This paper reviews the major ideas of the seminal total quality management theorists, such as Deming, Crosby, Juran, Ishikawa, and Imai, to illustrate how total quality management is applicable to education. It is argued that there is a need for a paradigm shift in educational administration. The first part reviews current Australian societal ideas and pressures and develops the concept of a "social discontinuity" effect. The second part summarizes the ideas of the total quality movement. Part 3 analyzes selected paradigms in educational administration, commenting on their relevance to the current Australian educational paradigm—the "design concept." A series of key issues are provided as a focus for administrators' reactions and discussion. Two tables are included. Ten attachments summarize selected educational administration paradigms. (Contains 18 references.) (LMI)
A PARADIGM SHIFT FOR EDUCATIONAL ADMINISTRATORS:

"THE TOTAL QUALITY MOVEMENT"

Professor Michael Hough
University of Wollongong
ABSTRACT

The Total Quality Movement is providing a paradigm shift in all aspects of management and administration. Partly driven by the “Need for a Clever Country” agenda, many organisations are being urged to adopt the precepts of the “Total Quality” movement as the basis of more effective operations. This paper reviews the major ideas of the seminal “Total Quality” theorists such as Deming, Crosby, Juran, Ishikawa, Imai and shows that “total quality” has complete applicability to the service field of education. The presentation concludes with an analysis of how the paradigms of educational administration may have to be altered to accommodate the advice and ideas of the total quality movement.

INTRODUCTION

The basic purpose of this paper is to discuss the need for a paradigm shift in educational administration. In order to do this, the following areas will be covered:

1. current Australian societal ideas and pressures will be reviewed, from which the concept of a “social discontinuity” effect will be argued.
2. the ideas of the “total quality” movement will be summarised
3. selected paradigms in educational administration will be analysed with a view to commenting on their perceived relevance and adequacy for this above (current) situation. This analysis concludes with a series of key issues/questions or concerns which are provided as a focus for educational administrators’ reaction and discussion.

AN ANALYSIS OF CURRENT AUSTRALIAN CONCERNS AND PRESSURES

This analysis will be made in the following key areas:

1. the general pressures and ideas coming from the “information society” arguments
2. the concerns and pressures of Australian society in the 1990's
3. overall trends and changes in societal-managerial relationships.

There is little doubt that society in general is experiencing many change pressures as it undergoes the transformations in what Toffler (1985) analyses as a change from agrarian (first wave) to industrial (second wave) to information (third wave) societies. Attachment 1 provides an analysis of the key features of these different societal emphases. Toffler (1991) has continued his analysis of societal change in “Powershift” in which he argues that social bases of power are moving from violence through wealth to information. His analysis of the factors associated with an information base to power are provided in Attachment 2.

Ellyard (1990) has also provided an excellent overview of the probable societal and educational changes facing Australians over the next two decades, and his viewpoints are summarised in Attachment 3.

The ideas summarised in these attachments support the viewpoint that societal change has entered a period of “discontinuity” - in which “the future” is not simply a projection of “the past”. Accordingly it is likely that the general requirements of people - both individually and collectively - to thrive in the “information era” will be based on a set of human characteristics such as:

- Flexible
- Adaptive
- Develop to a high degree a current set of Knowledge, Skills and Understandings
- Anticipating and Coping with Change
- Skilled in Information Technologies
- Willing to Continue Learning Across a Lifetime.
A "shopping list" of requirements such as these has world-wide implications for educators, but overlaying these general trends is a series of specifically Australian characteristics and pressures, which will now be briefly analysed.

As illustrated in Attachments 4 and 5, the Australian environment is going through a period of "soul searching" and concern, accompanied by a series of analyses, actions and proposals aimed at restoring confidence through improved productivity and increased employment opportunities.

The impetus for change in education at the national level is largely being driven by non-educators (Finn, Mayer and Carmichael) and has a business/trade union/training emphasis directed towards an increased skill base (described in outcome terms) and greater employability in an upskilled work environment, as the major focus concerns. These three major reports have been reviewed from a school perspective by Morrow (1992), and in general terms, these pressures are steadily leading to national curricula and testing/accountability requirements in sensitive/key areas of national concern. In summary, these are versions of NATIONAL POLICY and PLANNING pressures.

With perhaps unfortunate timing, these national trends are occurring in parallel with a move by most governments towards general public service reforms, a general cutback of public resources (including a "downsizing" of the public service) in such a way as to decentralise operational decision making in areas such as financial, industrial, productivity and quality concerns, ie there are versions of AUTONOMY and RESPONSIVENESS pressures.

At a recent "Directions in Education" conference (1992) held to brief and advise educators of these national developments, the author produced a discussion summary which summarises the perceived key issues and trends for educators (see Attachment 6).

In partial summary, the first component of this paper has established the perspectives that:

* there is a major social discontinuity in values and attitudes as our society moves from an industrial (second wave) to an information (third wave) society
* lack of international competitiveness has created strong national pressures on all Australian systems (including education) to become more productive
* national pressures are arising at a time which most education systems are decentralising and encouraging local autonomy.

