

**TRAINING AND MANAGEMENT
DEVELOPMENT OF QUALITY
MANAGERS**

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Abstract

This project's aim is to identify the training and management development needs of Quality Managers. Training is regarded as a very significant factor in the improvement of quality in organisations, once commitment has been achieved. The project explored whether Quality training was objectively, systematically, and continuously performed in Australia, and if so, by whom. Using a combination of questionnaire and case studies, the aim of the research was to examine whether the training needs of Quality Managers in Australia were being realised. The study included Australian quality practitioners and professional associations. Questions asked of Quality Managers included: what personal and professional management development training they have had in the past 5 years; what training programs have they provided for others in that period; what current programs are in progress, if any; how effective were their newly acquired skills; and what do they consider to be their needs and the needs of the organisation, for future development. Further, a number of quality management professional associations were contacted regarding their training and management development programs for Quality Managers. Questions of interest included: what do they offer; how do they determine the needs of their members; who provides these programs; how do they communicate these programs to their members; how do they communicate these programs to their members; how do they evaluate the success or otherwise of their programs; and by what process of evaluation do they determine future needs. This data has been collated and analysed and has been discussed in depth amongst both practitioners and academics in Australia.

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INTRODUCTION

Quality management is now an established field. Although current trends suggest that quality is increasingly integrated with other organisational processes (Neergaard, 1999; Redman & Grieves, 1999, Waddell 1998), there still appears to be a need for one or more employees to manage the quality process. In the past however, there has been little research on where and how these 'quality managers' acquire the specific skills needed to fulfill their unique role within the organisation.

This research partially reduces this empirical void by examining the training experiences and aspirations of Australian and New Zealand quality managers. Individuals responsible for quality in one thousand randomly selected organisations from the JAS-ANZ Register of Accredited and Certified Organisations (Standards Australia, 1998) were asked to complete a comprehensive questionnaire on their personal and professional development.

The seven-page questionnaire was designed specifically for this research and provided the researchers with a mix of both qualitative and quantitative data. A total of 235 fully completed and usable questionnaires were returned, producing an overall response rate of approximately 23.5%. This response was considered to be adequate given the length of the questionnaire and the fact that mail surveys have a particularly high no response rate (Neuman, 1997).

Some of the questions addressed in this study include:

- To what extent is training (especially for the quality manager) considered an important aspect of the quality process?
- Do quality managers receive formal training in quality?
- What are the most popular courses undertaken by quality managers?
- How does the situation differ compared to previous years?

- Who are the providers of this training and are there some providers that appear to be more effective than others?
- What training programs are planned in the future?, and
- What factors constrain / limit quality training?

RESPONDENT PROFILE

Of the total of 235 survey respondents, 180 or 76.6% were male which shows a variation in the Waddell research where there were no women quality managers represented in that survey (Waddell 1998). Of recent years there has been an increase in quality certification in service industries and this may result in an increase in the proportion of women in the role of quality manager. The age of the survey group ranged from 20 to 69 with 65% of respondents being 40 or more years of age. Of interest is that 13% are 20-29 years of age. What does this mean for the future direction of quality management and subsequent industry training needs? With respect to the highest level of formal qualification, 32% have an undergraduate degree where 13.6% have a post-graduate qualification and 24.7% are secondary school educated to the level of year 12.

Professional Association(s)

Bearing in mind that respondents may belong to more than one professional association, seventy different professional associations were listed. The two most common professional associations were the Institute of Electrical Engineers (IEE) and the Quality Society of Australia (QSA) with respondent membership rates of 12.6% and nine per cent respectively.

Table 1 – Professional Associations

Professional Association	%
IEE	12.6
QSA *	9.0
AIM	6.6
AHRI	6.0
RACA	5.4
AOQ	4.2
CPA	3.6
AQC *	3.0

Tenure

Almost 65% of respondents worked for their organisation for ten years or less. This was particularly interesting given the above information that indicated that 65% of respondents were between the ages of 40 and 69. Six per cent have been with the company for one year or less while 20% have been with the company five years or less. With regard to their tenure in their current position as a quality manager, 43.5 % of respondents have been the quality manager five years or less whereas 16.3% have been a quality manager less than two years and 13.6% have been in this position one year or less. This is an area that requires further investigation.

