IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN AUSTRALIAN PUBLIC SERVICE

(A Case Study: Western Mellourne Institute of TAFE, Newport Campus, Melbourne)

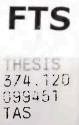
Julekha Tasmin

A M'nor Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Business in Public Sector Management

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By

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A Minor Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Business in Public Sector Management



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ABBREVIATIONS

ANTA	Australian National Training Authority
APS	Australian Public Service
AQA	Australian Quality Awards
AQC	Australian Quality Council
CCO	Customer Centered Organizations
COSTAC	Commonwealth State Training and Advisory Committee
EOQC	European Organization for Quality Control
NATA	National Association of Testing Authority
OTFE	Office of Training and Further Education
QS	Quality System
QU	Quality Unit
STB	State Training Board
STA	State Training Authority
TAFE	Technical And Further Education
TQM	Total Quality Management
VEETAC	Vocational Education Employment and Training Advisory Committee
WAN	Wide Area Network
WMIT	Western Melbourne Institute of TAFE

ABSTRACT

Total Quality Management is a set of time tested norms and practices being used in the management of organizations. The thesis aims at understanding Total Quality practices in the Australian Public Service and evaluating the extent to which Total Quality Management practices have been successful in Public Sector organizations.

The Public Sector in Australia has changed in a revolutionary way since 1990s. But earlier during the 1980s, Australian public and private sectors begun to show a heightened and quite focused interest in Total Quality Management in response to the reality of global market and the continuous change in the nature of international competition. Western Melbourne Institute of TAFE (WMIT), like many other public service agencies, has undertaken the continuous quality improvement programs and has been undergoing the process of changing its culture to a quality focused one.

This research is carried out to understand TQM in an Australian perspective and to assess the success rate in improving quality within the framework of quality management in the Australian Public service. It concludes by comparing the extent to which the change process and the Total Quality Management theory may assist other public sector organizations in dealing with TQM.

1. INTRODUCTION

1.1. Background:

Today, more than ever before, the world is immersed in change. There have been changes in all aspects of life- changes in technological developments, changes in economy and changes in management practices. All these changes gave rise to increased competitiveness in the global market. Especially, the management techniques for improvement of organizational effectiveness and efficiency have experienced enormous changes in the last two decades. Management all around the world has been undergoing the process of obtaining the most effective and efficient ways of producing quality outputs in terms of customer satisfaction by the use of various models and tools on management practices.

As the rate of change increased, all activities in management disciplines, be it in a private or public sector organization, need considerable attention for overall improvement in terms of quality outcomes. Thus, quality management techniques, principles and philosophy have gained massive popularity for bringing about positive changes in organizations worldwide.

The concept of Total Quality Management (TQM) was developed in America and later was adopted in post-war Japan (Jablonski, 1992). It has drawn enormous attention of the public and private sector organizations in many countries of the world. The reason behind this is simply that quality has the capacity to provide a strategic competitive advantage. TQM is also considered to be a change process within itself, providing an avenue for coping with change and directing it toward a positive outcome for the future (Jablonski, 1992).

Some myths about TQM exist because of the assumptions of "universal applicability". The

myths are (Chorn, 1993):

- a) Strategy implementation is a neutral process.
- b) TQM improves customer focus.
- c) TQM improves overall organizational performance.
- d) TQM institutionalizes innovation and self-renewal.

Keeping in view all the importance attached to TQM in the world environment and the challenge of sustaining competitive advantage, the Australian businesses and public sector organizations began to take up quality improvement programs during the 80s. Today, there has been a growth in the adoption of TQM in the national context. The public sector has shown keen interest in quality management practices. This is evident from the increasing number of practitioners of the quality movement (Foley et al., 1997). The quality measurement standards, ISO series have been put into work in many Australian organizations, mostly utilizing ISO 9000 series (Foley et. al., 1997).

This study is carried out to understand TQM in an Australian perspective and to assess the success rate in improving quality within the framework of quality management in the Australian Public Service (APS). In doing so, the study relied on secondary data to accumulate some understanding of the TQM practices in APS, its effectiveness, impediments to it and criticisms on different aspects of the TQM practices in Australia.

Further, a survey was conducted on one of the public sector agencies to explore the impact of the implementation of TQM on different elements of TQM principles, procedures and philosophy. The study also aims to understand the basis of TQM application and the correlation between the philosophical aspects of TQM and the measurement standards.

Focus is also given to the changes of the behavior of the personnel and cultural environment of the organization, and the Nation's technical infrastructure.

1.2. Preliminary Data Collection:

Three types of information sources were used for the evaluation purposes of the study:

- a) Existing documents
- b) Process of surveying
- c) Interviewing

Both *primary and secondary data* were collected for this research. The primary data comes from responses to the questionnaire and the interviews, while the secondary data comes from the sources listed below.

The *secondary data* (published books, CD ROM, articles in the journals and periodicals, newspapers, & the Internet) was gathered from university libraries, Western Melbourne Institute of TAFE (WMIT) libraries, and Library of State Training Board, Department of Education.

1.3. The Research Objectives:

The objectives of this research were to assess the relationships of a set of parameters representing the state of TQM application and TQM effectiveness for WMIT, Newport campus. This has been done in order to understand and explain TQM effectiveness with respect to TQM implementation and practices in this organization.

Further, the research is aimed at generating an example of the application of total quality practices in the Australian public sector.

1.4. The Problem Definition:

For the last two decades, there have been world-wide-changes in the public sector. Under the banner of 'Managerialism', a new tenet of public sector management, the public sector in Australia has experienced an agenda for change which included a decrease in public services, a decline in the number of permanent employees, and a restructuring of functions and positions in the pursuit of increased efficiency and effectiveness (Davis et al. 1993).

A problem definition or problem statement, as it is also often called, is a clear, precise, and succinct statement of the question or issue that is to be investigated with the goal of finding an answer or solution (Sekaran, 1992). The underlying research pertains to ' the problem as situation where gaps exist between the actual and the desired ideal state' (Sekaran, 1992).

This case study was intended to provide answers to the following research questions:

- a) To what extent does the implementation of TQM account for the perceived effectiveness of continuous quality improvement?
- b) How effective has the implementation of TQM been in meeting the quality improvement issues?
- c) To what extent was the organization able to build an organizational culture based on TQM philosophy?
- d) To what extent have common strategies been successful in building awareness among the employees of continuous quality improvement?
- e) What is the rate of growth in the dissemination of continuous quality management?
- f) What are the apparent constraints in the implementation process of total quality management?
- g) To what extent do the strategies taken by the organization account for meeting quality system standards (ISO 9000)?

1.5. Chapter Outlines of Thesis:

This thesis is organized into nine chapters. The first chapter deals with the background of the research, the research objectives, the problem definition and the chapter outlines. The second chapter presents the literature review and the third provides the context of the organization. The theoretical framework of the research has been discussed in the fourth chapter and the research design has been briefly presented in the fifth chapter. The sixth chapter provides an outline of the research methodology employed in this study. The scope of the study is also included in this chapter. The seventh and eighth chapters present the findings and results of the survey and the interviews respectively. Chapter nine puts forward a summary of observations and draws out the conclusion of the paper with directions for future research. Finally references and appendices follow the conclusion and recommendations.

2. LITERATURE REVIEW

The purpose of the study is to understand Total Quality practices in the Australian Public Sector and to evaluate the extent to which Total Quality Management practices have been successful in public sector organizations.

2.1. Initial Concepts and Leading Thinkers

Total Quality Management is a synthetic paradigm, changing through many decades and incorporating concepts and techniques from many different sources. Its uniqueness lies in its synthesis- taken together, its concepts and techniques have a systematic, synergistic effect (Bunning 1992).

The ideas and practices associated with TQM were first applied in Japan, even though its theoretical fathers and teachers were principally American. Thus, TQM has come from a national culture (Japan) and from a manufacturing base. Later it was increasingly applied in many countries of North America and Europe (Creech, 1994).

The Americans, Deming (1986), Juran (1988) and Fiegenbaum (1987) laid the foundation of quality control in manufacturing and suggested its wider management context, which their Japanese students were to so skillfully exploit and take further.

Deming (1986) is often seen as the number one guru, the father figure of the modern quality revolution. He was convinced that statistical sampling methods could be applied to manufacturing and non-manufacturing activities for productivity gains.

Deming's approach as a whole encouraged the Japanese to adopt a systematic approach to

problem solving with senior managers leading the way in solving quality problems by what later became known as the Deming Wheel or P-D-C-A (Plan, Do, Check, Action) cycle (Morgan & Murgatroyd 1994).

Juran (1988) is the quality guru perhaps most frequently linked with Deming when the American origins of TQM are discussed. He emphasized that quality control should be conducted as an integral part of management leadership and control. Central to his approach was the message that quality does not happen by accident, it must be planned for and is part of a quality trilogy: quality planning, quality control and quality improvement. Some of the key elements to Juran's approach were identifying customers and their needs, establishing optimal quality goals, creating measurements of quality, adopting planning processes which gave quality goals under operating conditions, and producing continuing results in terms of improved market share, prices and reduction of error.

He attributed the majority of quality problems to the fault of poor management rather than poor performance by the worker and believed that management controllable defects account for over 80 percent of all quality problems.

Fiegenbaum (1987), another major American guru, also came from a background of manufacturing quality control. A statistical point of view is seen as having a profound effect on modern quality control and Fiegenbaum argues that statistical methods must be used whenever and wherever they may be useful to this end.

Although much concerned with technical and statistical issues, he emphasised management methods and considered human relations as the basic issue in quality control activities.

Ishikawa (1985) is best known for his commitment to getting grassroot workers to understand and practice what quality was all about by way of quality circles and making simple statistical techniques accessible to supervisors and front-line workers for good data collection. Another researcher, Shingo (1987) is not well known in Europe outside of manufacturing, where he was essentially concerned with quality on the production aspects of manufacturing, but he is the initiator of the controversial Zero Defects concept, and his essential concepts have adaptive possibilities for transfer to service and public sector provisions.

The new leader, Crosby (1979) is nowadays seen as a leader of the 'new wave' of quality gurus, and is the leading western advocate of zero defects- a process concept that means not making mistakes in the way any process or activity is conducted. In the Crosby scheme, there is a strong top-down approach. Quality is driven by a management initiative from the top, while employees are involved in the operational difficulties affecting quality. He insists that the performance standard must be zero defects, not 'that's close enough. He asserts that zero defects does not mean that people never make mistakes, but that the organization should not expect people to make them. Crosby points out that if people do not believe that zero defects is possible, they will never achieve that goal.

Peters (1989), another American, researched a sample of the most successful companies. His contribution to TQM has been to celebrate a type of leadership and give prominence to customer orientation. In identifying leadership as central to quality improvement, he characterised the type of leadership necessary as leadership by walking about, a facilitating, cheerleader role constantly in touch with customers, innovation and people, the three major areas common to excellent achievers.

2.2. Evolution of the term TQM and its elements

The term TQM relates to a broader management philosophy which evolved from the core concepts of 'quality', 'management', and the attachment of 'total' with these. An understanding of these elements is necessary for a detailed understanding of TQM.

Quality refers to certain standards and the ways and means by which those standards are

achieved, maintained and improved upon. Most definitions given to quality refer to 'fitness for purpose' or 'conformance to requirements' (Holmes 1992).

The definition of 'quality' chosen by the European Organization for Quality Control (EOQC) and the American Society for Quality Control (Morgan & Murgatroyd 1994) is: "The totality of features of a product or service that bears on its ability to satisfy given needs".

At this point, a discussion of what services are, is required in the context of public sector management. According to Parasuraman, Zeithamsi and Berry (1985), Haywood-Farmer (1987) and others, there are three well-documented characteristics of services- intangibility, heterogeneity and inseparability - which must be acknowledged for a full understanding of service quality.

First, services are intangible because they are performances rather than objects; most services cannot be counted, measured, inventoried, tested or verified in advance of delivery to ensure quality.

Second, services have customers with very heterogeneous needs. Consumers of the same services do not all have the same priorities.

Third, services have 'inseparability', by which is meant that the production and consumption of services are not separate as they are in manufacturing. As a consequence, in the service industry, quality is not engineered into the product at the manufacturing plant and then delivered intact to the consumer. Rather, quality occurs during the delivery of the service, usually during the interaction between the client and the key contact person from the service provider.

Prescott (1995) describes Total Quality as 'a practical approach for managing and measuring continuous improvement of all aspects of the business in order to satisfy the need and expectations of customers'.

'In TQ it is the customer who makes the final decision on the quality of an organization's products and services and it is no longer sufficient to regard quality as meaning conformity to specification. Quality is defined as fully meeting the needs and expectations of customers, both internal and external. In essence this depends on the quality of the total organization and its willingness and capability to offer total quality'(Prescott 1995, pp.15-16).

Too many quality programs in the past were narrow; quality control efforts were concerned with catching mistakes and less than acceptable product after production, rather than with turning out high-quality products the first time around and improving the quality of every activity of the entire organization.

Quality is defined by the customer and a great deal of quality problems originate in service or administration areas. Therefore, delivery of the right quality every time requires the involvement of everyone who works in the organization. Customer quality has to be an integral part of every practice, policy, process and procedure.

Prescott (1995) formulated ten characteristics of Customer Centered Organizations (CCO) which closely relate to one of the core elements of TQM- the customer. These characteristics may have a profound influence on the TQM concept:

- Customer-centred leadership- Senior management demonstrate their commitment to total quality and 'customer' satisfaction by creating a leadership style and company ethos that promote the participation of employees, suppliers, customers and local community in a process of continuous quality improvement.
- Customer-centered strategy- Strategy is customer-centered, takes account of total quality, and is regularly reviewed, up-dated and widely communicated within the organization.
- 3. Management of people- Management employ a flexible leadership style, insist on personal responsibility for quality and provide the tools, information,

empowerment and support required for people to participate in a quest for excellence in all aspects of the business.

- 4. Training and developing people- The supply of qualified, competent and flexible people is sufficient to meet operational demands and contingencies and training is cost-effective and based on national or company standards.
- Management of resources- Utilisation of resources is on a par with the best of the competition and technology is effectively used to improve productivity and flexibility.
- Process control and improvement- Productivity and flexibility are as good as, or better than, the best of the competition; processes are under control and innovation and continuous improvement are encouraged.
- 7. Customer satisfaction- Customers rate the quality of products and services highly in relation to those of major competitors.
- 8. Employee satisfaction- Employees express a high degree of satisfaction with the way they are managed, developed and their skills used.
- Community satisfaction- The local community expresses satisfaction with the company's impact on environmental and safety matters and its involvement in community activities.
- 10. Investor satisfaction- Investors express satisfaction with the company's business results which are as good as, or better than, the best of the competition.

Further, other elements include Employee Involvement and Leadership, which have been emphasized by TQM thinkers and teachers.

Total quality management is a set of organizational strategies, practices, and tools for organizational performance improvement. The theoretical relationship between employee involvement (EI) and TQM is readily apparent. TQM describes a philosophy of organizational improvement and approaches that its advocates argue cannot be successful without employee involvement (Deming, 1986).

Historically, employee involvement processes have been designed for various reasons. Magjuka (1994) states that, employee involvement strategies have been designed to contribute a variety of objectives, such as, employee trust and commitment to the organization, to provide forum for employees that allows them to express their beliefs and attitudes concerning daily operations, or to enable employees to identify and solve problems with the aim of improving performance.

Lawler (1992, 1994) reports a great deal of conceptual overlap but key differences between these two practices. TQM often utilises Quality Circles, Quality Improvement Groups, or other participative teams, which creates involvement, flows information and sometimes shares power. The practice of these tools results in knowledge and skill development in the total workforce. TQM also nurtures self-inspection, which moves towards self-management. These approaches are fully consistent with employee involvement (Lawler 1992).

In Total Quality Management there is responsibility for quality at all levels of an organization and involvement of all staff in pursuit of quality objectives (Colhns 1994). All quality management gurus have given proper emphasis to employee involvement and included a certain number of points in their prescribed steps or points to quality improvement. Moreover employee involvement along with management commitment, education, teamwork is also considered an important aspect of continuous quality improvement- one of the major components of TQM.

Leadership is perhaps the most important ingredient in the philosophy of TQM and has been addressed in detail by early pioneers such as Deming (1986), Juran (1988), Crosby (1979) and Zairi and Leonard (1994).