PRESSURES ON MANAGEMENT THINKING AND IDEAS

The second component of this paper provides an analysis of how general management thinking has also evolved, at least in partial response to the general societal pressures already analysed. This analysis will conclude with a particular focus on the ideas of the "total quality" movement, which is a collection of ideas and arguments that are particularly pervasive at present.

Firstly, there appears a clear evolutionary relationship between societal, economic, industrialised managerial attitudes when patterns of change are viewed on a global perspective. A recent analysis by the author for some CIS (Russian) management training produced the relationships summarised in Figure 1, which attempts to summarise the changes in management attitudes and practices which occur as societal and technological change develops.
LABOUR/CAPITAL/TECHNOLOGY INTENSIVE ORGANISATIONS

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>KEY FACTOR(S) AND SPECTRUM OF CHANGE/CHOICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATUS OF WORKFORCE</td>
<td>Low Expectations</td>
</tr>
<tr>
<td></td>
<td>Low Education Levels</td>
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<tr>
<td></td>
<td>Low Training Investment</td>
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<td></td>
<td>Low Labour Costs</td>
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<tr>
<td></td>
<td>Emergence</td>
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<tr>
<td></td>
<td>High Expectations</td>
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<td></td>
<td>High Education Levels</td>
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<tr>
<td></td>
<td>High Training Investment</td>
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<tr>
<td></td>
<td>High Labour Costs</td>
</tr>
<tr>
<td>STATUS OF CAPITAL</td>
<td>Small size of Investment &quot;Pool&quot;</td>
</tr>
<tr>
<td></td>
<td>Large size of Investment &quot;Pool&quot;</td>
</tr>
<tr>
<td>ATTITUDE OF GOVERNMENT</td>
<td>Restricted ownership</td>
</tr>
<tr>
<td></td>
<td>Government domination</td>
</tr>
<tr>
<td></td>
<td>Protected markets</td>
</tr>
<tr>
<td></td>
<td>(tariffs, quotas)</td>
</tr>
<tr>
<td>MANAGEMENT MEASURES</td>
<td>Authoritarian</td>
</tr>
<tr>
<td></td>
<td>Downward Imposed Rules</td>
</tr>
<tr>
<td></td>
<td>Hierarchical Structures</td>
</tr>
<tr>
<td></td>
<td>Quality by Inspection</td>
</tr>
<tr>
<td></td>
<td>Low levels of freedom/choice for workforce</td>
</tr>
<tr>
<td></td>
<td>Responsibility directed upwards</td>
</tr>
<tr>
<td></td>
<td>Shared Authority</td>
</tr>
<tr>
<td></td>
<td>Rules developed by Agreement</td>
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<tr>
<td></td>
<td>&quot;Flat&quot; Structures</td>
</tr>
<tr>
<td></td>
<td>Total Quality for all activities</td>
</tr>
<tr>
<td></td>
<td>High Levels of Freedom/choice for Workforce</td>
</tr>
<tr>
<td></td>
<td>Responsibility vested with those who need to make the decision</td>
</tr>
<tr>
<td>PROBABLE PHASE OF ECONOMY</td>
<td>Agrarian → Industrial ← Industrial → Post Industrial ← Post Industrial</td>
</tr>
<tr>
<td>EMPHASSES OF PRODUCTION</td>
<td>Tradeable commodities (Domestic Market)</td>
</tr>
<tr>
<td></td>
<td>Manufactured goods (Domestic, International)</td>
</tr>
<tr>
<td></td>
<td>Services &amp; Knowledge Intensive Products</td>
</tr>
<tr>
<td></td>
<td>World</td>
</tr>
<tr>
<td>STYLE OF ORGANISATION</td>
<td>Labour Intensive</td>
</tr>
<tr>
<td></td>
<td>Capital Intensive</td>
</tr>
<tr>
<td></td>
<td>Knowledge Intensive</td>
</tr>
<tr>
<td>MINTZBERG STRUCTURE</td>
<td>Simple, Machine, Divisional, Professional, Adhocracy</td>
</tr>
<tr>
<td></td>
<td>Bureaucracy Structure, Bureaucracy</td>
</tr>
</tbody>
</table>

There are a number of "classical" advice texts for managers in this time of rapid change. Two selected examples are provided in Attachment 7, which provide typical examples of the ways in which managers have been advised to grow and develop.
A useful semantic base to the new emphases required of modern managers was provided by Jarvis (1992) when he explained the derivations of the terms "manager" and "leader", as follows:

- manager is derived from the French term: "ménager" (literally: to mind the horses behind the field of battle)
- leader is derived from the Norse term: "löder" (literally: the one person on a Viking raiding boat who understood how to read the "lodestone" which was a crude compass).

Bennis and Nanus (1985) provided the underlying analyses that present day organisations are over managed and under led, where the term "manager" is connected with "organisation and control" and "leader" is connected with "vision and influence".

