
Managing Service Quality

Volume 12, Number 6, 2002

ISSN 0960-4529

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Innovation and quality improvement in service organisations

Guest Editors: Alison M. Dean and Ross L. Chapman

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Abstracts & keywords

Beyond customer loyalty

James L. Heskett

Keywords Customer loyalty, Values, Commitment, Ownership

Research suggests that while customer satisfaction and loyalty provide a foundation for high levels of customer lifetime value, they support a range of customer behaviors with widely varying values, characterized by mere loyalty (repeat purchase), commitment (willingness to refer others to a product or service), apostle-like behavior (willingness to convince others to use a product or service), and ownership (willingness to recommend product or service improvements). As a result of these findings, it is of increasing importance that the small number of apostles and owners in a customer portfolio that can drive all of the profits be identified and cultivated.

Innovation in logistic services and the new business model: a conceptual framework

Ross L. Chapman, Claudine Soosay and Jay Kandampully

Keywords Service industries, Logistics, Innovation, Technology, Networks, Knowledge workers

Service industries hold an increasingly dynamic and pivotal role in today's knowledge-based economies. The logistics industry is a classic example of the birth and development of a vital new service-based industry, transformed from the business concept of transportation to that of serving the entire logistical needs of customers. Quantum advances in science, technology, and communication in the new millennium have compelled firms to consider the potential of the so-called new "resources" (technology, knowledge and relationship networks) that are essential if firms are to operate effectively within the emerging business model, and to utilise the opportunities to innovate and gain market leadership. Through an extensive literature review, this paper examines the

factors that nurture innovation in logistics services, identifies the contributions of the new "resources" and, using industry examples, examines the application of these resources to logistics firms as they assume an extended role within the new business model.

Exploring the development of quality in higher education

Maria Avdjieva and Marie Wilson

Keywords Higher education, Organizational learning, Quality

This paper uses a developmental perspective to characterise quality initiatives in the higher education systems of four countries: Australia, New Zealand, the UK and the USA. Each country demonstrates variety in its practices, as well as consistent patterns of environment, policy and institutional response. Survey data support a continuum of quality evolution from a low quality, low organisational learning environment toward organisational learning capabilities. The three stages of learning proposed by both Senge and McKay and Kember are also reflected in the study's findings. Drawing on these findings, implications for managers are outlined focusing on areas of key organisational transformation such as leadership, culture and infrastructure.

E-government: a new route to public sector quality

Julian Teicher, Owen Hughes and Nina Dow

Keywords Public sector, Internet, Total quality management, Australia, Government

In the past government organisations have paid little attention to service quality or responsiveness to clients. This changed with the movement termed "new public management", which occurred in most developed nations around 1990. This paper briefly examines the concept of quality and its application to the public sector and discusses e-government, the latest manifestation of attempts to improve quality in government. The paper also reports on a survey of senior personnel across the three levels of government in Australia. The results of the survey and other published research materials suggest that the impact of e-government on service delivery is modest and not well distributed. While there has been widespread adoption of e-government measures, these have generally been lacking in sophistication and have been disproportionately beneficial to city dwellers without addressing problems of equity and access.

An inter-industry comparison of quality management practices and performance

Bishnu Sharma and David Gadenne

Keywords Quality management, Service industries, Manufacturing industry, Construction industry

This paper investigates similarities and differences in total quality management practices across

different industry groups such as the service, manufacturing, and construction industries. The study also investigates the relationship between the quality management practices and business performance by industry category. A survey was conducted using Powell's framework as a basis, and sent to Queensland businesses. A total of 140 responses were received – 58 from the service sector, 62 from the manufacturing sector, and 20 from the construction sector. The results suggest that there are some common factors including value chain integration, efficiency and employee involvement, though the composition of quality management practices comprising these factors differed somewhat between industries. The results reveal that value chain integration in particular appears to be an important factor for quality management in each of the industries examined. The results of MANOVA analyses suggest evidence of an association between some of the quality management practices and performance for the service and manufacturing industries but not for the construction industry.

Attitudes of middle managers to quality-based organisational change

Douglas Davis and Thomas Fisher

Keywords Quality, Organizational change, Middle management

The paper explores some factors that may lead to middle managers in organisations holding differing views on their quality programs. In particular, it considers the possibility that differing views are related to job role. The data are from research into the beliefs and attitudes of middle managers towards quality programs in 21 Australian organisations. Findings suggest that quality specialists have more positive views of their companies' quality programs than other job groups. There was no evidence to suggest that those in operations-type roles have more positive views about their quality programs than those in non-operational roles, even though the history of quality development suggests otherwise.

Service quality in call centres: implications for customer loyalty

Alison M. Dean

Keywords Service quality, Customer orientation, Call centres, Customer loyalty

Studies on call centres suggest that there is a focus on efficiency at the expense of effectiveness, where effectiveness is indicated by characteristics such as customer orientation, service priorities and quality. It therefore appears that customers will expect and experience low levels of service quality from call centres, with possible implications for their loyalty to the providing organisation. These issues are the focus of this study. A mail survey was conducted of recent clients of two call centres in Australia. The respondents were individual consumers in an

insurance company ($n = 284$, 14 per cent) or business customers of a bank ($n = 325$, 16 per cent). Key findings are similar for the two samples. Both perceptions of quality and customer orientation of the call centre were related to loyalty to the providing organisation, and perceptions of quality partially mediated the customer orientation to loyalty relationship. The discussion includes managerial implications and potential future research.

Customers' perspectives on service quality and relationship quality in retail encounters

Amy Wong and Amrik Sohal

Keywords Service quality, Relationship marketing, Services marketing, Retail trade, Australia

This paper examines the relationship between service quality and overall relationship quality on two levels of retail relationships (employee and company levels). Responses were received from 1,261 shoppers in a retail chain departmental store setting in Victoria, Australia. Findings indicate that there is a positive and direct relationship between service quality and relationship quality. The results show that empathy is the most significant contributor to relationship quality at both the employee and company levels. Implications for the management of customer relationships are discussed, while limitations and future research directions are proposed.

E-services and their role in B2C e-commerce

Mohini Singh

Keywords Electronic commerce, Service, Internet, Customer service

E-services are important in B2C e-commerce for managing customer relations and enhancing sales. In the electronic world the customer and the merchant do not meet face-to-face, and the clients are more discerning with increased options and solutions available to them online. With the click of a mouse a customer can find another provider. As customers embrace e-commerce their expectations about service, support, and how they make purchases are changing. Services to customers offered electronically to enhance their online shopping experience include search support, e-response to customer queries, orders and transactions, e-payment, e-transaction record management, e-assurance and trust, e-help and other online support in the B2C e-space. This paper discusses the role of e-services in B2C e-commerce and how they can be applied to enhance the online customer shopping experience. Findings of two research projects that shed some light on both business and customer perspectives of the role of e-services in the B2C e-commerce are launched in this paper.

The guest editors

Alison M. Dean is a Senior Lecturer in the Department of Management, Monash University, Churchill, Australia. She joined the tertiary education sector ten years ago, after holding various positions in education and industry. She has a Master of Business from Southern Cross University, Australia, based on research in service quality in the distance education/industry training interface. She is currently completing her PhD, at Monash University, on service quality in call centres. Her undergraduate qualifications include an honours degree in Chemistry and a Diploma in Education, both from Sydney University. Apart from service quality, her other research interests include online and off-campus teaching, service climate, and the historical development of the services discipline. She currently teaches Managing Services, Service Operations Management, and Case Studies in Services Strategy.

Ross L. Chapman is an Associate Professor at the University of Western Sydney, having been employed there for the last 15 years, and is currently the Director, Research Management and Training for the College of Law and Business (which includes seven key schools across these discipline areas). He is also Coordinator of the InCITE (Innovation and Continuous Improvement Technologies) Research Group. He has spent ten years in private industry in technical, QC/QA and R&D management positions, working for several companies. Since 1985, he has taught and researched predominantly in the areas of quality management, continuous improvement, operations management, innovation and technology management. Ross is author or co-author of three books and over 45 journal and conference papers in the above areas, plus a further 15 articles on technical and scientific studies and two world-wide patents produced prior to 1987. He is currently Associate Editor or Editorial Review Board Member for several international journals including the *International Journal of Entrepreneurship and Innovation Management (IJEIM)*, *The TQM Magazine*, and *Managing Service Quality*.

Innovation and quality improvement in service organisations

This special issue of *MSQ* presents eight papers developed from selected high quality presentations made at the Sixth International Research Conference on Quality, Innovation and Knowledge. The Conference was presented by a consortium of Australian and Malaysian universities and held in Kuala Lumpur, Malaysia from 17-20 February 2002. In this issue, we are aiming to emphasise current trends in innovation and service quality improvement, and highlight the role that research can make in bridging theory and practice. Authors were invited to submit papers developed and extended from their conference presentations, all of which were double blind refereed prior to acceptance.

Service organisations dominate many world economies and continue to expand. They can be characterised by their scope, the frequent difficulty in defining outcomes, the involvement of the customer in service delivery, and their emphasis on intangible assets such as knowledge and relationships. Service organisations are continually changing in response to the challenges and opportunities presented by globalisation, technology and competition. Managing innovation and quality improvement in services is therefore complex and multi-disciplinary, often incorporating operations, marketing, finance, and information technology. The papers presented in this special issue illustrate both this disciplinary diversity and a range of services. They also include discussion and findings from both organisational and customer perspectives, and represent logistics, government, education, retail, e-retail, mass service situations and two cross-sectoral studies.

In services, service quality is the integrating factor between an organisation and its customers, whether internal or external. Service quality is a measure of how well organisations manage their processes and whether they meet customer expectations. Both organisational antecedents and employee attitudes influence the delivery of service quality and, in turn, service quality has been shown to lead to customer responses and future behaviours, and organisational outcomes such as accountability and profits. We have arranged the papers in this issue so



that broader business, government and educational perspectives are presented first, followed by inter-industry and organisational perspectives, and finally papers that employ customer data.

The first paper, by Chapman, Soosay and Kandampully, provides an introduction to innovation in services and uses logistics to illustrate the fact that innovation is at the heart of the new business model required for organisational success. Its approach, based on the fundamental resources of technology, knowledge and relationship networks essential in the new business model, provides themes that are evident in some form throughout the other papers. Next, Avdjieva and Wilson also take a historic approach in their analysis of quality and learning organisations in higher education, and compare data collected in four countries. In their article, Teicher, Hughes and Dow highlight the current trend to apply “private sector concepts” to the public sector in new public management. They discuss total quality management in the context of government, and report on a study that considers the role and contribution of contemporary electronic technologies to government.

The next two papers report on cross-sectoral research but differ in their focus. The first, by Sharma and Gadenne, explores quality management practices and their links to business performance, capturing results from a cross-section of companies and facilitating inter-industry comparisons. Davis and Fisher focus on employees, in particular, they were concerned with middle managers’ views of quality programs and whether managers’ attitudes were related to job roles. This work is important because attitudes are believed to lead to behaviours and ultimately organisational success factors.

Customers’ perceptions of quality, and their resultant attitudes and behaviours are investigated in the next two papers. The first of these, by Dean, measures customers’ views of call centre quality and demonstrates that this quality is related to customers’ ongoing loyalty to the providing organisation. Wong and Sohal formalise customer relationship quality in their study on the retail industry and demonstrate direct links between service quality and both employee and store level relationships. The final paper, by Singh, incorporates views of both managers and customers in examining e-services and their role in online retailing.

In this issue of *MSQ*, the papers reflect diverse settings, research approaches and interpretations. They reinforce the need for us to resist the temptation to oversimplify but rather to retain a holistic view that recognises and explores the complexities arising from context and analysis. We commend the papers to you and hope you find them stimulating and practical.

We wish to acknowledge the assistance and valuable feedback provided by reviewers during the process of compiling this issue. The following reviewers have all contributed greatly to this special issue by reviewing one or more papers and providing excellent feedback to authors in improving the quality of their submitted papers:

Bruce Acutt, David Bennett, Doug Davis, Ken Deans, Thomas Fisher, Rodney Gapp, Douglas Hensler, Robert Hunt, Paul Hyland, Lester Johnson, Sugumar Mariappanadar, Robert Mellor, Ali Quazi, Christopher Seow, Terrence Sloan and Mile Terziovski.

Finally, we would like to thank the authors who have contributed their research data, insights and applications via these papers, and who have adhered to tight time schedules.

Alison M. Dean and Ross L. Chapman

Guru's view

Beyond customer loyalty

James L. Heskett

The author

James L. Heskett is Baker Foundation Professor, at the Harvard Business School, Soldiers Field, Boston, Massachusetts, USA.

Keywords

Customer loyalty, Values, Commitment, Ownership

Abstract

Research suggests that while customer satisfaction and loyalty provide a foundation for high levels of customer lifetime value, they support a range of customer behaviors with widely varying values, characterized by mere loyalty (repeat purchase), commitment (willingness to refer others to a product or service), apostle-like behavior (willingness to convince others to use a product or service), and ownership (willingness to recommend product or service improvements). As a result of these findings, it is of increasing importance that the small number of apostles and owners in a customer portfolio that can drive all of the profits should be identified and cultivated.

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Introduction

Customer loyalty has been regarded as the *sine qua non* of an effective business strategy. It is an integral element in the relationships that make up what several of us have termed the service profit chain (see, for example (Heskett *et al.*, 1997)). It has been examined in detail by Fred Reichheld and others as part of a study of the impact of customer, employee, and investor loyalty on profit and growth (Reichheld, 1996). But recently, with the development of new information made possible in part by Internet-based customer feedback services, we are learning that there is a wide range of customer behaviors and lifetime values associated with loyalty. Where an individual customer falls on that range is important indeed.

The benefits of an extended relationship with a customer were first articulated by Reichheld and Sasser (1990). They include the margins both from repeated purchases of standard products and services and from purchases of new products and services. The latter often provide a margin premium. In addition, loyal customers may be less costly to serve than those who have not yet been "trained" how to buy from a supplier. But all of these benefits may pale in significance for some providers of goods and services compared with two others: referrals by satisfied customers to prospective ones and suggestions for product or service improvements from customers committed to the offerings of particular suppliers. In industrial marketing, referrals are particularly important. More recently in several successful high-tech firms, such as eBay (Internet auction services) and Intuit (personal and small business financial software), significant strategies have been built around the willingness of customers not only to provide word-of-mouth advertising but also to suggest ways of improving services and products.

A five-level hierarchy of customer behaviors can be developed on the basis of this information. It suggests that customer satisfaction – as determined by, among other things, whether a customer's expectations are met or exceeded in an individual transaction or a longer-term relationship – is the lowest level of this hierarchy. Of course, we know that it supplies the preconditions under which

This article is based on material to appear this Fall in James L. Heskett, W. Earl Sasser, Jr and Leonard A. Schlesinger's, *The Value Profit Chain* (2002), The Free Press, New York, NY.



customer loyalty – in which a customer devotes an increasing “share of wallet” to repeat purchases from the same supplier – may be developed.

But the fruits of loyalty really are realized through three other customer behaviors that we term:

- (1) commitment;
- (2) apostle-like behavior; and ultimately
- (3) ownership.

A committed customer is not only loyal but demonstrates that loyalty by telling others of her satisfaction; she characterizes the viral behaviors that more recent research has begun to examine. Apostles at the next level of the hierarchy are not only viral but also convincing. They possess credibility and a certain degree of authority in the eyes of others. Finally, a small subset of those who are loyal take responsibility for the continuing success of a product or service offering. They can be considered owners. These behaviors and the effects that they have on margins and profitability have been termed the “loyalty ripple effect” by Gremler and Brown (1999). The behaviors and their measurement have been facilitated by the Internet.

For example, Peter Blackshaw, co-founder of P&G Interactive for the packaged product manufacturer, Procter & Gamble, on a special assignment consulting with P&G’s Consumer Relations Department, found that consumers who provided feedback via the Internet were the most viral – that is, most willing to talk with others about products. Those who identified themselves as satisfied P&G product users through the feedback process passed on an average of 16 full-sized P&G product samples to friends when given the chance (Heskett, 2001). It helps explain how a committed customer as an apostle or owner can generate the same lifetime value of as many as 100 customers who are merely loyal but who do not recruit other customers or provide ideas for product or service improvement.

Some organizations have achieved much higher proportions of committed apostles and owners than others. Determinants of the extensiveness of this kind of behavior may include whether or not the product or service is of the type that generates customer commitment, perhaps because of the degree of perceived economic, social, and other risks in its purchase or use. However, explicit

efforts can be made to develop “owners”. They involve what can be termed a hierarchy of initiatives to “hardwire” customers to an organization, one that complements in some ways the hierarchy of customer behaviors.

A first-level strategy to develop extraordinary loyalty is that of the transactional, involving product warranties and service guarantees. A higher-order strategy may be termed strategic, involving repositioning the business to deliver “solutions” rather than products or services. Yet a third level in the hierarchy might be regarded as cultural, involving the linking of operational functions, such as product development and improvement, to customers or suppliers, often regarded as partners. At the top of the hierarchy are organic strategies designed to develop customers who regard themselves as owners. At this level, efforts are made to identify such customers as well as insure that they are treated in a manner that leads them to believe that they are part of a community of preferred customers who are able to influence company strategies. Cisco Systems, for example, has actually followed customer recommendations to acquire certain capabilities through the acquisition of other organizations. Frequent flyers are invited to help Southwest Airlines select cabin attendants. When I asked one why he had taken time off from work to participate in a hiring session, he said, among other things: “Because it’s my airline”.

Achieving ownership behaviors among customers may yield mixed results. At eBay, for example, there is such a strong feeling of ownership among so many of the users of its auction services that the company’s management runs the risk of criticism for almost any decision affecting users. It has to take special care to involve users in decision making.

Nevertheless, the potential payoff from building commitment, apostle-like behavior, and ownership among customers is so great that it often outweighs the potential costs. Questions raised for organizations attempting to achieve this include: Do you measure more than just loyalty among your customers? How well do you know where important customers fit on the customer behavior hierarchy? To what extent have strategic initiatives been geared to reflect the needs of apostles and owners? To what extent do these initiatives simultaneously serve to develop higher levels

of customer behaviors among the merely loyal?

Clearly, mere loyalty is not enough. Now that techniques and services are being developed to identify varying levels of customer loyalty, there is a real opportunity to build loyalty from a core of apostles and owners who have extraordinary lifetime value for the provider of goods and services.

References

- Gremler, D. and Brown, S. (1999), "The loyalty ripple effect: appreciating the full value of customers", *International Journal of Service Industry Management*, Vol. 10 No. 3, pp. 271-91.
- Heskett, J.L. (2001), *Planet Feedback: The Voice of One . . . The Power of Many (A)*, Case No. 9-901-051, Harvard Business School Publishing, Boston, MA.

Heskett, J.L., Sasser, W.E. Jr and Schlesinger, L.A. (1997), *The Service Profit Chain. How Leading Companies Link Profit and Growth to Loyalty, Satisfaction, and Value*, The Free Press, New York, NY.

Reichheld, F.F. (1996), *The Loyalty Effect*, HBS Press, Boston, MA.

Reichheld, F.F. and Sasser, W.E. Jr (1990), "Zero defections: quality comes to services", *Harvard Business Review*, September-October.

(James Heskett is Baker Foundation Professor at the Harvard Business School, where he has been a member of the faculty for most of the past 37 years. He is the co-author of several books, including *The Value Profit Chain*, *The Service Profit Chain*, and *Corporate Culture and Performance*. He is a director of Office Depot and several other organizations and consults with organizations in Latin America, Europe, and the USA.)

Perspectives

Innovation in logistic services and the new business model: a conceptual framework

Ross L. Chapman
Claudine Soosay and
Jay Kandampully

The authors

Ross L. Chapman and Claudine Soosay are both at the InCITe Research Group, School of Management, University of Western Sydney, Penrith South DC, Australia. Jay Kandampully is at UQ Business School, The University of Queensland, Ipswich, Australia.

Keywords

Service industries, Logistics, Innovation, Technology, Networks, Knowledge workers

Abstract

Service industries hold an increasingly dynamic and pivotal role in today's knowledge-based economies. The logistics industry is a classic example of the birth and development of a vital new service-based industry, transformed from the business concept of transportation to that of serving the entire logistical needs of customers. Quantum advances in science, technology, and communication in the new millennium have compelled firms to consider the potential of the so-called new "resources" (technology, knowledge and relationship networks) that are essential if firms are to operate effectively within the emerging business model, and to utilise the opportunities to innovate and gain market leadership. Through an extensive literature review, this paper examines the factors that nurture innovation in logistics services, identifies the contributions of the new "resources" and, using industry examples, examines the application of these resources to logistics firms as they assume an extended role within the new business model.

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Managing Service Quality
Volume 12 · Number 6 · 2002 · pp. 358–371
© MCB UP Limited · ISSN 0960-4529
DOI 10.1108/09604520210451849

Introduction

There is little doubt that services have grown to dominate world economic activity. Australia, which has been transformed from an economy based on mining and rural industries to a predominantly service economy, serves as an excellent example. The service sector in Australia contributes more than 76 per cent of GDP and accounts for four out of every five jobs (Department of Industry, Science and Resources, 2000; McLachlan *et al.*, 2002). This exponential growth in services is not at the expense of manufacturing industry, mining, and farming, but services have become an additional imperative factor that assists primary industries to achieve global competitiveness. In fact, a sizeable part of the growth in the services sector is attributable to traditional manufacturing industries "spinning-off" or outsourcing a range of previously incorporated service-based functions – such as logistics, communications, human resources (HR) and others – thus creating an apparent rapid growth in the number of independent companies undertaking such service-based activities and in the total output of those sectors generally defined as "service industries".

There is a general consensus that economic growth, higher disposable incomes, and technological advances have contributed to the rapid growth of service-sector enterprises (Mattsson, 1995; Patterson, 1995) and their increased economic importance. Growth in services has outpaced overall economic growth in the nations of the Organisation for Economic Co-operation and Development (OECD) for a number of decades, a trend that is predicted to continue (McLachlan *et al.*, 2002). According to Grönroos (2000), firms now compete on the basis of services, and not on the basis of physical products. The global marketplace has compelled every industry to transform itself into a truly customer-oriented, service-focused enterprise, irrespective of the products and services it sells. Most manufacturing firms need to be aware of the service aspects of their product-service mix, because the service component of their offerings offers the best chance of gaining sustainable competitive advantage, or, conversely, the greatest chance of losing customers through poor levels of service or a reluctance to innovate. Services



have thus become the recognised value assessment variable for predicting a firm's success in the marketplace.

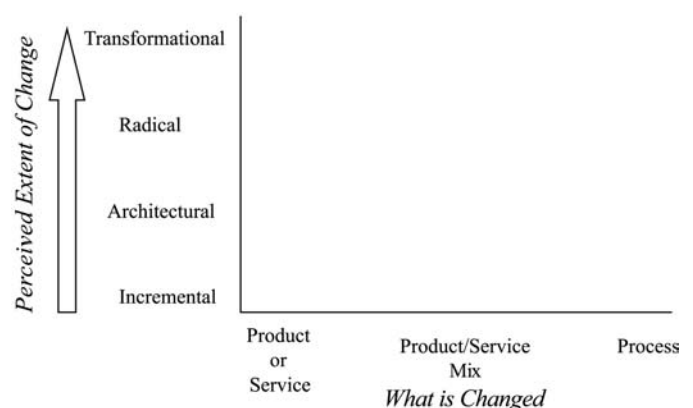
To stay ahead in the modern global marketplace, business organisations must constantly look for innovative strategies to improve their competitiveness. Continuous technological advancement has assisted industries to revolutionise the way they operate and conduct their business. Technology has traditionally been viewed as the key to productivity in manufacturing industries. However, in recent years, technology has assumed greater significance in services, has greatly facilitated the exponential growth of the sector, and has offered firms an all-important competitive edge. Technology enables service firms to improve their efficiency and effectiveness, and to enhance their services. Market competition has forced firms to incorporate modern technology into their key offerings to discerning customers who have little product loyalty. To do otherwise is to risk losing out to competitors who have adapted their strategies to the technology-based competitive environment (Bitner *et al.*, 2000; Olsen and Connolly, 2000). The growth in technology has led to considerable changes in business practices, particularly those relating to marketing, communication, and distribution (Moncrief and Cravens, 1999).