Zairi et al. (1994, p.19) points out that within the framework of TQM the role of the leader will include:

- The provision of unquestioned leadership;
- An explicit focus on the customer;
- The training of all employees;
- The recognition and reward of employee participation;
- Communication about quality both internally and externally;
- The provision of a quality process and quality tools.

According to Holmes (1992), the TQM model has four elements: top management drive, teamwork, techniques and systems. These interact on every process within an organization, each of which has inputs and outputs, suppliers and customers. The interaction is aimed at continually improving the potential and the actual level of performance in meeting or exceeding customers' requirements.

2.3. Definitions of TQM

Total quality management (TQM), or continuous quality improvement as it sometimes referred to, is generally understood to involve a focus on flexible, consultative management with the needs of 'the customer' or service recipient seen as central to guiding a continual process of improvement.

TQM is a comprehensive approach to improving competitiveness, effectiveness and flexibility through planning, organizing and understanding each activity and involving each individual at each level. It is useful in all types of organization.

Various implementation paradigms exist but importance should be given to the organizational culture before following any specific model. Effective leadership, commitment, creating the

culture of quality, training people to understand the customer-supplier relationship, managing system improvement, teamwork and improved communications, elimination of fear and barriers, constant education and expert development and continuous improvement are necessary steps to TQM implementation. When properly implemented TQM produces a cluster of benefits associated with bottomline results (Morgan and Murgatroyd, 1994).

TQM (Total Quality Management) is the acronym and term used for a body of management beliefs and practices which is making the headlines in the 1990s. In fact, TQM is not 'just another management approach', it is no less than a paradigm shift, a new management philosophy, set of concepts, and tools which has come from the world of manufacturing but which is now being applied across all types of organization (Morgan and Murgatroyd, 1994).

Morgan and Murgatroyd (1994, p. 3) further describe Total Quality Management as a general philosophy and set of ideas which has paradigm wholeness- an entity of related concepts, beliefs and working practices that have come together from different authors and cultural directions over a periods of some thirty-five years. This paradigm rests on a set of common assumptions which can of course differ from author to author and practitioner to practitioner, but nevertheless there is a common perspective'.

Perhaps the key idea of a well-established TQM program is to synchronize strategy, vision and operations. This is what, according to Weir (1992), is the really radical aspect of the TQM approach. It means working at three levels:

- Corporate mission and vision.
- Strategic organization and targeting.
- Operational description, codification and control (Morgan and Murgatroyd 1994, p.4).

According to Marchington (1992) TQM is seen as consistent with open management styles, delegated responsibility and increased autonomy to staff. Collard (1989, pp.3-4) regards TQM as:

"A systematic way of guaranteeing that all activities within an organization happen the way they have been planned. It is a management discipline concerned with preventing problems from occurring by creating the attitude and controls that make prevention possible. It is also about efficiency, productivity and long-term success."

Dale and Plunkett (1990, pp. 5-6) relate TQM more closely to employee relations, when they suggest that 'it is necessary to change behavior and attitudes throughout the organization. Key features of TQM are employee involvement and development and a teamwork approach to dealing with improvement activities.' Although there is a recognition of the role which needs to be played by employees in making TQM operate effectively, the principal focus remains on the statistical and operational characteristics of the system.

The TQM concept, therefore, comprises both production-oriented and employee relationsoriented elements, and this highlights the tensions between, on the one hand, following clearly laid-down instructions while, on the other, encouraging employee influence over the management process.

A variety of practices are included under the general rubric of TQM. At the operational level, it includes application of systematic approaches to the measurement and improvement of work process to ensure that they are adding value and meeting the needs of the customer. Work simplification is often part and parcel of TQM, as organizations focus on eliminating steps that do not add value and on combining tasks to reduce the number of interfaces (Lawler, Mohrman & Gerald, 1992).

Flood (1993) is of the view that TQM is best defined in terms of its three components. In this regard, he defines 'quality' as meaning 'meeting customers' (agreed) requirements, formal and

informal, at lowest cost, first time every time' (p 42); 'total quality' as meaning 'that everyone should be involved in quality, at all levels and across all functions' (p47); and by integrating the term 'management', the 'value of management responsibility is projected into the meaning of quality' (p 47). Improvement is manifested in better service, resulting from changes to processes and systems in the organization, rather than from a simple performance focus on individuals within it. Further, team processes and a sound database for decision-making about costs and service delivery are fundamental to this approach to management (Flood 1993; Ross, Clear, Dixon, Bartlett, Johnson, Wheldon and Hatcher, 1996).

2.4. TQM in the Public Sector

The present day challenge facing the public sector is to promote the organizational vision and ethos to achieve the outcomes that exhibit efficiency, integrity and equity from all levels. Thus, governments of many countries have been undergoing tremendous changes in their policies to achieve maximum efficiency at minimum costs.

TQM is not simply a set of techniques- a purely mechanistic approach to the production of artifacts- but a wholly new management approach to organization, with a work ethic which aims to make use of brain power, creativity and work experience of the entire work force. It clearly sets a challenge for all types of organizations, in all countries. Many exponents believe that TQM has a generic validity, so that it has come to be applied outside manufacturing to service industries and, more recently, to the non-profit and public sector activities (Morgan and Murgatroyd, 1994).

It is impossible to simply copy a Japanese approach because of the substantial differences in culture and background. However, the concept of TQM is beginning to capture the imagination of chief executives and senior management, not only in manufacturing but also in service industries, health care and educational institutions. Governments are developing

national quality campaigns and business schools and universities are becoming more committed to quality management training.

2.5. TQM in the Australian Public Sector

During the period of government expansion in the late 1960s public services (specially in parliamentary systems) appeared to have become well established on firm principles and practices. It seemed at that time that this type of activity was likely to remain constant. But the economic decline and changes in intellectual traditions undermined the certainties, and challenged the role effectiveness of their activities and value for money that citizens received Output measurements, policy evaluation, reference to 'clients', corporate plans, devolution of authority, broadly encompassed in the Financial Management Improvement Plan (Laking 1994), changed the style of public sector behavior.

The public sector in Australia has changed in a revolutionary way since the 1990s. This change has been a worldwide phenomenon underpinned by theories of 'Economic rationalism'. The traditional model of public administration has changed to a new form of public sector management. The traditional public service had distinct values, as outlined by Davis, Wanna, Warhurst and Weller (1993): neutrality, a career structure and an acceptance of the need for processes to be fair, equitable and proper. The emphasis was on the processes of government, with money appropriated by parliament largely to the inputs (such as salaries and other costs), rather than to the consequences (the programs) of spending for performance improvement or quality achievement.

Reforms to these financial and management practices have been widespread. At federal level the financial management improvement plan (FMIP) has required departments to set corporate objectives, develop a mission statement, shift to program management and devise performance indicators that can be used to evaluate the success of those programs. Managers are regarded as 'accountable' to their superior for the achievement of those objectives. All these innovations are designed to achieve both accountability and efficiency (Davis, Wanna, Warhurst and Weller, 1993). Simply, this is shift from 'administration' to 'management' or adoption of management practices of private sector and of international context.

Harman (1994, p. 13) defines 'Accountability' as "an obligation on public officials to report on, justify, and be judged for actions taken in an official capacity when called upon to do so by those with the necessary authority." Although proponents argue on the question of parliamentary accountability and effective management for quality improvement, proper management accountability along with responsibility and performance audit, etc. were needed for ensuring good employee performance and behavior. These in turn made ways for quality improvement practices and programs to be implemented in the Australian Public Sector.

The actual initiative for changes to implement TQM occurred during the 1980s as is evident from being one of the key elements in the development of a "Clever Country' agenda (Hough, 1993). In this period, reform questions such as devolution were given the most attention at the Commonwealth level. These eventually produced the management framework for the Australian Public Sector reform, which in fact, did not particularly incorporate quality initiatives although individual agencies were highly active. Later in the 1990s 'quality service' and 'continuous improvement' were much reflected in the APS reforms.

While the management methods of Total Quality were first applied to the manufacturing sector, the reform has seen increasing interest in their application to the human services sector, during mid-1990s, and over the past few years the Health care system in Australia has begun to implement models of TQM (Thornber 1992; Reeve 1993; Ross and others 1996). The Department of Immigration and Ethnic affairs and the Department of Social Security are human services departments who embraced the Total Quality approaches in their organizations' strategic plans. Also Government Commercial agencies such as Sydney Electricity is one of the pioneers in Australia to adopt a Total Quality approach as a new corporate culture. Many more agencies, including Telstra and the Office of Training and

Further Education (OTFE), have undertaken the modern concept of continuous improvement programs.

Sydney Electricity focused on the five cornerstones of excellence along with 'leadership' to make up its "Total Planning Quality Matrix" (Halligan 1995). These are:

- Customer satisfaction
- Empowering people
- Performance measurement
- Cycle time reduction (which starts as soon as a customer asks for something)
- Quality communication

In general, the quality initiatives currently being pursued in the Commonwealth and NSW Public Sectors, are outlined in the interdepartmental report- *Quality for our Clients* (Sedgwick 1995):

- Service quality standards that drive services to have a customer focus;
- Continuous improvement groups that aim to change workprocesses;
- Partnering arrangements that look to maximise customer-supplier relationships (or, in this context, perhaps supplier-supplier relationships);
- Service level agreements;
- Quality assurance,
- Review and accreditation schemes;
- One stops shops;
- Case management.

Focused on processes to improve quality.
Which are approaches to achieve a better coordination of services and are the underlying public sector infrastructure.

2.6. The Imperative for Change in the APS

'The challenge of public sector reform is substantial and urgent'- was reported in a discussion

for the reform process by the present Australian government. The report also presented the following useful discussions which enables us to overview the initiatives and determinations of the government towards a reform for quality improvement (The Internet, apsreformdiscussionpaper.htm, 1996):

"A very substantial cultural and structural change are needed in the Australian public sector, to make substantial improvements in program delivery involving, a fundamentally simplified public sector employment framework and current, the highly centralised, inflexible public service employment provisions do not meet the diverse needs of a modern public sector, and represent a significant impediment to efficient program delivery".

"Organizational reform is needed, not only to improve the ways in which services are delivered but so that the APS has the capacity and flexibility to assimilate further changes in its operating environment. The Government is introducing structural reforms to the nature and delivery of services provided to the community".

"The Government is looking at more effective ways of serving the Australian public. It is no longer appropriate for the APS to have a monopoly. It must prove that it can deliver government services as well as the private or non-profit sectors. This will require a new emphasis on contestability of services, outsourcing those functions which the private or nonprofit sector can undertake better and ensuring APS commitment to the process of performance benchmarking and continuous improvement".

"The APS must meet the challenges of market competition and ensure that its quality standards match those of the private sector. To do this it will need support".

2.7. Limitations of the application

A key barrier to the effective introduction of TQM in the public sector is contrapreneurship;

that is, the active resistance to change experienced in all organizations. Morgan and Murgatroyd (1994) define contrapreneurship as the effective and creative use of skills and competencies to prevent significant change from occurring.

As with many private sector employees, many public sector employees are also less enthusiastic about change. While some embrace change and development as a key feature of organizational life, others resist and reject change and seek to actively maintain the status quo. Others do not express a view, but by their behavior and inaction, can be seen as uncommitted.

Even when a quality focus does exist in organizations, the people who shape these efforts are still restricted. Harari (1993) notes that American companies often fail to utilise employees and customers. Less than 30% of employees are utilised in TQM programmes. This implies that the total participation of employees which is an important element of TQM is yet to be achieved

The role of trade unions in the development of TQM in the public sector is critical. Often, managers introduce TQM in a government department or a public sector agency without the full support of unions and their local shop-stewards (Morgan and Murgatroyd 1994).

Using 'management rights' as the basis for introducing TQM is not a substitute for effective dialogue and joint approaches for what will be, after all, a significant cultural change for the public sector (Morgan and Murgatroyd 1994).

In Australia, the imperatives now facing the public service in continuous improvement are primarily these. cutting away confusion and jargon and establishing a single, simple, clear and well-communicated framework; demonstrating both management commitment and encouraging staff ownership of the effort to the point where it becomes an ingrained part of the organizational habit; better organizing the APS as a public services as a whole to pursue the quality agenda, spreading best practice; and being well-geared up to learn from the outside.

2.8. Conclusion

Morgan and Murgatroyd (1994) outline that-

- TQM involves everything an organization, a society, or a community does, which in the eyes of others determines its reputation on a comparative basis with the best alternatives.
- TQM- a total system of quality improvement with decision-making based on facts- data collection- not opinion or impression.
- Total quality embraces not only the quality of the specific product or service which the end-user or the customer purchases or receives but everything an organization does internally to achieve continuing performance improvement.
- TQM assumes that quality is the outcome of all activities that take place within an organization; that all functions and all employees have to participate in the improvement process; that organizations need both quality systems and quality culture.
- TQM is a way of managing an organization so that every job, every process, is carried out right, first time and every time. It affects everyone.

TQM is a culture aimed at continually improving performance in meeting the requirements in all functions of a company or organization. It is characterised by management enabling the organization to please the customer by the provision of adequate resources and by making quality the primary goal, teamwork enabling everyone to participate in improvement, adherence to a good formal quality system and the use of established techniques to control and improve performance (Holmes 1992).

With the understanding of TQM in its whole perspective, this research is aimed at studying a case study of the effectiveness of TQM in the Australian public sector and evaluating the strategies undertaken, the involvement of the stake holders, and the extent to which the service recipients are satisfied.

Before discussing the research design, the author discusses the context of this case study conducted on Western Melbourne Institute of TAFE, Newport campus.

3. CONTEXT OF THE STUDY

3.1. An Overview of TAFE Colleges

TAFE is a most popularly known abbreviation in Australian culture. TAFE stands for Technical and Further education, which is the largest sector of post-secondary education in Australia. TAFE sector provides vocational education at preparatory, operator, trade, technician and, in some fields professional levels in eight different states and territories. But the courses provided differ in size and character in different states and territories. Each state or territory has its own distinctive system of operating based the local industrial base, the geographic spread of population and the demographic features of the population. As this study is undertaken on Western Melbourne Institute of TAFE (WMIT), the discussions and analysis in this study mainly encompass the TAFE system in Victoria.

However, to understand the characteristics and importance of the TAFE sector in Australia, a brief discussion on the overall TAFE systems is presented at this stage. Later in the proceedings a historical development is also included to overview the changes and reshaping of the TAFE systems- mainly highlighting the Victorian perspective along with some overall history.

The overall TAFE sector is easily distinguishable from other educational sectors in Australia due to its having a number of unique characteristics. These characteristics may be summarized as (Goozee, 1993):

- a) Geographical spread of TAFE colleges- About 225 major institutions and over 750 associated centers are spread Australia wide.
- b) Wide range of courses- Provides education and training for employment at the operative, trade and professional level as well as general education and literacy

programs.

- c) Diversified course duration- Courses in TAFE colleges range from a few hours for refresher courses to two or three years for associate diploma or diploma courses.
- d) The variety of attendance pattern- Over 90% of TAFE students attend part-time or externally. Further, part-time attendance includes attendance during the day or in the evening or through open-learning courses.
- e) The TAFE students' characteristics- Most TAFE student come from lower socioeconomic background for training and development of skills needed in the industries and TAFE also has a proportion of students from higher socio-economic backgrounds who take-up professional and academic courses.
- f) The teaching staff of TAFE colleges- Most TAFE teachers are recruited from industry and then provided with teacher education. Thus TAFE is also found to have a close link with the industry and unions.
- g) Operating status of TAFE colleges- TAFE systems originated and developed as part of government departments. Only in Victoria and South Australia, they started with and retained autonomous status. But at present these are expected to implement government policies and priorities.

3.2. Development of TAFE in Australia

The TAFE sector in Australia has a long historical base which can be traced back to the early settlement period. The 1980s saw a significant timeline in the development of technical education in some of the states. The involvement of Commonwealth government was found to rise to a considerable level after 1940.

However, until the 1970s the technical education was not considered to be part of the education sector although the vocational education and training had been fulfilling a crucial role in providing post-secondary education and training for a large number of people. Until this time this sector of education was undervalued and under resourced. But in late 1970s, due

to the unemployment problem, Commonwealth and State governments had to pay attention to the technical education system, through funding, expanding and upgrading their facilities.