Therefore, just as our managers have been urged to "let go of the detail", and concentrate on "leading and delegating", our Western management thinking has become increasingly aware of the ideas and practices of the "quality movement". This is in part because our societies have become increasingly focussed on the greater productivity and achievements of the "total quality" practices of other countries - especially but not only, Japan.

In summarising the "total quality" movement, a cautionary comment must be established about regarding "quality" practices as something uniquely or totally associated with the Japanese culture - and, therefore, by implication at least, not applicable or transferable to a Western (or Australian) culture. It is important to understand that the seminal theorists in the "total quality" movement are from the USA, and J Edwards Deming (in particular) was provided to the Japanese as part of post-WWII reparations by the USA.

The key ideas usually associated with the "total quality" movement are:

1. "total quality" is a mindset that has begun to pervade much of Western management thinking - partly due to the success of those countries which emphasise it.
2. the key "theorists" of quality are: Deming, Juran, Crosby, Ishikawa, Imai
3. some key concepts of quality theories - see Attachment 8 for details
4. some key ideas/emphases from the quality movement:
   4.1 a quality organisation is one which concentrates on being a problem solving, self-renewing organisation which concentrates on processes and people
   4.2 the basic purpose of any organisation is to provide service for customer(s)
   4.3 customer(s) are both internal and external to an organisation
   4.4 different customers require different concepts and levels of quality
   4.5 managers should spend time on developing "tomorrow's organisation", whilst empowering and trusting subordinates to run "today's version of the organisation"
   4.6 the emphasis is on a quality process, with an overall objective of a satisfied customer
   4.7 quality assurance is a natural component of a total quality system.

The National Industrial Extension Service (NIES) 1991 provides Australian context advice when it identifies the key elements of Total Quality Management as:

- Everyone serves a customer (external or internal)
- All systems inhibit variability
- Everyone works in a system
- Management of processes must be based on facts and data
- Work to improve output, by improving the process
- Continuous improvement as a way of life
- Improvement must be plan driven, not reaction driven
- Quality does not cost - it pays
Unfortunately, an early reaction from the service sectors (which include education) was to view "total quality" as a manufacturing related concept, and one that would have applications only to organisations that produce "things" (product). It would be a grave underestimation of the power and scope of "total quality" thinking to regard it as a manufacturing based logic system. For example, Attachment 9 provides a checklist of quality ideas for the financial services sector. In commencing our build-up of understandings of applying "total quality" to educational practice, Edmonds (1992) suggests that in establishing quality service concepts, schools need to examine and assess:

- their reliability
- their competence
- their responsiveness
- their accessibility
- their communicativeness
- their credibility
- their security
- their conformance
- their performance
- their durability
- their perceived quality; and
- their value for money

One particularly useful concept for all who manage or lead organisations is the "design concept" - which arises from the "total quality" (and other) arguments that managers should spend more time on "tomorrow's organisation and how it will work", rather than double checking subordinates' efforts to run today's version of the organisation. The final section of this paper focuses on some "design concept" suggestions for educational administration.

In partial summary for this section of the paper, it has been suggested that organisations (and management approaches) are moving from a "traditional" approach to a "recommended" approach, which can be summarised by Figure 2 following:

**Figure 2**

**"Traditional" Approach**

- Hierarchical organisations aimed at individual responsibility
- Downward power
- One way (downward) communication
- Confrontational problem solving (including I.R.)
- Quality as inspection by others, after the event
- Detailed specifications for how a job is to be done, as defined by superiors in an organisation

**A "Recommended" Approach**

- Flatter, less structured organisations aimed at group cohesiveness
- Shared power
- Two way (all levels) communication
- Co-operative problem solving
- Quality as a constant focus of all activities
- Product or service specifications, based on customer needs

In this environment, the challenges for those who are labelled managers - which for educators is an issue to be discussed in the final component of the paper - the essential tasks of providing effective leadership for organisations can be summarised as:

- **VISION** - providing a clear statement of the preferred future and how it will work
- **DEVELOPING HUMAN RESOURCES** - particularly with regard to empowering subordinates
- **CREATING FLEXIBLE, ADAPTIVE ORGANISATIONS** - which emphasise customer service
- **OPTIMISING INFORMATION TECHNOLOGY** - to supplement traditional structures and middle management
- **FOCUSING ON HIGH LEVELS OF SATISFACTION FOR CUSTOMERS**
IMPLICATIONS FOR PARADIGMS IN EDUCATIONAL ADMINISTRATION

In this section, two broad paradigms are offered to represent the ways in which educational administrators approach both education in general, and educational administration in particular. The treatments are meant to provide an "opening up" of issues which are considered increasingly important as the societal, managerial and educational pressures (reviewed in the first sections of this paper) impinge more heavily on these models and their assumptions. A review of educational research by Moe and Chubb (1990) which identified the research based factors which produce educational achievement is provided in Attachment 10.