The rapid growth in information and communication technologies (ICTs) over the past 20 years has been a major driver in the growth of service industries and continues to be the main engine for innovation within the services sector. Billions of people worldwide are currently connected to the Internet, and exponential growth in this international network means that millions more are being connected annually. The Internet enables customers to engage in a higher degree of self-service (Hallowell, 2001). The nature of business today demands that firms interact with their customers and business partners using technology to provide services instantaneously across international borders. With this emerging paradigm, firms have had to reassess the opportunities and challenges and have had to re-examine how they conceptualise and conduct their business. Leading organisations today will therefore have to adopt innovative strategies and practices if they are to operate effectively in this new global market.

Innovation in services

The term “innovation” can be used to describe myriad ideas. However, in relation to the business sector, innovation can be classified into technological innovation, organisational innovation, and market innovation (Tidd *et al.*, 2001). These classifications are particularly valuable within the services sector, in which technological innovation, particularly that concerning ICTs, has been particularly important in the rapid growth of the sector over the last ten years or so. Within the broad category of “technological innovation”, Tidd *et al.* (2001) have discerned two dimensions, as shown in Figure 1. In this Figure, on the vertical axis, the perceived extent or scope of the change brought about by the innovation can be positioned on a continuum running from “small-step” continuous innovations (which are often associated with process innovations) through to “transformational” innovations (which are so far-reaching that they change the very functioning of society). An example of the latter is the introduction of steam power in the Industrial Revolution. Between these two extremes are “architectural” innovations (which refers to novel reconfigurations of existing system components) and “radical” innovations (which redefine the way we think of, and use a product or service). The last-mentioned term is usually associated with a new product introduced to the market, or a highly differentiated product or service. On the horizontal axis of Figure 1, the continuum relates to whether the change impacts on the things that the organisation provides for its customers (goods or services) or the way in

Figure 1 Dimensions of innovation



Source: Adapted from Tidd *et al.* (2001)

which these things are created and delivered. The two extremes of this spectrum are traditionally called “product” and “process”, although the differentiation is not always clear-cut. In between these two extremes are innovations in the product-service mix provided by the organisation to its customers.

In addition to the above schema, innovation in the service sector can also be described in terms of technological innovation or non-technological (“soft”) innovation. Technological innovation often leads to new products or services of some form, whereas “soft” innovation focuses on organisational issues and processes that improve management practices, streamline organisational structures, customise services, enhance networking, improve distribution, advance procurement, and facilitate financing, to name only some (Howells, 2000).

Service innovations are often non-technical in nature, although technology might act as the vehicle that activates and/or enhances the process. In contrast to the product industry, these non-technical improvements in services might not necessarily involve or require formal research and development (R&D) (Pilat, 2000). Innovation in services is essentially a value-creating activity (Slater and Narver, 1995) that drives market orientation and performance. Innovation is usually defined as a holistic construct based on two or more factors. However, in a service context, it can be expressed in terms of the new services launched and the rate of improvement in the rendering of service. The market perceived value through service innovation, in terms of the specific advantage offered to the customer, is, indeed, the firm’s competitive market advantage.

Drivers of service innovation

Service firms can embrace innovation to improve their market performance and efficiency and, ultimately, to benefit both producers and consumer (Bakos, 1998; Wymbs, 2000; Garicano and Kaplan, 2001; Hackbarth and Kettinger, 2000). These researchers argue that efficiency can include improvements in: cost-efficiency, productivity, quality of service (both production and delivery), inventory management, process improvement, value

(creation and flexibility), price, information (on service and comparison), and so on. These improvements have become the primary factors in market competition in the services sector (Hauknes, 1999). For example, leading service firm Cisco Systems effectively use their Web-based business model to channel their business activities. This innovative approach has elevated Cisco to market leadership because it has saved millions of dollars through business efficiency and has simultaneously provided better service to customers (Mougayar *et al.*, 1999). Innovation in information technology and its utilisation in business practices has revolutionised the way business is conducted in the global market.

Time and again, information technology and its effective innovation of business practices have had a major influence on the firm’s success. Subsequently, business growth and productivity improvements are evident in various sectors, including transportation, communications, wholesale and retail trade, finance, and business (Pilat, 2000). There are many factors that nurture the growth of services and drive innovation. Table I provides an overview and description of some of the important factors as discussed by various authors.

Factors that support service innovation in the new global economy

Given the transforming changes evident in service industries today, it is imperative that firms think and operate with a new business mindset. The factors that contributed to successful innovation in the past might no longer be relevant in today’s boisterous marketplace. The transiency in science and technology, and most especially in communications, has compelled organisations to think about new “resources” in the pursuit of innovation. Today’s marketplace recognises the pre-eminence and value of people, knowledge, and technological advances, and service innovation is fundamentally reliant on the three interrelated factors of technology, knowledge, and relationship networks (Kandampully, 2002), (These will be discussed in more detail below in relation to logistics services in organisations.)

Table I Overview of some of the important factors

Force	Description
Networking and R&D	Networking and cooperation more prevalent through increased use of external knowledge and cost-sharing. Strategic alliances, purchasing groups, and retail franchises augment market share, particularly in trade, financial services, and business services (Pilat, 2000). Knowledge-intensive businesses (KIBs) assist in innovation networks by dissemination of technology and innovative concepts to other firms through consultants, training, R&D, and computing services (Den Hertog and Bilderbeek, 1998)
Investment in ICTs	Firms investing in ICT, human capital, and organisational change have higher productivity and economic performances because this aggregates networking and cooperation for innovation (Broersma and McGuckin, 1999). Introduction of electronic commerce through low-cost communication networks (satellite, cable, telephone, electricity grids) allows increase in the tradability of services and facilitates globalisation (Pilat, 2000)
Human capital	Labour-intensive services industries rely on the knowledge, expertise, skills, experience, creativity, resourcefulness, strategic thinking, and communication abilities of people. Tacit knowledge enables development of new services and innovative endeavours (Nonaka and Takeuchi, 1995). Investment in human capital through continuous training and development ensures efficient service performance in the firm conducive to innovative activities
Organisational change	Suitable organisation structures facilitate the management of innovation, especially in the effective use of modern technologies (OECD, 1999). The management of information technology in service firms is largely determined by organisational structure (Van Biema and Greenwald, 1997). New processes often require considerable organisational change (Hauknes, 1996)
Intellectual property rights (IPR)	Patents protecting software and information services are rather limited when compared with manufacturing patents. Specific characteristics of IPR allow for easy diffusion of innovation in services. Patents give IPR "protection", but in exchange for information about the innovation that allows knowledge to be diffused (Anderson and Howells, 1998). However, trademarks, copyright, and trade secrets are becoming more common in service industries (Pilat, 2000) because competitors know little about the new services or processes, and patents attempt to strengthen the returns on innovation
Changing competition and regulatory frameworks	Markets such as retailing, telecommunications, and banking are apparently saturated domestically and have therefore accessed global knowledge, innovative concepts, services, ideas, and technologies. Globalisation through direct foreign investment (joint ventures, mergers, and acquisitions) facilitates innovation (Stiglitz, 1999). Rapidly changing regulatory frameworks and government policies provide a strong driver for innovation in services. Public sector services such as health care, telecommunications and education have been privatised and allowed market forces to operate. Competition meeting of consumer needs encourages efficient services, higher productivity, and innovative activities (Pilat, 2000)

Technology

Advances in technology, particularly in ICTs via the Internet, have directly influenced the creation of innovative services, in terms of both independent service offerings and packages of products and services. Quantum advances in communications and digital science have enabled firms to transmute the challenges of the past into opportunities for the future. For example, distance and time, previously major impediments, now present firms with numerous opportunities for creative utilisation. Technology now makes it possible for firms to assign their functional departments strategically to international locations. This allows firms to draw on a global network of knowledge and services, thus augmenting the strength of their pre-existing superior service to internal and external customers, 24 hours a day, seven days a week. For example, General Electric

and British Airways established call centres in India to handle a daily barrage of customers' enquiries originating from North America and Europe (Landler, 2001). Businesses today are forced to handle operations and serve internal and external customers spanning international borders. Firms therefore have to operate as a "collective mind", extending their functional arms to serve an expanded base of customer stakeholders, thus adding value to the firm's essential service competency (Kandampully, 2001). Indeed, service "competency" has become the new business "buzzword", and reflects fundamental changes in the way that firms conceptualise, produce, and distribute their products and services. As firms increasingly rely on their service competency in this age of technology, functional and international coordination has emerged as a strategic necessity for firms to compete in the global

market. Rapid advances in technology have also required dramatic changes in the skill levels of employees. Dependence on continuous technological innovations and their application in business have resulted in fundamental changes to business practice in the marketplace, with consequent changes in the role of employees. The past experience of employees is of limited value because new business practices require a firm's employees and its stakeholders to have the latest available knowledge. It is the firm's employees and partners who, through new knowledge, add value and enhance the firm's core competency, thus rendering it efficient and competitive in the marketplace.

Knowledge

According to Drucker (1993, p. 38), knowledge represents a key personal and primary economic resource. He has argued that traditional production factors – such as land, labour, and capital – have become secondary, and that “knowledge is the only meaningful resource today”. Hence, a worker with knowledge commands a leading role and status, because the knowledge of their employees is the single greatest asset possessed by firms today. A firm's commitment to provide contemporary knowledge by being a “learning” and “teaching” organisation is essential if a firm is to sustain and enrich the value of its knowledge resource. Technology, competence, and capability are manifestations of a firm's knowledge assets operating at different levels of the organisation (Boisot, 1998). Developing, using, and leveraging knowledge are essential for all organisations and countries if they are to sustain economic progress. As management consultant Tom Peters (1994) has claimed: “Knowledge is indisputably the primary basis for value-added in today's companies”.

This new primacy of knowledge requires managers to rethink fundamental management practices. Webber (1993) has asserted that managers must not only invest in the necessary information tools (to support and enhance the productivity of the knowledge workers), but must also nurture a partnering relationship with employees. In essence, a firm's strategy for knowledge management should reflect its competitive strategy (Hansen *et al.*, 1999). According to Gummesson (1999), knowledge is the core

driver for competitiveness in this emulous economy. Thus firms can opt to seek the expertise of new knowledge through the effective use of extended networks of relationships. A borderless global market and the Internet present firms with an opportunity to cast the possibility of networks beyond individuals, groups, and corporations, and thus ultimately reap the creative potential of knowledge (Gummesson, 1999).

Relationship networks

In this competitive global market, the focus on customer needs requires a firm to gain a comprehensive understanding of the buyer's entire value chain (holistic needs), not only as it is today, but also as it will evolve over time (Slater and Narver, 1994). In most cases, the holistic requirements of customers frequently extend beyond the capability of a single firm (Kandampully and Duddy, 1999a). Firms that understand the holistic needs of customers will be able to mix and match various products and services to meet those needs. If customers require products or services that are not within the realm of a firm's core competency, the firm should find ways to procure those competencies – for the benefit of the customer – by creating strategic alliances both horizontally and vertically (internal and external relationships) with individuals and firms (Peppers and Rogers, 1997; Gummesson, 1999).

Today's service organisations traverse conventional boundaries. Firms that seek assistance and enter into alliances with various individuals and suppliers do so, not as a cost-saving exercise, but to seek out specialist know-how to extend their core competency. In modern business, the term “out-sourcing” has been accorded a new meaning and has subsequently been replaced with “out-partnering” (Peters, 1994). Manuel (1996, p. 168) has argued that: “Networks are [the] fundamental stuff of which new organisations are and will be made”. Developed as networks, the various relationships that a firm nurtures and maintains frequently constitute the life source for many leading-edge firms (Kandampully and Duddy, 1999b). Indeed, most large and small projects involve numerous alliances and partners. This is particularly pertinent to services, because networks are endemic to most service business (Heskett *et al.*, 1990).

Thus a firm's service-innovation capabilities are dependent on its knowledge base, realised through the effective use of internal and external partnerships, utilising technology to extend its product mix and increase the speed and efficiency of its delivery. Kandampully (2002) has argued that this continuously updated "amorphous knowledge resource", resulting from a network of partners, represents a firm's core competency. Moreover, a firm's subsequent ability to remain at the forefront nurtures its image as a service leader, and differentiates it from its competition.

Resourcing services through networks beyond national boundaries has thus become a common feature of the global marketplace. When Cisco Systems, a respected network firm, announced a \$2.2 billion inventory write-down in the second quarter of 2001, sceptics immediately proclaimed the fall of the network business model exemplified by Cisco. However, Cisco outperformed its peers, not only during the boom years of 1995–2000, but also during the first quarter of 2001 (Hacki and Lighton, 2001), Hacki and Lighton (2001) have argued that network companies continue to outperform because they own fewer assets, leverage the resources of partner companies, require less capital and return higher revenue per employee than conventionally run companies. The ongoing dependence on network relationships, and the effective maintenance of such networks, will dictate the core survival strategy of tomorrow's service firms as they operate in the new global economy.

The concept of a new business model

The new economy was essentially forged during the last quarter of the twentieth century through the advancement in information technology and the new business practices facilitated by information technology (Sweet, 2001). Although information and knowledge have always been critical components of economic growth, it is the advent of technology and the Internet that has brought about transformational changes in the economy. "Technology", in this sense, refers to the package of technological resources, skill and experience, which give firms their distinctive competitive edge in the

new global economy (Bessant and Rush, 2000).

Castells (2000) has argued that this new economy is fundamentally distinct from what has gone before because it gains its superiority through the effective use of information (knowledge), global concepts (organised on a global scale), and networks among economic agents (interaction among business networks). The creative utilisation of IT offers numerous benefits to firms that undertake business and other trading functions via the electronic marketplace. Firms that establish new business models often reap high rewards from ideas that spark new sources of revenue using applications of technology and market demand (Hamel and Skarzynski, 2001). The success of CNN, amazon.com, eBay, and others serves as testimony to the new types of resources that can be utilised through new business models. New business models provide alternative approaches to business practices for firms to consider, not only in terms of what is done, but also in terms of how it is done. Defining new business models can be difficult. However, in this context, they can be referred to as business practices that result in greater efficiency by utilising information technology.

Proponents of new business models suggest that new technology and innovative business practices provide the potential for organisational efficiency gains that are variously referred to as improvements in:

- value (Porter, 1985);
- quality of service production and delivery (Parasuraman and Grewal, 2000);
- R&D cost-efficiency (Rao, 2001);
- transaction costs (Garicano and Kaplan, 2001);
- productivity, inventory, and demand management (Kaplan and Sawhney, 2000);
- production lead-time reduction (Velocci, 2001);
- reduced search costs for customers (Bakos, 1997);
- selling process improvement (Feeney, 2001);
- increased customisation capabilities (Bakos, 1998);
- supply chain and relationships improvement (Feeney, 2001); and
- an increasingly long-term perspective of the firm, subsequently leading to business performance (Fox, 2001).

Thus, improving efficiency and effectiveness in all economic activities of the firm (buying, making, and selling) is imperative for the success of any organisation, including that of a logistics firm.

The logistics industry

Logistics are an extension of physical-distribution management and usually pertain to the management of the materials and information stream of a business, down through a distribution channel, to the end customers. Logistics management basically concerns the physical distribution of raw materials and, ultimately, finished products (Slack *et al.*, 1999). Logistics are apparent in all firms to some degree, depending on the nature of the business and the industry. They are all-encompassing throughout the organisation; including everything from a decision on a product or service needing to be made, through to the management of incoming raw materials, the production process, storage of finished goods, delivery to the customer, and after-sales service.

There are substantial logistics activities involved in both supply and distribution. Even in service industries, firms need to obtain and convert products into intangible services. The scope and role of logistics have changed dramatically over the years. Logistics used to have a supportive role to primary functions such as marketing and manufacturing. But now they have expanded to cover warehousing and transportation activities, purchasing, distribution, inventory management, packaging, manufacturing, and even customer service (Bowersox and Closs, 1996). More importantly, logistics management has evolved from a passive, cost-absorbing function to that of a strategic factor which provides a unique competitive advantage (Bowersox and Closs, 1996; Bowersox and Daugherty, 1995; Christopher, 1993).

As organisations globalise to access new markets and achieve higher production and sourcing efficiencies, logistics play an important role in moving materials, products, and services through supply chains. By improving logistics, organisations can realise greater production, increased efficiencies, and technological competencies beyond their geographic borders (Bovet, 1991; Fawcett

et al., 1993). With trade barriers being reduced, and the advent of advanced information technologies, new opportunities and global markets have become available for companies. Thus, there is increasing reliance on logistics, not only to move products and materials, but also to assist with new production requirements and customer needs. Intense competition has also required logistics providers to consider their services in terms of cost, quality, features, and value-added to their customers and to their stakeholders (Sum and Teo, 1999).

Logistics firms today acknowledge the importance of information (knowledge), not only to enhance the firm's core competency, but also as a service feature that assists customers and stakeholders. For example, "the Minitel Internet tracking system" developed by Carlberson, one of Europe's leading shipping and logistics firms, has propelled Carlberson to the forefront of its industry. Carlberson's 45,000 customers are able to obtain up-to-date information on their individual consignments by logging on to the company's Web site and selecting the customer-service package required. A customer code and password ensure that customer information remains confidential. The system also offers a multiple search facility. Customers can search a selected period (histories are kept for three months) for each of the five types of transport offered, and the status of consignments by destination. They have the option of tracking each consignment continuously. They can also interrogate the data using a reference or a receipt number. In addition, the system provides statistics on any delivery-related problems. The use of the Internet to track consignments provides customers with a very useful management tool and access to delivery schedules for various retail outlets. Thus technology provides the opportunity to offer services far beyond the firm's primary business concept. Today's innovative firms partner with their customers, allowing firms to conceive of support services that truly help customers. It is this concept of "thinking for the customer" that will allow firms to continue to excel and become the innovators of tomorrow.

Organisations today face great challenges because the successful provision of many goods and services requires the effective integration of logistics activities across a

lengthening supply chain and an increasing geographical separation. Logistics management represents a growing segment of the economy, and plays a critical role in international trade. In recent years, most industries have recognised that substantial savings are available to companies that are able to coordinate and innovate within their logistics operations. For example, the exponential growth in the distribution of digital information goods via the Internet has revolutionised the existing business models of the news, music, and film industries. This presents numerous opportunities and challenges, because perfect copies of information goods can be created and distributed via the Internet at practically no cost (Bakos, 1998).

Imperatives for innovation in logistics

The advance of information technology and its creative use in business have been one of the most significant contributions to the world of commerce. Globalisation and the increasing use of the Internet in e-commerce and e-markets have changed the way in which business is conducted and in which products and services are traded across international borders. As a result, firms are left with little option but to innovate constantly – beyond incremental improvement. Technological changes are rapid and are often discontinuous, leading to a relatively short product life span (Achrol, 1991). The displacement of the multimillion-dollar record industry by the introduction of CDs is an example of this phenomenon. Similarly, technology-led changes have revolutionised business practice, and have significant implications for firms in the supply chain in terms of manufacturing, warehousing, auctions and procurement, and distribution. It is thus imperative that firms in this borderless market constantly anticipate their global customers' future needs – and innovate appropriately. Innovation in product or process development provides firms with an element of flexibility (Parthasarthy and Sethi, 1992). Today's turbulent competitive environment mandates that logistics firms have the agility to survive and excel.

Acknowledging the dramatic changes in the economy and the advent of the new business

paradigm, many authors have identified logistics as a distinct form of service which provides “logistical solutions”. Logistics management has subsequently become an important source of competitive advantage in commerce (Achrol, 1991; Day, 1994; Porter, 1985; Stalk *et al.*, 1992; Webster, 1992). Moreover, logistics have today transcended a traditional role in “transportation” to a role in serving customers' strategic needs to gain a competitive advantage. Innovation is imperative for logistics firms serving the market in the new economy, and this can be examined on the basis of Kandampully's (2002) three requirements for service innovation:

- (1) technology;
- (2) knowledge; and
- (3) relationship networks.

Innovation in logistics through technology

It is evident that, to improve their market standing, many logistics firms will have to keep pace with the information age. It has been argued, and is generally well accepted, that the correct implementation of ICTs can be a significant source of competitive advantage to firms. This is particularly so for the logistics industry because of its dependence on information for efficient operations. Logistics ICT refers to the hardware, software, and network design required to facilitate processing and exchange (Closs and Xu, 2000). It thus includes related components in the supply chain, such as satellite transmissions, Web-based ordering, electronic data interchange, barcoding, systems for order entry, order processing, vehicle routing and scheduling, inventory replenishments, automated storage, and retrieval systems, to name a few.

Logistic firms that adopt and creatively deploy up-to-date technology, through the collective use of mind and knowledge, are able to implement innovative methods and gain superior competitive advantage. For instance, Langley *et al.* (1988) discussed the application of ICT as an effective means to enhance the strategic significance and operational effectiveness of firms. They were of the view that managers should look at the overall business needs first, before considering or selecting ICT hardware or software. ICT should not merely be utilised

for the benefit of the logistics firm itself. Rather, consideration should be given to how ICT can add benefit to customers and other stakeholders. Kerr (1989) has indicated how logistics ICT can contribute to the overall strategy of the firm, and that this might involve various activities outside the traditional logistical task. In the area of warehousing, for example, Stock (1990) has shown how logistics firms can effectively use technology and gain competitive advantage through automated systems, stock picking (the process of obtaining stock from the warehouse according to customers' orders), and barcoding. In addition, Closs *et al.* (1997) have offered some empirical evidence that firms innovating through the development of IT capabilities can positively influence overall logistics competency.

In France, an IT system was deployed to monitor and control the flow of inventory after discovering bottle-necks previously occurring at shipping ports. This is an example of information technology being used to integrate and link the planning, implementation, and control of traditional inventory activities such as product receipt, storage, stock picking, and shipping (Langley *et al.*, 1988). LaLonde and Auker (1973) noted that the use of technology can enable logistics firms to transform themselves from being an enabler of operational and material-handling functions to being an enabler of decision-making and activity-planning functions within the supply chain. This progressive transformation of firms from transportation services to logistical solutions requires innovation beyond traditional business capabilities. Innovation thus transcends the mere use of technology. Rather, technology makes creative use of the knowledge and relationship networks.

Innovation in logistics through knowledge

Knowledge is an essential component in the flow of material, information, and services for logistics. The amount of data and information available to firms is at unprecedented levels in today's economy, and firms need to transform this information and these data into knowledge and action to be effective in innovation. Thus the establishment of effective knowledge-management processes is

an essential part of successful innovation. Knowledge in logistics incorporates two key aspects. First, ICTs create a basis for knowledge sharing within and among the organisations involved. Second, people are involved as individual actors within these organisations. To achieve fully effective knowledge-management systems both aspects have to be incorporated into a holistic approach. The combination of these two aspects creates what has been referred to as "knowledge networks" (Kandampully, 2002). Knowledge networks in logistics allow firms to create, share, and use strategic knowledge to improve operational efficiencies and to assist customers.