The Kangan report (ACTFE Report 1974 in Goozee 1993) and the major Commonwealth report (Batrouney 1985 in Goozee 1993) at this critical time had a great effect on the educational philosophy and program direction of TAFE system. The Kangan report on TAFE in Australia, the subsequent establishment of the Technical and Further Education Commission and the provision of Commonwealth funding in the 1970s had a dramatic effect on technical education. Under its new name, TAFE was recognized nationally as a distinct identity within the education spectrum. It meant that both the quality and quantity of TAFE provision could be raised. However, it also meant that, for the first time, the Commonwealth was intervening in TAFE policy and practices (Goozee, 1993).

The involvement of Commonwealth government in the educational philosophy and educational profile of TAFE during 1975-1982 was a significant issue in the development of TAFE. Goozee (1993, p. 22) points out "The period of 1975 to 1982 marked not only the recognition of TAFE as an important sector of education but there was a growing awareness of TAFE as a vehicle for implementing Commonwealth economic and social policies. This recognition was shown by the increase in funding for TAFE at a time when funding for other sectors was either reduced or held at 'steady state". This period also marked the important role played by the TAFE commission in developing and influencing Commonwealth government policies for TAFE.

The period 1987-1990 has been marked as the period of ' the Dawkins revolution' as many great changes occurred in all sectors of education. John Dawkins, the Commonwealth minister for employment, education and training made strong interventions with new policies in the education sector that came as a result of the national economic imperative. Among the massive changes achieved by John Dawkins, a new higher education system, industrial relation system and guidelines for the vocational and training system were established.

3.3. Victorian TAFE System

Technical education and vocational training in Victoria has a long history beginning during 1836 to 1869. There had been many developments in the history of technical education in Victoria through the last century and the present one such as,

- the establishment of technical schools at different parts of Victoria during 1885-1910;
- the establishment of all technical schools under the control of the education department in 1911;
- the introduction of Commonwealth Technical Training Scheme in 1940;
- the establishment of Victorian tertiary technical courses in 1965; and
- the establishment of the TAFE Board in 1980 (Freeman and Herrick 1992 in Goozee 1993) etc.

A network of colleges was assembled under the TAFE Board in 1982 comprising independent colleges of technical education and selected department of education schools. Amendments were made in the following year to the Post Secondary Education Act, which made the TAFE service centrally employed. This implies that colleges are responsible for their own day to day management administration and the administration of the personnel aspects of the centrally employed staff together with the full human resource responsibilities for their own employees (administrative and support staff, seasonal and contract employed teachers). Further, the Vocational and Training Act 1990 provided for the establishment of TAFE colleges as self-governing institutions forming part of the post-secondary education system in Victoria which included vocational and further education.

The 1990 Vocational and Training Act also bestowed responsibilities for policy development and regulation of the vocational education and training system including education offered by the private providers on the State Training Board (STB). STB was established in 1987 in order to perform functions which previously used to be performed by the TAFE Board, the Industrial Board and the Training Division of the Department of Labor. The whole system is known as State Training System (STS) which focuses on the outputs and service delivery of the Vocational Education and Training Institutes including TAFE colleges.

In this relation there had been a national initiative to form an authority to promote a national vocational and training system. This was done in July, 1992 when Commonwealth, State and Territory heads of government agreed to establish the Australian National Training Authority (ANTA).

During 1993-94, the Office of Training and Further Education had taken over some of the roles of the State Training Board, and maintained performance agreements with colleges, setting the level of their operation against the funding provided. The colleges operated in a market, which is both competitive and demanding.

Thus, TAFE colleges in Victoria are established as relatively independent public sector authorities operating under the coordination of the Office of Training and Further Education to provide vocational training programs within a competitive training market, which includes private training providers.

3.3.1. Network of TAFE Colleges in Victoria

During 1991-92 there were 30 TAFE colleges in Victoria. In 1994 the Victorian TAFE colleges network was composed of 24 TAFE colleges, four universities with TAFE sectors and one specialist college, the Army College of TAFE.

In 1996 this network was reduced to 23 TAFE institutes with four universities with TAFE sectors.

Victorian TAFE colleges offer courses in a variety of fields which include:

- Basic preparation for work.
- Entry or certificate level training, including apprenticeships and traineeships.
- Advanced vocational training, including training for para-professionals and advanced technicians.
- Advanced post-initial training courses.
- Basic literacy and numeracy.

The general characteristics of Victorian TAFE system have been, since the establishment, in many ways unique compared with the TAFE systems of other states and territories.

These characteristics may be summarized as:

- a) Funding- all TAFE institutes are funded by the government to provide vocational education and training and further education.
- b) Self-governing- Victorian TAFE colleges have retained the same level of autonomy they had always enjoyed. The State Training Board (STB) had the responsibility of implementation of a TAFE management service within colleges for encouraging the entrepreneurial activity of colleges. The STB was a statutory authority for funding and regulation of the training system, whereas the internal administrative system, managing their own human resources, and service deliveries are carried out by each institute with freedom.
- c) Industry based- Have a close link with industry to best select the courses they offer to promote the consistency in the system.
- d) Work in partnership with each other and with STB, OTFE and other training bodies to promote consistency in the system.
- e) Commitment to improving quality- TAFE institutes have been taken into the quality improvement program during 1995-96 towards continuous improvement of quality in the priority areas of training delivery and institute governance. This

program was implemented by STB, and is being contributed to by the OTFE. The policy framework was formulated by the Board. Draft quality principles and outcome statements to support national quality arrangement have been contributed by the OTFE.

3.4. The 1990s- Pressure for Change

The later years of the 90s have seen the continuation of changes and uncertainty in the TAFE system. Many reports on restructuring and formation of different bodies and authorities on vocational education and training have kept the change process on the move. The major events (Goozee, 1993) were:

- The Deveson Report on the need for additional government funding;
- The establishment of the Vocational Education Employment and Training Advisory Committee (VEETAC) replacing the Commonwealth State Training and Advisory Committee (COSTAC) to report to the ministers on related issues;
- The Finn Report on directions for change in both schools and TAFE;
- The Carmichael Report on importance of training needs and the establishment of a competency based Australian vocational certificate system.

Since the early 1990s the TAFE system has been undergoing constant and changing pressures by the government and industry for TAFE to increase its service provision in a variety of ways. The TAFE system is striving to meet the ever increasing and constantly changing demands for vocational education and training. These demands evolved from many different functions as can be outlined below:

- a) Pressure of unmet demand for courses- arising out of the increased retention rate in schools and also of the recession;
- b) The demand for competency based training;

- c) Increased commercial activities- towards revenue generating and in turn, the training system for industry;
- d) The need to strengthen relationships between other sectors of education- to create more and better training opportunities for young people;
- e) The demand for new courses catering to the needs of the new labor market programs;
- f) The demand for improving skills and quality of service.

Apart from the economic forces there have been the pressures from the demographic and social factors. The slow growth in the work force, increase of unemployment and the increase of women in the work force- all these demographic trends add up to create pressures on the TAFE system.

Another need is to improve access to training by groups who have traditionally been disadvantaged in the labor market. These groups include women, people from non-English speaking backgrounds, people with disabilities, people in institutions, aborigines, people from rural areas and the long term unemployed.

3.5. Profile of WMIT

Western Melbourne Institute of TAFE is one of the largest TAFE institutes in the state, with major campuses located at Footscray, South Melbourne, Sunshine, Newport, Werribee, and in the Central Business District of Melbourne.

The institute was formed in May 1991 under section 24 of the Vocational Education and Training Act, 1990. In October 1995, a new constitution was approved by the Governor-in-Council. This took effect on 1 January, 1996. The responsible minister is the Minister for Tertiary Education and Training.

Western Melbourne TAFE is a major provider of vocational education and training programs, services and products in the Victorian and national arena. The institute enjoys a reputation, both locally and nationally, as a provider of quality education and training, particularly in the areas of flexible delivery and workplace training. Western Melbourne TAFE is also a state and national leader in the management of curriculum projects, including the production of quality curriculum materials.

While the majority of the institute's student population of nearly 24,000 comes from the western region of Melbourne, students are drawn from across Victoria and overseas. The institute has also extended its range of services by delivering education and training abroad. In 1996, the institute delivered extensive training in China, Cambodia and other parts of South-East Asia and is forged strong links with Maricopa County Community Colleges system in Phoenix, Arizona.

Western Melbourne Institute of TAFE offers a diverse range of full -time, part-time and short courses across a variety of disciplines. These include basic literacy and numeracy programs, certificates 1-1V and Associate Diploma and Diploma courses. Many courses are competency-based, and students are able to apply for recognition of prior learning where appropriate.

The institute's strategic alliances with industry and enterprises through cooperative ventures have seen the delivery of a wide range of quality, innovative, customized, and flexibly delivered programs to some of Australia's leading enterprises. The institute has also vigorously pursued offshore training opportunities through partnerships and strategic ventures with other educational and training institutions.

3.5.1. Change of Name

The Title Western Melbourne Institute of TAFE, was adopted by the former Western Metropolitan College of TAFE on January 1, 1996. The institute is one of Victoria's major

TAFE institutes. Currently there are approximately 850 staff members, made up of almost 600 teaching and 250 support and administrative staff. The majority of staff are permanent and full-time, although there are significant numbers of part-time and sessional staff.

3.5.2. Mission and Objectives

The mission of Western Melbourne Institute of TAFE is to provide high quality training and education programs, services and products to the community, industry and individuals.

The institute is committed to:

- Responding to the needs of the community, industry and individuals, in the western region of Melbourne and beyond, as well as the initiation and development of offshore training opportunities;
- Quality assurance and continuous improvement;
- A client-focused approach to program and service delivery;
- Recognition of the principles of access, equity and equal opportunity;
- A program of staff development, incorporating training, staff exchange and staff support;
- The further development of innovative and entrepreneurial activity;
- Effective and efficient management of institute resources;
- The provision of high quality equipment and facilities;
- Leadership in program delivery, including:
- Institute-based accreditation
- Curriculum maintenance and design
- Open training/ flexible delivery
- Partnerships/ alliances with a wide range of organizations external to the institute.

3.5.3. Development

The institute has undertaken a number of issues relating to a further improvement in all aspects of management and facilities as has been described in The Annual Report of 1996. These are outlined as:

- The development of strong educational leadership by senior and middle management;
- The development of a culture of innovation across the institute;
- The implementation of enhanced quality assurance and continuous improvement systems which emphasize a strong client focus;
- A review of program management and accreditation arrangements and the delegation of program management to program teams;
- The upgrading of the institute's information technology infrastructure, including the installation of a wide area network (WAN) linking the institute's campuses.

1996 was a year of great progress for the institute, with significant development in program delivery. With the commencement of the two new centers at the Sunshine campus, opening of the King street, Melbourne campus, and the consolidation of operations at these sites, the institute has a sound foundation on which to base further developments in program and service delivery into the year 2000 and beyond.

Most notable among the institute's developments has been its expanding links with overseas countries. The institute has forged strong links with the National Community College Chair Academy, which operates from the Mesa Community College in Phoenix, Arizona, for the successful dehvery of the program 'Leadership Development for Education and Training Managers' in Victoria, Australia. In consortium arrangements, the institute also delivers a variety of programs throughout South-East Asia.

3.5.4. Strategies

The institute put forward their strategies and detailed future directions for the period from 1997 to 1999 in a 'Strategic Directions' booklet, 1997. The major strategies of the institute have been described as:

- Responsiveness
- Quality
- Accessibility
- Efficiency

The 'Quality' strategy is further discussed in detail:

- Implement a system of program teams to achieve continuous improvement in the delivery of high quality programs, services and products
- Achieve ISO 9001 certification by mid 1997
- Foster an institute-wide "culture" of client service and innovation through, for example, establishment of a quality initiatives fund designed to support quality teaching and learning strategies across the institute
- Develop a new facilities strategic plan designed to rationalize programs across the institute
- Complete renovation of the center for sport, recreation and fitness and sponsor an official launch
- Implement an institute occupational health and safety manual containing current policies and procedures
- Recruit new institute council members and provide an induction program Design and implement a staff development program for institute teachers who are marketing "VET in schools" to secondary schools and colleges

- Upgrade the institute information technology/communication infrastructure
- Provide at least 100 computers to enable staff to access the wide area network to achieve administrative and communication efficiencies
- Implement an IBM-compatible Multi-Media Computer Laboratory at South Melbourne
- Implement a teaching and learning exchange initiative across the institute designed to enhance flexible delivery of programs and services to small enterprises.

3.6. Responses to Pressure

In the 1980s Australian public and private sectors began to show a heightened and quite focused interest in quality in response to the reality of global markets and the continuous change in the nature of international competition. This response has seen demonstrable benefits of the application of ISO Quality management standards or TQM approaches in a number of Australian enterprises (public and private).

The move to adopt continuous quality improvement programs in the national context gave rise to a number of committees and organizations to service the various needs of the purpose. In recent times the Wider Quality Movement (Foley et al., 1997), established in 1993 has added a new national forum to discuss and explore issues of national relevance.

In response to the national quality initiatives the public and private sectors in Victoria have demonstrated increasing commitment to improving the quality of products and services. More precisely there has been an increasing awareness in the improvement of quality of vocational education and training in Victoria-particularly in priority areas of training delivery and TAFE institutes governance.

The responses to quality improvement in this sector, of great importance to the interests of this study, have been found to be wide ranging.

3.6.1. From Quantity to Quality Outcomes

It is evident from the Annual Reports of the State Training Board that vocational education and training in Victoria has been experiencing systematic approaches to quality improvement undertaken by the different related bodies. Further, a clear picture of the quality initiative can be drawn from the 1995-96 Annual Report of State Training Board as compared to the previous ones. The 1995-1996 Annual Report discusses quality initiatives in the strategic direction as follows-

- Most of the State Training System bodies including TAFE institutes and private providers have already implemented quality improvement initiatives of their own.
- The Office of Training and Further Education (OTFE) has contributed to establishing draft quality principles and outcomes statements to support national quality arrangements.
- The STB identified educational effectiveness as benchmarking and best practice priority.
- The OTFE has supported development of benchmarking methodologies in relation to staff perspective on quality management and student perceptions of quality in TAFE.

3.7. Transition Planning

Towards adopting the quality improvement program, a Continuous Improvement and Quality Assurance Working Group was formed by WMIT and different implementation strategies were undertaken by the group (Williams, 1995). As part of the plan, a student satisfaction survey was conducted in November, 1995 which aimed at disseminating the results to assist managers in planning for quality. Subsequently a Quality Unit was formed in early 1996 to administered 'The Quality Project'. The team consisted of three people at the beginning. Besides, different programs have been undertaken towards fulfilling the Australian Quality Awards Criteria under the (AQA) Framework. The progress report obtained from the institute as of June 1996, can be referred to in Appendix-3. The progress of the plan at different stages can be seen in Appendix-4.

3.8. The Quality Context in WMIT

A Quality System Unit overviews the implementation of the quality strategies of all the campuses of the institute. The Quality System incorporates:

- A Quality Manual for programs to assist teaching The Manual has been prepared on the basis of 'Quality System Guidelines - Part 5, Guide to Quality System Standard AS/NZS ISO 9001: 1994 for Education and Training'.
- A program team model for the design, delivery and evaluation of programs.
- A leadership role for Board of Studies in the quality of teaching and learning.
- Quality Audits of program delivery and evaluation An Accreditation Audit was conducted by the National Association of Testing Authorities on 11, 12, 13, March 1997 and the Certification to ISO 9001 was obtained on 6 May, 1997.
- Fulfillment of criteria for obtaining (AQA) Award progress has been done and the institute has prepared documentation on criteria fulfillment under (AQA) framework to compete for the award.
- Internal Auditing A set of structured forms, (Appendix-5) such as:
 - a) Internal Memorandum on Notification of Quality Audit;
 - b) Cover Letter to Auditors;
 - c) Pre-audit Checklist;
 - d) Audit Report;
 - e) Corrective Action Request;
 - f) Audit Checklist.
- Customer Response Form (C.R.F.) to assess customer feedback on service or

products provided by the institute (Appendix-6).