In general, these paradigms are illustrations of the way that (preferably) educational administrators address some critical questions and issues about the "Design Concept" of education. Some questions and issues about the DESIGN CONCEPT are:

- can we sustain a model of education premised on adults (teachers) working with relatively fixed class groups (eg 20-30 students) in special locations and buildings (eg schools and classrooms)?
- can we develop performance management agreements to ensure national outcomes/requirements are met, whilst we retain local autonomy and individuality/equality?
- can we introduce and use technology in ways that retain educator involvement and confidence?
- can we develop a pedagogy for group, cooperative outcomes from schooling?
- what role does a physical location such as a school contribute to education?
- what can a school system contribute to the national agenda of concerns?

Accordingly, a summation of educational paradigms can be provided as:

| TABLE 1 |

<table>
<thead>
<tr>
<th>EDUCATIONAL PARADIGMS</th>
<th>A POSSIBLE FUTURE (?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESENT</td>
<td></td>
</tr>
<tr>
<td>• Individual teachers are central to learning in schools</td>
<td>• Individual teachers are supplements to learning in schools</td>
</tr>
<tr>
<td>• Technology supplements learning in schools</td>
<td>• Technology is central to learning in schools</td>
</tr>
<tr>
<td>• Schooling is an activity that occurs in deliberate, physical locations called schools</td>
<td>• Schooling only partly occurs in deliberate physical locations called schools</td>
</tr>
<tr>
<td>• Funding is premised on class sizes in the range 20-30</td>
<td>• Class sizes range widely depending on the learning outcome envisaged</td>
</tr>
<tr>
<td>• Curriculum is developed at State (or local) levels</td>
<td>• Some curricula are nationally specified</td>
</tr>
<tr>
<td>• Curriculum is evaluated through pupil achievement on tests</td>
<td>• Curriculum is evaluated through pupil outcomes</td>
</tr>
<tr>
<td>• Pupil achievement is assessed locally, except at critical exit points (Y10, Y12)</td>
<td>• Pupil achievement is assessed regularly on national issues, across K-12</td>
</tr>
<tr>
<td>• Schools are separate to other learning agencies</td>
<td>• Schools are linked to TAFE, WEA type agencies</td>
</tr>
</tbody>
</table>

/Cont'd

/Cont'd
Schools are a low initial investment (capital cost) but a high recurrent cost (eg 80% spent on salaries)
Minimal data is shared between schools and parents, business, community
Teaching is an Isolate Activity, with only one "grade" or "level" of professional teacher
Curricula and learning methods (including assessment) directed towards individual achievement; and represent cumulations of past knowledge and understanding.

Schools are capital intensive with much less commitment to teacher salaries
Much data sharing between schools, business and community
Teaching is a cooperative activity, with differing levels of "professional, teacher-aide" grades
Curricula and learning methods (including assessment) directed towards cooperative behaviour and group outcomes; and represent ways of thriving in an information society.

TABLE 2

EDUCATIONAL ADMINISTRATION PARADIGMS
PRESENT

• Educational administration is different from management
• Educational administrators should come "from the ranks" (the Headmaster heritage)
• Body of knowledge: Teaching, Curriculum, Discipline, Pedagogy, Working with Teachers

• Educational administration does not require special training or qualifications
• No professional update requirement
• Emerging professional organisation

A POSSIBLE FUTURE (?)

• Educational administration is a form of public sector leadership
• Educational administrators could come from a range of public/private sector backgrounds
• Body of Knowledge: Leadership of Educational Institutions, Planning, Human Resources, Evaluation, Communication, Supervision, Financial and Information Management

• Educational administration does require specific training and qualifications
• Professional update requirement
• Mature professional organisation

CONCLUDING COMMENTS

It is unlikely that educational administrators will be given much more time to undertake their own reforms of the educational organisations and educational practices in the institutions for which they are responsible. The alternative is political and/or societally imposed change requirements.

This paper has attempted to trace the strong societal, managerial and educational pressures for change have produced an environment in which the "design concept" of education will increasingly be pressured to accommodate these influences.

It seems intrinsically more satisfying for educational administrators to address existing assumptions and practices with a view to the professional retaining fundamental control over such change.

The "total quality" movement has had a very significant impact on the management practices of many organisational sectors, and it will continue to impinge on service environments such as education.

Accordingly, this paper has attempted to sensitise educational administrators to pay increasing attention to "tomorrow's" educational organisation and its practices - even if it is only to prevent non-educators imposing their "design concepts" in an ad hoc sequence of enforced change. Much more positively, the "total quality" movement opens up encouraging opportunities for the quality process and long term interests of educators - as distinct from trainers - to be encapsulated into better paradigms and practices of educational administration.
<table>
<thead>
<tr>
<th>Attachment</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Toffler: The Third Wave</td>
</tr>
<tr>
<td>2</td>
<td>Toffler: Powershift</td>
</tr>
<tr>
<td>3</td>
<td>Ellyard: Leadership and Management for the Future</td>
</tr>
<tr>
<td>4</td>
<td>Australian Features: The Environment 1992</td>
</tr>
<tr>
<td>5</td>
<td>An Australian Perspective on the 1980's</td>
</tr>
<tr>
<td>6</td>
<td>A &quot;Directions in Education&quot; Conference: Key Trends and Issues</td>
</tr>
<tr>
<td>7</td>
<td>Organisational and Managerial Challenges</td>
</tr>
<tr>
<td>8</td>
<td>Key Features of the &quot;Total Quality&quot; Movement</td>
</tr>
<tr>
<td>9</td>
<td>Quality in Financial Services</td>
</tr>
<tr>
<td>10</td>
<td>Factors which Produce Educational Achievement</td>
</tr>
</tbody>
</table>
ATTACHMENT 1

A Toffler: THE THIRD WAVE (1985)

PRE-INDUSTRIAL ERA (1st Wave)

Small family groups. Rural economy. Emphases on survival and coping. Few organisations. Little need for understanding/skills related to groups. Church and Army were major organisations.