The business resource gained through these relationships and knowledge networks can thus be effectively used not only to improve firms' operational processes but also to enhance organisational knowledge acquisition and implementation, and trigger continuous learning (Scherer, 2000). Services are becoming increasingly complex and customer requirements are extending far beyond traditional transportation needs. Logistics firms therefore have to seek knowledge and expertise outside the realm of their traditional operations to effect the organisational transformation required to serve the entire logistical needs of the customer. Some of these needs include: customer service, transport and network management, multinational and multi-site inventory control, and multicultural facility location management. Thus leading logistics firms are obliged to seek and use new knowledge to innovate – primarily for the benefit of their customers. This new mindset recognises the fact that the all-important factor is the extrinsic organisational requirements of logistics firms necessary for the enhancement of customer value. The firm might thus choose to use various technologies and forge networks of relationships to extend its competency (knowledge), and thus offer higher value to the customer.

Innovation in logistics through relationship networks

Since the 1970s, manufacturing firms have been faced with increasingly competitive pressure and increasingly discerning customers. These firms have been forced to

restructure both internal and external relationships to respond flexibly, innovatively, and rapidly to shifting and splintering market demand. International experience offers a host of examples of how manufacturers have successfully restructured to improve their international competitiveness (Kaplinsky, 1994; Gereffi, 1996; Schmitz, 1993; Schonberger, 1982, 1996; Piore and Sabel, 1984). An important component of such restructuring has been the recognition that firms cannot be islands of competitiveness in a sea of inefficiency. This recognition has created a major increase in importance of the value chain. The value chain concept was initially described by Porter (1985) and is inherently linked to the idea of relationship networks.

A value chain is a set of activities and processes tracing the stages of a product from raw materials to the final customer. Looking at the value chain as a whole requires looking at the product from the point of view of the customer – with companies providing links in the larger chain process, not merely as manufacturers of specific components. This is a subtle but significant shift in approach, and means that improving the overall value to the end customer requires suppliers and manufacturers in the chain to seek avenues for collaboration, rather than continual competition. These traditional competitive roles involved passing risk on to the supplier or buyer, and tough negotiations to get the best product or service for the lowest price in the short term. This resulted in contributors along the supply chain focusing on enlarging their profits at the expense of others in the supply chain. In contrast, recent international pressures for industry restructuring (Gereffi, 1996) focused attention on the importance of value-chain concepts. The value-chain perspective highlights interdependence among companies in a common value chain. Intermediaries become partners who deliver value to the customer, and the boundaries between organisations become more fluid as key inter-organisational business processes become more integrated. Information flows more freely along the channel and inter-company relationships broaden out to embrace logistics, merchandising, and product development – rather than simply being focused on purchasing and selling (Ernst & Young, 1999). Improving competitiveness requires both intra-firm and

inter-firm restructuring that places a major stress on the linkages among enterprises. The focus has had to shift from activity centred on individual firms to activity involving the value chains and clusters within which enterprises are embedded. This can be applied to the prevalence of logistics services throughout the supply chain, and reinforces the need for networks.

Logistics firms need to place considerable importance on relationships and networking. Critical linkages exist with other firms both up and down the supply chain, and also with firms outside the supply chain. Logistics firms should develop and maintain long-term strategic alliances with partners to improve performance in the areas of product handling, product tracking, information flow technology, and other product and process advancements. These, in turn, enhance customer satisfaction and firm performance (Epatko, 1994; Schilling and Hill, 1998; Vonderembse and Tracey, 1999; Shin *et al.*, 2000).

Organisational structures, and particularly inter-organisational structures, are important constraining or facilitating factors in logistics innovation. Firms can develop their innovative capabilities and meet the challenges for organisational learning only through adequate supportive organisational structures. In the UK, many utilities firms have joined in partnerships both up and down the supply chain. This collaborative or partnership approach is also evident within the Toyota supplier system in Japan. Such an intercompany network system greatly assists innovation in logistics. Szeto (2000) has supported the idea that inter-organisational networks with resource supplies and knowledge formation through repeated collaboration can enhance innovation capacity. The firms can “achieve financial information, latest technology and marketing intelligence, which supplement the collective innovation activities within the network” (Szeto, 2000, p. 158). The structure of inter-organisational networks has been examined by many authors, including Ghosal and Bartlett (1990), Jarillo (1998), Saxenian (1991), Snow *et al.* (1992), and Storper and Harrison (1991). Logistics integration links logistics activities to other functional areas within the firm and to the logistics activities of other firms. The authors listed above, along with many others in the past ten years or so,

have supported the notion that development of effective logistics networks leads to increased competitive scope, greater competitive advantage, and better performance.

By affiliating with networks in the industry, firms gain an opportunity to learn from best practice. Process improvement can be achieved through benchmarking within the supply chain, thus enabling logistics partners to learn from each other (Andersen *et al.*, 1999). Supplier relationships have recently adopted a changing role in which larger firms provide assistance and guidance in performance assessment or benchmarking within the supply-chain network. Similarly, appropriate performance-measurement systems can be developed and shared within the supply chain. Van Hock (2001) has stated that measurement systems contribute significantly to the expansion of alliances in supply chains. Attempts to improve efficiency and productivity in supply chains require a movement away from internal organisational measures, which, in turn, requires innovation in measurement and control systems and the development of stronger relationships across the whole supply chain.

The emphasis on supply-chain integration, value-chain approaches, and joint process improvement has altered the way in which logistics firms undertake, and benefit from, innovation. Companies are shifting inventory back up the supply chain, and are increasingly seeking integrated supply-chain solutions rather than individual, isolated improvements. Logistics networks are commonly strategically guided, extensive, and innovative. Such networks will almost certainly dominate the logistics industry over the coming decades.

Conclusion

Logistics organisations are redesigning their structures and relationships and creating knowledge networks to facilitate improved communication of data, information, and knowledge, while improving their coordination, decision making, and planning. These new internal and external relationships are based on “new economy” technologies, and are in line with the new business paradigm. There are numerous benefits to be

gained by logistics firms through increased knowledge sharing. These include:

- the achievement of greater efficiency;
- increased customer satisfaction;
- better strategic planning;
- more flexibility and adaptation to market changes;
- improved decision making;
- rapid and flexible supply-chain management processes; and
- other benefits leading to rapid innovation capabilities.

Logistics firms need to reappraise the full extent and breadth of their functions, systems, and processes in the whole supply chain. They must aim to synchronise activities among the partners in the network with the aim of gaining and integrating knowledge. Application of new technologies, particularly ICTs, must be synchronised across the network to streamline management processes and provide efficiency and productivity improvement across the length of the supply chain. Only then can such firms be successful in reaping benefits from their innovative efforts. It is imperative for logistics firms to recognise this new business paradigm, and evolve to be part of it, if they are to stay ahead in the turbulent global economy. By recognising opportunities that emerge outside traditional business models, logistics firms must constantly seek new knowledge, “think for the customer”, anticipate, and innovate services to meet customers’ evolving needs. However, innovation *per se* is of limited significance in today’s evolving business continuum. Rather, it is the value of the innovation as perceived by the customer that provides the advantage in a product or service. Service innovation results when a firm is able to focus its entire energies to think on behalf of the customer, and thus produce an outcome that surpasses customers’ present expectation of superior value.

References

- Achrol, R. (1991), “Evolution of the marketing organisation: new forms for turbulent environments”, *Journal of Marketing*, Vol. 55 No. 4, pp. 77-93.
- Andersen, B., Fagerhaug, T., Randmael, S., Schuldmaier, J. and Prenninger, J. (1999), “Benchmarking supply chain management: finding best practices”, *Journal of Business & Industrial Marketing*, Vol. 14 No. 5, pp. 378-89.

- Anderson, B. and Howells, J. (1998), "Innovation dynamics in services intellectual property rights as indicators and shaping systems in innovation", *CRIC Discussion Paper*, No. 8, February, University of Manchester, Manchester.
- Bakos, Y.J. (1997), "Reducing buyer search costs: implications for electronic marketplaces", *Management Science*, Vol. 43, December, pp. 1676-708.
- Bakos, Y.J. (1998), "Towards friction-free markets: the emerging role of electronic marketplaces on the Internet", *Communications of the ACM*, Vol. 41 No. 8, pp. 35-42.
- Bessant, J. and Rush, H. (2000), "Innovation agents and technology transfer", in Boden, M. and Miles, I. (Eds), *Services and the Knowledge-based Economy*, Continuum, London, pp. 155-69.
- Bitner, M.J., Brown, S.W. and Meuter, M.L. (2000), "Technology infusion in service encounters", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 138-49.
- Boisot, M.H. (1998), *Knowledge Assets: Securing Competitive Advantage in the Information Economy*, Oxford University Press, London.
- Bovet, D. (1991), "Logistics strategies for Europe in the nineties", *Planning Review*, July/August, pp. 12-15, 46-8.
- Bowersox, D. and Closs, D.J. (1996), *Logistical Management: The Integrated Supply Chain Process*, 4th ed., McGraw-Hill, New York, NY.
- Bowersox, D.J. and Daugherty, P.J. (1995), "Logistics paradigms: the impact of information technology", *Journal of Business Logistics*, Vol. 16 No. 1, pp. 65-80.
- Broersma, L. and McGuckin, R.H. (1999), "The impact of computers on productivity in the trade sector: explorations with Dutch microdata", *Research Memorandum GD-45*, Growth and Development Centre, Groningen, October.
- Castells, M. (2000), *The Rise of the Network Society*, 2nd ed., Basil Blackwell, Oxford.
- Christopher, M. (1993), "Logistics and competitive strategy", *European Management Journal*, Vol. 11 No. 2, pp. 258-61.
- Closs, D.J. and Xu, K. (2000), "Logistics information technology practice in manufacturing and merchandising firms – an international benchmarking study versus world-class logistics firms", *International Journal of Physical Distribution & Logistics Management*, Vol. 30 No. 10, pp. 869-86.
- Closs, D.J., Goldsby, T.J. and Clinton, S.R. (1997), "Information technology influences on world-class logistics capability", *International Journal of Physical Distribution & Logistics Management*, Vol. 27 No. 1, pp. 4-17.
- Day, G.S. (1994), "The capabilities of market-driven organisations", *Journal of Marketing*, Vol. 58 No. 4, pp. 37-52.
- Den Hertog, P. and Bilderbeek, R. (1998), "The new knowledge infrastructure: the role of technology-based knowledge-intensive business services in national innovation systems", *S145 Project*, STEP Group, Oslo.
- Department of Industry, Science and Resources (2000), *The Australian Service Sector Review, Statistics and Industry Profiles*, Vol. 1.
- Drucker, P.F. (1993), *Post-Capitalist Society*, HarperCollins, New York, NY.
- Epatko, E. (1994), "Suppliers can help meet customers' desires", *Purchasing*, Vol. 117 No. 8, pp. 9-11.
- Ernst & Young (1999), "International market assessment: the new manufacturing company", in Smith, A. (Ed.), *Australian Ingenuity, Manufacturing for the World*, Focus Publishing, Newburyport, MA.
- Fawcett, S.E., Birou, L. and Taylor, B.C. (1993), "Supporting global operations through logistics and purchasing", *International Journal of Physical Distribution & Logistics Management*, Vol. 23 No. 4.
- Feeney, D. (2001), "Making business sense of the e-opportunity", *MIT Sloan Management Review*, pp. 41-51.
- Fox, K.A. (2001), "Invisible competition: some lessons learned", *Journal of Business Strategy*, July/August, pp. 36-8.
- Garicano, L. and Kaplan, S.N. (2001), "The effects of business-to-business e-commerce on transaction costs", *The Journal of Industrial Economics*, Vol. 49 No. 4, pp. 463-85.
- Gereffi, G. (1996), "Global commodity chains: new forms of coordination and control amongst nations and firms in international industries", *Competition and Change*, Vol. 4, pp. 427-39.
- Ghosal, S. and Bartlett, C.A. (1990), "The multinational corporation as an interorganisational network", *Academy of Management Review*, Vol. 15 No. 4, pp. 603-25.
- Grönroos, C. (2000), *Service Management and Marketing: A Customer Relationship Management Approach*, 2nd ed., John Wiley & Sons, London.
- Gummesson, E. (1999), *Total Relationship Marketing: Rethinking Marketing Management from 4Ps to 30 Rs*, Butterworth-Heinemann, Oxford.
- Hackbarth, G. and Kettinger, W.J. (2000), "Building an e-business strategy", *Information Systems Management*, Summer, pp. 78-93.
- Hacki, R. and Lighton, J. (2001), "The future of the networked company", *The McKinsey Quarterly*, No. 3.
- Hallowell, R. (2001), "Scalability: the paradox of human resources in e-commerce", *International Journal of Service Industry Management*, Vol. 12 No. 1, pp. 34-43.
- Hamel, G. and Skarzynski, P. (2001), "Innovation: the new route to wealth", *Journal of Accountancy*, pp. 65-8.
- Hansen, M.T., Nohria, N. and Tierney, T. (1999), "What's your strategy for managing knowledge?", *Harvard Business Review*, March-April, pp. 106-16.
- Hauknes, J. (1996), *Innovation in the Service Economy. Studies in Technology, Innovation and Economic Policy (STEP Group) Report*, Oslo, December.
- Hauknes, J. (1999), "Innovation systems and capabilities. Studies in technology, innovation and economic policy (STEP Group) report", paper prepared within the framework of the TSER RISE Program for the European Commission, DGXII, Oslo, December.
- Heskett, J.L., Sasser, W.E. and Hart, C.L. (1990), *Service Breakthroughs*, Free Press, New York, NY.

- Howells, J. (2000), "The nature of innovation in services", OECD Innovation and Productivity in Services Workshop, Sydney.
- Jarillo, J.C. (1998), "On strategic networks", *Strategic Management Journal*, Vol. 9 No. 1, pp. 31-41.
- Kandampully, J. (2001), "Service competency: a new business paradigm for organisations", *Sbusiness*, Vol. 26 No. 5, December, pp. 23-4.
- Kandampully, J. (2002), "Innovation as the core competency of a service organisation: the role of technology, knowledge and networks", *European Journal of Innovation Management*, Vol. 5 No. 1.
- Kandampully, J. and Duddy, R. (1999a), "Relationship marketing: a concept beyond the primary relationship", *Marketing Intelligence & Planning*, Special Issue on Relationship Marketing, Vol. 17 No. 7, pp. 315-23.
- Kandampully, J. and Duddy, R. (1999b), "Competitive advantage through anticipation, innovation and relationships", *Management Decision*, Vol. 37 No. 1, pp. 51-6.
- Kaplan, S. and Sawhney, M. (2000), "E-hubs: the new B2B marketplaces", *Harvard Business Review*, May-June, pp. 97-103.
- Kaplinsky, R. (1994), *Easternization: The Spread of Japanese Management Techniques to Developing Countries*, Frank Cass, Ilford.
- Kerr, A. (1989), "Information technology – creating strategic opportunities for logistics", *International Journal of Physical Distribution & Logistics Management*, Vol. 19 No. 5.
- LaLonde, B.J. and Auker, K. (1973), "A survey of computer applications and practices in transportation and distribution", *International Journal of Physical Distribution*, Vol. 3 No. 5, pp. 292-301.
- Landler, M. (2001), "Hi, I'm in Bangalore (but I dare not tell)", *The New York Times*, 22 March.
- Langley, C.J., Carlisle, D.P., Probst, S.B., Biggs, D.F. and Cail, R.E. (1988), "Microcomputes as a logistics information strategy", *International Journal of Physical Distribution & Materials Management*, Vol. 18 No. 6, pp. 11-17.
- McLachlan, R., Clark, C. and Monday, I. (2002), "Australia's service sector: a study in diversity", *Productivity Commission Staff Research Paper*, AusInfo, Canberra.
- Manuel, C. (1996), *The Rise of the Network Society*, Basil Blackwell, Oxford.
- Mattsson, J. (1995), "Services management: a holistic, multi-disciplinary and customer-driven research agenda", *New Zealand Journal of Business*, Vol. 17 No. 2, pp. 1-18.
- Moncrief, W.C. and Cravens, D.W. (1999), "Technology and the changing marketing world", *Marketing Intelligence & Planning*, Vol. 17 No. 7.
- Mougayar, W., Mattis, M., McKinley, K. and Crawford, N. (1999), "The 100 hottest companies", *Business 2.0 Magazine*, May.
- Nonaka, I. and Takeuchi, H. (1995), *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Oxford University Press, New York, NY.
- OECD (1999), "Background paper on Australia's service industries: Business and Industry Forum on realising the potential of the service economy: facilitating growth, innovation and competition", OECD, Paris, September.
- Olsen, M.D. and Connolly, D.J. (2000), "Experience-based travel", *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 41 No. 1.
- Parasuraman, A. and Grewal, D. (2000), "The Impact of technology on the quality-value-loyalty chain: a research agenda", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 168-74.
- Parthasarthy, R. and Sethi, S.P. (1992), "Relating strategy and structure to flexible automation", *Strategic Management Journal*, Vol. 14 No. 7, pp. 529-50.
- Patterson, P.G. (1995), "Services management 1995-2000 and beyond: comment", *New Zealand Journal of Business*, Vol. 17 No. 2, pp. 19-25.
- Peppers, D. and Rogers, M. (1997), "The \$15,000 rug", *Marketing Tools*, May, pp. 4-7.
- Peters, T. (1994), "Crazy times call for crazy organizations", Tom Peters Seminar, Macmillan, London.
- Pilat, D. (2000), "Innovation and productivity in services: state-of-the-art", OECD/ Australia Workshop on Innovation and Productivity in Services, Sydney, October.
- Piore, M. and Sabel, C. (1984), *The Second Industrial Divide*, Basic Books, New York, NY.
- Porter, M.E. (1985), *The Competitive Advantage of Nations*, Free Press, New York, NY.
- Rao, P.M. (2001), "The ICT revolution, internationalisation of technological activity, and the emerging economies: implications for global marketing", *International Business Review*, Vol. 10, pp. 571-96.
- Saxenian, A. (1991), "The origins and dynamics of production networks in Silicon Valley", *Research Policy*, Vol. 20 No. 5, pp. 423-37.
- Scherer, E. (2000), "The knowledge network: knowledge generation during implementation of application software packages", *Logistics Information Management*, Vol. 13 No. 4, pp. 210-18.
- Schilling, M.A. and Hill, C.W.L. (1998), "Managing the new product development process: strategic imperatives", *Academy of Management Executive*, Vol. 12 No. 3, pp. 67-81.
- Schmitz, H. (1993), "Small shoemakers and Fordist giants: tales of a supercluster", Discussion Paper No. 331, Institute of Development Studies, University of Sussex, Brighton.
- Schonberger, R.J. (1982), *Japanese Manufacturing Techniques: Nine Hidden Lessons in Simplicity*, The Free Press, New York, NY.
- Schonberger, R.J. (1996), *World Class Manufacturing: The Next Decade*, The Free Press, New York, NY.
- Shin, H., Collier, D.A. and Wilson, D.D. (2000), "Supply management orientation and supply/buyer performance", *Mid-American Journal of Business*, Vol. 15 No. 2, pp. 11-20.
- Slack, N., Chambers, S., Harland, C., Harrison, A. and Johnston, R. (1999), "Operations management", 2nd ed., *Financial Times*, London.
- Slater, S.F. and Narver, J.C. (1994), "Market orientation, customer value, and superior performance", *Business Horizons*, Vol. 37, March-April, pp. 22-8.
- Slater, S.F. and Narver, J.C. (1995), "Market orientation and the learning organization", *Journal of Marketing*, Vol. 59, July, pp. 63-74.

- Snow, C.C., Miles, R.E. and Coleman, H.J. (1992), "Managing 21st century network organisations", *Organisational Dynamics*, Vol. 20 No. 3, pp. 5-20.
- Stalk, G., Evans, P. and Shulman, L. (1992), "Competing on capabilities : the new rules of corporate strategy", *Harvard Business Review*, Vol. 70 No. 2, pp. 57-68.
- Stiglitz, J.E. (1999), "Knowledge in the modern economy", *Our competitive Future – The Economics of the Knowledge-driven Economy*, Department of Trade and Industry, London, December, pp. 37-57.
- Stock, J.R. (1990), "Managing computer, communication and information system strategically: opportunities and challenges for warehousing", *Logistics and Transportation Review*, Vol. 26 No. 2, pp. 133-48.
- Storper, M. and Harrison, B. (1991), " Flexibility, hierarchy and regional development: the changing structure of industrial production systems and their forms of governance in the 1990s", *Research Policy*, Vol. 20 No. 5, pp. 407-22.
- Sum, C.C. and Teo, C.B. (1999), "Strategic posture of logistics service providers in Singapore", *International Journal of Physical Distribution & Logistics Management*, Vol. 29 No. 9, pp. 588-605.
- Sweet, P. (2001), "Strategic value configuration logics and the 'new' economy: a service economy revolution", *International Journal of Service Industry Management*, Vol. 12 No. 1, pp. 70-83.
- Szeto, E. (2000), "Innovation capacity: working towards a mechanism for improving innovation within an inter-organisational network", *The TQM Magazine*, Vol. 12 No. 2, pp. 149-58.
- Tidd, J., Bessant, J. and Pavitt, K. (2001), *Managing Innovation: Integrating Technological, Market and Organizational Change*, John Wiley & Sons, New York, NY.
- Van Biema, M. and Greenwald, B. (1997), "Managing our way to higher service sector", Brookings Institution, available at: www.brookings.edu/views/papers/triplett/20000112.htm (accessed 23 February 2001).
- Van Hock, R.L. (2001), "The contribution of performance measurement to the expansion of third-party logistics alliances in the supply chain", *International Journal of Operations & Production Management*, Vol. 21 No. 1, pp. 15-21.
- Velocci, A.L. (2001), "New business model taking root around closer collaboration", *Aviation Week & Space Technology*, Vol. 155 No. 16, 15 October, pp. 72-4.
- Vonderembse, M.A. and Tracey, M. (1999), "The impact of supplier selection criteria and supplier involvement on manufacturing performance", *Journal of Supply Chain Management*, Vol. 35 No. 3, pp. 33-9.
- Webber, A.M. (1993), "What's so new about the new economy?", *Harvard Business Review*, January-February, pp. 24-42.
- Webster, F. Jr (1992), "The changing role of marketing in the corporation", *Journal of Marketing*, Vol. 56 No. 4, pp. 1-17.
- Wymbs, C. (2000), "How e-commerce is transforming and internationalizing service industries", *Journal of Services Marketing*, Vol. 14 No. 6, pp. 463-78.

Perspectives

Exploring the development of quality in higher education

*Maria Avdjieva and
Marie Wilson*

The authors

Maria Avdjieva is Senior Tutor and Marie Wilson is Research Director, Icehouse Business Incubator, Department of Management and Employment Relations, The University of Auckland, Auckland, New Zealand.