Role prior to current position

Only 22.1% of respondents claimed to be operating in a 'quality' related role prior to their current position. It was also interesting to note that six per cent of respondents were consultants before their current position,

suggesting that a number of external agents are being hired on a permanent basis whereas 43% came from a diverse range of backgrounds, for example general management, project management and sales.

Responsibility for Quality Management

The majority of respondents (63.6%) had responsibility for quality in their entire organisation. Further, 33.1% of respondents indicated that they were not responsible for any other functional departments in the organisation while the remaining respondents occupied a range of additional roles, the most common being general administration (12.8%) and occupational health and safety (9.4%). Contrary to what researchers expected, only 3.4% of respondents described their other functional responsibility as 'human resource/personnel management'.

TRAINING FOR QUALITY

This section presents data concerning the importance of training in the management of quality as stipulated by respondents. We are aware that there may be a degree of overlap in the terminology used by our respondents to describe training programs.

Formal training qualifications of quality managers

When respondents were asked if they had any formal 'training' qualifications, significantly, approximately 40% indicated that they did not. In Table 2, the remaining respondents presented a diverse range of formal 'training' programs. Respondents were given an open-ended question about whether and how they perceived their training needs to be different from the training needs of other functional managers in their organisations. Interestingly, only 17.0% of respondents (Table 3) indicated that quality managers should receive more quality-related training whereas 14.0% suggested that the quality role requires a broader knowledge in general. What then of the future in determining further training needs of quality managers? Does this mean there are different expectations as to the future of quality management? This has significant implications for any future planning for training for quality management.

Table 2 - Formal Training Qualifications

Formal training qualifications	%
Train the trainer	12.3
QAS internal auditing of quality systems	9.4
ISO 9000 Understanding the quality system	8.9
Graduate Diploma in Quality Management	5.1
Training basic skills	3.0
QSA training programs	0.9
Environmental	1.0
Other	17.0
No answer	1.3
Total	58.9

Table 3 - Perception of Training Needs

Training needs: different	%
More quality oriented tools/skills/principles	17.0
Broader knowledge	14.0
Different but not specified	4.7
Process improvement skills/knowledge	3.0
Training as a core business	2.1
Environmental	0.4
Business statistics	0.4
Project management	0.4
Other	1.3
No answer	1.7
Total	45.0

Comparison of the importance placed on training

When asked to rank the importance of training and the impact training had on quality, respondents themselves placed a premium on training. A total of 88% stated that training was 'very important' or 'important'. However, only half of the respondents (46.4%) perceived their organisation to place a similar emphasis on training. (Refer to Table 4).

Table 4 – The Importance Placed on Training by the Quality Manager and the Organisation

% (Personal Ranking)	Scale	% (Organisational Ranking)
46.0	Very important	14.5
42.6	Important	31.9
8.5	Undecided	34.5
1.6	Unimportant	16.2
0.0	Very unimportant	2.0
1.3	No answer	0.9
<i>100.0</i>	<i>Total</i>	<i>100.0</i>

TRAINING AND MANAGEMENT DEVELOPMENT

Previous Training Courses for Quality Managers and Other Employees

Quality managers were provided with an opportunity to list the names of training programs they had undertaken in the past five years. A staggering 41.1% of respondents did not complete this question of the survey, and one could infer that this group had not undergone any training in this five year period. Of those that had, a diverse range of training courses was given (Table 5). (We need to bear in mind, however, that this is a work-in-progress paper and the responses will overlap in some cases where respondents would have completed more than one training program). Further, we have not yet determined the classification of the many small categories of courses listed. Of the 1174 training courses completed in the past five years, it is interesting to note that only 6.9% pertained to general management. These training programs ranged from half-a-day to over three years in duration and in more than one-third of the cases (34.2%), training programs were five days or less.

Quality managers were asked to indicate the names of providers for their previous training programs and here the list of providers was both numerous and varied (see Table 6). The most common were consultancy firms (17.8%), QSA (6.5%), educational institutions (5.4%) and the organisations themselves (3.8%). Again respondents were able to stipulate as many training providers as was relevant to their experience over the past five years. Of particular interest to the researchers, was how respondents regarded these training programs in terms of effectiveness. Approximately 35% of quality managers believed the training programs they had attended were either 'good' or 'excellent'. The balance of 62.5% probably had no training programs to evaluate or there was no evaluative measures.

