management, excepting in one case where the participant had been promoted to a senior position in another company and was now employing someone else to investigate the quality issues. It was agreed by all participants that involvement in the programme that it had had a positive impact on their working activities and that the quality improvement progress was marked. One company had, however, in that period been concentrating on the installation of new plant and was starting to build its quality assurance activities around that changed circumstance.

**Value for money:** As a number of participants had paid there own fees it was good to identify a positive approach to questions about value for money

**Host Company Survey**

**Motivation and perception:** This was driven by the need for the introduction of quality management systems for the reasons indicated.

**Meeting Company Objectives:** The great majority of companies believed that their objectives had been met, three companies had already achieved ISO 9000 certification and were moving forward towards a more total quality approach. Tutoring services were perceived to be adequate and even where offered as an option in the second programme almost 50% were keen to take up that option.

**Value for money:** Despite the added cost of tutor support companies were happy with the cost implications of involvement in the programme and would recommend it to other owner-managers.

**Conclusions from India**

The overall impression from the Indian programme was that it satisfied a specific need amongst small-scale industries and that despite the part-time nature of the training, this was not a barrier to progress. NMIMS has already started its next programme in a series. Equally, the utilisation of the “internal secondee” was not a barrier to progress. The important issue as in Scotland and Finland was the opportunity to have someone dedicated to the task of introducing and championing the quality assurance process.

**Discussion**

It is interesting to note that some 15 programmes have been completed or in progress in three countries. It is especially encouraging to note that positive responses of participants and companies have been generated throughout an 8.5-year period. The structure has not been significantly changed, just fine-tuned to suit nuances in local need. Indeed, what might have been assumed to be a substantial change to a part-time programme for the Indian context with “internal secondees” has not altered the positive outcomes of the programme. This positivity is not based solely on the achievement of third party certification per se, but more upon the introduction of a quality culture in the small companies. The participant has been an agent of change, the champion of quality and the inculcator of quality philosophy. Equally, the participant has been the internal trainer to the owner-manager and other key staff in the small company. In the UK, there now seems to be less emphasis upon ISO9000 standards. Perhaps, too, there is less pressure from large corporations to impose the standards.

In Finland it is suspected that the situation is similar to Scotland. However, in India the espousal of quality management systems with an emphasis upon third party certification seems undiminished with a willingness to develop systems and to move on to total quality management/Japanese approaches as being normal and natural. In the United Kingdom there is now more emphasis upon benchmarking and business excellence models. In summation, though, it can be stated, that this series of quality management training programmes seem to confirm that geographical and cultural environments do not seem to have had any negative impact upon the delivery and embedding of such programmes in SMEs. Perhaps, we can conclude that the issues and challenges that impact upon SMEs in most environments are not dissimilar, but may be influenced more by local economic and policy activities.