Keywords

Higher education, Organizational learning, Quality

Abstract

This paper uses a developmental perspective to characterise quality initiatives in the higher education systems of four countries: Australia, New Zealand, the UK, and North America. Each country demonstrates variety in its practices, as well as consistent patterns of environment, policy and institutional response. Survey data support a continuum of quality evolution from a low quality, low organisational learning environment toward organisational learning capabilities. The three stages of learning proposed by both Senge and McKay and Kember are also reflected in the study's findings. Drawing on these findings, implications for managers are outlined focusing on areas of key organisational transformation such as leadership, culture and infrastructure.

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Introduction and background

In a 1995 interview on schools as learning organisations, Peter Senge discussed the application of his principles to education, beginning with the assertion that institutions of learning are not automatically learning organisations (O'Neil, 1995). Like other industrial age institutions today, educational institutions are caught in the cross-currents of change and need to shift from an industrial, mechanistic age model to an information age model (Dolence *et al.*, 1997; Senge, 2000). Simply focusing energies on quality assurance programmes that are predominantly concerned with process improvement confines the efforts of higher education to the domain of adaptive learning. Moreover, educational institutions are not typically organised to support collective learning. They are complex and stratified organisations embedded within even more complex communities. Knowledge is fragmented into very specialised areas, and teaching is a highly individual activity. Educators are likely to feel disempowered, not having sufficient leverage to make change in such a complex system (Senge, 2000). In contrast, according to Meade (2001), a learning organisation is open to innovation and change and aims to link the learning of individual staff to the learning of the institution. In turn, Macpherson (2000, p. 116) emphasises that "organisations that would be educational will need effective governance and change management capacities in order to demonstrably boost learning, and maintain the link between their general development as 'learning organisations' and the growth of their nation's 'knowledge economy' and 'knowledge society'". This challenges the place of higher education institutions (HEIs) in the fabric of national quality, as well as the capacity of "organisations of learning" to become learning organisations.

The roots of the quality movement lie in assumptions about people, organisations, and management that have one unifying theme: to make continual learning a way of life, especially improving the performance of the organisation as a total system (Senge, 1995a). Dahlgaard (1999) echoes Senge's view by observing that the renewal and evolving processes of this movement are proof of its power as a living human system. These views suggest that the evolution of learning



organisations could be best understood as a series of waves (Senge, 1992). The earlier stages of the quality movement represent the first wave in building learning organisations. This wave took much of its power from a guiding idea introduced first in Japan and then in North America:

Increasing quality did not necessarily mean increasing cost, in fact low quality and high costs may both be the consequence of poor processes (Senge, 1999a, p. 44).

Hence, in the first wave the primary focus of change was on the role of front-line workers in process improvement. Management's job was to champion continual improvement of tangible work processes, remove impediments (such as quality control experts and unnecessary bureaucracy) that disempowered local personnel, and support new practices like quality training and competitive benchmarking. While the focus had broadened to include more complex processes, by and large the customer has been outside the system of delivery, even as the system has been designed to meet customer needs.

In the second wave, the focus shifts from improving work process to improving how an organisation works. The primary focus of change here is management's role in fostering ways of thinking and interacting conducive to continual learning about the complex and potentially conflicting issues that determine system-wide performance. In generating lasting, organisation-wide commitment to continuous improvement, special emphasis was placed on not just forming teams, but on developing team-learning skills and mass deployment of quality tools. According to Senge (1999b, p. 38), the real message of the second wave is that:

... leveraging ultimately lies in improving us, not just improving our work processes.

The first two waves of learning, most commonly known as quality movement initiatives, gradually merge into a third, in which learning becomes institutionalised as a way of life for managers and workers alike (Senge, 1999b). While the work of the first two waves – improving the organisation's functions and performance capabilities respectively – points in the right direction, the work of the leaders in building learning organisations emphasises the key role of the third wave – improving our ability to improve

(Senge, 1999a). Along with yet another generation of tools, it is through practising the five learning organisation disciplines (Senge, 1990):

- (1) personal mastery;
- (2) mental models;
- (3) shared vision;
- (4) team learning; and
- (5) systems thinking

that organisations develop their learning capabilities – capabilities overlooked in most organisations.

Practising the learning organisation disciplines is at the heart of creating an organisational “symphony” (Senge, 1992). Empowering people toward personal mastery empowers the organisation, but only if individuals are deeply aligned around a common sense of purpose and shared vision. Shared vision will energise and sustain an organisation through thick and thin, but only if people think systematically. Once people are able to see how their actions shape their reality, they begin to understand how alternative actions could create a different reality. Individual skills in reflection and inquiry mean little if they cannot be practised when groups of people confront controversial issues. Systems thinking will become the province of a small set of system experts unless it is tied to an organisation-wide commitment to improving mental models, and even then nothing much will change without shared visions. A commitment to seeing the larger system only matters when there is a commitment to the long term. In the short run, everyone can just fix his or her piece. Only with a long-term view can executives see that optimising the parts, one at a time, can lead to sub-optimising the whole.

The three waves of learning are also reflected in the organisations' endeavours for coping with increasing rates of environmental change and turbulence where the issue of both successful and sustainable organisational transformation takes centre stage. According to Elton (McKay and Kember, 1999), quality systems and measures within universities can generally be placed into two categories:

- (1) quality assurance; and
- (2) quality enhancement.

Based on this distinction McKay and Kember (1999) argue that the quality assurance activities are a crucial precursor to quality

enhancement and excellence initiatives. Considering the evolutionary nature of these mental models we can discern that the more interested organisations are in becoming a learning organisation, the closer they probably are to the “total quality” end of the continuum. Indeed, the quality cycle may be conceptualised as an evolutionary pathway from control through assurance processes to enhancement and learning.

The range of models for both quality and learning shares a number of key attributes. Both Senge (1995a) and McKay and Kember (1999) identify three discrete categories of quality development, and all theorists see these as an evolutionary or developmental pathway (Table I).

The evolutionary perspective gives us the opportunity to explore the role of transformational knowledge in continually evolving an organisation’s learning capacity (Senge, 1998). On the premise that, if an organisation wants to achieve organisational excellence, it must create a change-oriented, learning environment (Eskildsen *et al.*, 1999), we can hypothesize a significant and positive relationship between the development of quality and the development of learning. This hypothesis is explored in the context of a small-scale international study of large HEIs.

Method

An iterative process of interviews and surveys was undertaken in a small number of HEIs in each of four countries. The countries selected, the UK, North America, New Zealand and Australia, have similar HEIs, but different governmental and cultural environments, especially with regard to quality initiatives. This increases the probability of finding differences between theorised stages of development or evolution within an exploratory study. The study used multiple methods, including initial scoping interviews with subject experts, an electronic survey, and follow-up in-depth interviews.

The potential for multiple institutional perspectives occasioned a “diagonal slice” approach, collecting perspectives of both academic and non-academic staff, managers and line staff. The two primary data collection methods were used to triangulate findings and to support findings with illustrative quotes, underscoring developmental and contextual issues.

Sampling was two-tiered and non-random; first institutions were selected, then individuals within the institution. Initial sampling was based on relevant archival data on each institution obtained in written and electronic searches. Four to eight matched HEIs with comparable offerings at both undergraduate and graduate levels, and similar numbers of academic staff and students were selected in each country. All were complex, large-scale institutions with well-publicised quality initiatives. Within each HEI, up to seven people ranging from executives to non-managerial staff (all quality experts identified by their HEIs) were surveyed on their HEI’s practices regarding quality; these individuals included the quality manager of the institution, the president or vice chancellor and professors associated with the area.

Initial focus interviews were conducted with six HE quality experts, to identify issues regarding language, culture and practice in HEI quality initiatives. These experts became resources in constructing a survey instrument that queried practice in the areas of quality and learning, particularly with regard to the different nomenclature in each of the countries surveyed. The survey was developed using a series of 18 prompts – each addressing the extent to which the practices identified by Senge or McKay and Kember were practised. Thus, Senge’s five learning disciplines were each assessed by a focal Likert-scaled question regarding the extent to which the practice existed in their HEI, using a Likert scaled question from 1 (to a small extent) to 7 (to a large extent), with an optional category of “not sure” (coded and analysed

Table I Three discrete categories of quality development

Senge (1995a)	All organisations	First wave – process improvement	Second wave – organisational improvement	Third wave – organisational learning
McKay and Kember (1999)	Higher education institutions	Quality assurance	Quality enhancement	Excellence initiatives

separately). This was followed by an overall question regarding whether the respondents saw their organisation as a “learning organisation” in the Senge-defined sense of that phrase. Each of the other quality categories used focal questions derived from the characteristics identified in the literature as well as one overall “quality” question. A number of open requests for comments and requests for organisational demography, personal demographics and formalised quality approaches were also included. Each Likert-scaled focal question was then followed by an open question as to why focal responses were relatively positive or negative. For example, a positive response to the focus question on organisational learning, “To what extent is your institution committed to enhancing its organisational learning?”, was followed up by “If your response is positive, how is this achieved and evaluated?” A negative response was followed by a request for comments. To moderate some of the difficulties involved in common method variance, questions were not clustered against the model parameters, that is, the quality assurance items were distributed throughout the survey, as were other categories. The survey had three overall sections:

- (1) quality;
- (2) learning; and
- (3) demographic and general data.

Likert scale data were used as a preliminary sorting mechanism. Given the small sample size and non-random nature of surveying, extended statistical treatment would have been inappropriate, but basic checks for the direction and strength of variance and covariance, and primary clustering, were performed. The demographic data allowed examination for patterns and concordance within organisations, as well as across organisations and types of respondents.

The responses to the open questions were coded into conceptual categories and then sorted for themes using three analytical levels:

- (1) open;
- (2) axial (using theoretically derived groupings and responses to the Likert-scaled questions as organizing categories); and
- (3) selective (identifying clusters and majority perspectives and representative statements).

At the open coding level, basic themes were surfaced by assigning labels for the themes without making connections among them. In the next pass, organising ideas and themes were used to identify the key analytical patterns, particularly between quality stages and institutional dimensions. At the selective level, data were organised to display patterns of quality development. Demographic characteristics for respondents and their institutions were assessed as potential moderating variables. Survey data are summarised; throughout the remainder of the article, respondent quotes appear in italics.

Subsequently eight follow-up interviews were held, again with HEI quality managers and experts, to review preliminary findings, generate alternate hypotheses and as a check on clusters and interpretations on the thematic coding of data.

This methodological approach was undertaken to explore the underlying relationships between quality and learning, from the perspective of “expert” informants in those organisations. The depth of responses requested, with extensive follow-up questions, made a full-scale survey exploration problematic, as did the lack of established instrumentation. The small number of respondents, and single item measures for some constructs, with institutions selected non-randomly, significantly limits the generalizability of any findings, as well as constraining subsequent analyses. The richness of textual data provided, however, allows us to highlight key issues between the respondents and provide a qualitative balance to the quantitative data. The focus on institutions that promote their “quality programmes” provides a conservative test arena for the research questions.

Results

We approached 27 HEIs altogether and from each country received a response rate ranging from 60 to 75 per cent. Responses from three to six HEIs in each country were received, with at least two respondents per institution. A similar number of respondents were contacted in each country: 20 in Australia; 28 in New Zealand, 16 in the UK and 19 in North America, for a total of 83 individual respondents. The response rate from quality managers and executives was higher than that

for non-managerial staff. As non-managerial staff had been the majority of the initial purposive sample, this resulted in a more even split between managerial and non-managerial respondents.

The numbers of responses and categories, combined with a number of bi-modal response distributions, make factor or cluster analysis problematic at best. Thus simple group inter-correlations are reported (Table II). All the responses to the “learning organisation” focal questions are strongly inter-correlated – indeed there are robust inter-correlations between the items for each measure. The quality questions are also strongly inter-correlated with one another, although the links to organisational excellence are more tenuous and there are no significant correlations between the quality and learning organisation questions. It is also difficult to tease out clear differentiation between the various types of quality (assurance and enhancement in the McKay and Kember models, Stages 1 and 2 in Senge), although the correlative patterns and partial correlations are clearly in the hypothesized directions.

As noted previously, there were few neutral responses in the Likert scales; over 90 per cent of responses fell in polar distributions (ratings of more than five or less than three). Focusing on the overall quality and learning organisation questions, there are three clear categories that emerge from the data: relatively low ratings of both perceived organisational quality and perceived “learning organisation”, relatively high ratings of quality but low ratings of learning organisation, and high ratings of both variables. This is

consistent with a three-stage model, but somewhat inconsistent with a smooth developmental pathway from quality to learning and excellence.

Looking carefully at the survey data, and the three derived categories, we also note that these map almost perfectly with national origin of the respondents with only US organisations appearing in the high-high ratings, all Australian organisations in the low-low ratings, and a mix of UK and New Zealand organisations (and one Australian) in the low-high category. Aside from the mix of countries and scores, the low-high category also contained the highest item variance within institutions, with significant disagreement between the ratings of quality and learning by managerial and non-managerial respondents.

To gain additional insight into these three respondent clusters, qualitative comments that followed the focal, Likert-scale questions are helpful.

Cluster I: low perceived organisational learning – low perceived institutional quality

Several of the sampled institutions appeared to display relatively low levels of both learning organisation capabilities and institutional quality, while from a cultural perspective the clash between traditional collegial culture and an emerging managerial one impeded organisational learning. Relative to the key learning organisation disciplines, organisations in this cluster were characterised by the majority of respondents as:

Table II Correlation matrix of Likert scale items on questionnaire

		L01	L02	L03	L04	L05	L0rg	PI	OI	QA	QE	OE
L01 – Personal mastery	Individual learning											
L02 – Team learning	Organisational learning	0.71**										
L03 – Mental models	Culture of enquiry	0.53	0.61*									
L04 – Shared vision	Shared vision	0.68**	0.54	0.59*								
L05 – Systems thinking	Systems thinking	0.45	0.37	0.52	0.61*							
L0rg – Learning organisation	Infrastructure supports learning	0.81**	0.59*	0.63*	0.68**	0.47*						
PI – Process improvement	Policies as problems	0.22	0.31	0.25	0.39	0.26	0.24					
OI – Organisational improvement	Quality for stakeholders	0.42	0.38	0.31	0.35	0.36	0.35	0.37				
QA – Quality assurance	Input to quality review	0.19	0.04	0.22	0.26	0.22	0.21	0.45	0.38			
QE – Quality enhancement	Questioning assumptions	0.29	0.32	0.35	0.33	0.35	0.29	0.31	0.45*	0.41		
OE – Organisational excellence	Information for organisational excellence	0.47*	0.28	0.33	0.35	0.44*	0.35	0.21	0.29	0.31	0.33	
Q – Quality	Buy-in to quality	0.35	0.32	0.36	0.28	0.18	0.24	0.32	0.39	0.45	0.66*	0.34

Note: * $p < 0.05$; ** $p < 0.01$

- Blocked by the *mindset of senior management*, which appears to have no recognition of the role that educational institutions play. At this stage there is also *little recognition of staff and key stakeholders' aspirations except for traditional course surveys for students*.
- Quality approaches in this cluster do not provide for responsibility for organisational excellence, as personal vision of success is not married to espoused organisational vision. Success at institutional level is mostly focused on *numbers and \$ signs*.
- In the majority of the sampled organisations the staff do not own the vision statements and the energies related to what Senge referred to as “creative tension,” the tension between the vision and reality, are dissipated at organisational level. The vision statements of these institutions *did not appear to play a role in focusing organisational energies* on creating quality for stakeholders.
- Respondents called for an *open discussion of what we are trying to achieve* and sought *real improvement, not better numbers*.

The often lengthy responses for respondents in this category suggest no focused effort to either nurturing a quality culture nor to advancing organisational learning capabilities. Furthermore, while focusing on quality as a *marketing tool*, supported by an ISO 9000 accreditation, these institutions appear to have acquired habits that are counter-productive. The issues highlighted in this cluster strongly support the conclusion recently reached by Coaldrake (2000, p. 20):

If we are going to operate successfully in the future then we will need not just to retain worthwhile aims and traditions, but also adapt to changing circumstances. Moreover it is looking increasingly as if we will need to find our own way, rather than relying on national road maps emerging from major reviews or statements of government policy. [...] dealing with them [pressing issues] will require fundamental reappraisal of university traditions and practices.

Cluster II: low organisational learning – high institutional quality

Based on the analysis of the survey, the majority of sampled HEIs appeared to be making their first steps towards a quality culture, but in many aspects their quality practices were not consistent with their

espoused commitment to change and learning. The array of discrepancies that has been revealed in terms of both organisational learning practices and current approaches to quality suggests a state of dissonance. The changeable mix of traditional collegial and managerial cultures appeared to be intertwined with the “new collegialism” approach and thus further reinforced the state of disagreement in this cluster. New Zealand and UK organisations dominated this cluster. The majority of respondents noted:

- Staff aspire to a supportive environment that would enable them to develop their full potential by providing them with the opportunity to be involved in the making of decisions that affect them.
- The senior management of most sampled institutions appears to be at the stage of taking a *canned approach* to fostering shared vision and this is reflected in scepticism, and ultimately failures in embracing organisational development ideals. With top-down efforts to produce bottom-up change, few people appear to feel that they have had any opportunity *to even ask questions* about the strategy and purpose. Some have *not even seen their strategic plan*. Predictably, there is *little or no buy-in* to organisational learning initiatives. Staff are *completely turned-off by the corporate style* of approach. It appears that the cultural uniqueness of academia is still a key challenge in this cluster.
- While *in theory the system lets ideas move between top to bottom and vice versa*, in practice, similarly to Cluster I, most of the institutions seem to be *run bureaucratically*.
- Systems thinking is *not a concept that has been discussed either explicitly or implicitly at any academic institution*. These perceptions seem to be reflected in a number of academic culture aspects that tend to suggest a state of profound disagreement.

In summary, although this cluster is described as “low organisational learning – high institutional quality”, its dominant feature is dissonance. On the one hand, some of the sampled institutions have formally embarked on using advanced approaches to quality, but it appears that these are mostly management initiatives, which are either viewed as *managerialism* and *resisted by academics and*

staff, or are simply not known to non-managerial staff. Externally imposed frameworks to one of the sampled countries are also resisted as they are seen as *simplistic, post hoc*, as well as *impinging on academic freedom*. This is seen as a *pull approach*, which clearly appears to be resisted by the collegial culture.

Cluster III: high organisational learning – high institutional quality

The sampled North American organisations were unique within the sample and presented as being well on their journey to institutionalised learning where *quality is no longer an add-on* – it becomes part of the developmental culture. The values and criteria of their learning-oriented organisational excellence frameworks such as *EHE framework* (Ruben *et al.*, 1999) further supported this position of highly evolved organisational learning, which corresponds to Senge's "third wave of learning". Hence, the features of the North American sample form the basis for illustrating this cluster:

- In HEIs in this cluster, *learning is what you do* – staff development systems are *not directive*; staff choose *their own adventure*, while being supported by other initiatives. Suggestions for further improvements in organisational excellence reflect such an expanded capacity to *make personal choices for achieving common aspirations*.
- In fostering a community of learning the *shared meaning of success*, both reflected and shaped by the institution's own culture, is measured both quantitatively and qualitatively, *including self-reflection*, and thus motivates the whole institution in a holistic manner. The successful on-going change appears to be also underpinned by a *common language* that *stresses service and community*.
- Respondents reported *various formal organisational change* initiatives such as *CQI and BPR* that acted as a stepping-stone in making *deeper changes* in systems and practices, and in *people's attitudes and behaviour*. *Senior management support and involvement* appears to have played again a *key role* in fostering the practice of double loop learning – learning, which is generative, but much riskier and its benefits more remote.
- The focus on *collaboration, relationship and process* has been nurtured over the last

decade or so through initiatives such as vision building, CQI and benchmarking. *Cross-functional academic teams working to initiate improved college degree programs* are commonplace. Organisations seem to have laid the foundation for radically *reduced investments in controls* and achievement of significant improvements in performance and ownership.

- The vision, policies and practices of the institutions in this cluster highlighted a *holistic view of creating organisational excellence*, a view that recognises the *impact of rapid change and increasing interdependencies*. Shared learning is fostered by *collaboration between institutions and accreditors*. The tension between accountability and institutional autonomy has been *productively addressed [by the HEIs] through instituting organisational excellence*. Such frameworks facilitate HEIs' learning by focusing on both quantitative and qualitative *organisation-wide assessment and measurements*, which serve as a *communications tool* and a basis for providing consistent overall performance requirements.

The institutions in this cluster appeared to have been deliberately and systematically fostering a quality culture since the early 1990s and thus advancing their organisational learning by developing capabilities that are consistent with their objectives. The contribution of the first two waves of learning, and particularly the systems thinking quality management approaches, is reflected in the highly developed learning systems of these institutions. Some of them *no longer need formal quality management programmes* – *there is no formal quality effort at this time at [this university]*.

Has learning evolved from quality?

Both the McKay and Kember (1999) and Senge (1995a) models clearly state a developmental pathway from series of quality initiatives toward learning and/or excellence. While the data support a differentiation of quality and learning excellence, and modest relationships between these "higher states", the dissonance in the centre suggests an alternative.

If quality and learning were seen as part of a cumulative continuity, then we might picture a series of “learning curves” that are built on one another (see Figure 1).

A continuous pattern would have a strong correlation between quality and learning, and we would not expect a high quality-low quality environment or high dissonance in the transitional phase. The results support a slightly different type of development, one that is more discrete and discontinuous (see Figure 2).

The other factor that leads us to revisit the evolutionary metaphor is the near-perfect mapping of nationality and stage or cluster. While both “evolution” and “development” contain a clear temporal inference, that is, we expect individuals, species and organisations to evolve over time, there is no clear time differentiation that would completely explain an array with North America followed by the UK and New Zealand followed by Australia. The most obvious candidate in the higher education quality literature is the combination of financial exigency and fierce competition that characterised North American higher education in the 1970s, followed by similar disruptions in the UK in the 1980s and in Australasia in the 1990s. While this order effect is consonant, it fails to differentiate the New Zealand and Australian

experiences. Perhaps another factor, such as the employment relations environment which is much more polarised in the Australian context, may interact with the broader changes in higher education to produce this ordering effect.

The evolutionary process of learning illustrated above reflects the considerable cross-fertilisation between the learning organisation and the quality fields. It suggests that learning disciplines do impact higher education quality, although not in quite the way theorised. Quality approaches, particularly the advanced ones, are powerful transformational processes that can foster learning. However, this is not to suggest that it is a smooth transition from one to the other. The high degree of dissonance and disagreement in Cluster II seems to underscore a more discontinuous development process. In this respect, the quality movement can be seen as a kind of a “prequel”, a term coined by Senge (2000), to the concept of the learning organisation. The data support the proposition that evolving as an organisation to the level of practising the learning disciplines does effect enduring organisational excellence but requires its own painful process post-quality movement, at least within the rather fractious environment of higher education. Respondents in organisations that are in Cluster III, for instance, have been called upon to act with greater autonomy, to draw their own conclusions, to lead as well as follow, to question difficult issues in a safe manner, and to risk failure so that they may build capabilities for future successes.

Considering the state of dissonance in Cluster II, as well as the emerging “bottom-up”-driven initiatives in Cluster I, the best practices identified by this study are not confined to Cluster III. The nature of these practices, though, again reinforces the developmental, and in some cases very tentative, nature of organisational learning practices in higher education.

Implications for managers in higher education

Managers may also learn from the best practices of others; respondents also indicated a range of practices as aspirations that serve as “pointers” for leaders in higher education.