The Quality Unit undertakes continuous monitoring of different quality aspects including the adherence to the elements of ISO 9001 as interpreted by WMIT. The institute has fit the 20 elements of ISO 9001 in the working procedures of the institute for better quality of service or product.

4. THEORETICAL FRAMEWORK

The theoretical framework constitutes the conceptual foundation of the study- through identifying different variables and analyzing the relationships among the variables to arrive at testable hypotheses. These hypotheses were applied in examining the state of TQM implementation in the Australian public sector agency under investigation.

4.1. Variable Identification

Dependent variable: There are number of major variables in the case study of which the primary variable is " effectiveness of Total Quality practices" which is classified as "the dependent variable'. Effectiveness was measured by the following independent variables:

Independent variables: The independent variables were identified as-

- a) Quality of service.
- b) Degree of satisfaction of stakeholders.
- c) Management commitment.
- d) Effective strategies.

Intervening variables: Further, some other variables, called 'Intervening variables' are listed below that surface as a function of each independent variable-

Independent Variable	Intervening Variable
a) Quality of Service	1. Employee productivity
	2. Improved organizational process and
	procedures
	3. Improved management decision
	making
	4. Improved competitiveness
	5. Dealing with complaints
	6. Participation in community
	development
b) Degree of Satisfaction of Stakeholders	1. Reward
	2. Quality of working life (QWL)
c) Employee Involvement and Awareness	1. Employee participation
	2. QS Knowledge level
	3. Self-motivation
	4. Acceptance, Attitudes and behavioral
	responses to TQM.
d) Effective Strategies	1. Good information channel
	2. Code of ethics
	3. Benchmarking performance
	4. Support system

<u>Moderating variable</u>: Apart from the variables named above, a different kind of variable known as 'Moderating variable' has been taken into account in the study to examine and analyze the external effects on the current situation. This is explained as government policies, strategies, financial support in relation to the implementation of Quality Systems and national infrastructure development which all together put a contingent effect on the relationships of

the dependent and independent variables.

4.2. Research Questions

The broad area of the research are aimed at obtaining answers to the following research questions-

- I. Will the staff be more aware of the existence of TQM features with the improvement of communication channels and will improvement in awareness result in positive outcomes in respect of effectiveness in the implementation of TQM?
- II. Will increase in knowledge of the existence of quality system and self motivation of the employees assure more employee involvement in the quality improvement process for increasing effectiveness of TQM practices?
- III. Will change of the culture of the organization toward a quality improvement process make the attitudes and behavioral responses of the employees more positive to TQM so as to increase the speed of implementation of TQM?

5. THE RESEARCH DESIGN

5.1. Type of Study

The research was primarily designed as an exploratory, qualitative field study to examine the extent of effectiveness of TQM in the Australian public sector. In this research a descriptive and single case study approach has been undertaken in an attempt to determine the status of TQM implementation and its effectiveness in WMIT - a public sector agency. The nature of the study was analytical as relationships between independent and dependent variable have been attempted to be established.

5.2. Type of Investigation

The research was undertaken as a single case study in order to explain the nature of certain relationships through the field study.

WMIT is one of the Australian public sector organizations to undertake TQM for continuous improvement. Information was collected through different sources of evidence i.e. questionnaire and interviews. At the same time information was also collected through different working papers, internal documents and reports of the organization for analyzing and reviewing. This was done to confirm the construct validity of the research as suggested by Yin (1994).

The Quality System (QS) was implemented in March, 1997, as part of the quality improvement programs initiated by the government since 1990s. The individuals contacted for interviews and questionnaire surveys were of primary interest to the study due to their recent experience in the quality improvement process.

Two formal interviews were recorded using an audio recorder and later the recorded answers were analyzed. The interview answers were used to provide qualitative exploration of the findings recorded in the questionnaire results.

5.3. Study Setting

The aim of the study was establish correlation, cause-effect relationship and confirm hypothesis through a field study. The survey was carried out among employees of the organization in their natural work environment. There was not any controlled or manipulated question in the questionnaire and neither was it artificially set.

5.4. Unit of Analysis

Since the survey was done on each individual employee directly related to the change process of QS of WMIT, Newport campus, the unit of analysis undertaken was the individual. Thus, the research was aimed at analyzing the data gathered from each individual and treating each employee's response as an individual data source.

5.5. Time Horizon

This study was a one-shot or cross-sectional research. The data for this study was collected over a period of one month.

6. METHODOLOGY

6.1. Background of the Survey

To meet the objective of the proposed study, several public sector organizations where TQM is being implemented were short listed on the basis of quality improvement having been implemented. These were approached to participate in a survey for the purpose of assessing the state of TQM practices. At first (2nd week of May), The Office of Training and Further Education (OTFE) in the Department of Education were approached for the purpose and a number of communications and discussion sessions were held on different dates with one of the Officers. But access to do the proposed survey was not granted on the grounds of not having enough staff in the office to meet the sample size and other technical problems within the office. Then, an attempt was made to conduct the survey on a TAFE college, this being one of the Australian Public sector organizations, to have adopted TQM.

At this stage, the Western Melbourne Institute of TAFE of Footscray campus, and city campus, were selected and several meetings were held with one of the teachers of Footscray campus, who organized a presentation on the purpose of the study and on the support required for the survey in their monthly (June) staff meeting. Finally, after discussion staff members in the meeting agreed to support this survey. As a result, a total of 35 Questionnaires were distributed the Footscray campus and a total of 30 questionnaires in the City campus of WMIT in the second week of June with a request to the respondents to return the filled in questionnaires from the City campus have so far been received. This indicates that about 17% responses were obtained from these two campuses. Owing to its accessibility and small size, WMIT is more suitable for conducting a sample survey within a limited time frame.

In the mean time, two other similar organizations were tried but it was not possible to obtain

access within those organizations. In the first week of July, the Newport campus of WMIT was approached after understanding that a quality unit has been established in the campus for implementing and monitoring a Quality System in all the campuses of WMIT. The Manager, Quality Unit of Newport campus, extended maximum support and cooperation towards conducting the survey and under his personal initiative and persuasion 51 questionnaires out of 100, were received (51%).

Further, qualitative data was obtained from semi-structured face to face interview with two key personnel in the Quality Unit of the organization in order to gather information on the organization's history, transition to the Quality system, status of the Quality program and the extent of use by the organization.

6.2. Scope of the Study

The scope of the study was restricted to the extent of application of TQM and its effectiveness in WMIT, Newport campus. The primary information sources for this research were a questionnaire survey of a sample population , interviewing of 1) The Manager, Quality Unit at WMIT, Newport campus and 2) Manager, Inter Agency and Non Government Relations, Department of Education, and some secondary data obtained. The extent of use of TQM, the effectiveness, TQM knowledge of the organization staff, quality of service to the stakeholders, benefits of TQM etc. has been represented by a set of measurable features and correlation have been established. Although the study was aimed at understanding the TQM perspectives of the Australian public sector as a whole, it is limited to one organization for survey purposes and two key personnel involved in implementation of the Quality System for interviewing purposes.

6.3. Limitations of the Study

The application of TQM in an Australian context being a recent development, the availability of secondary data on TQM in the Australian public sector was found to be limited. Due to the small sample size the results obtained from the sample cannot present an overall picture of effectiveness of TQM in the APS.

6.4. Questionnaire Design

The questionnaire was designed to collect various required data elements from the respondents. Several published case studies have been consulted to develop the questionnaire (Appendix-8).

It had six major sections:

- a) Eight questions concerning general background information about the respondents.
- b) Two questions were aimed at understanding respondents' knowledge of the Quality System.
- c) Three questions to measure the practice of TQM within the organization.
- d) Seven questions to measure the level and effectiveness of common strategies undertaken by the management towards the successful implementation of quality management.
- e) This section contained two sub-sections:

1) Measurement of the effectiveness of QS within the organization (internally) with four close-ended questions and one open-ended question tagged with one of the four questions.

2) Measurement of effectiveness of QS outside the organization (externally)

comprising three questions.

f) This section consisted of six close-ended questions along with one open-ended question tagged with the last question. This section was aimed at understanding the level of satisfaction /benefit experienced due to the implementation of TQM by the different stakeholders.

These were the dimensions designed to evaluate the effectiveness of TQM practices in WMIT.

6.5. Rating Scale

Different rating scales were used for the close-ended questions in the questionnaire depending on the nature of the questions. For most of the cases, five point rating scales were used. These five point scales were of different types, such as: 'Not at all ------ very great extent', 'None ------- Excellent', ' Very negative ------ very positive', and 'None ----- all'. Other closeended questions were scaled in binary form, i.e. 'Yes'/'No'.

In addition, two open-ended questions were used to augment the information at the relevant section.

6.6. Data Collection Method

One hundred structured questionnaires were distributed among the respondents. A discussion was held with the Manager, Quality Unit, regarding the relevance and appropriateness of the questions and the questionnaire was thoroughly revised before distribution. It was possible to collect 51% filled in questionnaires after four weeks with the cooperation of the Manager, Quality Unit. During this period of time two separate structured interviews were conducted to

limit the gaps between the information expected through the questionnaire survey and the required information for the overall thesis.

Interview questions were mainly related to the organization chart, organization history, TQM implementation strategies, government policies, financial allocation etc. This questions were arranged in two different ways and two separate questionnaire were prepared for the purpose of having relevance to the position and experience of the two interviewees (Appendix-9 & Appendix-10).

The first interview was conducted with the Manager, Quality Unit and the interview schedule was primarily confined to internal aspects of the change process. The second interview was conducted with the Manager, Inter Agency and Non Government Relations, Ministry of Education, and the schedule was designed in this case with a view to obtaining the external factors influencing the quality improvement process.

Further, TQM has been officially implemented in this organization only since March, 1997 and as such the findings from the survey were used to give overall trends through statistical methods and by content analysis. Thus, the research design decisions were constrained and a level of scientific enquiry was determined by the resource constraints of the study.

6.7. Coding and Analysis

These filled in questionnaires were manually checked for various omissions and data was entered into SPSS data file directly from these schedules. To recheck the validity of the responses a frequency-run was taken to check the response against various valid limits for several variables.

A section has also been used for data control for the questionnaire form. This was used to

administer the data collection process. The questionnaire form was designed using NCC form design standard (Lee, 1980). For quick response all close-ended questions were pre-coded where the face to face interview with the TAFE resource personnel was helpful. Due to time and access limitation, very few consistency checks could be kept in-built within the questionnaire. Care was taken to ensure better quality of questionnaire by carefully avoiding double-barreled, ambiguous, recall dependent, leading and loaded questions (Sekaran, 1992).

6.8. Sampling Design

Due to the non-availability of the sizes of different groups of employees in the organization, a simple random sampling was carried out instead of stratified random sampling. The simple random sampling or unrestricted sample design refers to a known and equal chance for every element of population to be selected as a subject (Sekaran, 1992). Whereas stratified random sampling could have been more advantageous for this case study since questionnaires could be distributed among each group to obtain differentiated information.

The sample size for this research was a total number of 100 and this would conform to the rules of thumb proposed by Roscoe (1975 in Sekaran, 1992) as " Sample sizes larger than 30 and less than 500 are appropriate for most research".

6.8.1. Response Rates

A total number of 100 questionnaires were distributed among 114 employees and a total of 51 filled-in questionnaires were returned. There were different classes of employees as shown in the following table:

Role in the organization	No. of employees	% of the total population
	responded	(Response Rate)
Senior managers	3	3%
Managers	10	10%
Teachers	16	16%
Supporting staff	22	22%
Total	51	*51%

* Total number of staff (Sr Managers, Managers, Teachers & Supporting Staff) is 114.
Note: The data for the total number of staff in the individual category (Sr. Managers, Managers, Teachers and Supporting staff) was not available from the institute.

6.8.2. Description of the Sample

Survey sample: The Survey sample population comprised Senior Managers, Managers, Teachers and Supporting staff including Administrative Officers, Project Officers involved in the Quality System at WMIT, Newport campus.

Interview sample: One of the interview samples was a key person responsible for the implementation and monitoring of the Quality System at WMIT, Newport campus. The other interviewee was a government representative directly involved in the quality improvement initiative and supervision of different TQM programs.

6.9. Data Analysis and Interpretation

The data were analyzed using SPSS (Statistical Package for the Social Scientists) version 6.1 (Windows), a reliable statistics software for generating statistical index and models. After entering data it was manually verified and a frequency run was given to check consistency of all variables. Some open-ended variables such as age needed re-coding and standard age ranges were used to encode this.

Various statistical indices such as mean, mode, etc. were used for one way analysis after cleaning of data. Regression, Frequencies and Cross Tabulations were used for two or multiways analysis by which association or relation among two or more variables were established. Regression was used to understand the association of ordinal and metric variables.

Different models were proposed and several statistical indexes were used to test hypotheses formed during the exploratory data analysis.

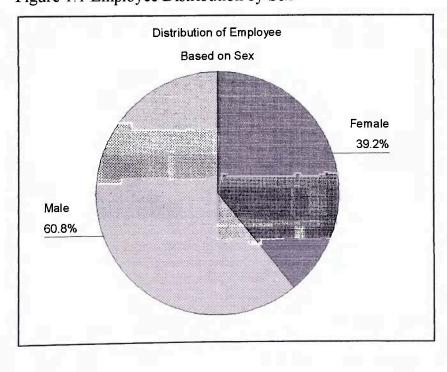
7. FINDINGS AND RESULTS FROM SURVEY

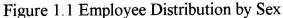
A questionnaire survey was conducted to assess the demographic characteristics of the organization, employees' knowledge, awareness, attitude and participation in Quality System Implementation. The employees' opinion were also gathered on the effectiveness of TQM practices in various dimensions.

7.1. Demographic characteristics of the institute

Distribution by Sex

The factors influencing the success of TQM is related to the demographic characteristics of the institution. For example, TQM knowledge, which is an important factor, may be related to the level of education, age-distribution, etc. In this section, various demographic characteristics of Newport -WMIT, have been provided. WMIT is an education organization with 114 employees, having a male-female proportion of 3:2 (Fig 7.1).





Employee Age Distribution

The employee's age distribution forms almost a normal distribution but is skewed towards 40+. About 70% of the employees are 40+, which is usual for academic institutions.

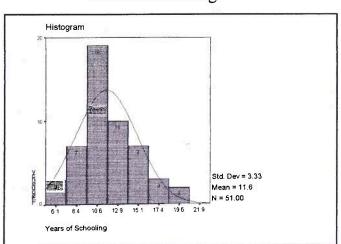
Age	Count	%
20-30	6	11.8%
31-40	11	21.5%
41-50	27	53%
51+	7	13.8%

Table 1.1 Employee Age Distribution

Years of Formal Schooling

The sample has quite uncommon distribution of level of education. This may be attributed to the specific requirements of the organization as an education institution (Fig 1.2).

Figure 1.2 Distribution of Employees'



Years of Schooling

Service Length of Employees

Table 1.2 on the distribution of service length implies, 40% employees are new. New staff are more likely to be less informed about organization's intrinsic rules, regulations and practices.

Years	Count	%
0-5	21	42.0%
6-10	9	18.0%
11-15	7	14.0%
15-20	8	16.0%
21-25	5	10.0%

Table 1.2 Employees' Service Length

Nature of Employment

The organization is running with approximately 54% permanent employees and the rest occupy contracted positions (Table 1.3).

Table 1.3 Nature of Employment

Employment Nature	Count	%
Casual	1	2.0%
Part Time Permanent	5	9.8%
Full Time Permanent	23	45.1%
Part Time Contract	5	9.8%
Full Time Contract	17	33.3%

Employees' Level of Position

There are two main streams of positions in the organization – academic staff and administrative staff. The manager and non-manager ratio is approx. 1:3 (Table 1.4), as teachers and administrative officers have identified themselves as non-managers in the questionnaires.

Table 1.4 Level of Position

Position	Count	%
Teacher	22	43.1%
Admin Officer	16	31.4%
Manager	10	19.6%
Senior Manager	3	5.9%

Supervisory Role of Employees

Based on the mentoring requirement the distribution of supervisor – non supervisor roles is as per the following table:

Table 1.5 Supervision Role

Role	Count	%
No Supervision role	33	64.7%
Supervision role	18	35.3%

7.2. TQM Knowledge Level Assessment

OS Knowledge Level of Employees

Table 2.1 shows that 9.8% of the sample responded as having no knowledge of the organization's quality system. It also reveals that the level of knowledge on Quality System is just above 50% on the medium and high category. This reveals the fact that QS has been very recently implemented and that all the employees are not aware of the system in which they are performing their duties.