INDUSTRIAL ERA (2nd Wave)

Developed skills/attitudes necessary to cope with mass production/technologies of production. Emphasis on consumption. Values related to specialisation and standardisation. Social groupings based on large urban complexes. Little emphasis/awareness of costs and by-products of consumption oriented society. Organisational studies/management studies grew out of need to work with large complex organisations in a growth era.

INFORMATION ERA (3rd Wave)

Developing skills/attitudes needed to cope with service industries and emphasis on sharing and using knowledge. Relative decline/displacement of manufacturing. Development of inter-linked economies and corporations. Emphasis on service, defined as quality for the individual customer. Values relate to integration and overall quality. Awareness of by-products, emphasis on sustainable development. Organisational/management studies will need to cope with problems of downscaling organisations, increasing flexibility in a static or decline era.

SOCIAL PRIORITIES OF THE 1990s

Issues: Conservation. The Lowing of Growth: Sustainable Development; Concern for Global Ecosystem. Interlinking Economics and Countries; Global Shifts in Productivity and Power Centres; Re-emergence of "capitalism".
ATTACHMENT 2

A Toffler: **POWERSHIFT**, Bantam 1991

Power Source: Violence, Wealth, Knowledge

New Power Sources: Robots; Computers; Research; Education;
Management Improvement; Electronic Finance;
Communication; Market Research.

New Shifts in Power:

- Innovative, brain based companies (less capital)
- Individuals within organisations
- Symbolic use of money
- Qualitative aspects to employment
- Smaller, tailored production "runs"
- Advanced economies use less raw materials
  (problem for Australia)
- "Third Wave" emphases have weakened Marxist/socialist economies and free market approaches
- Product/market information gives power to suppliers
- Lower inventories/J.I.T. reduces wholesalers, warehousers
- Computerisation breaking down organisational hierarchies
- Growing diversity in cultures: less majorities
  more minorities
- Religious fundamentalism - Reactionary pressures of freedom, press
- Limits of industrialisation reached in "Third Wave" countries - offload to 2nd wave economies
- Speed of production increasing in 3rd wave economies and is a key reason for ascendancy
ATTACHMENT 3

Ellyard P (1990), LEADERSHIP AND MANAGEMENT FOR THE FUTURE

1. Need to emphasise Vision Driven Planning.

2. Concept of Preferred Future is most important, but surprisingly little discussion.
   2.1 Element of “self fulfilling prophecy: if we can visualise a preferred future.
   2.2 We need to have an IMAGE (ie conceptualisation) of our preferred future.
   2.3 Use major events to drive our future (eg Greenhouse Effect).

2. Some Observations

   3.1 Three major current “revolutions”:
       Information Technology - based on silicon chip developments
       Biological - based on DNA research
       Ecological - based on understanding inter-relatedness

   3.2 Forecast: 50% of present job categories absent in next 20 years -
       25% “disappeared”
       25% “new”

   3.3 1990s and era more focussed on public good, vision. Cooperative globalism.

4. Some encouraging developments


   4.2 Key initial requirements:
       Capacity to learn
       Literacy, numeracy and language mastery
       Desire to learn
       Confidence to be a lifelong learner

   4.3 Key subsequent requirements:
       Opportunity to learn
       Encouragement and Development of learning skills and attitudes

   4.4 OECD Nature of Learning:

       3 educational “passports”:
       traditional (literacy, numeracy, language, etc)
       vocational (multiskilling, career paths, training)
       enterprise - positive, flexible approach to change
       initiate creative ideas, confidential communicator
       able to implement ideas

   4.5 Carnegie Foundation suggestions:

       Education for creativity (not conformity)
       cooperation (not competition)
       global (not national)
       public benefits (not private benefits)
ATTACHMENT 4

AUSTRALIAN FEATURES

Decline in living standards
Analysis of the 1980s
"Clever Country" Agenda
  Training
  Multiskilling
  National registration
  Total quality
  National forum on "good ideas"
  Finn Report, Mayer Report, Carmichael Report

THE AUSTRALIAN ENVIRONMENT 1992

Opening up of domestic markets
Reduction in tariffs/protection
Need to expand internationally
Mature Markets
New technologies "failing" in early promise of new job creation
Exchange rates
Cost reduction pressures (especially labour)
Social environmental pressure groups
Privatization
Union expectations
Education levels of workforce
# Australian Perspective on the 1980s