Table 5 - Previous Training Courses Undertaken by Quality Managers

Previous/by Quality Managers	%
General management	6.9
Quality practices/principles	6.0
Internal auditing	5.0
Quality tools	4.5
Technical/software training	3.8
Occupational health & safety	3.8
Lead auditor	1.7
Train the trainer	1.5
Environmental auditing	1.5
Leadership/teamwork	1.4
Business process improvement/strategy	0.9
Interpersonal skills	0.7
Risk management	0.7
Customer service	0.6
Finance	0.4
Production	0.4
Change management	0.4
Problem solving	0.2
Innovation	0.2
WHSO	0.2
HRM	0.1
Sales	0.1
None	58.9

Table 6 - Past Training Program Providers

Past/Providers	%
External company – consultant	17.8
QSA *	6.5
External – education institution	5.4
Internal – in house	3.8
AQC *	1.5
NATA	1.5
Standards Australia	1.0
ETRS	0.8
AIM	0.6
AOQ	0.5
NSCA	0.2
SGS	0.2
AIG	0.2
AAPA	0.1
AHRI	0.1
APESMA	0.1
CC	0.1
CFA	0.1
LRQA	0.1
MMI	0.1
None	59.5

Respondents indicated that as quality managers they had organised a range of training programs for others (Table 7) with the most common training course relating to the teaching of quality tools and systems (10.0%). Sixty-seven respondents (5.7%) also claimed to have provided training on QA auditing. This is indicative of the diverse demands placed on quality managers in their provision of appropriate and timely quality-related training programs for the employees of their organisations. What is of concern is that 68.1% of respondents provided no training for their employees in the past five years?

Table 7 - Previous Training Courses Organised by Quality Managers for Others

Previous/For others	%
Quality tools / systems	10.0
QA auditing	5.7
Specific job skills	2.6
Computer related	2.5
Occupational health & safety	2.4
Risk / general management	2.3
Customer liaison	1.5
Business improvement	1.2
Interpersonal	1.1
Legislation	0.8
Environmental	0.6
Leadership	0.4
New products	0.3
Sales skills	0.3
Industrial relations	0.2
No answer	68.1
Total	100.0

Table 8 - Providers of Past Training Programs Organised by Quality Managers

Previous/Providers	%
Self	23.6
External provider- consultant	5.6
QSA	0.6
Educational institution	0.3
ETRS	0.3
NATA	0.2
QAU	0.1
AIG	0.1
No answer	69.2
Total	100.0

As identified in Table 8, a significant amount (23.6%) of quality managers provided these training programs by themselves. Only 5.6% of training courses were provided by external consultants and the remaining providers were either educational institutions or a range of industry associations. Only 1.3% of survey respondents suggested that their training was aimed at customers or new staff. Some stated that their training was suitable for all employees (13.5%), whereas others trained only management staff (8.6%) or staff operating in a particular functional department (5.9%). Compared to the training received by quality managers, overall it seems that the training provided for others is marginally shorter, with 28.1% of training programs running for five days or less. Few quality managers perceived their training programs to be effective. An alarming 6.3% of those who did organise training for others had no comment on how they had measured the effectiveness of these programs.

Current Training Programs for Quality Managers and Other Employees

Quality managers were asked to list the training programs they were currently undertaking, and, surprisingly, very few respondents (4.8%) appeared to be engaged in any training program at the moment (there is no hesitation on behalf of the researchers to make this conclusion given the user-friendly format of the questionnaire). As can be gleaned from Table 9, the small number of quality managers that responded were involved in a diverse range of training programs, many of which were in the general management area. External companies/consultants and educational institutions were running the majority of these.