Table 2.1 Quality System Knowledge Level

Level	Count	%
No Knowledge	5	9.8%
Low	16	31.4%
Medium	21	41.2%
High	9	17.6%

Systematic Formal Training on OS

Systematic formal training has been received by 11 persons constituting 22.4% of the sample and 2 persons did not answer this question (Table 2.2). The rest answered 'no' to the question. Although formal training is essential for everyone involved in the quality improvement process, the response shows that a very low portion of the sample have had formal training.

Table 2.2 Systematic Formal Training

Response	Count	%
No	38	77.6%
Yes	11	22.4%

Systematic Formal Training w.r.t. Supervisory Role

Table 2.3 shows that 62.5 % did not have any training in spite of their supervisory role. The computed contingency coefficient is 0.2, with the approx. level of significance being > 0.05. This implies that overall there was insufficient training and the training that was offered was biased towards senior administrators.

No		No	Yes	
Role	Count	%	Count	%
Non-Supervisory	28	57.1%	5	10.2%
Role				
Supervisory	10	20.4%	6	12.2%
Role				

Table 2.3 Systematic Formal Training w.r.t. Supervisory Role

Systematic Formal Training w.r.t. Position

Even 60% managers and 33.33% Senior Managers did not have any formal training on TQM (Table 2.4). Owing to small sample size training policy could not be identified.

Table 2.4 Systematic Formal Training w.r.t. Position

Position	N	No		es
	Count	Row %	Count	Row %
Teacher	20	90.9%	2	9.1%
Admin Officer	11	78.6%	3	21.4%
Manager	6	60.0%	4	40.0%
Senior Manager	1	33.3%	2	66.7%

7.3. Extent of use of TQM

OS Implementation Period

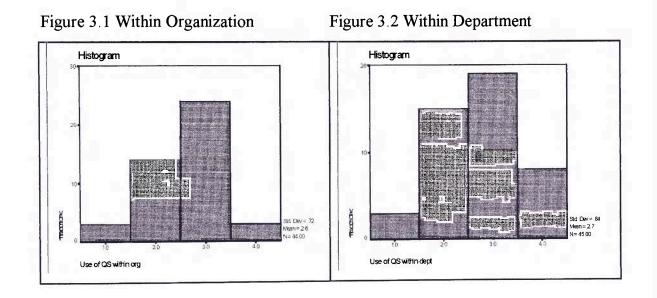
From the frequency table it appears to be in a transitional state. Owing to gradual transition (step wise or multi-stage), different people had different perceptions about the implementation time. But a major portion of the staff has seen it for at least one year (Table 3.1). Further, about 9 respondents (17.64%) did not answer this question which implies that the implementation of TQM is not known to this group of staff. However, the rest is not aware of the actual period of time that QS has been implemented in the institute.

Table 3.1 How Long QS Been Implemented

Years Implemented	Count	Row %
Upto 1 year	31	60.78%
More than 1 to 2 years	8	15.68%
More than 2 to 4 years	3	5.88%
Missing responses	9	17.64%

The Use of Quality Improvement Procedures

The responses indicate that the use of procedures relating to quality improvement programs is quite satisfactory. The mean of the use within the organization is 2.6 and within the individual department is 2.7, which show a substantial level of achievement in the extent of use of methods and tools of TQM. About 60% respondents described the level of use within the organization as 'good' and 'excellent. On the other hand, about 50% marked it within departments as 'good' and 'excellent' (Fig 3.1 & 3.2).



Coverage in Terms of Number of Employees

The organization claims to cover 100% employees in the program but in the response a small percentage of people has some doubt about the 100% coverage. This may be attributed to the induction of new staff and lack of information flow within the organization or lack of employee participation (Figure 3.3).

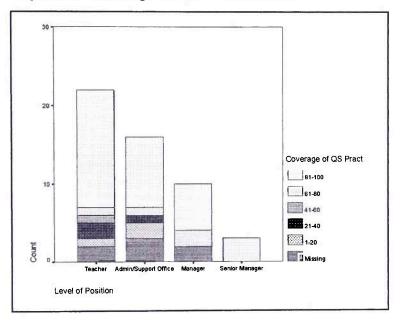


Figure 3.3 Coverage of QS w.r.t Position

7.4. Strategy for Continuous Improvement

Measurement of Ouality

As expected, the organization took several measures to monitor and improve services. It has set a number of directions for these purposes and the emphasis on different dimensions is different. Figure 4.1 shows the relative emphasis on different categories of efforts.

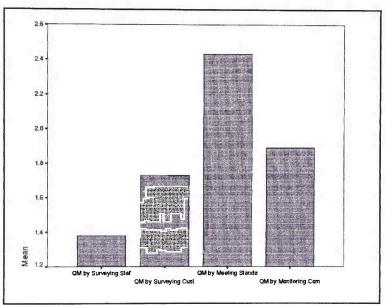
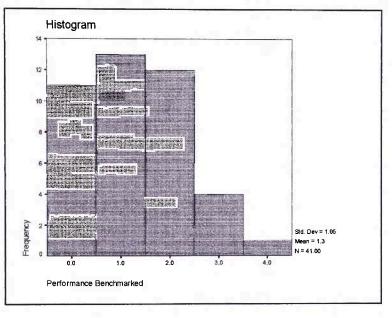


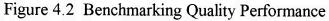
Figure 4.1 Measurement of Quality

From the above figure, it is evident that the organization put emphasis on meeting standards, as the mean is above average, ie., 2.4. It also puts emphasis on monitoring complaints. The results reflects that, the average level of such efforts are moderate.

Benchmarking Quality Performance

The results show in Figure 4.2 that about 55% of the respondents are aware that the organization has been benchmarked against other institutes but the survey reflects the extent of such benchmarking efforts is low. A high standard deviation of response reflects a high degree of difference in opinion. This may be due to a lack of information (Figure 4.2).

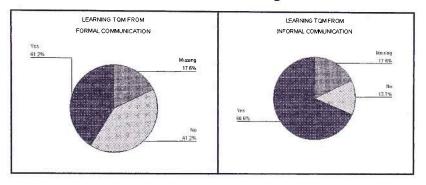




<u>Learning TOM</u>

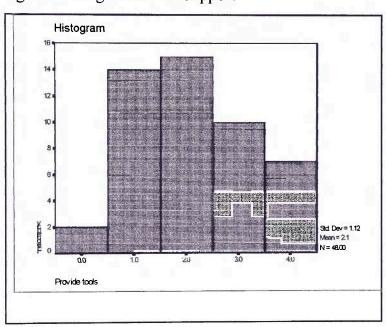
The spread of TQM knowledge through formal communication channels is much lower compared with informal communication channels (Figure 4.3 & 4.4). About 41% learned TQM from formal and 69% from informal channels.

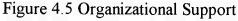
Figure 4.3Figure 4.4Learning thru Formal Comm.Learning thru Infrml Comm.



Organizational Support, Code of Ethics & Informing Stakeholders

The organizational support in favour of spread of TQM practice is moderate, scoring 2.13 in the scale of 0 to 4 (Fig 4.5) with a Standard Error of Mean 0.16. The 95% CI for Mean (1.80, 2.45) reflects moderate scoring of the organizational support. There is big a difference of opinion in this regard as the SD 1.2 is big compared to the mean 2.1. This reflects lack of uniformity and there is a great extent of scope to improve in this direction. The organization needs to put more emphasis to ensure participation of people by tools, information, training, etc.

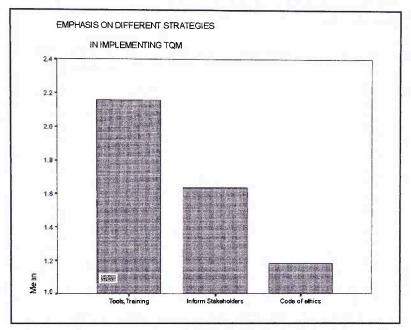


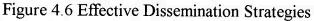


The organization lacks a code of ethics for the employees. In a scale of 0 to 4, the average score reported for the code of ethics setting is 0.32. The 95% Confidence Index (CI) for Mean (0.18, 0.46), reflects poor efforts on setting code of ethics. This is an important indicator for the effective implementation of TQM and it has some relation with cultural and psychological attitude formation.

Some efforts to inform stakeholders about the performance of the organization are visible. There are regular publications and a department is devoted to such activity. The mean score obtained from the opinion survey is 1.65 in a scale of 0 to 4 and the 95% CI for Mean is (1.34, 1.97). This is less than average and it reflects scope for improvement.

The relative emphasis on different strategies in obtaining effectiveness can be summarised by the following Figure 4.6

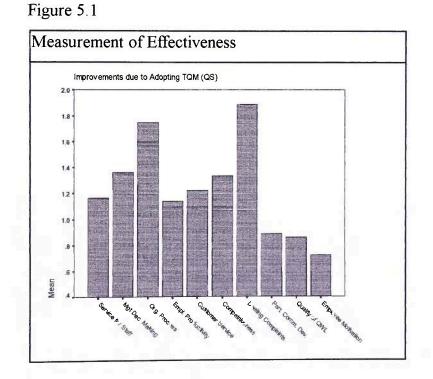




The organization also plays a number of roles to improve quality by supplying tools, setting code of ethics and keeping stakeholders/customers well informed. In the above items the effort to set up a code of ethics is found to be the most neglected one.

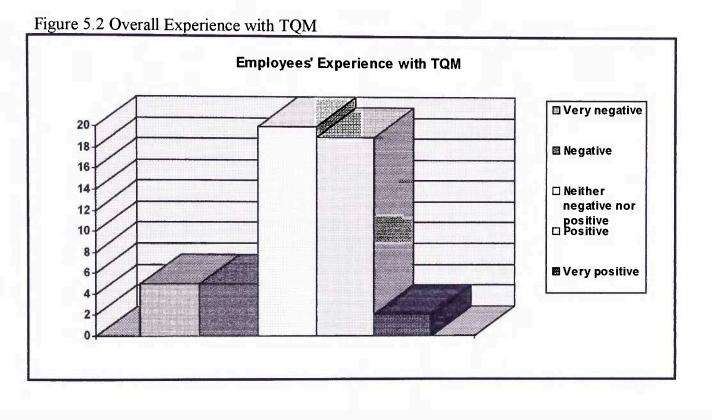
7.5. The Effectiveness of TQM Practices

The opinion survey on measuring the effectiveness of TQM within the organization reflects that there are some visible improvements due to the implementation of TQM but there is room for improvement. Opinion for the questions (Nos. 21-26, 28, 30-32) were recorded in a scale of 0 to 4 and the improvement of quality of service obtained from the survey have the mean score of 1.16 with Std Dev 0.91. The p (Precision) value computed from this experiment is (Std Err/Mean) 0.13 which implies the sample size is inadequate for drawing inference. 95% CI for Mean is (0.85, 1.47).



The above Figure (Fig 5.1) shows that dealing with complaints and improvements in organizational procedure have improved substantially. However, emphasis needs to be given to improving quality of working life of employees, employee motivation and participation in community development.

The following figure 5.2 reflects the respondents' overall experience with TQM and it reflects that 5 persons rated their experience as 'very negative and 5 persons as 'very positive'. Of the rest, 20 persons had 'negative' views and 19 had 'neither negative nor positive' views. As a whole, about 45% had responses inclined to positive.



7.6. Estimation of Efforts for Quality Improvement

Levels of Satisfaction of Stakeholders

Figure 6.1 compares the different level of satisfaction of the different stakeholders, namely, the customers, the employees and the community. From the survey, it has been found that the respondents are of the opinion that the highest level of satisfaction is obtained by the customers and the lowest by the community. But all these levels are above average, ie., customer satisfaction was perceived to have a mean of 2.45, employee satisfaction to have 2.3, and community satisfaction to have 2.15.

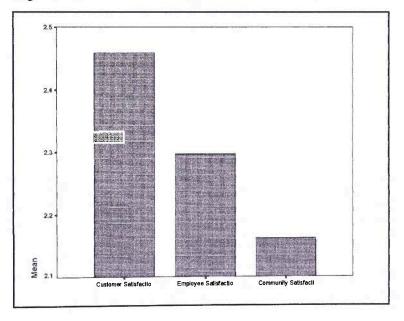


Figure 6.1 Satisfaction Level of Stakeholders

Employees Rewarded for Performance

Figure 6.2 reveals that the majority of the sample (about 66%) has rated the level of reward as 'Zero' or nil, about 18% with a view of getting rewarded to 'some extent' and only 4% with a view of getting a 'moderate extent' of reward for performance. Thus, it is evident that the Quality System is not based on 'rewarding for performance', rather it is a system with the inherent characteristics of improving quality by following procedures and directions.

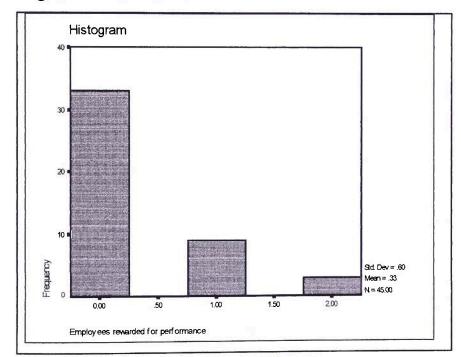


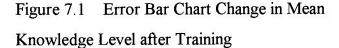
Figure 6.2 Reward for Performance

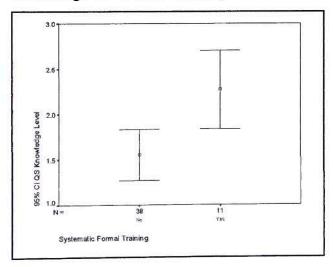
7.7. Alternate Research Questions

In this section, the following additional research questions were tested based on the general research questions developed in section 4.2:

I. Can QS formal training program improve average QS knowledge level? In other words, are the training programs organized by the organization effective?

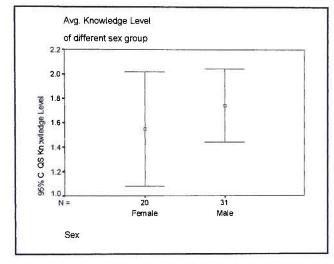
The improvement of knowledge level after formal training on Quality System is evident from the following error bar chart (Figure 7.1) showing the 95% confidence interval (CI) for trained and untrained groups. Two groups have statistically distinct mean and they do not have overlaps. This reflects emplyees' knowledge can be upgraded by formal training and formal training courses are effective. So, if proper emphasis on upgrading employees is given, the employee awereness can be enhanced.





There is no significant difference in the average knowledge of male and female employee groups (Figure 7.2). Though the female group has slightly lower average knowledge level for the sample, the following error bar chart shows that the difference is statistically insignificant as 95% Confidence Interval (CI) of knowledge index overlaps.

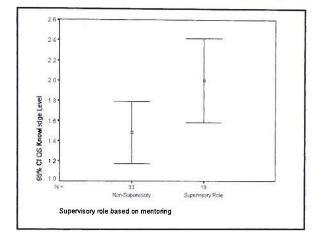
Figure 7.2 Error Bar Chart Showing Mean Knowledge Level of Different Sex Group



III. Is the knwoeldge level of employees of supervisor and non-supervisor role different ?

Based on mentoring, supervisory role was determined and as expected the knowledge level of supervisors is slightly higher. But owing to higher variance, the difference between supervisor and non-supervisor groups is statistically insignificant and this is reflected in the following error bar chart. (Figure 7.3).

Figure 7.3 Error Bar Chart Showing Mean Knowledge Level of Different Groups Based on Supervisory Role



7.8. Findings From Open Questions

Two open questions were tagged with two questions in the questionnaire- one with the question of employee productivity and the other with the question of reward for performance improvement.

A total of 19 questionnaires were found to have answers to either or both of the open questions. The question on employee productivity was answered by 31.4% of the sample and the question on reward was answered by 15.7% of the sample. Both questions were answered by only 9.8% of the sample. Of these 19 respondents, 4 were Managers, 2 were

Senior Managers, 5 were Administrative Officers and 8 were Teachers.