McManamy (1990), *The Dreamtime Casino: How Australian Business Gambled Its Way into Recession*

<table>
<thead>
<tr>
<th>Characteristics of a Productive Economy</th>
<th>Characteristics of Australian Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has an economic policy</td>
<td>Has no economic policy</td>
</tr>
<tr>
<td>Has highly skilled managerial and technical people</td>
<td>Has accountants and lawyers</td>
</tr>
<tr>
<td>Has an educated workforce</td>
<td>Has an uneducated workforce</td>
</tr>
<tr>
<td>Has investment geared to productive activity</td>
<td>Has investment geared to speculative activity</td>
</tr>
</tbody>
</table>
A "DIRECTIONS IN EDUCATION" CONFERENCE: KEY TRENDS AND ISSUES

KEY TRENDS

- Less affluent, less competitive Australia
- Solutions directed at outcomes (employment)
- Rapid, imposed change(s)
- Key players are not educators
- "Crunch" issues: commitment (school) funding/control/"rights" (system)

KEY ISSUES

- CAN schools address these problems? (Trends)
- SHOULD schools address these problems?
- Are these CYCLIC problems anyway?
- Can quality come from NATIONAL INITIATIVE(S) AND COLLABORATION?
- Education vs training: is this a real issue? separate vs integrated systems?
- Pedagogy for group (as distinct from individual) outcomes
- National frameworks
  - standard
  - assessment
  - competencies
    Can they be specific, useful approaches to improve quality?
- Reduce anonymity/lack of consultation in the change process
- Educator/school role in Y11-12 years
- How to gain educator commitment?
- Other(s)?

M.Hough
June 1992
ORGANISATIONAL AND MANAGERIAL CHALLENGES

Tomasico (1987), *Downsizing: Reshaping the Future*

**EMPHASES:**
1. Make large companies *behave* like small companies
2. Emphasis back on "core" business
3. Emphasis on organisational ecosystems of inter-relating companies
4. Focus on people and their skills: companies become "intellectual holding" agencies based on skills and knowledges.
5. Information systems developed to ascertain each individual’s contribution to the corporate vision.

Peters (1987), *Thriving on Chaos*

- Flatter organisations
- Differentiation, value added goods and services, niche markets
- Quality, service conscious: *DELIGHTED*
- More response to customers: *CUSTOMER* (not just satisfied)
- More responsive organisation

- Faster at innovation
- Highly trained, flexible people as principal resources of organisations
There are 4 broad approaches to total quality at present:

1. The Deming Approach - Deming’s 14 point program.
2. The Juran Approach - Quality control and the control sequence, quality improvement and the breakthrough sequence, and quality planning and the annual quality program.
3. The Crosby Approach - The “absolutes of quality management” and the “basic elements of improvement”.
4. The Japanese Approach - To develop and sustain a habit of improvement and to work toward perfection.

The main expansion now provided is of a “typical” Japanese approach - provided by Imai (1986).
QUALITY CONCEPTS

References: Deming W, Out of the Crisis, Cambridge University Press, 1986
Imai M, Kaizen: The Key to Japan's Competitive Success, McGraw Hill, 1986

Background Comments

The competitive success of Japanese industry has been a source of increasing focus, analysis and comment in Western Management thought. The initial view - incorrect as it transpired - is that Japanese managers/organisations had a series of specific techniques, eg JUST-IN-TIME; QUALITY CIRCLES; KAMBA Techniques, which gave a strong "competitive edge". The recently emerging understanding is that the difference is much greater - being, in effect, a totally different management orientation.

W Edwards Deming provided much of the intellectual stimulus and advice to Japanese business in the 50s (as did J Juran). The Imai book is written by a Japanese, who has spent much time in the USA, and who is attempting to communicate the wholistic view of Japanese success, through a management perspective.

Key Concepts

Imai (xxix): The most important difference between Japanese and Western management concepts "Japanese KAIZEN and its process oriented way of thinking versus the West's innovation and results oriented thinking".

KAIZEN means: "ongoing improvement involving everyone".

p (xxi): "Both innovation and KAIZEN are needed ... to survive and grow"
p (xxxii): "KAIZEN solves problems by establishing a corporate culture in which everyone can freely admit these problems. Problems can be both semifunctional and cross functional. ... In the West, cross functional problems are often seen in terms of conflict resolution - KAIZEN strategy enables Japanese management to take a systematic and collaborative approach to cross functional problem solving.

"Underlying the KAIZEN strategy is the recognition that management must seek to satisfy the customer and serve customer needs if it is to stay in business."

p (xxxiii): "KAIZEN has generated a process oriented way of thinking, and a management system that supports and acknowledges people's process oriented efforts for improvement. This is in sharp contrast to Western management practice of revising people's performance strictly on the basis of results and not rewarding the effort made."
BASIC MESSAGES

1. It is orientation towards process that gives the competitive edge.
2. Continuous improvement in all aspects is the key to quality.
3. The key roles of management should be concerned with the constant improvement of the total organisation.
4. KAIZEN means continual improvement involving everyone.