Figure 1 Three stages of cumulative and continuous development

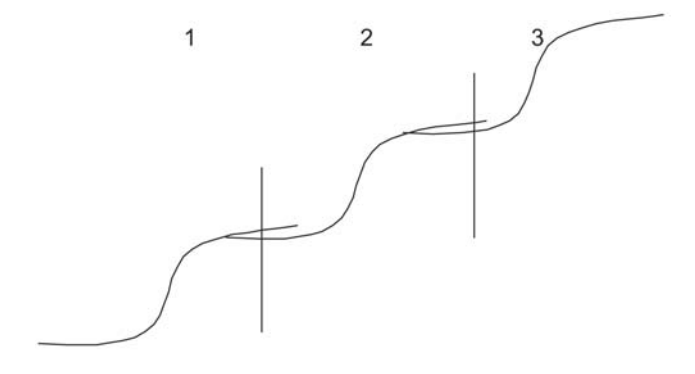
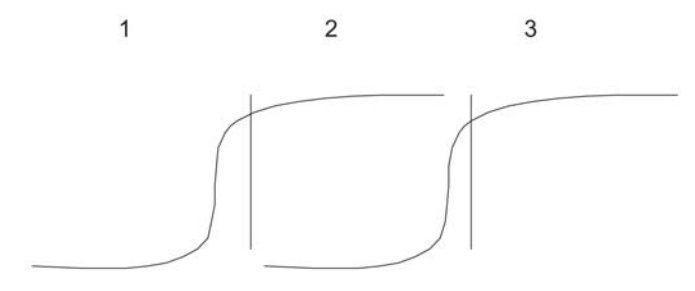


Figure 2 Three stages of discrete and discontinuous development



These pointers focus on key areas of organisational transformation, including processes and systems for individual and organisational learning and related feedback mechanisms:

- Develop transformational academic leadership. The need for a management mind-shift emerged clearly in most of the sampled countries. While the learning experiences of some of the institutions in Cluster II suggest that the inadequate down-the-line leadership and development, also known as a “silent killer” (Beer and Eisenstat, 2000), has been recognised and is being addressed, Cluster III findings indicate that leaders as champions of new ideas and supporters of risk takers do foster a shared vision and generative learning. Genuinely recognising the key role of direct commitment and involvement that reflect co-ordination, vision, and integration can be very helpful, particularly to the leaders of Cluster I institutions. As Edwards (1999, p. 26) argues, though:

... transforming the chair into an effective professional manager runs directly counter to the conception of the chair as a faculty member temporarily on rotation in administration.

Respondents emphasize the positive impact of *visible leadership support for concepts of service excellence and organisational leadership. Both dialogue and debate on theoretical and practical issues and ideas are encouraged and expected as part of responsible campus citizenship.*

- Innovate learning infrastructure and communication channels and modes. Lack and/or inefficiency of formal and informal systems and structures in fostering learning, along with cultural and political barriers, appeared to be a key issue for both Clusters I and II institutions. The need for addressing this issue was highlighted by a range of negative consequences such as fragmentation and focus on task and compliance. Senior managers in such institutions might benefit from considering the learning experience of one UK organisation where *the developing of a new strategic plan involved a great deal of consultation and “bottom-up” influence.*
- Understand the organisational learning impacts of the quality movement. Quality effort is a learning effort and quality practices need to be considered regarding their level of contribution to individual learning, shared learning and organisational action. Institutions that have adapted and successfully embedded quality frameworks appeared to have the most highly developed learning organisation capabilities. They see their quest for excellence as an organisational effort and responsibility rather than a centralised effort vested in a separate quality management bureaucracy. The evolution of utilising such frameworks is reflected in the New Zealand pilot scale efforts as well as in North American *organisational excellence frameworks based on EHE* (Ruben *et al.*, 1999).
- Know and acknowledge the cultures. Understanding cultures and their interplay is critical to the success of any significant change. The Australian and New Zealand samples have revealed, though, that it is all too easy for senior management to attempt to introduce new ideas without considering the assumptions held by the various constituencies, assumptions demonstrated by both non-managerial and managerial academic respondents in their strong resistance to what they view as *managerialism*, and *corporate model*, even models *per se*. Shifting from the current dichotomous mind-sets – organisations are either “more consistent with our deeper values” or “more effective” ones (Senge, 1995b) – to a developmental culture is particularly valid to most of the sampled institutions, except the US ones, where quality culture is no longer an *add-on*.
- Create and support a quality culture and generative learning. The shift from adaptive to generative learning is an integral part of nurturing an enduring change. To succeed in such change, managers need to involve and engage in the process with all the staff members, as well as students and other stakeholders, working across levels, functions, and external boundaries. Satisfaction surveys are highlights of the wealth of learning experiences of how to gain the commitment of people at all levels and continually expand their capacity to learn (Senge, 1991).

- Make the learning needs of the organisation as important and as explicit as the learning needs of both students and staff (academic and non-academic). The transfer between individual and organisational learning is at the heart of an LO. Learning at all levels must be purposeful, which means that it must be explicit, it must be useful, and the process through which individual learning becomes embedded in an organisation's memory and structure must be assessed.
- Focus on the individual and organisational learning nexus. For individual learning to become organisational learning, it must be encoded into the practice of the organisation, so that it becomes independent of the memory, motivation and action of those individually involved. An organisation cannot be a quality organisation without the pursuit of collective learning (Senge, 1994). In addressing this nexus, HEIs also need to review the usefulness of their learning infrastructures, as in a world of rapid change and increasing interdependence learning is too important to be left to chance.
- Make professional development, including the organisational learning aspects, an integral part of institutional planning. Professional development in most of the sampled HEIs tends not to be focused on organisational learning aspects. If universities wish to strengthen organisational skills, then those must be identified and all employees should be expected to acquire them, though there can be options as to the means by which they are acquired. *Frameworks designed/ adapted to address the needs of colleges and universities, while utilising language that is familiar to the culture of such institutions, facilitate the integration process.*
- Recognise and support the “scholarship of teaching”. The tension between the institution's interests in being responsive, focused, innovative, and entrepreneurial and the department's traditional academic culture is reflected in the divergent views on the nature of academic work and success in HE that emerged in this study. While initiatives such as the Carnegie Foundation-inspired effort to create a “scholarship of teaching” offer promise of developing an organic link between teaching/learning and research, the onus is on HEIs to foster such a culture and support it with appropriate recognition and reward systems. Furthermore, departments would need to develop a broader view of their own work, a view that incorporates all their staff members' contributions to the larger work of the university. For instance, it would be difficult to meet the ever-growing need for interdisciplinary programmes if teaching in such programmes tends to be viewed as an *add-on*. Instituting such a developmental culture for academic staff is illustrated by the *development information centred on student learning and interdisciplinarity*.
- Develop feedback mechanisms based on continuous assessment and reflective evaluation. Creating a reflective infrastructure with time and incentive for reflection is a powerful tool for strengthening a learning organisation. A recurring theme in this study was the lack or insufficiency of viable feedback mechanisms – a common problem for those HEIs that do not have a comprehensive quality framework based on systems thinking. Of particular value here may be a *portfolio type assessment, developed by both students and staff at individual level, which can be used to measure the progress of the learners involved at both individual and organisational level with emphasis on qualitative aspects.*
- Focus on the larger system. There is a need for both HEIs and quality assurance agencies to learn that their role is to manage the larger system as a system toward a collaboratively developed aim. Whether an external audit system will be effective is determined by the extent to which HEIs and external agencies collaborate in leveraging the tension of autonomy and accountability. Key to this type of approach is HEIs' taking the responsibility and developing their own methods of ongoing self-review and enhancement, while being committed to establishing an ongoing validation based on collaboration. As revealed in Cluster III, a pointer in this direction could be the proven way of taking responsibility and accountability by a shift to an internal, intrinsic motivation within institutions to

improve what they do. HEIs that have taken this proactive approach have had a most encouraging and collaborative response from their external agencies, which in turn emphasised enhancement as their primary goal and launched learning-oriented programmes such as the Academic Quality Improvement Project (AQIP, 2001). Most important, though, in exchanging values and norms there must be a dialogue rather than just an open rhetoric. Promoting dialogue between the monitoring body and the HEIs, as well as involving other key stakeholders in it, could lead to creative relationships – a learning opportunity not to be missed.

Conclusion

The findings of this exploratory study support a developmental perspective linking learning organisation disciplines and approaches to quality. The small non-random sample and two-tier survey approach generated rich data and some insights, despite the limitations of the methodological approach. Future research approaches can build from these findings with more robust instrumentation and larger cross-sectional sampling frames. Given the findings regarding organisational dissonance, we would urge other researchers to attempt a within-institution “diagonal slice” approach to preserve and further explore these important differences.

Even though the national quality frameworks and systems place significant constraints on the majority of the sampled organisations, there are signs of recognition for the need to move to institutionalised quality and learning. This evolution may be more discontinuous than previously noted, but the desired state is similar regardless. This is reflected in the focus on learning and accountability as demonstrated in the seeds of best practice identified in the first two clusters. On the other hand, the Cluster III institutions have been consistently focusing on learning-oriented approaches to quality and thus demonstrated that aspiring to a common identity and sense of destiny does not necessarily mean sacrificing the intrinsic motivation of the academic and non-academic staff, and the diversity and creativity of the academe (Flood and Romm, 1996).

Furthermore, fostering such aspirations could lead to sharing a learning culture and creating an organisation we would like to work within and which can thrive in a world of increasing interdependency and change.

While there is no one best way to “learn”, it helps to have a useful guidance and reassurance that shifting to quantum approaches is possible in academia. To be open to unexpected futures, as well as to anticipate the challenges that profound change will ultimately force the organisation to face, call for fostering a culture that integrates a new understanding of self and work, a culture that addresses developmental changes and builds capacity by motivating efforts at self-improvement and institutional learning. A blueprint for all universities is not possible and this study does not suggest that significant cultural, structural, political and technical differences do impact on transferability. Instead, it provides a set of options for universities to create their own blueprints.

References

- Academic Quality Improvement Project (AQIP) (2001), X, North Central Association, available at: www.aqip.org/allabout.html (accessed 2001).
- Beer, M. and Eisenstat, R.A. (2000), “The silent killers of strategy implementation and learning”, *Sloan Management Review*, Vol. 41 No. 4, pp. 29-40.
- Coaldrake, P. (2000), “Reflections on the repositioning of the government’s approach to higher education, or I am dreaming of a white paper”, *Journal of Higher Education Policy and Management*, Vol. 22 No. 1, pp. 9-21.
- Dahlgard, S.M.P. (1999), “The evolution patterns of quality management: some reflections on the quality movement”, *Total Quality Management*, Vol. 10 No. 4/5, pp. S473-S480.
- Dolence, M.G., Rowley, D.J. and Lujan, H.D. (1997), *Working toward Strategic Change: A Step-by-Step Guide to the Planning Process*, Jossey-Bass, San Francisco, CA.
- Edwards, R. (1999), “The academic department: how does it fit into the university reform agenda?”, *Change; New Rochelle*, Vol. 31 No. 5, pp. 16-27.
- Eskildsen, J.K., Dahlgard, J.J. and Norgaard, A. (1999), “The impact of creativity and learning on business excellence”, *Total Quality Management*, Vol. 10 No. 4/5, pp. S523-S530.
- Flood, R.L. and Romm, N.R.A. (1996), *Diversity Management: Triple Loop Learning*, John Wiley & Sons, Chichester, New York, NY.
- McKay, J. and Kember, D. (1999), “Quality assurance systems and educational development: part 1 – the limitations of quality control”, *Quality Assurance in Education*, Vol. 7 No. 1, pp. 25-9.

- Macpherson, R. (2000), "The impact of information and communication technology on policies, practice, theory and research in educational administration", CASEA, University of Alberta, Edmonton, 25 May, pp. 102-26
- Meade, P. (2001), "Consolidating enhancement in higher education", available at: www.otago.ac.nz/quality/staffpub.html, University of Otago, Dunedin (accessed 16 April).
- O'Neil, J. (1995), "On schools as learning organizations: a conversation with Peter Senge", *Educational Leadership [Wilson, H.W. – Educ.]*, Vol. 52 No. 7, pp. 20-3.
- Ruben, B.D., Lehr, J. and DeAngelis, J. (1999), "The value of the Baldrige framework for self-assessment and improvement in education: the Rutgers Excellence in Higher Education Program", National Quality Education Conference, Atlantic City, NJ, 3 October.
- Senge, P.M. (1990), *The Fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday/Currency, New York, NY.
- Senge, P.M. (1991), "Learning organizations", *Executive Excellence*, Vol. 8 No. 9, pp. 7-8.
- Senge, P.M. (1992), "Building learning organizations", *Journal for Quality & Participation*, Vol. 15 No. 2, pp. 30-8.
- Senge, P.M. (1994), *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization*, Currency Doubleday, New York, NY.
- Senge, P.M. (1995a), "The message of the quality movement", *Executive Excellence*, Vol. 12 No. 7, pp. 5-6.
- Senge, P.M. (1995b), "Making a better world", *Executive Excellence*, Vol. 12 No. 8, pp. 18-19.
- Senge, P.M. (1998), "Sharing knowledge", *Executive Excellence*, Vol. 15 No. 6, pp. 11-12.
- Senge, P.M. (1999a), *The Dance of Change: The Challenges of Sustaining Momentum in Learning Organizations*, Currency/Doubleday, New York, NY.
- Senge, P.M. (1999b), "It's the learning: the real lesson of the quality movement", *Journal for Quality & Participation*, Vol. 22 No. 6, pp. 34-40.
- Senge, P.M. (2000), *Schools that Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares about Education*, Doubleday, New York, NY.

Perspectives

E-government: a new route to public sector quality

Julian Teicher

Owen Hughes and

Nina Dow

The authors

Julian Teicher is Deputy Head, **Owen Hughes** is Head, and **Nina Dow** is a Research Assistant, all in the Department of Management, Faculty of Business and Economics, Monash University, Caulfield East, Australia.

Keywords

Public sector, Internet, Total quality management, Australia, Government

Abstract

In the past government organisations have paid little attention to service quality or responsiveness to clients. This changed with the movement termed "new public management", which occurred in most developed nations around 1990. This paper briefly examines the concept of quality and its application to the public sector and discusses e-government, the latest manifestation of attempts to improve quality in government. The paper also reports on a survey of senior personnel across the three levels of government in Australia. The results of the survey and other published research materials suggest, that the impact of e-government on service delivery is modest and not well distributed. While there has been widespread adoption of e-government measures, these have generally been lacking in sophistication and have been disproportionately beneficial to city dwellers without addressing problems of equity and access.

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Introduction

In the early 1990s the quality movement was taken up by the public sector. As was the case with other reforms passing from the private sector – strategic planning, incentive pay, performance appraisal, contracting out and performance management – implementation was sometimes problematic. Despite the overt embrace of private sector norms by governments around the world under the rubric of new public management (NPM), it remains that typically public sector managers operate with a different frame of reference:

- outcomes are harder to measure;
- there is less freedom to be arbitrary;
- decisions need to be firmly based in law;
- there is more scrutiny from the press and public; and
- the pervasive influence of politics and accountability to political appointees.

All combine to create a distinctive environment. This distinctiveness is not confined to those agencies engaged in the core business of government, but pervades areas in which public sector provision is in direct competition with the private sector, or where there is potential for goods and services to be provided in a market environment.

The biggest difficulty in dealing with a public sector environment is being able to measure outcomes or even outputs in meaningful ways, and this places real restrictions on the capacity to apply concepts of quality derived from the private sector. Consequently, while the intention is still to improve quality standards, the way of doing so has increasingly shifted to other mechanisms such as explicit contracts, privatisation, separating service provision agencies from policy and, most recently, e-government.

In this paper, we examine the concept of quality and its application to the public sector. While the total quality management (TQM) movement is sometimes conflated with other public sector reforms, arguably these are developments which are separate both temporally and conceptually. This territory is explored in the first two parts of the paper, while the next four sections examine e-government, the latest manifestation of attempts to improve quality in government, in Australia. By e-government we mean the application of information and communications technologies (ICT) to the



organisation and operation of government. Drawing on this discussion, we conclude that, while the various concepts of quality are able to be applied to the public sector, there are major difficulties which necessitate a careful re-working of the concepts and tools. This conclusion applies equally to the traditional concepts of quality, most of which were developed in manufacturing settings, and to the more market-driven manifestations which developed under the rubric of NPM.

TQM and government

Interest in TQM stemmed from the phenomenal success of the use of these techniques by Japanese industry in the 1970s and 1980s in penetrating the US market. Quality management derived from the ideas of W.E. Deming, Joseph Juran and Kaoru Ishikawa to improve organisational effectiveness. They emphasised the use of statistical quality control applications to manage quality assurance and quality control but, more important, they recast quality as a preventive approach which was integral to everyone's job, rather than the traditional inspection-led reactive approach (Wilkinson *et al.*, 1998).

Reflecting its historical development there are two broad strands to quality management: the "hard" approach emphasises statistical tools and monitoring; e.g. scattergrams, fish-bone diagrams, flow charts and run charts and a "soft" approach which is usually associated with TQM (Wilkinson, 1992). It builds on the older statistical techniques taking a holistic approach to the management process. The main features of TQM involve improving work processes with the involvement of appropriately trained employees, a focus on the variability of work processes to find the causes of this variability, the systematic collection of data on work processes and the use of continuous improvement problem-solving techniques by teams of employees and cross-functional groups (Hackman and Wageman, 1995). The distinctiveness of the "soft" approach of TQM lies in the focus on the management of human resources: devolution within the management hierarchy and "enlisting the commitment of 'empowered' workers, organised into teams and participating in decision making, to take responsibility as 'suppliers of zero-defect goods to internal customers'" (Legge, 1995,

pp. 219-20). These ideas had an impact from the middle 1980s onward in the USA and were transferred from there to countries like Australia or in some cases from offshoots of Japanese firms operating in the host country.

By 1990, the movement had spread to government, winning the endorsement of the USA's first President Bush who argued: "Reasserting our leadership will require a firm commitment to TQM and the principle of continuous improvement. Quality improvement principles apply in the public sector as well as private enterprise" (Carr and Littman, 1990, p. 2). Translated to government, however, there has often been a tendency to focus on hard measures of quality. As such, quality is defined in terms of standards, performance indicators or benchmarks, which, when followed, ensure that the outcome of the task or service will be predictable, repeatable and consistent. The indicators themselves play an important role in the provision of government services. By being made explicit within the organisation and to its users and the public, quality measurement represents a measure of governance, while at the same time reclassifying citizens as customers (Pollitt and Bouckaert, 1995).

Advocates claim that TQM is readily applied to government, particularly in areas of goods or service delivery. Morgan and Murgatroyd (1994) list examples in health care, education and social services. They argue that there are ten major considerations for implementing TQM in the public sector. Practices need to be customer-driven and empowering for communities, workers and customers, as well as being strategically focused on outcomes and processes. They should also be driven by goals and values, not regulations. The emphasis should be on being proactive rather than reactive, and enterprising, not simply spending-oriented. The aim should be to be effective and efficient and be able to be evaluated as successful by customers when compared to other providers and the private sector. Finally, every public sector organisation should be prepared to be benchmarked against the best in the world.

NPM and quality

The need for public servants to adopt private sector principles and practices in accordance with the precepts of NPM in order to pursue a

results-oriented approach has been hailed as a panacea for an ailing public management. By its very nature, NPM is concerned with TQM: it is a “contemporary, customer-focused approach, which aims at improving the delivery of public service quality” (Mwita, 2000, p. 30). Governments around the world advocated and implemented such measures as performance indicators, surveys of service quality, and other schemata derived from the private sector. There were different ways used in NPM to improve quality, though the unifying theme is the emphasis on performance and its measurement.

Agencies in many parts of government are now expected to develop performance indicators, that is, some way of measuring the progress the organisation has made towards achieving declared objectives. However, given the inherent difficulties of measuring performance in the public sector, performance indicators are open to criticism for trying to specify the unquantifiable. Managers will argue that the benefits brought by their particular organisation cannot be quantified or that empirical measurement distorts what it does by focusing only on those things which can be quantified.

Service agreements or more explicit contracts are legally or morally enforceable instruments where outcomes or outputs, including those related to quality, can be specified. This has become much more common within government in recent years. The essence of explicit contracts is to separate the “purchaser” of government services from the “provider”, with the purchaser being the party who decides what will be produced and the provider the party who delivers the agreed outputs and outcomes. Contracts now abound in the public sector: contracts with suppliers of services, contracts with staff and consultants, contracts between agencies and service agreements that are quasi-contracts between different parts of government.

We have also seen in some countries the adoption of charters, quasi-contractual arrangements between government agencies and the public, usually specifying some quality standards. These can be considered part of the contractual model outlined above. Service charters generally set out what service standards can be expected and what rights and responsibilities a citizen has in ensuring they are met. Charters generally specify entitlements, targets (for example, processing,

timeliness) and behavioural norms (desired culture of the organisation) (O’Faircheallaigh *et al.*, 1999).

Service charters are common across government agencies, particularly in the Australian public service (APS) where agencies are encouraged to do likewise (Department of Finance and Administration, 2000). They are promoted as a powerful tool for agencies to continuously improve service delivery and to reshape the agencies into client-focused entities. For example, the Taxpayers’ Charter, developed by the Australian Taxation Office (ATO) in 1995, was promoted to taxpayers and tax practitioners as a means for providing greater transparency regarding rights and expected standards of service (Carmody, 1996, 2000).

While most Australian states experimented with various forms of contracting out local government services, Victoria stands apart as adopting a legislated regime of compulsory competitive tendering (CCT) which led to a significant transfer of service provision to the private and not-for-profit sectors. Consistent with the logic of contractualism, it was argued that CCT would improve quality by making explicit the services to be delivered with their performance standards and quality standards specified. Significantly, CCT also created incentives, if not pressures, for the existing workforce to bid for their own jobs as well as opening service delivery to outside competition.

A rather extreme form of quality improvement in government is through privatisation. Advocates of privatisation proceed from the basis of the superior efficiency of the private sector and its capacity to satisfy consumers’ needs. Whether this is true cannot be established a priori, and the empirical evidence is mixed (Hodge, 1998). There is also the need to look at quality outcomes in a broader sense, that is, an outcome may appear to be more “efficient” even if the clients are dissatisfied and extra costs appear elsewhere in the system. The issue here is whose preferences are to be taken into account and how are they to be weighted? For example, electricity privatisation in Victoria appears to be successful in that assets were sold for a high price. However, electricity prices are projected to rise sharply and there is less certainty of supply. The overall quality of outcome is problematic. Also, in a very real sense privatisation poses a

potential conflict between service and basic factors (e.g. political accountability) in any consideration of the quality of government (Schedler and Felix, 2000).

Various routes to quality have been adopted in the public sector and the mix of these approaches has changed over time. Of all the approaches adopted to date, the most pervasive is the collection of measures described as NPM. In recent years the uptake of ICT has begun to exert an influence on the operation and organisation of the public sector. Under the rubric of e-government this may offer yet another route to improve quality.

E-government: a new route to quality?

E-government is sometimes referred to as the second revolution in public management after NPM and according to the *The Economist* (2000) it will transform not only the way in which most public services are delivered, but also the fundamental relationship between government and citizen. Broadly, e-government involves the use of Internet-based technologies to transact the business of government. At the level of service, e-government promises 24 × 7 convenience (full service available 24 hours a day, seven days a week), greater accessibility, the capacity to obtain government services without ever visiting a government office and reduced costs due to the increased technological intermediation. At the level of basic factors (government accountability and the general acceptance of state institutions), e-government contributes to the functioning of democracy by online provision of reports and other government information which would otherwise be difficult to obtain or unavailable, and through online debates and plebiscites.