Fifteen respondents had positive views on the question on employee productivity and only 1 respondent did not find any change or improvement in this regard. On the other hand the question on reward for performance was responded as extreme negative by one respondent, as negative in certain aspects (such as security of employment and financial reward) by 1 respondent and as positive in some way or the other by six respondents. The answers of these open questions can be seen in Appendix-11.

8. FINDINGS FROM INTERVIEWS

Two different interviews were conducted to obtain qualitative information on different aspects of Quality Management in the surveyed institute and in the Australian Public Sector.

The results of the discussions with the two key personnel are summarised separately in the following section:

8.1. Results of Interview 1

Interviewee was responsible for looking after the overall supervising, monitoring and controlling the activities of the Quality Unit of WMIT. The interviewee has been trained by NATA for implementing Quality System (QS) in WMIT.

The Quality Unit (QU) manager said that the QS is used to form an image of each organization within the TAFE system in Victoria and Australia, and the QS will also be used as a promotional tool. It has international links with Indonesia, Malaysia, China and Vietnam.

The QU manager identified a number of benefits of the system which are:-

- a) Standardisation of service quality;
- b) Improved quality of service;
- c) Consistency of service delivery;
- d) Better provision to identify and improve opportunities.

To him, all these help in strengthening the institute and the departments within the institute.

The factors influencing the future success of the QS outlined by the QU manager are:-

- a) Lifting the standard of all departments;
- b) Forcing all staff to have customer-focus;
- c) Using Quality Assurance as a marketing tool;
- d) Gaining competitive advantage within the ever increasing competitive market of Victoria and overseas.

However, the interview is discussed below within the context of the major variables of TQM.

a) Quality of service: The service to staff is a responsibility of the Service Department which complies with the Procedure Manual and the ISO 9000 series standards. The Senior Management group adheres to the quality standards in making any decision. Most of the responsibilities and duties have been defined within the quality context, i.e., within the Quality System procedures.

As described by the QU manager, the effect of the implementation of QS is instrumental. The roles of the staff have changed and broadened which are covered in the Procedure Manual for every activity. Staff can see what their duties are and the Quality System Procedures Manual is something to go to as a resource. All these are changing the culture of the organization and the behaviour of the staff. He considered this procedural checking of responsibilities as a great effect of the implementation of QS since there had never been before any procedure to check the responsibilities of staff.

In terms of employee productivity gain, he said that it is too early to actually measure the effects. However, he mentioned that employees have a variety of responses- some see it as a good effort, whereas others see it as an imposition on their time and effort.

The question of involvement of the institute in community development and the question of the organization's being competitive with other organizations have yet to be answered.

As per his opinion, the procedure for dealing with complaints has improved to a great extent. In this regard, he mentioned the Customer Response Form which can be filled in by anybody

- students, staff or the members of the community. The Customer Response Forms are logged in the Quality Unit and a report is sent to Senior Management Group. This Senior Management Group meets every Monday morning to discuss and takes actions on the reports which are sent to Senior Management on a regular basis.

b) Degree of satisfaction of stakeholders: The Customer Response Form is an effective way of improving customer satisfaction and the community needs. This, in turn, helps improving service delivery and being more customer-focused.

Concerning the issue of quality of working life, there has also been too short a time to make any comment. The reward in respect of employee performance is not an issue included in the quality improvement program. However, he said that duties and responsibilities are more organized to form a part of improved quality of working life.

c) Employee involvement and awareness: The QU manager said that 100% of staff is covered by the system. All levels of employees from the Director to teaching and/or support staff are involved. The relevant procedures effect all the staff in a way that they have to comply with the procedures or are effected by their requirements e.g., Professional Development. Further, all levels are audited by internal auditors except for some staff in

the Security Department, Grounds staff and the Council.

As to the aspects of employee acceptance and attitudes towards the QS, he said that there have been various responses. Some employees accepted the system as a way to future success, gain competitive advantage and as a systematic guideline to perform duties and responsibilities. Some are resistant, specially the older members who perceive it as a time wasting exercise. The new members find it as part of their normal work procedures- they are neither resistant nor enthusiastic.

d) Effective Strategies: The National Association of Testing Authority (NATA) is the accreditation body of the institute. NATA has measured the institute against the ISO 9001 Standards and also against other institutes/organizations, and has given the certification. Senior Management use it as a measurement tool for ensuring that processes are kept in place and also for further credibility studies.

The performance is benchmarked against other organizations and against ISO 9000 series. This is done by NATA. The institute is considering the viability of obtaining the Australian Quality Award standards and the Australian Quality Council self assessment processes so as to asses their own performance rather than being audited by an outside body.

The QU provides all necessary support to the overall improvement of quality and related procedures. This is done through various ways. The QU informs the institute and all levels about the ISO 9000 series and the quality procedures that impact on the different areas of the organizational process. The Unit provides training to internal staff to become internal auditors, who subsequently have the authority on a scheduled program to audit any department. The Unit also provides information and training sessions to the Heads of the Departments, Heads of Centers and Associate Directors for a broader understanding of their responsibilities in relation to the Quality System. An innovation is to create Program Teams within all the teaching departments.

The stakeholders are informed of the different activities, developments and programs through a number of ways. advertising in newspapers, student diaries, in-house

publications etc. as a promotion to the wider community. Institute open days are also a mode of providing information to stakeholders.

8.2. Results of Interview 2

The Interviewee is currently the Manager, Inter Agency and Non-Government Relations in the Department of Education. She has worked with the Department of Education for twelve years and has been involved in Adult Community and Further Education for six years as a Regional Manager. Since 1992, she has worked in the central office of the Department of Education where she had the opportunity to observe closely the work related to continuous improvement and program management. In her current position, she has a policy coordination role.

In the context of the initiative for implementing continuous quality improvement the Interviewee said that a large number of programs have been undertaken in the last three to four years within OTFE and across their various branches. These organizations are affiliated with the Quality Council. On the other hand, the continuous quality improvement programs began to be undertaken by different TAFE colleges during late 80s.

She expressed her views in regard to the overall benefits of TQM experienced so far, as a matter too early to discover. But she also added that the general consensus about the improvements in different areas are- organizational understanding, productivity, levels of commitment, heightened awareness of job expectation, performance pay, increased focus on efficient development, stronger focus on outcomes, introduction of benchmarking and striving for improvement on a regular basis. These are very significant in the public sector.

In response to the question of problems or impediments in the implementation of TQM she pointed out that skepticism on the part of staff, unwillingness to change and viewing TQM as a threat by many people constitute a very complex situation in the implementation programs. She also referred to the areas that need to be emphasised to overcome the problems. These areas are commitment of Senior Management, appropriate training, and resources i.e., human and financial resources. The current strategies and policies of the relevant ministry in this regard, as outlined by the Interviewee, are extremely positive but not directive. They are supportive and encouraging by providing resources and information on the ways to perform within the quality improvement framework. The Department encourages the provider levels i.e., TAFE colleges and their staff, in the form of seminars and also through performance management plans.

She informed that TQM, individual performance pay and performance management had been operative during the Labor Government and that government was interested in new management techniques from the industry point of view. She also added that the Liberal Government has a strong commitment to quality improvement practices, especially in Victoria.

She expressed positive views on the success of TQM and its future. She said that quality improvement programs are working well in the TAFE colleges and it does foster improved customer relations through benchmarking and increased competitiveness. As per the interviewee's opinion there has already been a cultural shift in TAFE colleges and the OTFE with a continuing effort to change the culture towards continuous quality improvement.

a) Quality of Service: The question of the effect of the implementation on quality of service to staff has also been expressed as a matter yet to be answered at this early stage. However, she mentioned that professional development activities undertaken by the quality system have been instrumental in assisting staff to understand the direction that OTFE and the TAFE colleges are headed. These activities also help the staff to have a better idea of their roles in the organizations, the goals and objectives of the organizations and broader global understanding of the role of education in a competitive society.

She said that it was evident from earlier surveys on a participatory approach to management that many staff were not involved in decision making. The current process of continuous quality improvement has introduced a more participatory and commitment

oriented management approach in an open environment.

Her views on the effect of TQM on organizational processes and procedures are that it has produced a much greater attempt at communication and information flow, and an awareness of the direction of the organization. These are effected through seminars, workshops and regular meetings.

The service recipients, as seen from her position in the OTFE, are the TAFE colleges and hence, she opined on the quality of services from the point of view of a representative of OTFE. Although, she mentioned that this is too early a stage to evaluate the services, a number of improvements have been identified, such as, addressing the way of asking information from TAFE colleges and resource allocations to TAFE colleges.

As per the Interviewee's opinion, it is very hard to assess productivity improvement in an overall sense, as the OTFE is more involved in policy setting while TAFE Colleges are responsible for productivity. However, the individual performance plan, which is in use by most people, gives an opportunity for people to assess and improve their productivity.

On the question of competitiveness of OTFE in the area of TQM, she said that OTFE is doing better as a sector within the Department of Education and other areas of public sector agencies. She also mentioned that OTFE has been advised by Treasury and Finance that it is a leader in its implementation of TQM.

The question of participation in community development, as per the Interviewee, relates to the TAFE colleges which are extremely autonomous. To her, some colleges are found to be more involved in community development than others, specially in rural areas.

b) Degree of Satisfaction of Stakeholders: The Interviewee is of the view that most people have been enthusiastic in the implementation of TQM as it is considered to be very important, for example, Industry is satisfied by getting better service from TAFE colleges, i.e., they are able to get what they want very quickly from TAFE colleges. Further, the number of students in the TAFE sector is continuing to grow.

The question of quality of working life of employees has been discussed in the perspective of a performance management plan, individual performance plan and professional development. The Interviewee said that the Department of Education is at the forefront of promoting these plans which, in turn, fulfills the needs and expectations of the employers and employees. She added that funds are provided for individual development in respect of studying and professional training from the Department of Education.

The interviewee informed that employees are rewarded in a financial way as performance pay is a part of the performance plan. Individual performance policy varies from college to college.

c) Employee Involvement and Awareness: In relation to the responses of the employees towards TQM, she said that an enormous amount of concern and fear exists among people about TQM. Initially people were very concerned about losing their jobs or getting tied up in a complex management process. Later they have been able to cope with it and see the benefits of it.

d) Effective Strategies: In regard to the support of the Department, the interviewee explained that the OTFE provides an example for the TAFE colleges which are very autonomous in their relationships with OTFE. They have developed a range of tools and information available to TAFE colleges to take advantage of The OTFE also runs a series of training programs, seminars, and involves external consultants in the training programs.

The question of informing stakeholders is up to the individual TAFE colleges. She explained that Government is regularly reporting on benchmarks for TAFE colleges.

9. CONCLUSION

This research has sought as understanding of TQM practices in the APS by underpinning various aspects of TQM in a global as well as an Australian context. Various literatures have been analysed to identify the core elements of TQM concepts and to compare these with the current state of implementation of TQM in the APS. A case study was undertaken on WMIT, Newport campus, to evaluate the nature of TQM practices and in turn, to understand the overall picture of TQM practices in the APS.

Sample survey and interviews were undertaken and the findings from these were discussed, analysed and compared with the literature review in the previous section of findings and results. This section emphasises the main points of the observation as per the hypotheses generated earlier and the recommendations on areas need to be improved for obtaining the best results.

9.1. Summary of Observations

The case of WMIT, Newport, portrays an organization with continuing effort to change its culture toward continuous quality improvement. The incorporation of quality in the management processes of the institute came into being as a result of pressures from the Government, from industry and from the needs of the society. The institute is, as a matter of fact, in the earlier stage of implementation of TQM since its introduction occurred only in March, 1997. Although it is in the transitional period, it is yet a matter of time for the institute to cover all the aspects of quality principles and standards up to the maximum extent.

However, the case study reveals a number of notable factors posing a threat or problem in the way to effective implementation of TQM. These factors are revisited in this section in light of the research questions generated earlier.

Lack of communication or information flow within the organization has been identified to

form the basis of lack of awareness among employees. It is evident from the findings of the survey that the knowledge level of employees on QS has been found to be only 17.6% in the high category and 41.2% in the medium category (Table 2.1).

Although the organization claims to cover 100% employees in the programs, the responses, as can be seen in Figure 3.3, reveal that a substantial portion of employees in Teacher, Administrative/ Supporting staff, Manager categories has doubt about the coverage of QS practice. Only Senior Managers rated the coverage in 81% to 100% band.

Awareness can also be improved through increasing employee motivation, which is found to have a Mean of only 0.7 as per Figure 5.1. This implies that employees have very low self motivation toward TQM. The acceptance and attitudes of the employees also matter in growing awareness throughout the organization. As to the content of acceptance by employees it has been found, as can be seen from Figure 5.2, that the overall experience with TQM was rated as 'very positive' by only 4.3% of the sample, whereas about 10.9% responded as 'negative'. In this respect 43.5% respondents had 'neither negative or positive' experience. Thus, the overall experience of the employees with TQM is below the expected level of employee involvement and awareness required for the effective implementation of TQM.

The speed of implementation have been found to be reduced by a low levels of employee productivity, service to staff, management decision making, organizational process and procedures, dealing with complaints and to some extent by low level of participation in community development- all of which have a mean below 2.0 (Figure 5.1). But the interviews with the relevant personnel revealed a high quality of organizational processes and high standard of dealing with complaints through the Customer Response Form.

Employee awareness, involvement and satisfaction are major factors contributing to a cultural change required for effective implementation of any management process. There is still a lot to improve to gain a substantial change in the culture of the organization as well as behavioural responses of the employees toward TQM.

The organization has been found to have set a well-structured, well-prepared and welldocumented process for taking quality processes ahead to obtain effective results through the establishment of a Quality Unit. However, literature on TQM suggests that there should be coherence between following standards or set rules and the philosophy to have behavioral and cultural transformation towards practices. To this effect, the employees and others related in the context of quality improvement could have been made more concerned about the change process and its benefits. Although much effort has been given on the procedural matters, less importance has been attached to the aspects of behavioral responses and the subsequent aspects of cultural change.

9.2. Response to Research Questions

At this early stage of implementation of continuous quality improvement in the institute, it has gained momentum in increasing efficiency within a systematic work environment and it has also gained effectiveness in dealing with complaints, management decision making and organisational procedures. This fosters hope for obtaining effectiveness through the implementation in the future.

The organisation has not yet been able to build the required culture for quality improvement and the awareness of the employees toward use of TQM. Rather, strict procedures are followed within the framework of quality measurement standards. In fact, employees follow the Quality Procedures Manual without being aware of the quality principles or philosophy. Although, the organisation has been found to be very successful in meeting the quality system standards (ISO 9000 series), there exist a number of constraints toward the successful implementation of TQM, such as, resistance to change, low level of awareness, low level of motivation, etc.

9.3. Directions for Future Research

Future research and investigations are suggested to be designed to find out:

- As TQM has been implemented by a large number of public and private sector organizations in Australia, a comparative study of selected public and private sector organizations would contribute to a better understanding of how the theory of TQM relating to the different organizational processes copes with these sectors.
- Issues like expectations of and pressures from stakeholders, the role of leadership and management style, employees resistance and involvement, and the speed of implementation and their effect on the organization's management practices could be studied in more detail.
- Further research could be done to get a clearer picture of the state of TQM implementation in the APS through multiple case studies or surveys. This could be done by selecting a number of public sector organizations that have been undergoing TQM implementation processes for a considerable period of time. In this respect, the aspects of behavioral and cultural change in these organizations could be evaluated to obtain a holistic picture.

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APPENDICES

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17 June, 1997

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Mr David Maxwell Quality Unit TAFE Newport Campus

Dear Mr Maxwell,

Research orid Graduate Studies Foculty of Business

Appendix-1



Thank you for your assistance with the theses research for the Master of Public Sector Management students Julekha Tasmin and Parimal Mazunder. These students. experienced public servants in their own countries, are sponsored by the Australian Development Assistance Bureau.

As part of their Degree each student must compete a research thesis which involves a theoretical exposition supported by primary data. Their areas of research are: "Implementation and Practice of Quality Management in the Public Sector" and "Accountability in the Australian Public Service".

Each piece of research requires a survey of an organisation. We would very much appreciate your assistance in conducting the research in TAFE and we also hope that the information obtained would prove useful for your organisation. The questionnaires which should take about 20 minutes to complete would be randomly distributed with a stamped self addressed envelope. All results would be confidential and only aggregated results would be reported.