The KAIZEN Umbrella

- Customer orientation
- TQC (total quality control)
- Robotics
- QC circles
- Suggestion system
- Automation
- Discipline in the workplace
- TPM
  (total productive maintenance)

- Kaibin
- Quality improvement
- Just-in-time
- Zero defects
- Small-group activities
- Cooperative labor-management relations
- Productivity improvement
- New-product development

KEY IDEAS

1. "Results oriented" criteria for evaluating performance are a legacy of the "mass production" society.

"Process oriented" criteria are relevant in the post-industrial, high tech. society.

2. "Process oriented" management deals with process factors, and it is process oriented thinking that enables Japan to maintain its competitive edge. The result counts, but is viewed as a key component resulting from quality process.
**KEY FEATURES OF KAIZEN**

Contrasts: **KAIZEN:** undramatic, subtle, gradual improvement - a continuous process  
**INNOVATION:** dramatic, attention-gathering; "one-off" phenomenon

<table>
<thead>
<tr>
<th></th>
<th>KAIZEN (Japanese)</th>
<th>Innovation (Australian)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Effect</td>
<td>Long-term and long-lasting but undramatic</td>
<td>Short-term but dramatic</td>
</tr>
<tr>
<td>2. Pace</td>
<td>Small steps</td>
<td>Big steps</td>
</tr>
<tr>
<td>3. Timeframe</td>
<td>Continuous and incremental</td>
<td>Intermittent and non-incremental</td>
</tr>
<tr>
<td>4. Change</td>
<td>Gradual and constant</td>
<td>Abrupt and volatile</td>
</tr>
<tr>
<td>5. Involvement</td>
<td>Everybody</td>
<td>Select few &quot;champions&quot;</td>
</tr>
<tr>
<td>6. Approach</td>
<td>Collectivism, group efforts, systems approach</td>
<td>Rugged individualism, individual ideas and efforts</td>
</tr>
<tr>
<td>7. Mode</td>
<td>Maintenance and improvement</td>
<td>Scrap and rebuild</td>
</tr>
<tr>
<td>8. Spark</td>
<td>Conventional know-how and state of the art</td>
<td>Technological breakthroughs, new inventions, new theories</td>
</tr>
<tr>
<td>9. Practical requirements</td>
<td>Requires little investment but great effort to maintain</td>
<td>Requires large investment but little effort to maintain</td>
</tr>
<tr>
<td>10. Effort orientation</td>
<td>People</td>
<td>Technology</td>
</tr>
<tr>
<td>11. Evaluation criteria</td>
<td>Process and efforts for better results</td>
<td>Results for profits</td>
</tr>
<tr>
<td>12. Advantage</td>
<td>Works well in slow-growth economy</td>
<td>Better suited to fast-growth economy</td>
</tr>
</tbody>
</table>

(from Imai 1986)

"Western" management emphases:

1. lack of an improvement philosophy
2. no system to reward efforts for improvement
3. improvement by innovation creates an increased emphasis on financial accounting, which in turn forces managers to account for every action proposed in short term "Return on Investment" data. This type of system does not lend itself to building a favourable climate for improvement.

**KAIZEN** requires: sharing, caring, commitment, communication, leadership based on personal experience and conviction (not authority, age or task).
**KAIZEN through Total Quality Control (TQC)**

TQC provides a systematic and statistical approach to continual improvement problem solving (KAIZEN).

**Concepts to TQC:** Speak with Data
- Quality First, not Profit First
- Manage the Previous Process (Manage "upstream")
- The Next Process Is the Customer
- Customer Oriented Quality, Not Organisation Orientation Quality
- TQC Starts with Training, and Ends with Training
- Cross Functional Management Required
- Use the "Plan-Do-Action-Check" PDCA Cycle
- Use the QC Story to Persuade Others
- Standardise the Result

KAIZEN at Crossroots Level

<table>
<thead>
<tr>
<th></th>
<th>Management-Oriented KAIZEN</th>
<th>Group-Oriented KAIZEN</th>
<th>Individual-Oriented KAIZEN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tools</strong></td>
<td>Seven Statistical Tools</td>
<td>Seven Statistical Tools</td>
<td>Common sense Seven Statistical Tools</td>
</tr>
<tr>
<td></td>
<td>New Seven Tools</td>
<td>New Seven Tools</td>
<td>Seven Statistical Tools</td>
</tr>
<tr>
<td></td>
<td>Professional Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Involves</strong></td>
<td>Managers and professionals</td>
<td>QC-circle (group) members</td>
<td>Everybody</td>
</tr>
<tr>
<td><strong>Cycle (period)</strong></td>
<td>Lasts for the duration of the project</td>
<td>Requires four or five months to complete</td>
<td>Anytime</td>
</tr>
<tr>
<td><strong>Achievements</strong></td>
<td>As many as management chooses</td>
<td>Two or three per year</td>
<td>Many</td>
</tr>
<tr>
<td><strong>Supporting system</strong></td>
<td>Line and staff project team</td>
<td>Small-group activities</td>
<td>Suggestion system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>QC circles</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Suggestion system</td>
<td></td>
</tr>
<tr>
<td><strong>Implementation costs</strong></td>
<td>Sometimes requires small investment to implement the decision</td>
<td>Mostly inexpensive</td>
<td>Inexpensive</td>
</tr>
<tr>
<td><strong>Result</strong></td>
<td>New system and facility improvement</td>
<td>Improved work procedure</td>
<td>On-the-spot improvement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revision of standard</td>
<td></td>
</tr>
</tbody>
</table>
Booster | Improvement in managerial performance | Morale improvement | Morale improvement
---|---|---|---
Direction | Gradual and visible improvement | Gradual and visible improvement | Gradual and visible improvement
Marked upgrading of current status