E-government can be used to address a number of the principal aims of TQM for the public sector, particularly those related to the need to be:

- customer-driven;
- empowering for communities, workers and customers; and
- effective and efficient.

Whether it achieves these things any better than previous reforms is not technologically determined, but is primarily a matter of

political intent and commitment of resources. In order to gain insight into this development we conducted a survey of senior managers at the three levels of government in Australia. Although use of the Internet has gained increasing prominence in both private and public sectors, its penetration, even in advanced countries like Australia, is a major limiting factor. For example, in Australia, the proportion of households that have access to the Internet at home grew from 19 to 37 percent over the two years to November 2000 (Australian Bureau of Statistics, 2001a). Also there is an urban-rural divide with 35 percent of adults in metropolitan areas having accessed the Internet at home during the 12 months to November 2000, compared to 28 percent of those outside the metropolitan areas (Australian Bureau of Statistics, 2001a). Pertinent to this study is that, although Australia is ranked equal sixth in level of government online use (Mellor *et al.*, 2001) only 9 percent of Australian adults used the Internet to access government services in the 12 months to November 2000 (Australian Bureau of Statistics, 2001b). However, these numbers are expected to increase over time because Internet use is most prevalent in the younger age groups: 43 percent of 18 to 24 year-olds access the Internet from home compared to 39 percent of those in the 25 to 54 age group and only 13 percent of those 55 and over (Australian Bureau of Statistics, 2001a).

Method

This was a pilot study to determine the extent of e-government initiatives across the three levels of government in Australia. The instrument used was a questionnaire based on a US survey conducted by Hart-Teeter (2000). This was chosen because it most closely addressed the issues of interest to our study. The questionnaire was mailed to the chief executive officers of local councils and to secretaries or heads of departments as well as officers with responsibility for information technology policy and planning, where this information was readily available. In order to maximise the response rate, a reply paid envelope was supplied and the questionnaire was made available on the Internet giving subjects the option of responding electronically if they preferred. It is interesting

to note that only 11 respondents (8 percent) chose this option.

A sample was constructed at each level of government. At the local level a demographically based stratified random sample, using the number of councils in each state and the population of each council, yielded a national sample of 200 local councils.

At the state and federal government levels it was not possible to construct a random sample based on demography, therefore a purposive sample of departments based on their prominence in service delivery was selected. Two kinds of departments were selected:

- (1) those with a high profile in interaction with the public; i.e. departments concerned with health, human services and law;
- (2) those primarily providing services to other government departments and also to business: i.e. departments concerned with infrastructure, treasury, and finance.

As each government has a different structure, this meant surveying varying numbers of departments within each state. As a result, 355 senior personnel were selected as representatives of those agencies, and survey questionnaires were mailed to all of these people.

Responses were received from 135 senior personnel across the three levels of government. This represents a total response rate of 38 percent, which is satisfactory for mail surveys (Diamantopoulos and Schlegelmilch, 1996), particularly as it includes a wide cross-section of organisations. Importantly, most of the respondents (some of whom were different from recipients of the questionnaire) were senior officers with more than 85 percent having the title of director, manager or CEO. All were involved in ICT, in the policy (73 percent), implementation (67 percent) or operations (65 percent) area, and many had involvement in more than one of these areas. Nearly all (95 percent) were directly involved with e-government, with 60 percent being very to extremely involved. Three-quarters of the respondents were male and one quarter were female, with the majority in the 40–49 year age group.

As the survey responses were confidential and anonymous, little is known about the

characteristics of non-respondents. Importantly, however, the distribution of responses by government level was consistent with the percentages mailed out (see Table I).

Local governments were further broken down into 34 percent metropolitan urban, 26 percent regional urban and 40 percent rural.

Results

Intranets

The use of intranets is widespread, with 70 percent of surveyed sites having an intranet installed. However, the percentage of federal and state agencies (97) with an intranet differed significantly ($p < 0.001$) from local councils (51). In general, intranets at this stage are not very sophisticated, being used mainly for internal communication via newsletters and bulletin boards. Other uses mentioned by respondents are for contact lists, social club, document management systems, HR services, access to online internal library catalog, and information about branches and projects.

Internets

There is a statistically significant difference ($p < 0.001$) between federal and state governments and local councils in the use of the Internet for provision of services. Every federal and state government site surveyed has a public Web site. However, this is not true for local government organisations, with only 76 percent of local councils providing a public Web site for their constituents. Within local government the difference between urban and rural councils is also great ($p < 0.001$) with only 53 percent of rural councils providing a public Web site.

In practice, the level of sophistication attained by government departments and agencies can vary enormously. It is generally

Table I Distribution of responses by government level

	Sent out (%)	Returned (%)
<i>Government level</i>		
Federal	8	10.0
State	35	33.0
Local	57	57.0
Total (n)	355	135.0

recognised that e-government is a process which passes through four stages. In our survey we used the following definition based on Baum and Maio (2000):

- (1) *Presence*. A static phase where agencies make available information about their agency.
- (2) *Interaction*. Allows uploading of information (for example, e-mailing a completed form) and may provide basic search capabilities, and linkages with other relevant sites.
- (3) *Transaction*. Allows completing a transaction online, for example, filing tax returns and paying fines.
- (4) *Transformation*. Has the capability to provide all necessary information, fulfil all obligations and apply for and receive all services for which one is entitled from one place. This may involve seamless access to more than one agency, perhaps even to non-government bodies.

The cost and complexity of providing a comprehensive service on the Internet were evident from the small number of sites at the higher stages of e-government. Our survey shows that nearly half of the sites (46 percent) are at the lowest stage as defined above. Of the sites surveyed, only one was at stage 4, transformation. Federal government agencies are more advanced with 46 percent at the transaction stage or higher. There is not a great deal of difference between state and local governments, although state governments have a slightly higher percentage (52) at the presence stage. Figure 1 shows the e-government stage attained by the different levels of government in Australia.

In Australia, distance has been a major source of inequality, particularly in relation to service provision and this is manifest in a

pronounced rural-urban split. In this study the problem of distance is reflected in the fact that rural councils lag sharply in the sophistication of their Internet sites ($p < 0.05$). The councils on the urban fringe are at the highest stage of development with 50 percent at the transaction stage, whereas, of the 15 rural and remote councils which provide Internet-based services, 73 percent are still at the lowest stage of e-government (see Figure 2).

This is one of the ironies regarding service provision in remote areas, for as one respondent put it:

E-government will allow us to communicate more efficiently with other organisations. It will also allow us to provide better services and accessibility to people in remote areas.

However, rural councils are hampered in their efforts to provide services on the Internet because of the lack of infrastructure. As another respondent explained:

Our full use of the electronic media is restricted by the take-up of Internet usage of our residents/customers. Their take-up is limited by poor telephone/Internet infrastructure in rural areas. This must be addressed if Government is serious about e-government.

Portals

A portal is a point of entry which enables citizens to have access to a full range of services without any consciousness of movement between Internet sites and where those services may be tailored to the user's profile. Our survey showed that the majority of federal and state government organisations (88 percent) provide Web access via a portal. However, only 37 percent of local councils provide a portal, and only four rural councils (22 percent of those which provide an Internet service) also have a portal. Of those

Figure 1 E-government stage across government levels

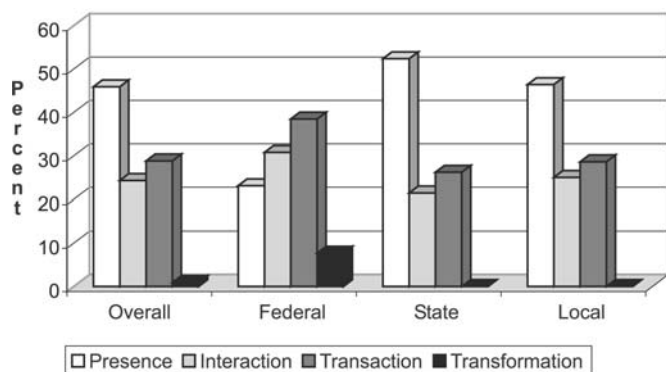
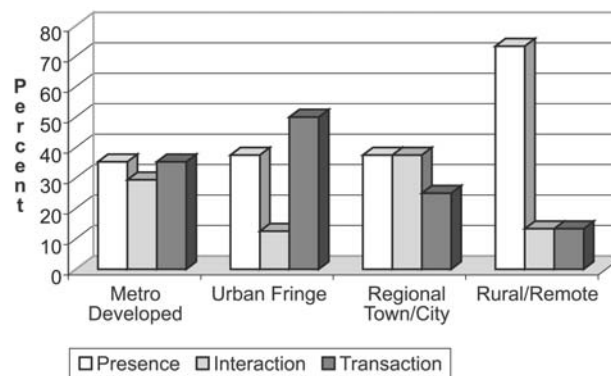


Figure 2 E-government stage for local councils



which are not currently operating through a portal, 56 percent have no plans to do so in the next five years. An overwhelming 80 percent of rural councils without a portal have no plans to get one. At present many of the so-called portals are no more than a directory to a range of services. To be truly effective and have a real impact on service quality, portals need to evolve to the last of the four stages of development, unification. Phifer (2001) defines the stages as follows:

- (1) *Aggregation* of content.
- (2) *Personalisation*, which includes features for content management/aggregation, search/index and categorisation, with a lightweight integration layer.
- (3) *Integration*, which adds a robust application framework and data integration capabilities. These include the ability to run the portal and its components in application servers environments, as well as robust enterprise application integration functionality.
- (4) *Unification*, which includes accessing data and content of all government departments through abstraction layers that provide the mechanism to tie together disparate sources of data. Process integration is another feature of this stage.

Our survey showed that, of the 60 percent of organisations that provide access via a portal, more than half (55 percent) are at the lowest stage of evolution, and only 6 percent (four agencies) are at the fourth or most advanced stage.

Service quality issues

One of the great promises of e-government is 24 × 7 availability. Our survey found that many government sites have delivered on this promise, at least as far as the availability of information is concerned. Given a choice of 14 areas where e-government could have an impact, 56 percent of respondents nominated “facilitating citizens’ access to information from government agencies” and “offering services at a convenient time and place” to be the most important positive result of e-government. Very few nominated efficiency or accountability. This finding is significant because it reflects the bureaucrats’ recognition of the importance of service ahead of the traditional government preoccupation with accountability and efficiency.

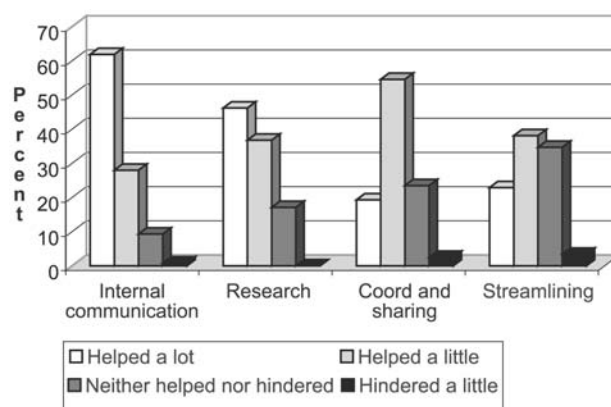
Figure 3 indicates the extent to which the use of the Internet and other information technologies was perceived to have assisted the organisation.

While some of the major benefits are internal (e.g. improving research facility and communication), there are clear implications for quality (e.g. coordinating activities and sharing information between the various levels of government). It is particularly interesting that 75.4 percent of respondents felt that the use of such technology had assisted the organisation in providing quality services or products to the public (see Figure 4). It would seem then that e-government may enhance service quality from the perspective of two distinct groups of customers: other government agencies through information sharing, and citizens by offering services at a convenient time and place.

Access/equity

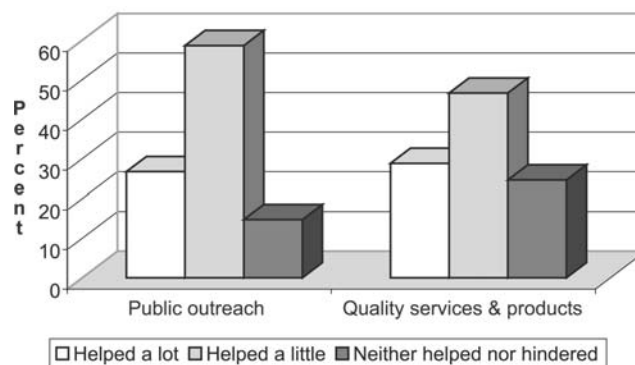
From the perspective of public sector service quality, an important aspect of service

Figure 3 Internal quality indicators



Note: The figure for “hindered a lot” is between 0 and 0.8 percent and not shown on the chart

Figure 4 Quality indicators – public-agency interaction



provision is ensuring equity of access to all members of the public. Our survey asked respondents to indicate which of five options should be government's highest priority in order to overcome access problems. The option of making computers available without charge in libraries, schools and other public locations was the option most favoured by 48 percent of respondents. Only 22 percent thought that making services and information available, both on the Internet and in other ways, was a priority. This could indicate that the Internet is viewed as an alternative to traditional face-to-face and written service provision, rather than as a way of improving the quality of services. Providing low-cost Internet access for low-income people was the least favoured option with only 9 percent of respondents supporting it.

Two questions were asked about access for the disabled and for people who did not speak English. The first related to the potential for e-government to improve the organisation's ability to respond to the needs of each of these groups. While 78 percent saw the potential for e-government to improve services for the disabled, only 37 percent thought it would improve the organisation's ability to respond to the needs of those who do not speak English (with the majority (56 percent) claiming it would make no difference either way). This judgement was mentioned in the response to the second question, which asked how well the organisation's public Web site actually did cater for their needs. Just over half of the respondents considered their organisations cater well to extremely well for the disabled, but 82 percent said they catered poorly to very poorly for people who do not speak English.

Discussion

Public sector service

Private providers are usually focused solely on generating profits and most are free to choose what services they will provide and to whom. Quality for government is different because government services are either universal (e.g. tax) or provided to specific, eligible groups (e.g. the unemployed). They are not premised on a client's capacity or willingness to pay. Thus, e-government has to focus on the capacity of government to serve the needs of diverse groups, including the aged, those with

disabilities, those with few or inadequate resources and those in rural and remote areas. The rural and remote areas issue is particularly relevant because, as discussed earlier, our survey found that local councils in urban areas are the ones that have the most sophisticated access to Internet-based services. However, it is the residents in remote areas, already suffering inadequate service provision through conventional means because of the tyranny of distance, who are missing out on the digital revolution for the same reason.

Equity and access

Even in metropolitan areas governments need to ensure that their services are available to all sections that are eligible. A major concern is people's access to technology. If services are going to be provided over the Internet alone, then it is imperative that provision be made to ensure access by those who cannot afford the technology, those who cannot use the technology because of disability or lack of expertise, and those who are not literate in the official language of the country in which they reside. On the available evidence, we have some reservations about whether governments are really addressing these issues adequately.

A number of initiatives have been taken to assist Internet access for the disabled. These range from text-based browsers and Braille displays for the visually impaired to captioning of video and audio clips for the hearing-impaired. Standards have been developed to cater for the needs of people with a range of disabilities and many government Web sites seek and are given Bobby approval. (Bobby approval refers to a Web accessibility software tool and compliance process designed to identify and repair barriers to Web site accessibility for people with disabilities. It is currently managed by the Watchfire Corporation.)

Government Internet sites, however, do not cater well for people who are not literate in the official language of the country in which they reside, even though some measures are not very difficult to implement. Australia prides itself on being a harmonious and successful multicultural nation (Council for Multicultural Australia, 2000, p. 8). Yet the services provided by governments over the Internet either ignore the fact that a very large percentage of the population has difficulty in

reading English, or make only a token effort to address this problem. The new federal government portal, australia.gov.au, ignores non-English speakers, while the Victorian state government, despite claiming in a ministerial statement that it “will increase access for multilingual users” (Brumby, 1999), neglects this aspect of access equity in its otherwise very advanced Multi-Service Express portal.

Centrelink, the federal government agency that administers social services, is an exception. It provides Web access to publications in more than 40 languages, but the implementation is less than ideal. First, the link to the publications list is identified in English instead of in the language of the person to whom it applies or with some universal symbol such as the flag of the country where that language is spoken. Second, the number of publications translated is very limited: e.g. from only one in Romanian to over 60 in Vietnamese. Clearly, more needs to be done in this area in order to provide a quality service to a large group of citizens.

Intranets

While much attention has been focused on the use of Internet-based technologies to provide government services to business and citizens, e-government also encompasses the use of ICT to assist government organisations with internal services through the use of intranets. Although most federal and state government agencies have an intranet, very few respondents referred to intranets being used for file sharing, online internal transactions, or application integration. Also very few indicated that the intranet was used to link across agencies at the same level, much less across different levels of government. This suggests that organisations are operating within existing hierarchies and that at this time the impact of Internet-based technologies is akin to the impact of the photocopier, rather than the ICT revolution some claim it to be. It is, however, an area where service quality could be improved in the future, as agencies broaden their intranets to encompass information and file sharing across the different levels of government.

The future

While there is some way to go on this research, it is clear that, although

governments are using Internet technology to good effect, the impact on quality is still limited. This may change as more and more governments consolidate their Web sites through Internet portals, to provide a single point of contact and make government organisation transparent to citizens. An example of such a portal in Australia is Victoria’s Multi-Service Express portal, which could be considered to be at the unification stage as it gives access to 115 Victorian government services and permits many transactions to be completed online. It uses a multi-modal approach to facilitate finding the service required. Users have the option of requesting a service by service type (e.g. account query), by service provider (e.g. Office of Housing) or by topic (e.g. environment). It also uses a strategy which is becoming increasingly popular, grouping services around “life events”. Thus, for example, many of the interactions with government required on turning 18 (enrolling to vote, applying for a driver’s licence, making a will) can be linked with each other on the same Web site. The advantage of this approach is that all services related to a particular life event are grouped together and the customer does not need to know which department or agency is involved. In this way, services become responsive to citizens’ needs and provide an effective and efficient service.

Conclusion

As governments have become more conscious of the need to address service quality, a range of approaches has been adopted, including TQM. To date the most overarching of these approaches has been NPM. In the latter part of the 1990s, however, governments have turned their attention to e-government, a set of technologies which promise a quantum leap in service quality, new services and reduced costs. As the results presented above suggest, it is early days and the gains from e-government are modest and not well distributed. These results should be treated with caution because little is known about the characteristics of the non-respondents and the small number of federal government respondents. While we acknowledge the small sample size for the federal level, it was a purposive sample and the main focus of the study was local versus federal/state

governments. The results obtained are an important indication of the level of development and possible future trajectories of e-government in Australia. Because of the methodological limitations of the research, however, it is evident that a larger survey will be needed to provide more generalisable results.

References

- Australian Bureau of Statistics (2001a), "Use of the Internet by householders – November 2000", 1,847, Australian Bureau of Statistics, Canberra.
- Australian Bureau of Statistics (2001b), "Household use of information technology", 8,146.0, Australian Bureau of Statistics, Canberra.
- Baum, C. and Maio, A.D. (2000), "Gartner's four phases of e-government model", Gartner Group, available at: gartner11.gartnerweb.com/public/static/hotc/00094235.html
- Brumby, J. (1999), "Connecting Victoria", Department of State and Regional Development, available at: [www.mmv.vic.gov.au/Web/MMV/MMV.nsf/cc983b3d177fc0bc4a2567920046d852/1a8d8f6df0d04b9d4a2569a000180d0a/\\$FILE/connvic3.pdf](http://www.mmv.vic.gov.au/Web/MMV/MMV.nsf/cc983b3d177fc0bc4a2567920046d852/1a8d8f6df0d04b9d4a2569a000180d0a/$FILE/connvic3.pdf)
- Carmody, M. (1996), *ATO Directions and Operations: Issues Affecting the Practitioner*, Australian Taxation Office.
- Carmody, M. (2000), "Tax reform: the lesson for tax administration in Australia", Australian Taxation Office, available at: www.ato.gov.au/content.asp?doc=/content/Corporate/sp200002.htm
- Carr, D.K. and Littman, I.D. (1990), *Excellence in Government: Total Quality Management in the 1990s*, Coopers & Lybrand, New York, NY.
- Council for Multicultural Australia (2000), "Australia's multicultural performance deserves gold medal", Council for Multicultural Australia, available at: www.immi.gov.au/multicultural/cma/media/20001003.pdf
- Department of Finance and Administration (2000), *Client Service Charter Principles*, Department of Finance and Administration.
- Diamantopoulos, A. and Schlegelmilch, B. (1996), "Determinants of industrial mail survey response: a survey-on-surveys analysis of researchers' and managers' views", *Journal of Marketing Management*, Vol. 12, pp. 505-31.
- (The) Economist (2000), 24 June.
- Hackman, R.J. and Wageman, R. (1995), "Total quality management: empirical, conceptual and practical issues", *Administrative Science Quarterly*, Vol. 40 No. 2, p. 309.
- Hart-Teeter (2000), "e-government: the next American revolution", The Council for Excellence in Government, available at: www.excelgov.org/egovpoll/report/contents.htm
- Hodge, G. (1998), "Contracting public sector services: a meta-analytical perspective of international evidence", *Australian Journal of Public Administration*, Vol. 57 No. 4, pp. 98-111.
- Legge, K. (1995), *Human Resource Management: Rhetorics and Realities*, Macmillan Business, Basingstoke.
- Mellor, W., Parr, V. and Hood, M. (2001), "Government online – an international perspective", Taylor Nelson Sofres, available at: www.tnsofres.com/gostudy/gostudydownload.pdf
- Morgan, C. and Murgatroyd, S.P. (1994), *Total Quality Management in the Public Sector: An International Perspective*, Open University Press, Buckingham/Philadelphia, PA.
- Mwita, J.I. (2000), "Performance management model: a system-based approach to public service quality", *International Journal of Public Sector Management*, Vol. 13 No. 1, pp. 19-37.
- O'Faircheallaigh, C., Wanna, J. and Weller, P. (1999), *Public Sector Management in Australia: New Challenges, New Directions*, Macmillan Education Australia, South Yarra.
- Phifer, G. (2001), "Portals into the software ecosystem", Gartner Group, available at: www.fcit.monash.edu.au/library/gartner/research/ras/95700/95708/95708.html
- Pollitt, C. and Bouckaert, G. (Eds) (1995), *Quality Improvement in European Public Services: Concepts, Cases and Commentary*, Sage Publications, London.
- Schedler, K. and Felix, J. (2000), "Quality in public management: the customer perspective", *International Public Management Journal*, Vol. 3 No. 1, pp. 125-43.
- Wilkinson, A. (1992), "The other side of quality: 'soft' issues and the human resource dimension", *Total Quality Management*, Vol. 3 No. 3, pp. 323-9.
- Wilkinson, A., Redman, T., Snape, E. and Marchington, M. (1998), *Managing with Total Quality Management: Theory and Practice*, Macmillan Business, Basingstoke.

Perspectives

An inter-industry comparison of quality management practices and performance

*Bishnu Sharma and
David Gadenne*

The authors

Bishnu Sharma is Lecturer in Management, Faculty of Business, University of the Sunshine Coast, Maroochydore DC, Australia.

David Gadenne is Professor of Accounting and Finance, Faculty of Business and Law, Central Queensland University, North Rockhampton, Australia.