Thank you for your interest and support of our Masters program. If you require any further information, please telephone me, 9248 1037.

Yours sincerely.

Dr Anona Armstrong Coordinator Public Sector Management

> Compuses at City, Footscray, Meltan, St Albans, Sunbury ond Werribse,

18 June, 1997

Dear Sir/Madam,

Towards partial fulfillment of the requirements for the degree of Master of Business in Public Sector Management I am writing a thesis on *Implementation of total quality Management in Australian Public services*. Total Quality Management is a set of time tested norms and practices being used in the management of organisations. The purpose of the study is to understand Total Quality practices in the Australian Public Services and to evaluate the extent to which Total quality Management practices have been successful in Public Sector organisations.

I am working in the government services of Bangladesh as Assistant Secretary and at present undergoing this study as an in-service training sponsored by AusAID. This course will benefit me with the knowledge and skills learnt for utilising in my duties and responsibilities on my going back and resuming my duties as a government employee.

Primarily the research is designed to be an exploratory qualitative field study. A descriptive and single case study approach is undertaken in an attempt to determine the status quo of TQM implementation and its effective practices in a TAFE college. The information is intended to be collected from both the teachers and the administrative employees. It will be confidential and will not be available to anyone other than the Quality Unit for data access only without any identification. To participate in this survey as a respondent will give you an opportunity to have input into a paper on Total Quality Management.

I would, therefore, be grateful to you if you please complete the attached survey and return the completed forms in the return envelope provided within ten days.

Looking forward to your cooperation.

Thanking you.

Yours sincerely

(Julekha Tasmin) PO Box 14428 MCMC 10th Floor 300 Flinders Street Melbourne Victoria 3001

AQA CRITERIA	VALUES	PROGRESS AT JUNE 1996
 LEADERSHIP Senior Executive Leadership Leadership throughout the Institute Leadership in the Community 	 Effective leadership to create and deploy clear values to the College Appropriate Community & environmental responsibility 	 Four Senior Managers have attended the American Leadership & Development program. A further two Associate Directors will attend in October 1996. Two Associate Directors have attended management training with the Melbourne University School of Management. The Leadership Development for Education & Training Managers program has been customised and implemented. 38 WMIT Heads of Department from Teaching and Service have participated in the 52 week program An additional 10 staff (approx) will participate in the program commencing September 1996.
 POLICY AND PLANNING Institute values The planning process 	• A planned & structured approach to setting and achieving goals & objectives	 A Strategic Mangement Planning system has been established and implemented. "Strategic Planning" policy and procedures to document the requirements for strategic planning by Centres/Departments/Units have been drafted and will be implemented in 1996. These will support the WMIT 1995/97 Strategic Directions document.
 3. INFORMATION AND ANALYSIS Scope and collection of data and information Analysis and use of data and information 	 An understanding of variation and management by appropriate facts and data 	 An Institute wide Student Satisfaction Survey was conducted in November 1995. Resulst have been disseminated to assist Managers in planning for Quality. The 1996 survey will be conducted in September. A Staff Survey will be conducted in early 1997 to measure staff satisfaction with Institute performance, systems and procedures in key areas suggested by the Australian Quality Awards criteria.

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AQA CRITERIA	VALUES	PROGRESS
 4. PEOPLE Human resource management planning Employee involvement Performance management Education and training Wellbeing and morale Communication 	Full involvement and development of staff	 Workshops have been held in all Schools/Divisions on the Institute's planned Quality Assurance system. The Institute's regular Newsletter has been refocused to provide information to staff on quality initiatives within the Institute. Two Division/School based "Quality Teams" were established. Engineering and Building & Design "Staff Review of the Quality System" policy and procedures which document the Institute's requirements for involving staff in reviewing and improving the Quality system have been drafted. A "Continuous Process Improvement System" has been drafted and will be circulated to staff for comment. The document outlines a process to support staff in recommending improvements to Institute practices, particularly where those practices affect a number of Divisions/Departments. A number of departments have involved staff in quality related staff development: customer service skills and team management training. Staff Development plans for 1996 - 1997 will focus on quality related training A team of internal auditors have been nominated and will undertake training in 1996. Work Plans and Human Resources Development Plans for teaching staff have been developed and implemented in 1996.
5. CUSTOMER FOCUS		
 Knowledge of customers' needs and expectations Customer relationship management Customer satisfaction Competitive comparisons Design and innovation 	 Students/customers play the central role in defining quality of products and services Innovation is recognised as an essential adjunct to continual improvement 	 Proposals for more effective admissions practices, student advisory services and retention strategies are being planned. Draft policy & procedures "Evaluation: Program, Product, Service" which emphasise customer/client feedback have been circulated to staff for comment and will form part of the Institute's Quality Assurance system. Student Satisfaction Surveys are being conducted at an Institute level.

AQA CRITERIA	VALUES	PROGRESS
6. QUALITY OF PROCESS, PRODUCT & SERVICE Cont'd:		 The Institute is developing a "Teaching and Learning Development Program" for implementation in 1996. The proposed program will support staff in examining their instructional practice in light of good adult learning theory and practice, flexible delivery objectives and multimedia developments by strategically focusing existing resources. A budget for small grants to teaching departments for implementation of teaching and learning initiatives will be established in second semester 1996.
7. ORGANISATIONAL PERFORMANCE	 Organisational performance is interpreted in a broad sense, not being restricted to financial performance, but including benefits achieved for all stakeholders, including customers, staff, suppliers and the wider community. Performance is measured against achievement of key organisational objectives and performance indicators which encompass all major activities and functions 	 A Discussion Paper on Student Completions was prepared. The paper outlines a number of issues regarding student completions and potential strategies to enhance student retention. This will be addressed in 1996/1997. An International Benchmarking project with the National Community College Chair Academy (USA) which investigates practices to support educational leadership and enhanced quality of teaching and learning was conducted in 1996. A project to benchmark best practice in establishing effective consultancy relationships with industry clients was also conducted in 1996.

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AQA CRITERIA	VALUES	PROGRESS
 QUALITY OF PROCESS, PRODUCT & SERVICE Supplier quality improvement Improving process performance Quality of products and services 	 Quality is derived from well planned and managed processes Standardisation is part of process management Continual improvement is part of the management of all processes Management emphasis is on prevention and improvement rather than reaction The College and its suppliers work in partnership 	 Extensive documentation and review of Institute policies and procedures is currently underway. It is planned to implement a quality system which meets requirements of ISO 9001 for the provision of education and training programs and services. A target date for applying for gettification to ISO 9001 has been set for December 1996 A review of the role of Board of Studies was completed in 1996. The Board of Studies will become more proactive in supporting the quality of teaching and learning. The Institute "Quality System will incorporate: ⇒ A quality manual for programs to assist Teaching Departments/Program Teams to meet the requirements of the quality system. ⇒ A program team model for the design delivery evaluation of programs ⇒ A Leadership role for Board of Studies in the quality of teaching and learning. ⇒ Quality audits of program delivery and evaluation A substantial review of the Human Resources & Administrative Services Policy and Procedures, including Occupational Health & Safety is nearing completion. The three College Children's Centres have gained Quality accreditation by the National Australian Council. An Evaluation Working Group has been established to develop strategies to enhance student/client satisfaction through effective evaluation practices

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WMIT - QUALITY ASSURANCE PLAN 1996

PROJECT STAGES/FIMELINES	COMPLETED	COMMENTS
 PROJECT DESIGN AND ESTABLISHMENT Establish project team Brief team members on project objectives, timelines and progress to date Confirm roles and responsibilities Clarify processes to be documented Identify and provide training as required 	5/2/96 - 16/2/96 - - - -	 Progress to date: Project team of three people (1.7 EFT) established in February 1996. Due to industrial issues, one 0.6 team member unable to continue with the project beyond February. A replacement was recruited and commenced in mid May. A project administrator joined the team in June. A "consultancy" relationship has been established with Casey Institute of TAFE and Ballarat School of Mines to assist in planning by offer ing their interpretation of ISO 9001 requirements. Briefing sessions conducted with Associate Directors and Heads of Departments in each Division to inform them of project progress and outline
 DOCUMENT REVIEW/SYSTEM DEVELOPMENT Consult with stakeholders Review existing documentation Map existing documentation against ISO standards Identify processes which require revision Identify new processes to be documented Identify new processes to be documented Nominate responsibilities for future maintenance & review of each process Develop flowcharts of processes Document policy & procedures and work instructions Verify documentation with manager responsible Develop support/implementation materials where required Verify all requirements of ISO9001 are addressed Write Quality Manual Establish system of storing accessing and updating documentation with Records Management Unit 	19/2/96 -12/8/96 Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing	 Departments in each Division to inform them of project progress and outline the requirements of the quality system. Some workshops have been held at a Department level where requested. First draft of the Institute's Quality Manual (top level documentation) has been prepared, however this is being constantly reviewed and revised as the system is developing through documentation of policy and procedures. It will be circulated to Institute staff for consultation/comment shortly. Draft policy and procedures and work instructions are currently being developed. Approximately 60% of procedures have now been drafted. Key stakeholders have been consulted where possible, particularly where some documentation or standard procedures already exist. The Board of Studies review has recommended that "Program Teams" be established to manage all aspects of course accreditation, delivery, review and evaluation. Program Teams will be required to develop and implement an annual Course Improvement Plan. Policy and procedures and guidelines for the conduct of Course Teams are being written and will be incorporated into the ISO 9001 quality assurance system. Expressions of interest have been sought from staff interested in being trained as internal auditors. The response has been reasonably good and training will be organised for Semester 2.

Appendix-

PROJECT STAGE	COMPLETED	COMMENTS
 APPROVE FIRST DRAFT Submit draft system to CI & QA Working Group/Senior Management Group for approval Certification Agency conducts desk audit Present draft system through Senior Management Group to College community Collate, review and revise draft Submit system to Policy & Planning Committee for approval Publish and print final copies of documented Quality system 	12/8/96 -16/9/96	*Note: Although tasks to be undertaken are grouped under each Project Stage, they are not strictly sequential.
 IMPLEMENT QUALITY SYSTEM Introduce quality system to College community Establish a support system for staff enquiries Develop implementation support material including checklists of tasks required to be performed, systems which should be established in Departments etc. Conduct general staff training on use of Quality system Assist staff to commence working towards system 	16/9/96 - 31/10/96 	
 AUDIT Arrange pre-assessment visit by external accreditation agency Identify and train internal auditors Develop audit schedule Communicate audit schedule to staff Conduct internal audit Review/evaluate internal audit Undertake corrective action required Conduct external audit Undertake corrective action Apply for certification to ISO 9001 	31/10/96 - 6/12/96 	

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Goes to Department Meno

INTERNAL MEMORANDUM



Western Appendix-5 Melbourne

FORM B11.1

MEMO TO: FROM: DATE: SUBJECT: Julekha Tasarin

David Maxwell, Quality Manager 30 July, 1997 NOTIFICATION OF AN IMPENDING QUALITY AUDIT

As you are no doubt aware, a requirement for retaining ISO9001 certification, requires the Institute to conduct Institute wide internal audits of the Quality System.

The auditor who has been allocated for the audit will contact you in the near future to arrange a date and time convenient to you both.

The auditor will also compare the curriculum documents held by the department with those on the Institute's Program Profile, to ensure that the relevant curriculum is held for all the courses which your department is responsible to deliver and the Institute is contracted to deliver with OTFE.

We appreciate your assistance in this matter and look forward to working with you to achieve a successful audit. ξ

If you require any further information prior to being contacted by the assigned auditor, please feel free to contact myself on extension 8383.

Regards,

David Maxwell.

		Watter
Cover Letter to Audito	rs	Western Melbourne Institute of TAFE Form B16.1
~	6 Auditor	
Date: 06/08/97		
Dear Cen. 1		

Please find attached, documentation for Audit Number[s]:, also I wish to remind you that sighting of the Curriculum for courses delivered by departments is required at each audit where relevant.

Documents included:

Pre-audit Checklist B15	G
Audit Report B13.3	
Audit Checklist B09	
Corrective Action Request 6.1	0
Photocopy of previous CAR(s) issu	$ed \Box \times$

Please return ALL the completed audit documentation prior to .25.1.6.197.

Many thanks.

Organized by:

David Maxwell Ext., 8383. Gail Stevens Ext.: 8382

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PRE AUDIT CHECKLIST	Western Melbourne Institute of TAFE
	FORM B15.1
NTERNAL AUDIT NUMBER 151 Week	k Beginning 9 16 187
Auditor & Sterrens Department Quality	
Department in which audit is to be performed. Haird	1 eczing
Department representative to be contacted D, Counop	
Audit DateAudit DayAudit Time.	Audit Duration
SPs to be audited 6, 9-1, 16	
OPs to be audited	
CAR Effectiveness verification check. CAR No. 12.8.1.4	2 8·2 Depart. Rep
Closeout of CAR No	Depart. Rep
	84

re-audit checklist. Tick as each is completed.

	Determine relevant curriculum as per Institute SCH Progr	am Profile
	Department contacted (Initial contact) 7-10 days before a	udit
П	Day, Date and Time confirmed	
	Notification of QSPs to be audited	
	Notification of QOPs to be audited	
	Notification of CAR to be verified	
	Review QSP or QOP	E Ko
	Develop Audit Checklist	
П	Review previous Audit documentation	
	Review relevant Corrective Action Requests	
	Develop Audit Plan	
	Department Contacted (Confirmation) 1-2 days before au	dit
7		

	T REPORT	Western Melbourne Institute of TAFE FORM B13.3
Department Audited: Institute Campus: Department Contacts: QSP/QOP audited: Verification of CAR No/s		Audit No: Ext: ?? C
	Excellent under Horeer er no App While for gig Whig	
A scallactevants urriculum se <i>Consistency means</i> <i>constants</i> Areas for further investigation	Icalum SAGBS	
S guature on Sudhol Date NB: Dept. Rep. signatures indicat		Date Date interview of the second
	A CON	MMENT/S Syplich
Corrective Action Reque OSP: <u>6</u> Clause: <u>5</u> QSP: <u>Clause:</u> QSP: <u>Clause:</u> QSP: <u>Clause:</u> USP: <u>Clause:</u> Unprovement Opportunity		

Varian 23	Issue Date, 19/6/97	
Version 2.3		

FORM B13.3 Page 1 of 1

the source, which raised t INTERNAL AUDIT		IAL		ER	FORM B06.1
Department(s) Affe	cted: Internal Auditor to comple		conformance and o	obtain required	signatures.
	PLALIPON	dit Max	<u> </u>	CarN	
Description of Non-	- //	un 140: 75		ra sheets if re	121.1
Q.S.P. No: 6	Clause No :				
No A	sproved S	~ppl."	er [.3.4		
	**1				
Signature :			Signature .		
Dep't Rep's Name:			Auditor's N		
					rtment Representative.
A proved Form	2 Supplier 201	List		Who will affe corrective acti	on/s Date the corre
Dept Rep's:			Auditor's:		
Signature:	Date:		Signature: :		Date: /
Root Cause [the facto	rs that have prompted the issui	ng of this CAR]	e .	the corrective a f	atine and completing this form
		erifying complia	nce to complete thi	s section.	, aga mang sanan sanggangg
Effectiveness Verifi Date: / Comments:	ication and Close Out. / CAR No:		Signature of Verifying Aud	itor:	

	Qualit	y System Procedure Manual	
			FORM B06 1
and the second se	Issue Date 30(5:97	Last A mendment Date 10/5/97	Page 1 of 1
Version 7.1		to the second	a set and a second seco



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FORM B09

DEPARTMENT/UNIT				AUDIT NO.
AUDITOR AREA/ACTIVITY			AUDIT DATE	DEPARTMENT REP
	QSP/QOP NO.	VERSION NO.		
PROCEDURE REFERENCE	PROCEDURE REQUIREMENT	COMPLIANCE ACHIEVED YES NO		ENTS OR ARKS

AUDIT CHECKLIST

¥ ...