Table 9 - Current Training Programs Programs Undertaken by Quality Managers

Current/by QMs	%
Risk/general management	1.0
Occupational health & safety	0.9
Specific job skills	0.5
Quality tools	0.5
QA auditing	0.4
Leadership	0.3
Legislation	0.3
Computer related	0.3
Business improvement	0.2
Environmental	0.1
Industrial relations	0.1
Customer liaison	0.1
Interpersonal	0.1
No answer	95.2

Table 10 - Current Training Organised for Others

Current/For Others	%
Quality tools	3.4
QA auditing	3.1
Occupational health & safety	2.8
Specific job skills	2.6
Risk / general management	2.1
Computer related	1.3
Leadership	1.0
Business improvement	0.7
Customer liaison	0.4
Environmental	0.4
Interpersonal	0.3
Train the trainer	0.3
Sales skills	0.1
Legislation	0.1
New products	0.1
No answer	81.3

Quality managers were able to list the training programs they were currently organising for others in their organisations. We can see from Table 10 that a very high 82.4% did not respond to this question suggesting that there were no programs currently being organised for other employees. The majority of these programs were run for a short duration, that is, between one half-day and five-days with the major target being all staff in the first instance, followed by management staff. Only a minute number of new staff were targeted for such programs. Of those quality managers who currently were organising training programs for their staff, more than half of them provided the training programs themselves (11.0%), followed by external companies/consultants (6.9%). Effectiveness was measured in a variety of different ways, ranging from feedback strategies, auditing, financial performance, lost time and quality of work.

Future Training Needs for Quality Managers and Other Employees – Short-Term and Long-Term

The percentage of survey quality managers who did not provide a respond to questions regarding their future training plans, both short-term (nearly 50%) (Table 11) and long term (58%) (Table 12) respectively, could be attributed to the view that current programs on offer would not meet their individual needs. Only 11.1% of respondents believed a post-graduate degree or some other form of higher tertiary education would fulfill their long-term training requirements. General management (8.5%), continuous improvement (3.0%) and computer skills, environmental awareness, and knowledge of the new ISO 9000 standard also were considered important by 2.6% of respondents.

A large percentage of respondents indicated that employees are in need of short-term training in quality concepts, practices and techniques (21.9%) (Table 13). Other categories of interest appeared to be occupational health and safety (9.7%), computer and technical skills (8.5%) and general management procedures (7.7%). Nearly 30% of quality managers had no short-term plans for employees in their organisations. In Table 14, we see that to some extent, the long-term needs of employees appears to be similar to the short-term training requirements. However, there was a wide range of responses. Table 14, for example shows that new legislation (ie the GST) creates an immediate need for training. Forty-five percent of respondents did not answer this question and we can assume here that these quality managers have no long-term programs planned for others in their organisation, which is quite of some concern.

Table 11 - Quality Managers/Short -Term

Quality Managers/Short-Term	%
General management	7.2
Computer skills	6.8
New ISO 9000 standard	6.0
OH & S	4.3
Environment	3.4
Continuous improvement	2.6
Leadership	2.6
Introduction to quality	2.1
Integrated management	2.1
People management	2.1
Problem solving skills	1.7
Auditing	1.7
GST	1.3
Basic accounting	1.3
Risk management	0.9
Customer service	0.9
Higher degree (postgraduate)	0.9
Train the trainer	0.9
Y2K crisis	0.9
Language and training	0.4
Basic statistics	0.4
No answer	49.8

Table 12 - Quality Managers/Long-Term

Quality Managers/Long-Term	%
Higher tertiary/Postgraduate	11.1
General management	8.5
Continuous improvement	3.0
Computer skills	2.6
Environment	2.6
New ISO standard	2.6
OH & S	1.7
Integrated management systems	1.7
Leadership	1.7
Risk management	1.3
Problem solving skills	1.3
Customer service	0.9
GST	0.9
People management	0.9
Basic statistics	0.4
Basic accounting	0.4
Auditing	0.4
No answer	58.0

Table 13- Employees/Short-Term

Employees/Short-Term	%
Introduction to quality	11.7
Continuous improvement	10.2
Occupational health & safety	9.7
Computer skills	8.5
General management	7.7
Auditing	3.8
Customer service	2.6
New ISO 9000 quality standard	2.6
Risk management	2.6
People management	2.1
Basic accounting	1.7
Leadership	1.7
Integrated management	1.3
GST	0.9
Environment	0.9
Language and training	0.9
Train the trainer	0.9
Hygiene (food etc)	0.4
Problem solving skills	0.4
No answer	29.4