Each manager must develop:

- **P Criteria** (check points) - "measures" - process oriented
- **R Criteria** (control points) - "goals" - results oriented

Some examples of P Criteria, as applied to Quality Circles (quality Circles are directed towards improvement in the workplace, and need evaluation through P Criteria to sustain long term life.]

Appropriate P Criteria:

- No of meetings held/month
- No of problems solved
- No of reports submitted
- Do efforts lead to improved work standards?
- Participation rate
- Are issues of safety, quality, cost considered in solutions?
- Is organisation's current situation considered?

Areas for Active Suggestion Systems:

- Improvement in one's own work
- Savings in energy, material, other resources
- Improvements in the working environment (e.g. cleanliness, safety, appearance)
- Improvements in equipment and processes
- Improvements in clerical/office work
- Improvements in product quality
- Ideas for New Products
- Customer Service and Customer Relations
- Other

**SUMMARY**

True long term quality comes from the human resources of an organisation. Management's role is to create and lead a total quality environment. Evaluation in this environment is heavily based on **Process** factors rather than **Result** or output factors.
DEMING'S 14 POINTS FOR QUALITY IMPROVEMENT

CREATE CONSTANCY OF PURPOSE
ADOPT THE NEW PHILOSOPHY
REQUIRE STATISTICAL EVIDENCE
LONG TERM SUPPLY RELATIONSHIPS
STATISTICAL METHODS TO IMPROVE
TRAINING ON THE JOB
IMPROVE SUPERVISION
DRIVE OUT FEAR
BREAK DOWN ORGANISATIONAL BARRIERS
ELIMINATE ARBITRARY NUMERICAL GOALS, POSTERS AND SLOGANS
LOOK CAREFULLY AT WORK STANDARDS
SIMPLE BUT POWERFUL STATISTICAL METHODS
RETAINING PEOPLE IN NEW SKILLS
PUSH EVERY DAY ON THE ABOVE THIRTEEN POINTS
QUALITY IN FINANCIAL SERVICES

Initial Requirements: Define customers
- *Service quality* is a complex thing which cannot separate production from delivery of product (eg a teller providing cash withdrawal)
- Customers view service quality from their *expectation levels*
- *Services are intangible*, but can be created, experienced or participated in by customers
- *Service cannot be stored* as an inventory (ie marketing and production are combined)
- *Customer feedback* is a useful source of continuous improvement
- *Employee satisfaction* is closely linked to customer satisfaction especially that of customer service personnel

Key Management Requirements:
- What specific *features* will be labelled "high quality" for customers?
- What *service attributes* are required to meet customer needs?
- What *levels of performance* on these features are required?

Evaluating Perceived Service Quality:
- *Reliability* = consistency of performance + dependability of service quality
- *Responsiveness* = provision of timely service(s)
- *Competence* = required skills and knowledge to perform the service
- *Access* = approachability and ease of contact
- *Courtesy* = politeness and respect
- *Communications* = keeping customers informed
- *Credibility* = trustworthiness + believability + customers' interests
- *Security* = physical + financial freedom and confidentiality
- *Understanding/Knowing the Customer* = recognition, knowing specific requirements
- *Tangibles* = appearance, cleanliness, facilities, tools and equipment
ATTACHMENT 10

FACTORs WHICH PRODUCE EDUCATIONAL ACHIEVEMENT

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National Training Board, National Competency Standards: Policy and Guidelines. NTN, Canberra, 1991
Schools Council, Teacher Quality: An Issues Paper. Canberra NBEET 1989
Schools Council, Public Responses to the Issues Paper on Teacher Quality. Canberra NBEET 1990

ANALYSIS OF FACTORS WHICH PRODUCE EDUCATIONAL ACHIEVEMENT

1. Teacher training: Trained teachers do count but not length of preservice training. OJT supported as a preferred methodology/approach

2. Class size significance
   < 15 improvement
   > 70 decrease
   {25 - 50} no difference

3. Instructional material investment

   Significant          Not Significant
   Books                Computers
   Paper                not Videos
   Blackboard           Library

   Being taught in mother tongue

4. School Curriculum → general skills/academic outcomes

5. Workplace Training → specific vocational skills

6. Examinations monitor school quality

7. Healthy, well fed children

8. Number of hours spent in learning
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