	Quello	y System Procedure Manual	
Version: 20	Issue Date: 14/10/96	Last Amendment Date: 14/10/96	FORM BOS Page 1 of 1
			rage 1 01 1

	CUSTOMER R	ESPONSE FORM		Appendix-6
			FORM	1 B07
This form can be uservice or product	used to make a comm provided by the Insti	ent, suggestion or express an tute.	idea relating to a	
Please discuss thes	oplicable if you have se concerns directly w ry of Academic Regu	concerns regarding academic vith your teacher in the first in lations.	assessment or results. Instance - refer to the	3
SECTION A	Student	Staff Member	C Other	
CUSTOMER CON	MMENTS:			
	•3			
1				
If you would like t complete the follo		d to you personally regarding	your comments, pleas	e
SECTION B				
Customer Name:_	Given Name	Fam	ily Name	
Contact Address:_				

Telephone No.: BH:	AH:
Customer Signature:	Date:

SECTION C RECEIPT OF RESPONSE FORM

Your Customer Response Form has been received and the following action has been taken.

	and the second	Quality System	
			FORM B07
Version 2.0	Issue Date: 14/10/1996	Last Amendment Date 14/10/96	Page 1 of 2

A GUIDE TO USING THE "CUSTOMER RESPONSE FORM"

As an integral part of WMIT commitment to Quality Assurance and Continuous Improvement the Institute actively encourages you to submit your concerns, comments or ideas.

- If possible, discuss your concern or suggestion in the first instance with those directly responsible.
- If you are not satisfied with the manner your concern or suggestion is treated, then complete this "Customer Response Form".
- The Quality Coordinator will register your form and forward a copy to the Associate Director or Department Manager best able to respond to your concern/suggestion.
- The relevant Associate Director/Department Manager will contact you within <u>10</u>
 working days of receiving this form to advise you of the action proposed to address your concern or suggestion.
- Confidentiality will be maintained at all times.
- Deliver this form to the General Office at any WMIT Campus or by internal or external mail to the Quality Coordinator, Western Melbourne Institute of TAFE, PO Box 197, Footscray 3011.

SECTION D	CTION D INSTITUTE USE ONLY		
Initial action taken:			
Name: Action taken to prevent i		Date:	
Name:		Date:	

QUALITY SYSTEM

Listed below is the WMIT interpretation of the relationship between the ISO 9001 elements and the procedures of the Institutes Quality System.

	ISO 9001		WMIT QSP PROCEDURE
4.1	Management	QSP1	Management Review of Quality
			System
		QSP23	Recruitment
4.2	Quality System	QSP2	Quality Plans
4.3	Contract Review	QSP3.1	Contracts with Customers (Student Enrolments)
		QSP3.2	Contracts with Customers (Fee for Service)
		QSP3.3	Contracts with Customers (Performance Agreement)
4.4	Design Control	QSP4	Design, Development and Customisation of Curriculum
		QSP21	Course Maintenance/Evaluation
		QSP21 QSP22	Course Accreditation
4.5	Document and Data Control	QSP22 QSP5	Control of Quality System
ч.J	Document and Data Collitor	QSrJ	Documentation
4.6	Purchasing	QSP6	Purchasing
4.7	Control of Customer Supplied Product	QSP0 QSP7	Control of Student and Customer
4.7			Property
4.8	Product Identification and Traceability	QSP8	Service and Student identification
4.9	Process Control	QSP9.1	Control of Service Delivery
		QSP9.2	Program Teams
		QSP11	Student Selection
4.10	Inspection and Testing	QSP10	Student Assessment
		QSP21	Course Maintenance/Evaluation
4.11	Control of Inspection, Measuring and Test	QSP24	Calibration of Equipment and
Equip	ment		Affecting Student Learning
4.12	Inspection and Test Status	QSP12	Student Results
4.13	Control of Non-conforming Product	QSP13	Resolution of Student/Customer Issues
		QSP14	Managing System Non Conformance
4.14	Corrective and Preventive Action	QSP13	Resolution of Student/Customer Issues
		QSP14	Managing System Non Conformance
	The Date Description	QSP14 QSP15	Managing and Maintaining Learning
4.15	Handling, Storage, Packing, Preservation and Delivery		Materials
4.16	Control of Quality Records	QSP16	Maintenance of Quality Records
4.17	Internal Quality Audits	QSP17	Internal Audits
4.18	Training	QSP18	Professional Development
4.19	Servicing	QSP19	Post Service and Ongoing Support
4.20	Statistical Techniques	QSP20	Statistical Techniques

WMIT INTERPRETATION OF THE ELEMENTS OF ISO9001

Version 2.1

Appendix-?

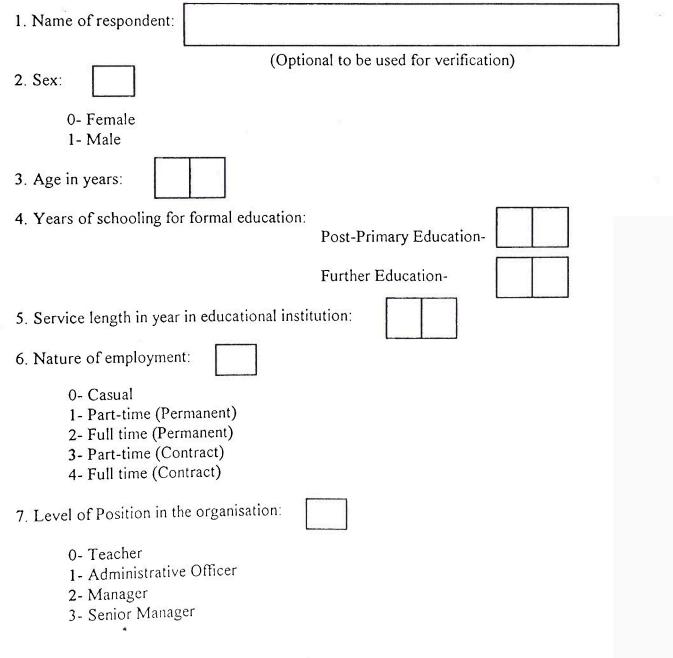
Questionnaire of TOM/QS survey for Western Melbourne Institute of TAFE, Melbourne, Australia. Carried out by the Department of Management Victoria University of Technology, Melbourne

Schedule No.



Please choose the appropriate answer that most closely represents your opinion and write that number in the box alongside each question. Further, please write in brief your comments or opinion about the open-ended questions in the space provided thereagainst.

Demographics Related Question:



 Number of people reporting to you: (If 'Not applicable', write 00 in the boxes)

Respondent's Total Quality (Quality System) Knowledge related Questions:

9. What is the level of your Quality System (QS) knowledge:

- 0- No Knowledge.
- 1- Heard or seen the Quality System being used.
- 2- Applied aspects of the Quality System sometimes.
- 3- Applied aspects of the Quality System extensively.

10. Have you received any systematic formal training on QS:

0- No 1- Yes

Questions to measure the practice of TQM/QS within the organisation:

11. About how long has QS been implemented in this organisation: Years-

Months-

- 12. What is the extent of use of QS-
- within the organisation:

- within your department:

- 0- None
- 1- Poor
- 2- Some use
- 3- Good
- 4- Excellent

13. What percent of employees in your organisation are covered by QS practices:

0- None 1- Almost none (1-20%) 2- Some (21-40%) 3- About half (41-60%) 4- Most (61-80%) 5- Almost all (81-99%) 6- All (100%)



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Questions to measure the strategies for Continuous Improvement of Quality:

14. Is quality measured: 0- No 1-Yes If 'Yes', How is quality most frequently measured: - by surveying staff - by surveying customers - by meeting standards - by monitoring complaints 0- Not at all 1- Some extent 2- Moderate extent 3- Great extent 4- Very great extent 15. Is quality performance benchmarked against other organisations: 0- Not at all 1- Some extent 2- Moderate extent 3- Great extent 4- Very great extent 16. How did you learn about TQM/QS in your organisation: - through formal communication, i.e., training or workshop -through informal communication, i.e., work related activities

> 0- No 1- Yes

- 17. Does the organisation provide tools, information, training and authority for people to participate in improvement and innovative activities:
 - 0- Not at all
 - 1- Some extent
 - 2- Moderate extent
 - 3- Great extent
 - 4- Very great extent

18. Has the organisation enforced a code of ethics throughout the organisation:

- 0-Yes
- 1- No

19. Does the organisation keep the stakeholders/customers informed about the performance outcomes of the organisation:

- 0- Not at all
- 1- Some extent
- 2- Moderate extent

3- Great extent

- 4- Very great extent
- 20. Has any special emphasis been laid by your organisation on Continuous Quality Improvement in all processes in the QS program:
 - 0- Not at all
 - 1- Some extent
 - 2- Moderate extent
 - 3- Great extent
 - 4- Very great extent

Questions to measure the effectiveness of TQM/QS:

Internally (Within your organisation)

21. Has the quality of service to staff improved after the implementation of QS:

- 0- Not at all
- 1- Some extent
- 2- Moderate extent
- 3- Great extent
- 4- Very great extent

22. Has it improved management decision making:

- 0- Not at all
- 1- Some extent
- 2- Moderate extent
- 3- Great extent
- 4- Very great extent

23. Has it improved organisational processes and procedures:

- 0- Not at all
- 1- Some extent
- 2- Moderate extent
- 3- Great extent
- 4- Very great extent

24. Are individual employees more productive:

- 0- Not at all
- 1- Some extent
- 2- Moderate extent
- 3- Great extent
- 4- Very great extent

If the answer is between 1 to 5, please write your comments on 'In what way?'-

Externally (Qutside the organisation)

- 25. Has the quality of service to the service recipients/customers improved after the implementation of TQM/QS:
 - 0- Not at all
 - 1- Some extent
 - 2- Moderate extent
 - 3- Great extent
 - 4- Very great extent

26. Has your organisation been competitive in improving quality of services with other organisations:
0- Not at all 1- Some extent 2- Moderate extent 3- Great extent 4- Very great extent
27. Overall how positive has your experience been with TQM/QS:
 0- Very negative 1- Negative 2- Neither negative nor positive 3- Positive⁴ 4- Very positive
Questions to measure satisfaction/benefit of TQM/QS:
28. Has the level of dealing with complaints been quick and effective:
0- Not at all 1- Some extent 2- Moderate extent 3- Great extent 4- Very great extent
29. What is the degree of satisfaction of the different groups- - Customers
- Employees
 - Community 0- Very negative 1- Negative 2- Neither negative nor positive

- 3- Positive
- 4- Very positive

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- 30. Has the support and participation of the organisation in community development increased:
 - 0- Not at all
 - 1- Some extent
 - 2- Moderate extent
 - 3- Great extent
 - 4- Very great extent

31. Has the quality of your working life improved: 0- Not at all 1- Some extent 2- Moderate extent 3- Great extent 4- Very great extent 32. Have employees been more self-motivated than before: 0- Not at all 1- Some extent 2- Moderate extent 3- Great extent 4- Very great extent 33. Are the employees rewarded for performance improvement: 0- Not at all 1- Some extent 2- Moderate extent 3- Great extent 4- Very great extent If so, In what way?-

Appendix-9

- 1. About how long has QS been implemented in this organization
- 2. What is the extent of use of QS within the organization?
- 3. What is the percentage of employees covered by QS in the organization?
- 4. How is quality measured?
- 5. How is quality performance benchmarked against other organizations?
- 6. Does the organization provide tools, information, training and authority for people to participate in improvement and innovative activities? if so, explain.
- 7. How does the organization keep the stakeholders/customers informed about the performance outcomes of the organization?
- 8. What is the effect of the implementation of QS on-
 - (a) the quality of service to staff?
 - (b) the management decision making?
 - (c) organizational processes and procedures?
 - (d) quality of service to service recipients?
- 9. What is the effect of QS on the productivity of individual employees?
- 10. How has the level of dealing with complaints improved?
- 11. What is the degree of satisfaction of the different groups, such as Customers, Employees, Community?
- 12. How much is the support and participation of the organization in community development increased after the implementation of QS?

13. Has the quality of working life of employees improved? if so, in what way?

14. Are the employees rewarded for performance improvement? if so, in what way?

15. Please make a list of overall benefits of QS experienced so far.

16. How can students participate in QS programs?

17. What are the problems experienced in the implementation of QS?

18. What is the response of the employees towards the QS?

19. How do you think the Quality System will be successful in the future?

Interview Questions for Manager. Inter Agency & Non-Government Relations. Department of Education

- 1. When and how long ago has the initiative for implementing continuous quality improvement programs taken in OTFE ?
- 2. Does the government provide tools, information, training and authority for people to participate in improvement and innovative activities? if so, explain.
- 3. How does the government keep the stakeholders/customers informed about the performance outcomes of the government agencies which have adopted TQM?
- 4. What is the effect of the implementation of TQM on-

(a) the quality of service to staff?

- (b) the management decision making?
- (c) organizational processes and procedures?
- (d) quality of service to service recipients?
- 5. What is the effect of TQM on the productivity of employees in the Public Sector?
- 6. How much competitive has OTFE been in improving quality of services with other organizations?
- 7. What is the degree of satisfaction of the different groups, such as Customers, Employees, Community after implementation of TQM as per your opinion?
- 8. How much do you think is the support and participation of the organization in community development increased after the implementation of QS/TQM?

- 9. Has the Ministry/government made any policy towards improving the quality of working life of employees after implementation of QS (TQM) in different public sector organizations? if so, in what way?
- 10. Are the employees rewarded for performance improvement? if so, in what way?
- 11. Please make a list of overall benefits of TQM experienced so far.
- 12. What are the problems experienced in the implementation of TQM?
- 13. What is the response of the employees towards TQM from your point of view?
- 14. Could you please explain the current strategies and policies of the Ministry towards improving the state of TQM in the TAFE Colleges?
- 15. Please discuss the major changes or developments in TQM policies during the Labour government and the Liberal government.
- 16. How do you think the Quality System will be successful in the future in TAFE colleges?

Sl.No	Position	Question on Employee Productivity	Question on Reward for performance
1	Manager	Nil	a) Intrinsic rewards. b) Awards professional recognition
2	Manager	More aware of needs for meeting quality issues.	Nil
3	Teacher	Through the application of TQM/QS individual employees are empowered with responsibility for quality outcomes and on going improvement via training techniques and awareness. This accountability eliminates a potential stage of non- performance at 'the coalface'.	Not rewarded by security of employmen and conditions and/or financial reward for productivity improvements.
4	Teacher	Each member of staff is given research or work related tasks to do to enhance subjects done by students. e.g., Assignment!	Nil
5	Teacher	I think more people are accountable for what they are doing so some may be involved in more because of this. e.g. introduction of programs teams, more tasks allocated, etc.	1 think as I gain more experience in the teaching field my performance improves and I feel capable at taking on more tasks. I believe that my reward is recognition by supervisors and praise from my students.
6	Teacher	Nil	No benefits passed on (Reg. conditions salaries etc.).
7	Sr. Manager	Improved processes generate productivity.	Nil
8	Admin. officer	In the ability to consistently do paper work.	Nil
9	Admin. officer	Nil	A 'thank you'.
10	Admin. officer	Standards have been set for employees to carry out certain procedures the 'correct' way in order for other employees to be able to follow what they have done and how.	Verbally.
11	Manager	Staff document practices and address non- conformance with QSP's.	Improvement of performance rewarded by production of quality products & by improved processes/management of product development.
12	Sr. Manager	More attentive to expects of their jobs which may otherwise have received a low priority. i.e. overall, a greater level of accountability.	-Recognition of achievement in various ways is possible. e.g., at Director's dinners or through better access (performance) to staff development and preferred in promotional opportunities. -Some levels of employee (Head of centro and above) may be financially rewarded for performance improvement.
13	Teacher	Provided operational guidelines for staff to follow.	Nil
14	Manager	More systems are in place. Documents are now coded to indicate production date and origin. Carriculum and other documentation are more accessible and placed in a central location.	Nil
15	Teacher	More information about the department.	Nil
16	Admin. officer	More thorough monitoring of results supplied from teaching department. Check processes for missing results. 3 way check process of curriculum for all new courses.	Nil
17	Admin. officer	They are more aware of institute processes. Make sure they adhere to them some departments are very good and find this process great. Others are struggling with changes, i.e., Roles and responsibilities.	Nil
18	Teacher	Change in method and delivery of programmes.	
19	Teacher	a) hardly mentioned; b) No explanation about 9001; c) No change throughout the departments e.g. phone still rings out, we have limited support for applicants.	