Table 14 - Employees/Long-Term

Employees/Long-Term	%
General management	10.2
Continuous improvement	6.8
Computer skills	4.7
New ISO 9000 quality standard	3.8
Customer service	3.4
Introduction to quality	3.0
Integrated management systems	3.0
Leadership	3.0
Auditing	3.0
People management	3.0
Risk management	2.6
Environment	2.1
Occupational health & safety	1.7
Basic statistics	0.9
Basic accounting	0.9
Problem solving skills	0.9
Higher degree (post graduate)	0.9
GST	0.4
Hygiene (food etc)	0.4
No answer	45.3

THE FUTURE OF QUALITY MANAGEMENT

Training requirements appeared to be determined by a number of factors. (Refer Table 15). Given that customer/client-focus is one of the main ingredients for a successful quality management program, we unexpectedly find that customers only rated 1.7% as a determinant of future training requirements. Money and time were together considered to have the greatest impact on whether or not specific training courses are completed (refer Table 16).

Table 15 – Determinants for Future Planning

Determinants	%
Performance review	15.7
Self perception	12.3
Training needs analysis (TNA)	11.9
Employee demand	8.1
Company strategy	7.2
Industry demand	4.7
Top management	4.7
Future employment opportunity	2.1
Legislation	1.7
Customer	1.7
Audit	0.9
Government	0.9
External audit	0.9
Budget	0.9
Current workload	0.9
Availability	0.4
No answer	25.0

Table 16 - Constraints

Planning Constraints	%
Money & time	42.1
Time	11.9
Workload	4.7
Senior management approval	3.0
No constraints	3.0
Availability of course	2.6
Restructuring	2.1
Management commitment	2.1
Importance of course	1.7
Availability of consultants	1.7
Staff cooperation / commitment	1.3
Other	0.8
No answer	23.0

Table 17 - The Future of Quality Management

The future of QM?	%
IMS	30.5
Continue as is	9.4
Continuous improvement	9.4
Expanded / extended	9.0
Indispensable	6.4
Uncertain	6.0
Extinction / dead	5.5
Decreasing in importance	5.1
More global / stringent	3.8
Greater acceptance	3.4
Reborn / rebranded	3.0
Marginalised	1.7
Greater demand	0.9
More flexible	0.4
Self regulated	0.4
No answer	5.1

Table 18 – The Future of the Quality Manager

Future of Quality Manager	%
Retired	42.4
Same - no change	19.6
Promoted	13.6
Don't know	7.2
Consulting	4.3
Own business	2.5
Human resources role	1.3
Education	1.3
IT	0.8
Looking for a job	0.4
No answer	6.4

Respondents were given the opportunity to reflect on the future of quality management. This was an open-ended question allowing respondents to give more than one answer. The question asked was 'Where do you see the future of quality management in the year 2010? In Table 17, we are able to see a large percentage of these managers (some 30%) perceiving quality being integrated into the management systems of organisations. This infers training for quality now should be occurring quite extensively throughout the organisation or that, at least, there is some carefully constructed training plans being developed for the next five years. From the previous discussion and results, this does not seem to be the case! In Table 18, almost half of the respondents (42.4%) indicated that they would be retired in 10 years time while 19.6% believed they would be in a similar quality management position. Only 13.6% thought they would be promoted. The future of quality management may very well rest with the 20-29 group of quality managers and further research could ascertain the responses of this age group to this question.

CONCLUSION

It is clear that although there has been much research on which quality practices and tools should be taught across both the manufacturing and services sectors, there has been a serious lack of empirical research on who actually provides such courses and how effective these courses are.

In this investigation of training for quality, we have found that not only is there a range of quality related training providers but also the formal qualifications of quality managers vary significantly. There appears to be a pressing need for a more detailed investigation of training providers and an evaluation of the courses provided by each. This would allow quality managers to more easily identify suitable training courses for both themselves and their employees.

The question remains about how do we train for quality management? From our research, the current training for quality practices in organisations, to date, appear vague and nebulous. The employment backgrounds of those presently in the role of quality managers are diverse and the future career paths of these managers remain uncertain. There is little consensus about where quality management is heading in the future but we should take heed of the one-third of these respondents who envisage quality becoming integrated into the management systems of organisations. What impact will these factors have on an organisation's need to develop future and coherent plans for training for quality management? What we have presented here is a dilemma and one could suggest that it is an especially opportune time for representatives of professional associations and educational institutions, for example, who are concerned with quality management, to take up the gauntlet and address some of these issues to ensure training for quality management in the future is more strategic and coherent.

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