Keywords

Quality management, Service industries, Manufacturing industry, Construction industry

Abstract

This paper investigates similarities and differences in total quality management practices across different industry groups such as the service, manufacturing, and construction industries. The study also investigates the relationship between the quality management practices and business performance by industry category. A survey was conducted using Powell's framework as a basis, and sent to Queensland businesses. A total of 140 responses were received – 58 from the service sector, 62 from the manufacturing sector, and 20 from the construction sector. The results suggest that there are some common factors including value chain integration, efficiency and employee involvement, though the composition of quality management practices comprising these factors differed somewhat between industries. The results reveal that value chain integration in particular appears to be an important factor for quality management in each of the industries examined. The results of MANOVA analyses suggest evidence of an association between some of the quality management practices and performance for the service and manufacturing industries but not for the construction industry.

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Managing Service Quality
Volume 12 · Number 6 · 2002 · pp. 394–404
© MCB UP Limited · ISSN 0960-4529
DOI 10.1108/09604520210451876

Introduction

Businesses currently face high levels of uncertainty due to changes in the business environment such as product and market deregulation, increasing global competition and rapid change in technologies. To cope with these changes and make the business competitive and/or sustain business competitiveness, many firms pursue cost-cutting and revenue-generating strategies (Frenkel *et al.*, 1998). However, in the process of cost cutting, it is important that there is no compromise in the quality of products or services, as quality is consistently listed as one of the top competitive priorities or strategic initiatives that has become a prerequisite for success in the global marketplace (Forker, 1996; Mische, 2001). Consequently, a large number of organisations world-wide are applying quality theories, principles, and methods to every business function (Boone and Wilkins, 1995; Lawler, 1994). Total quality management (TQM), for example, has become a part of business thinking and many companies in the western world (including those in Australia) have adopted this concept in some form (Powell, 1995; Davis and Fisher, 1994).

QM perspectives – a brief review of the literature

According to Das *et al.* (2000), quality practices comprise two parallel sets of activities – the first set involves decisions and actions internal to the firm, while the second set engages the supply base. The decisions and actions in the first set involve design, quality planning and leadership, quality training, quality procedures, quality resource investment and evaluation, benchmarking and customer orientation. Crosby (1979) discussed 14 quality steps. They are:

- (1) management commitment;
- (2) quality improvement teams;
- (3) quality measurement;
- (4) cost of quality evaluation;
- (5) quality awareness;
- (6) corrective action;
- (7) engaging a zero-defects committee;
- (8) supervisor training;
- (9) zero-defects days;
- (10) goal setting;
- (11) error cause removal;
- (12) recognition;
- (13) quality councils, and;
- (14) doing it over again to achieve quality.



Deming (1986) advocated 14 points for the improvement of productivity. They are also linked with the successful implementation of QM practices. His 14 points are:

- (1) constancy of purpose;
- (2) adopting the philosophy;
- (3) ceasing mass inspection;
- (4) refusing to award business solely on price;
- (5) continuous improvement;
- (6) training on the job;
- (7) institute leadership;
- (8) driving out fear;
- (9) breaking down barriers;
- (10) eliminating slogans;
- (11) eliminating quotas;
- (12) taking pride in workmanship;
- (13) self-improvement (education and retraining); and
- (14) putting everybody to work.

Juran (1986) proposed that QM constitutes a trilogy comprising:

- (1) quality planning;
- (2) quality control; and
- (3) quality improvement.

Saraph *et al.* (1989) identified eight factors (areas) of QM in a business unit. Those eight factors are:

- (1) role of divisional top management and quality policy;
- (2) role of quality department;
- (3) training;
- (4) product/service design;
- (5) supplier QM;
- (6) process management/operating procedures;
- (7) quality data reporting; and
- (8) employee relations.

Flynn *et al.* (1994, 1995, a, b) identified seven dimensions of QM from which a set of 14 perceptual scales was developed. Their seven dimensions are:

- (1) top management support (quality leadership and quality improvement rewards);
- (2) quality information (process control and feedback);
- (3) process management (cleanliness and organisation);
- (4) product design (new product quality and interfunctional design process);
- (5) workforce management (selection for teamwork potential and teamwork);
- (6) supplier involvement (supplier relationship); and

- (7) customer involvement (customer interaction).

The Baldrige Award criteria include seven major categories, of which customer focus and satisfaction has been given 30 per cent weight, i.e. 300 points (from a possible total score of 1,000 points). The framework for business excellence (Australian Quality Awards) uses seven main categories and has 1,000 points, of which the people aspect has been accorded 200 points. Similar weighting has been given to the process, products and services aspect. It can be seen that different authors have promoted different frameworks but Powell (1995) suggested that complete TQM programs tend to incorporate 11 attributes. They are:

- (1) executive commitment;
- (2) adoption and commitment of TQM philosophy;
- (3) increased interaction with customers and suppliers;
- (4) process improvement;
- (5) measurement;
- (6) employee empowerment;
- (7) open organisation
- (8) training;
- (9) benchmarking;
- (10) flexible manufacturing; and
- (11) zero-defects mentality.

QM and organisational effectiveness/performance

The leading TQM pioneers such as Deming, Juran, and Crosby devoted considerable attention to identifying key factors that impact quality performance (Curkovic *et al.*, 2000). Despite the popularity of TQM in large businesses, Powell (1995) raised a series of questions regarding the relationship between TQM and business performance. Some of the questions that he posed are:

- Can TQM act as a source of competitive advantage?
- If not, why is TQM disseminating so rapidly?
- If yes, why the mixed results including some high profile failures?

It can be seen that different researchers have conducted research in this regard in different ways at different times. Findings from these studies generally suggest that application of the TQM concept should result in improved organisational efficiency through teamwork, personal responsibility, customer orientation, and institutional openness as discussed by

Fenyvesi (1992). Of 11 TQM factors identified by Powell (1995), only executive commitment, open organisation, and employee empowerment were found to be significantly correlated with firm performance. In conducting this study, Powell had collected information from 39 different business units out of which 15 represented service organisations and 24 represented manufacturing. Dow *et al.* (1999) extended Powell's work in a larger study of some 698 manufacturing firms in Australia and New Zealand. They found that firm performance appeared to be positively associated with executive commitment and employee empowerment. Both studies found measures of training and the use of benchmarking to be unrelated to performance.

In a study involving 126 businesses in the electronics industry, Simmons and White (1999) found that, when firm size is controlled for, ISO 9000-registered companies are more profitable than non-ISO 9000 companies. From a study of public-listed manufacturing companies in Malaysia, Agus and Abdullah (2000) found length of TQM implementation had a significant impact on the companies' financial performance. However, as noted by Curkovic *et al.* (2000), some studies have found no effects or even negative effects of TQM on firm performance. Terziovski *et al.* (1999) argued that, although TQM has been the fundamental business strategy of the world's leading organisations throughout the last 20 years, there has been a shift in popularity in QM practices over the last five years from TQM-related practices to ISO 9000 certification. Their findings are based on the data collected from Australian manufacturing companies. Terziovski and Samson (1998) found that integrated quality strategy involving TQM and ISO 9000 certification is the most effective competitive strategy for sustaining organisational performance, particularly for firms employing over 100 employees. From a study of Australian and New Zealand firms, Terziovski (1998) found that high performing organisations focus on the "softer" quality practices such as breaking down barriers between departments and continuous improvement, while low performing organisations tend to focus on the "harder" quality practices such as ISO 9000 certification, and benchmarking.

Summary of issues emerging from the literature

In managing quality, some organisations focus on specific areas such as continuous process improvement, training or benchmarking, while others take a holistic approach and attempt to implement TQM programs covering all the key areas (Porter and Parker, 1993) or adopt the ISO 9000 system. Quality is a popular strategic priority of businesses for competitiveness (Forker, 1996; Terziovski *et al.*, 1999; Harrington and Akehurst, 2000; Mische, 2001). If implemented properly, TQM produces a variety of benefits such as understanding of customers' needs, improved customer satisfaction, improved internal communication, better problem solving, greater employee commitment and motivation, stronger relationships with suppliers, fewer errors and reduced waste (Powell, 1995). However, some studies suggest that Australian organisations are struggling with the problems of implementation of TQM systems and they have had limited success (Wild, 1998; Preston and Hingorani, 1998). Although Australian organisations from all types of industry groups have implemented TQM practices, there is little research available which deals with TQM application in small businesses, particularly in relation to industry-specific factors. Ahire and Golhar (1996) argued that, despite a lack of capital, and managerial expertise, small firms can and do implement TQM elements and achieve high product quality. They also discussed that small firms should capitalise on their relative strengths in employee involvement and participation. Although Powell's (1995) study looked into service and manufacturing industries, the sample size was too small to permit generalisation to a wider range of businesses. A majority of previous studies have concentrated on the manufacturing industry. Therefore, the TQM frameworks that are available now have not been tested for their applicability across different industry groups such as service or construction sectors in addition to the manufacturing sector. There is also very limited research which has investigated the relationship between TQM factors and performance across different industry groups. This study, therefore, is a response to these gaps in the existing literature.

Research questions

To address the issues discussed above, this research investigates the following research questions:

- Q1. Are there similarities and differences between industries in terms of QM practices?
- Q2. Is there a difference between industries in terms of the association of QM practices with organisational performance?

These research questions are explored within the context of a survey of Queensland businesses which are predominantly small businesses.

Method

Of the different QM frameworks discussed above, Powell's (1995) framework was used as a basis for this research. Based on preliminary interviews with some of the chief executive officers (CEOs) on the Sunshine Coast region, some modifications were made in the survey instrument used by Powell (1995) but the scales used for each of the QM practices were the same. To investigate the type of QM program used by the businesses in Queensland, various options were provided including TQM, ISO 9000, TQM and ISO 9000, and others. Depending on the nature of the variable, nominal and interval scales were used to measure each. For example, degree of implementation of QM practices was measured in interval scale and the type of QM program used was measured in nominal scale.

The sample (sample size of approximately 1,100) was selected from businesses in Queensland employing more than 16 people representing service, manufacturing and construction industries using the Dun & Bradstreet database. The survey was addressed to the chief executive officers (CEOs) of the company as they have a good knowledge of the firm's strategies and QM aspects. A follow-up was carried out to improve the response rate of the survey. Face-to-face interviews of CEOs or senior managers were carried out for checking the information accuracy, validating the outcome of analysis and developing an understanding of practical aspects of QM principles adoption.

To check the sample representativeness, early respondents were compared with the late respondents (two-tailed *t*-test) in some of the key attributes. No significant differences were noted in these attributes between the early and late respondents. Similarly, a chi-square test was carried out to see whether there was a difference in the proportion of early and late respondents in terms of firm size, industry category and the type of QM program used. The analysis revealed no significant difference in these attributes between the early and late respondents. These results suggest that respondents are representative of the population. The first 100 questionnaires that were received without any follow-up were considered as early respondents and the remaining 40 as late respondents.

Results

A total of 140 responses were received with a response rate of 12.7 per cent. Of the questionnaires, 71 per cent were completed by the firm's top management. Of the total respondents, 68 per cent indicated their commitment in QM programs. Of respondents who had commitment in QM programs, 67 per cent had adopted ISO 9000, 13.5 per cent had adopted TQM and ISO 9000 combination, 8.3 per cent had adopted TQM. There was a clear indication that ISO 9000 was the most popular program in the Queensland businesses. The median number of employees in the sample was 32 with gross median sales of \$5.45 million, a median market share of 25 per cent, a median growth rate of 5 per cent and profitability (median) of 10 per cent. In relation to industry group the sample included 58 service firms, 62 manufacturing firms, and 20 construction firms.

The answers to the research questions are presented below:

Q1

To address this research question, an exploratory factor analysis was conducted for each industry. This analysis was considered an appropriate way to determine some limited evidence for the underlying QM constructs unique to each industry and to reduce the large number of QM practice items to a more manageable size. The

results of these analyses (see Tables I-III) show that, although there may be some common features between the industries, in general the QM practice factors appear to be quite distinct for each industry. For all industry groups, each of the factors had an eigenvalue of greater than 1.5 and consisted of items that loaded at greater than 0.40 on the factor. Alpha reliability coefficients were computed for each of the QM factors. Cronbach's alpha was between 0.60 and 0.86 for the service industry; between 0.73 and 0.87 for the manufacturing industry; and between 0.79 and 0.94 for the construction industry. This range is generally considered to be acceptable as Hitt *et al.* (1982) had alpha values between

0.66 and 0.88. Based on these considerations, strong evidence of reliability is noted in the constructs of the factors for all industry groups. The factors collectively explain 68 per cent for the service industry, 67 per cent of the total variance for the manufacturing industry, and 71 per cent for the construction industry.

A comparison of Tables I-III shows that there appear to be some similarities and differences for QM practices across the three industry groups. Table I shows that for the service industry the QM factors included value chain integration, employee training and quality measurement, employee efficiency, supplier quality cooperation,

Table I Rotated component matrix: service industry

QM practice	Principal component								
	1	2	3	4	5	6	7	8	9
Increasing the organisation's personal contacts with customers	0.86								
Increased employee interaction with customers and suppliers	0.83								
Increased employee involvement in design and planning	0.64								
Increased employee autonomy in decision making	0.61								
Top executives actively championing our quality program	0.55								
Employee training in quality principles	0.51								
Use of statistical methods to measure and monitor quality		0.82							
Use of charts and graphs to measure and monitor quality		0.81							
Employee training in statistical methods for measuring quality		0.52							
Management training in quality principles		0.51							
Use of empowered (responsible) teams		0.50							
Measurement of quality performance in all areas		0.49							
A plan to reduce rework drastically			0.44						
A program to reduce order-processing cycle time			0.89						
Program to reduce overall product/service delivery cycle times			0.89						
A program to reduce product/service development cycle times			0.63						
A more active employee suggestion system			0.61						
Requiring suppliers to adopt a quality program				0.83					
Requiring suppliers to meet stricter quality specifications				0.82					
Executives communicating quality commitment to employees				0.61					
A top executive decision to commit fully to a quality program					0.77				
Actively seeking customer inputs to determine requirements					0.65				
Frequent use of cross-departmental teams					0.44				
Using customer requirements as the basis for quality						0.78			
Quality principles included in our mission statement						0.60			
Employee training in teamwork						0.43			
Less bureaucracy							0.80		
A program to reduce paper work							0.65		
A more open, trusting organisational culture							0.63		
Employee training in problem-solving skills								0.71	
An overall theme based on our quality program								0.66	
A program for continuous reduction in defects									0.86
A program to find wasted time and costs in all internal processes									0.57
An announced goal of zero-defects									0.40

Table II Rotated component matrix: manufacturing industry

QM management practice	Principal component							
	1	2	3	4	5	6	7	8
Increasing the organisation's personal contacts with customers	0.78							
Increased employee interaction with customers and suppliers	0.77							
Increased employee involvement in design and planning	0.75							
Working more closely with suppliers	0.57							
A top executive decision to commit fully to a quality program	0.57							
Increased employee autonomy in decision making	0.50							
An announced goal of zero-defects		0.73						
Requiring suppliers to adopt a quality program		0.66						
Requiring suppliers to meet stricter quality specifications		0.66						
A program to reduce product/service development cycle times		0.56						
Frequent use of cross-departmental teams		0.54						
Actively seeking customer inputs to determine requirements			0.83					
Using customer requirements as the basis for quality			0.72					
An active competitive benchmarking program			0.67					
Involving customers in product or service design			0.61					
Use of statistical methods to measure and monitor quality			0.57					
Use of charts and graphs to measure and monitor quality				0.81				
Use of empowered (responsible) teams				0.74				
Visiting other organisations to investigate best practices				0.58				
Employee training in quality principles				0.47				
Less bureaucracy					0.80			
A program to find wasted time and costs in all internal processes					0.78			
A program to reduce paper work					0.71			
An overall theme based on our quality program					0.55			
Measurement of quality performance in all areas					0.48			
Employee training in problem-solving skills						0.81		
Employee training in teamwork						0.80		
Researching best practices of other organisations						0.57		
A more open, trusting organisational culture							0.85	
A more active employee suggestion system							0.77	
Employee training in statistical methods for measuring quality							0.48	
Quality principles included in our mission statement								0.74
Management training in quality principles								0.74

executive involvement, customer-employee cooperation, efficiency-transparency, emphasis on overall quality, and defects reduction. Table II shows that for the manufacturing industry the QM factors were value chain integration, efficiency improvement, customer liaison, employee involvement, office efficiency, employee training, open organisation, and top executive commitment to quality. Table III shows that for the construction industry the QM factors included top executive support and value chain integration, teamwork and measurement, efficiency, suppliers and employees. One of the respondents mentioned that “the application of TQM is not practical in the construction industry and ISO 9000 standards form the basis of

environmental, health and safety and risk management standards (now emerging)”. The results show that value chain integration in particular appears to be common for QM in each of the industries. This would suggest that perceived degree of QM implementation is likely to be higher if an integrated holistic approach is adopted that recognises the importance of involvement and integration of relationships between employees, suppliers and customers. This accords with earlier calls for a more holistic approach to QM (e.g. Porter and Parker, 1993). It was also found that businesses in all three industries in the sample were inclined to place due emphasis on aspects relating to employee efficiency and involvement. This suggests that the businesses in the sample may endeavour to

Table III Rotated component matrix: construction industry

QM practice	Principal component				
	1	2	3	4	5
Increased employee involvement in design and planning	0.90				
Quality principles included in our mission statement	0.89				
Increasing the organisation's personal contacts with customers	0.89				
Management training in quality principles	0.80				
A top executive decision to commit fully to a quality program	0.76				
Measurement of quality performance in all areas	0.75				
Top executives actively championing our quality program	0.68				
Involving customers in product or service design	0.67				
Increased employee interaction with customers and suppliers	0.65				
A more open, trusting organisational culture	0.65				
Frequent use of cross-departmental teams		0.87			
An overall theme based on our quality program		0.85			
Employee training in teamwork		0.83			
An announced goal of zero-defects		0.77			
Visiting other organisations to investigate best practices		0.70			
Employee training in statistical methods for measuring quality		0.66			
An active competitive benchmarking program		0.61			
Working more closely with suppliers		0.60			
Employee training in problem-solving skills		0.54			
A program to reduce paper work			0.91		
A program to reduce overall product/service delivery cycle times			0.86		
Less bureaucracy			0.79		
Using customer requirements as the basis for quality			0.73		
A program to reduce order-processing cycle time			0.69		
A program to find wasted time and costs in all internal processes			0.69		
A program for continuous reduction in defects			0.66		
A plan to reduce rework drastically			0.56		
Requiring suppliers to adopt a quality program				0.89	
Requiring suppliers to meet stricter quality specifications				0.88	
Researching best practices of other organisations				0.75	
A program to reduce product/service development cycle times				0.61	
Use of empowered (responsible) teams					0.84
Employee training in quality principles					0.54
Executives communicating quality commitment to employees					0.47

improve productivity through employee involvement in the decision-making process in an effort to enhance employee commitment in achieving business objectives. It was also observed that businesses endeavour to provide training opportunities to their employees as a means of improving quality. The need for productivity/efficiency improvement might have arisen in response to cost-conscious customers across different market segments. The importance of employee training in QM may be due to industry-relevant management practices. These would include:

- the additional requirement relating to improved personal relationships, particularly in the service industry; and

- the differences in level of labour intensity across industries which calls for more emphasis on training, and in particular customer service training in the service industry.

Some of the QM factors were unique to each industry. For example, both customer liaison and open organisation factors appeared to be more prevalent in the manufacturing industry than in the service or construction industry. The importance of a more open trusting organisational culture combined with encouraging a more active employee suggestion system and more employee training in the manufacturing industry would seem to indicate that these features are even

more essential where production flows are considered critical.

Q2

Separate MANOVA analyses for each industry are reported in Tables IV-VII. Table IV shows that for service firms the only QM factors which show a significant association with organisational performance were value chain integration ($p = 0.081$), supplier quality cooperation ($p = 0.013$), emphasis on overall quality ($p = 0.087$), and defects reduction ($p = 0.013$). Table V shows that the effects of various QM practices are reflected in the objective measure of return on total assets ($p = 0.015$) and the subjective measure of TQM performance ($p = 0.003$). The results show that return on investment for service firms is positively associated with value chain integration ($p = 0.019$), and supplier quality cooperation ($p = 0.002$); whereas perceived TQM performance is positively associated with emphasis on overall quality ($p = 0.012$), and defects reduction ($p = 0.004$). This would suggest that service firms would benefit most from integration and involvement of employee, supplier and customer relationships at all levels. This seems to make intuitive sense as service firms are first and foremost interested in providing good service to customers, which in turn depends heavily on employees who are trained in providing a high level of personal service to those customers, with fewer mistakes and emphasis on overall quality.

Table VI shows that the only QM factors which show a significant association with manufacturing firm performance were value chain integration ($p = 0.032$), open

organisation ($p = 0.037$), and top executive quality commitment ($p = 0.031$). Table VII shows that the effects of various QM practices are reflected only in the subjective measure of TQM performance ($p = 0.030$). This finding would suggest that perceived TQM performance for manufacturing firms is positively associated with value chain integration ($p = 0.006$), customer liaison ($p = 0.016$), open organisation ($p = 0.056$), and top executive quality commitment ($p = 0.052$). The importance of these factors reflects the importance of top management support and value chain integration and a trusting organisational culture within the manufacturing industry, and this is consistent with previous research (see Powell, 1995, p. 31, where executive commitment, and training for manufacturing had significant correlations with performance compared with the service firms).

Similar analyses for the construction industry show that none of the QM factors was associated with organisational performance in terms of either return on investment or the subjective measures of total performance or TQM performance. Although this may be due to the relatively small number of construction firms in the sample, it could also reflect the low level of QM implementation in this type of industry.

Conclusions

Factor analysis carried out using the data collected from Queensland firms in Australia reveals that some QM factors are common among service, manufacturing and construction industries. These include value chain integration, efficiency, and employee involvement, and of these value chain integration was the only factor associated with organisational performance for the service and manufacturing industries but not for the construction industry. This may indicate the importance of adopting a more holistic approach to QM for these industry groups. There were also some factors unique to industry groups including customer liaison and open organisation for the manufacturing industry, the latter also being associated with organisational performance.

This study also revealed that QM practices appear to be positively associated with both objective and subjective measures for the

Table IV Service Industry: MANOVA test of effect of factors on QM performance measures

Effect	Wilks'		
	lambda	F	Significance
Value chain integration	0.607	2.809	0.081
Employee training and quality measurement	0.705	1.816	0.194
Employee efficiency	0.862	0.693	0.572
Supplier quality cooperation	0.451	5.272	0.013
Executive involvement	0.720	1.687	0.219
Customer-employee cooperation	0.685	1.994	0.165
Efficiency-transparency	0.701	1.846	0.189
Emphasis on overall quality	0.614	2.727	0.087
Defects reduction	0.448	5.339	0.013

Table V Service industry: test of between-subjects effects

Source	Dependent variable	F	Significance
Corrected model	Return on total assets (ROA)	3.395	0.015
	Total performance	1.073	0.439
	TQMP	4.779	0.003
Value chain integration	Return on total assets (ROA)	6.844	0.019
	Total performance	2.459	0.138
	TQMP	0.171	0.685
Supplier quality cooperation	Return on total assets (ROA)	14.741	0.002
	Total performance	1.338	0.266
	TQMP	0.001	0.982
Emphasis on overall quality	Return on total assets (ROA)	0.020	0.890
	Total performance	0.774	0.393
	TQMP	8.129	0.012
Defects reduction	Return on total assets (ROA)	0.089	0.770
	Total performance	0.061	0.809
	TQMP	11.799	0.004

Table VI Manufacturing industry: MANOVA test of effect of factors on QM performance measures

Effect	Wilks' lambda	F	Significance
Value chain integration	0.587	3.755	0.032
Efficiency improvement	0.808	1.267	0.319
Customer liaison	0.635	3.069	0.058
Employee involvement	0.945	0.309	0.819
Office efficiency	0.989	0.057	0.981
Employee training	0.894	0.632	0.605
Open organisation	0.597	3.607	0.037
Top executive quality commitment	0.583	3.817	0.031

managers in the manufacturing industry may believe that QM practices have an effect on profitability but this cannot be verified by examining objective measures. This would also appear to apply to managers in the service industry, as the effects of QM practices on objective and subjective performance measures were not consistent.

Limitations and suggestions for further research

This study investigated the differences between industries in the level of implementation and effectiveness of QM practices for a sample of Queensland businesses. The findings show that, although

service industry, subjective but not objective measures of performance for the manufacturing industry, but neither for the construction industry. This may indicate that

Table VII Manufacturing industry: tests of between-subjects effects

Source	Dependent variable	F	Significance
Corrected model	Return on total assets (ROA)	0.922	0.541
	Total performance	1.315	0.292
	TQMP	2.700	0.030
Value chain integration	Return on total assets (ROA)	0.496	0.490
	Total performance	0.077	0.784
	TQMP	4.421	0.006
Customer liaison	Return on total assets (ROA)	1.548	0.229
	Total performance	1.326	0.265
	TQMP	7.139	0.016
Open organisation	Return on total assets (ROA)	1.689	0.210
	Total performance	9.428	0.007
	TQMP	4.189	0.056
Top executive quality commitment	Return on total assets (ROA)	2.604	0.124
	Total performance	0.005	0.944
	TQMP	4.329	0.052

there are some inter-industry similarities, there are also some differences in the level of implementation for a number of QM practices, particularly those that may contribute to organisational performance and effectiveness.

However, it must be acknowledged that the sample firms may not be representative of all firms in the service, manufacturing, and construction industries. Moreover, the total sample size of 140 firms was disappointing, and may limit the generalisability of these results to a wider population of businesses. Therefore further research is called for to ascertain whether the same practices are evident across organisations of different size and industry group within a broader sampling frame.

This study was also restricted to particular types of QM practices consistent with those advocated by Powell (1995). Future research may investigate the perceived importance of other types of QM practices. An exploratory factor analysis was also undertaken to investigate whether any combinations of these practices were correlated with organisational performance. Future research may extend this study by considering the importance and effectiveness of total integrated systems of QM practices to further investigate our preliminary proposition that holistic approach to QM leads to improvements in organisational effectiveness.

Finally, in the current study organisational performance was operationalised by subjective total performance in terms of average responses to questions posed to respondents about their company's performance relative to other competitors over the last three years in relation to profitability, sales revenue growth, and customer satisfaction; subjective TQM performance as being represented by respondents' perceptions of their firm's QM contribution to productivity, competitive position, profitability, revenue growth, overall performance, and positive organisational development; and return on assets as an objective measure.

Further research may investigate alternative subjective measures of organisational performance such as different benchmarking standards of comparative performance, and different alternative measures such as profit margins and market share.

References

- Agus, A. and Abdullah, M. (2000), "Total quality management practices in manufacturing companies in Malaysia: an exploratory analysis", *Total Quality Management*, Vol. 11 No. 8, December, Abingdon, pp. 1041-51.
- Ahire, S.L. and Golhar, D.Y. (1996), "Quality management in large vs. small firms", *Journal of Small Business Management*, April, pp. 1-13.
- Boone, L.E. and Wilkins, D. (1995), "The role of benchmarking in total quality management", *International Journal of Management*, Vol. 12 No. 1, March, pp. 123-31.
- Crosby, P. (1979), *Quality Is Free: The Art of Making Quality Certain*, McGraw-Hill, New York, NY.
- Curkovic, S., Vickery, S. and Droge, C. (2000), "Quality-related action programs – their impact on quality performance and firm performance", *Decision Sciences*, Vol. 31 No. 4, Fall, 885-905.
- Das, A., Handfield, R.B., Calantone, R.J. and Ghosh, S. (2000), "A contingent view of quality management – the impact of international competition on quality", *Decision Sciences*, Vol. 31 No. 3, Summer, pp. 649-90.
- Davis, D. and Fisher, T.J. (1994), "The pace of change: a case study of the development of a total quality organisation", *International Journal of Quality & Reliability Management*, Vol. 11 No. 8, pp. 5-18.
- Deming, W.E. (1986), *Out of the Crisis*, Center for Advanced Engineering Study, MIT, Cambridge, MA.
- Dow, D., Samson, D. and Ford, S. (1999), "Exploding the myth: do all quality management practices contribute to superior performance?", *Production and Operations Management*, Muncie, Vol. 8 No. 1, Spring, pp. 1-27.
- Fenyvesi, C. (1992), "Amazing grace: total quality management", *US News & World Report*, October 19, p. 28.
- Flynn, B.B., Schroeder, R.G. and Sakakibara, S. (1994), "A framework for quality management research and an associated measurement instrument", *Journal of Operations Management*, Vol. 11, pp. 339-66.
- Flynn, B.B., Schroeder, R.G. and Sakakibara, S. (1995a), "Determinants of quality performance in high and low quality plants", *QMJ*, Winter, pp. 8-25.
- Flynn, B.B., Schroeder, R.G. and Sakakibara, S. (1995b), "The impact of quality management practices on performance and competitive advantage", *Decision Sciences*, Vol. 26 No. 5, September/October, pp. 659-91.
- Forker, L.B. (1996), "The contribution of quality to business performance", *International Journal of Operations & Production Management*, Vol. 16 No. 8, pp. 44-62.
- Frenkel, S.J., Tam, M., Korczynski, M. and Shire, K. (1998), "Beyond bureaucracy? Work organisation in call centres", *The International Journal of Human Resources Management*, Vol. 9 No. 6, December, pp. 957-77.
- Harrington, D. and Akehurst, G. (2000), "An empirical study of service quality implementation", *The Service Industries Journal*, Vol. 20 No. 2, April, pp. 133-56, London.
- Hitt, M.A., Ireland, R.D. and Palia K.A. (1982), "Industrial firms' grand strategy and functional importance:

- moderating effects of technology and uncertainty", *Academy of Management Journal*, Vol. 25 No. 2, pp. 265-98.
- Juran, J.M. (1986), "A universal approach to managing for quality – the quality trilogy", *Quality Progress*, Vol. 19 No. 8, August, pp. 19-24.
- Lawler, E.E. III (1994), "Total quality management and employee involvement: are they compatible?", *Academy of Management Executive*, Vol. 8 No. 1, pp. 68-76.
- Mische, M.A. (2001), *Strategic Renewal – Becoming a High-performance Organisation*, Prentice-Hall, Englewood Cliffs, NJ.
- Porter, L.J. and Parker, A.J. (1993), "Total quality management – the critical success factors", *Total Quality Management*, Vol. 4 No. 1, pp. 13-22.
- Powell, T.C. (1995), "Total quality management as competitive advantage: a review and empirical study", *Strategic Management Journal*, Vol. 16, pp. 15-37.
- Preston, A. and Hingorani, M. (1998), "Approaches to continuous improvement by Queensland manufacturers", *Proceedings of the Second International and Fifth National Research Conference on Quality Management*, Monash University and the University of Melbourne, Australia, 8-11 February, pp. 131-7.
- Saraph, J.V., Benson, P.G. and Schroeder, R.G. (1989), "An instrument for measuring the critical factors of quality management", *Decision Sciences*, Vol. 20, pp. 810-29.
- Simmons, B.L. and White, M.A. (1999), "The relationship between ISO 9000 and business performance: does registration really matter?", *Journal of Management Issues*, Vol. 11 No. 3, Fall, pp. 330-43.
- Terziovski, M. (1998), "Best predictors of high performance quality organisations: evidence from Australia and New Zealand", Working Paper 23/98, March, Faculty of Business & Economics, Monash University, Caulfield East, Victoria, Australia.
- Terziovski, M. and Samson, D. (1998), "Increasing and sustaining performance through an integrated quality strategy", Working Paper 50/98, June, Faculty of Business & Economics, Monash University, Caulfield East, Victoria, Australia.
- Terziovski, M., Sohal, A. and Moss, S. (1999), "Longitudinal analysis of quality management practices in Australian organisations", *Total Quality Management*, Vol. 10 No. 6, August, pp. 915-26.
- Wild, T.K.S. (1998), "Are there aspects of Australian culture that militate against the adoption of total quality management?", *Proceedings of the Second International and Fifth National Research Conference on Quality Management*, Monash University and the University of Melbourne, Australia, 8-11 February, pp. 271-84.

Perspectives

Attitudes of middle managers to quality-based organisational change

*Douglas Davis and
Thomas Fisher*

The authors

Douglas Davis is a Senior Lecturer and **Thomas Fisher** is an Honorary Associate in the School of Management, University of Technology, Sydney, Australia.

Keywords

Quality, Organizational change, Middle management

Abstract

The paper explores some factors that may lead to middle managers in organisations holding differing views on their quality programs. In particular, it considers the possibility that differing views are related to job role. The data are from research into the beliefs and attitudes of middle managers towards quality programs in 21 Australian organisations. Findings suggest that quality specialists have more positive views of their companies' quality programs than other job groups. There was no evidence to suggest that those in operations-type roles have more positive views about their quality programs than those in non-operational roles, even though the history of quality development suggests otherwise.

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Introduction

This paper presents research findings that relate to middle managers' beliefs and attitudes about quality programmes in their organisations. Specifically we investigate if there are significant differences in beliefs about quality and attitudes to quality between different functional groups of middle managers in the organisations studied. The consequences of a significant lack of consistency in the beliefs and attitudes towards an organisation's quality programme are examined. We expect that there will be a natural variation in beliefs and attitudes to the quality programme across middle managers in an organisation. In this paper we focus on a number of variables that may increase this variation. The literature on middle management resistance to change is briefly reviewed.

We argue that, because the development of quality theory and practice has been predominantly in manufacturing industry and applied to operations functions, those middle managers in operations-type roles are likely to have more positive beliefs and attitudes towards quality programmes than those in non-operational-type roles. This could affect co-operation between middle managers in operations roles and those in non-operations roles. By non-operational roles, we mean those roles which involve less direct involvement with the ongoing production of a service or a good. In services non-operational roles could also be described as "back office" roles that are invisible to the end customer (Lovelock, 1992, pp. 22-3). Also, it is argued that middle managers having a particular vested interest in quality, that is, the quality specialists, will have more positive beliefs and attitudes towards quality than non-quality specialists. If this is correct then quality specialists may have unrealistic expectations about the enthusiasm of non-quality specialists for the quality programme.

We define a quality programme as a formal approach to change that may be part of an ongoing series of quality-based improvement interventions. Most of the data collected concern the beliefs and attitudes of middle managers working in the organisations that participated in the research. The work of attitude researchers such as Ajzen (1988) suggests that an individual's attitude towards a change programme can be an important



factor in determining his/her behaviour in relation to the programme. For example, attitudes may be related to his/her level of programme involvement, his or her acceptance of the programme, or resistance to it. Furthermore, it has been shown that the value that individuals place on the outcomes of a change programme such as a quality programme, together with their evaluation of the likelihood of these outcomes, contributes to attitude formation. For example, programme outcomes that are valued and that an individual believes strongly will result from a quality programme will contribute to positive programme attitudes. Therefore beliefs about a quality programme can influence an individual's attitudes towards the programme.

Literature review and hypotheses

Middle managers are a diverse group, some considering themselves primarily professionals rather than primarily managers. The concept of the middle manager is a hazy one: there is no generally accepted definition of a middle manager. Until relatively recently there was little interest by academics in researching middle management. This situation has changed with increased research interest in middle management in the last few years.

The radical changes of the 1980s led to widespread dissatisfaction among middle managers who saw their status and power within their organisations being reduced and job security and promotional opportunities under threat. There were predictions of the demise of middle management, especially because of increased use of information technology. Such predictions represented the gloomy view of the future of middle management (Dopson and Stewart, 1993, 1994). However, these gloomy predictions did not generally occur and middle managers are far from being a spent force in larger organisations. Middle managers seem to co-exist with new organisational forms such as group working, perhaps because hierarchy still exists alongside these new forms (Palmer and Dunford, 1999). A number of writers have provided support for the importance of middle managers in contemporary organisations. Nonaka and Takeuchi (1995) argue that middle managers have together

with top managers an important role in knowledge management in their organisations. Hilmer and Donaldson (1996) are also strong defenders of middle management. They argue that the complex tasks middle managers perform in large organisations cannot be replaced effectively by computer-based information systems. Over a number of years Floyd and Wooldridge (1990) have argued that the middle managers' role in decision making has increased. More recently, Blumentritt and Hardie (2000) make a case for the importance of middle management in the knowledge-focused service organisation. Wilcox King *et al.* (2001) argue that middle managers can provide a competitive advantage because the skills they have are hard for competitors to replicate. Recent research also suggests that middle managers are generally more satisfied with their jobs than in the 1980s (Fenton-O'Creevy, 1998). Thomas and Dunkerly (1999) even report some positive impacts of downsizing on middle managers – the retrenchment survivors and new employees. They assert that restructuring had lessened several of the traditional middle management frustrations related to career stagnation. This happier situation contrasts with the bleak view of middle management work described by Scase and Goffee (1989) in their UK survey of middle managers carried out in 1989. However, complaining about workload is one aspect of middle management work that does not seem to have changed much over the years, citations in the literature dating back at least to the seminal research of Stewart (1967).

There appears to have been very little research that has directly addressed the role of middle managers in quality programmes. What literature there is supports the notion that effective involvement of middle managers is important for the success of quality programmes (Wilkinson and Witcher, 1991; Bardoel and Sohal, 1999). A review of some of the writings of quality experts such as Deming, Crosby, Juran, Ishikawa and others found scant mention of any specific role for middle managers in quality interventions.

A theme in the middle management literature, which is important in the context of this paper, is that of resistance to various forms of change. These include quality circles (Brennan, 1991), other kinds of employee

involvement initiatives (Fenton-O’Creevy, 1998) and quality programmes (Wilkinson and Witcher, 1991; Sohal *et al.*, 1998). The literature also suggested that resistance can take many forms and can be very subtle, such as various tactics of non-cooperation (Fenton-O’Creevy, 1998). Piderit (2000) suggests that researchers have largely overlooked the positive intentions that may motivate employee resistance to change.

In terms of current approaches to formal quality programmes arguably two approaches dominate practice. First, a broad TQM approach is often implemented through the use of a quality award framework (currently in Australia this is the Australian Business Excellence Framework), and second, a narrower quality assurance approach using the ISO 9000 series. Despite the criticism that TQM lacks a sound theoretical underpinning (Dean and Bowen, 1994), the approach has been remarkably resilient. Also, the literature indicates that TQM is still reasonably popular with large organisations in Australia (Morehead *et al.*, 1997, Table 9.7; Terziovski *et al.*, 1999). This evidence of the popularity of the TQM approach leads to the following hypothesis:

H1: Middle managers generally believe that the TQM approach to managing an organisation is useful and effective.

The development of what can be termed formal approaches to quality has been predominantly in the area of manufacturing and operations rather than service. The development of the SERVQUAL instrument (Zeithaml *et al.*, 1990) is a notable exception, but this is relatively recent. If one considers major developments such as standards, statistical quality control and the development of TQM, all have been developed within industrial settings with an operational focus (e.g. Garvin, 1988). It is only relatively recently that, TQM has been applied to service organisations. Some writers have argued that, because TQM has this manufacturing/operations heritage, individuals in operations-type roles will have more positive beliefs and attitudes towards quality than those in non-operations type roles (e.g. Jones *et al.*, 1993). The development of quality ideas and practice in manufacturing and operations leads to the following hypothesis:

H2: Middle managers who are working in operations-type jobs will generally have more positive views of the TQM approach and towards their organisation’s quality programme than those working in non-operations roles.

Middle managers who are quality specialists have a particularly strong vested interest in quality and their organisation’s quality programme. Therefore, it seems reasonable that middle managers who are quality specialists will have more positive views on TQM and their organisation’s quality programme than other middle management groups in their organisations. The idea that having a vested interest is associated with more positive views has support in the psychology literature (e.g. Ajzen, 1988, p. 4).

H3: Quality specialists will have the most positive beliefs and attitudes towards the TQM approach and towards their organisation’s quality programme when compared with other middle management job categories.

Methodology

A total of 21 large and medium-sized organisations from the private and public sectors participated in the research. Of these, 13 were service organisations including; transport, communications, information technology and utilities. Large organisations were selected because they were more likely than small organisations to employ middle managers. All the organisations had a formal quality programme. Most of the quality programmes were of a broad based TQM type, with 18 also incorporating certification to one or more of the ISO 9000 standards. The data were collected prior to the introduction of changes to the ISO 9000 series, i.e. ISO 9000 : 2000.

Preliminary interviews with middle managers were carried out in one of the organisations to check if issues related to quality and of concern to middle managers corresponded with issues identified in the literature and to identify any additional issues.

Data were collected in two ways. First, a self-report questionnaire was developed and distributed to a sample of middle managers in each of the participating organisations. The questionnaire addressed a number of

hypotheses that related to middle managers' beliefs and attitudes to their quality programmes including the hypotheses specifically addressed in this paper. Most of the questions required a quantitative response; there were a small number of open-ended questions. Organisations identified their own middle managers within a broad definition provided by the researchers. In organisations with a small number of middle managers questionnaires were sent to all of them. In organisations with a large number of middle managers a sample was selected. In some cases the samples were not truly random because of organisational constraints. The questionnaires were completed anonymously within organisations. Over 550 usable questionnaire responses were received, representing an overall response rate of 50 per cent. Sufficient responses were obtained from 15 of the organisations to enable data from those companies to be compared in a reasonably rigorous statistical way. Second, after some preliminary analysis of the questionnaire data, which identified a number of issues requiring clarification or corroboration, a total of 30 interviews were carried out with middle managers, senior managers and quality specialists in ten of the participating organisations. Senior managers were interviewed to obtain their views of the role of middle managers and their relationship with middle managers in their organisations with respect to quality.

Analysis of quantitative data was carried out using SPSS. Qualitative data from interviews and from 285 responses to open-ended questions on the questionnaire were subjected to content analysis using NUD*IST software.

Results

Profile of respondents

Of the 562 questionnaire respondents 107 (19 per cent) were female. Average age of respondents was 41 years, mean organisational tenure was relatively long at 12.6 years but tenure in current position was short at 2.9 years. A large proportion (78 per cent) of respondents had received some formal training/education in quality.

TQM approach to quality

An important finding was that middle managers generally had a strong belief that

the TQM approach was an effective way to manage an organisation. The questionnaire response for the whole sample – a mean score of 5.5 on the 1 (not effective) to 7 (very effective) scale – clearly demonstrates this. The mean score was consistently high across organisations. The results therefore support *H1*. Interviews and comments on the questionnaire showed that in a number of organisations middle managers had concerns about the ISO 9000 approach. One concern was about difficulties in integrating the TQM and ISO 9000 approaches. Some middle managers saw the approaches as being incompatible.

Analysis by job category

Questionnaire respondents were asked to categorise themselves into one of seven broad job categories (see Table I). One-way ANOVA for mean values and chi-square tests for proportions were used where appropriate to test for significant differences between job category groups. When examining differences between these groups across a number of organisations it is possible that statistical tests using the whole sample could be distorted by an uneven spread of job types across organisations. For example, a significant difference between two job categories may be due to one category being concentrated in one particular organisation and the other category concentrated in another organisation. To assess this possibility, to at least some extent, a cross-tabulation of job category by organisation was carried out. This indicated that generally there was a spread of most job types over the participating organisations. All of the participating organisations were included in this analysis.

Table I Main job activities of respondents

Category	Number	Percentage
Production, operations, purchasing	115	20.5
Design, R&D, engineering, information technology	100	17.9
General management	93	16.6
Marketing, sales	66	11.8
Quality specialist	38	6.8
Accounting, finance	32	5.7
Human resource management	27	4.8
Other (e.g. customer service, maintenance)	89	15.9
Total	560 ^a	100

Note: ^aThere were two non-respondents

Although a large number of variables were found to be significantly different between organisations, there were relatively few variables for which there were significant differences between job categories. Also where tests indicated a significant difference between job categories this was generally at the least conservative level (e.g. LSD for ANOVA tests of means). Some of the more relevant results will now be described.

Quality specialists scored significantly higher on a number of variables related to quality and their organisation's quality programmes. They were significantly more enthusiastic about becoming involved with quality in their organisations than were the production, HRM or accounting job categories. Quality specialists also indicated significantly more support for the quality programme from their direct bosses and colleagues than did marketing or HRM. They also had significantly higher scores than a number of other categories for the benefits of the TQM approach. Some unexpected results emerged. For example, those in HRM rated the TQM approach significantly more useful than did respondents from the production/operations/purchasing group.

Analysis of the qualitative data generally supported the quantitative analysis. There were many criticisms of the way in which quality programmes were implemented and also many suggestions for improvements in the implementation process. However, there were no significant indications of a belief that the quality approach to change was more applicable to manufacturing than service, or that involvement in quality-related activities was more applicable to any particular job role. There were a number of comments from middle managers across organisations emphasising the importance of involving all employees in quality-related activities regardless of job role.

These results of comparisons between job categories suggests that the quality specialist, who has a particular vested interest in quality and the quality programme, generally holds more positive views on the benefits of the TQM approach and the benefits of quality programmes to their organisations. However, the results suggest that these distinctions do not exist between other job functions and between those who consider they hold a line or staff position.

Therefore the results related to job categories support H3, but do not support H2.

Consistency of beliefs about quality within organisations

We expected some variability in the beliefs and attitudes between respondents within organisations. However, we were surprised at the lack of consistency on something as basic as respondents' beliefs about the approach to quality used in their organisations. We asked respondents to identify the approach to quality used in their quality programmes. The results for 15 of the organisations with larger response rates are shown in Table II. For example, these results show for organisation 1 that six respondents, including one quality specialist, believed the approach is based on ISO 9000, ten believed a TQM approach is used, 47 including three quality specialists believed there was a combined ISO 9000 and TQM approach and four respondents were not sure what approach was used.

It can be seen that in not one of the 15 organisations do respondents have a consistent view. In some organisations there is much more of a consensus than in others. For example, in organisation 2, 25 of the 26 respondents agree on the approach to quality in the organisation. Organisation 2 was identified as having the most developed quality culture of those participating in the research. In contrast there are considerable differences in the opinions of respondents from organisation 12 as to the nature of their quality programme. More surprising is that in some cases there is a difference of opinion between quality specialists in the same organisation as to the nature of their quality programme, i.e. organisations 1, 7, 9 and 11 in Table II.

Middle management resistance to change

This issue was a sensitive one and the senior managers who were interviewed were generally reluctant to discuss it in much detail. There was some evidence of past resistance to quality management initiatives in a small number of the organisations. The situation in participating organisations at the time data were collected suggests that there is generally little overall resistance to the implementation of quality programmes.

Table II Differences in beliefs about type of quality programme – by organisation

Organisation	Belief that an ISO 9000 approach to quality is used	Belief that a TQM approach to quality is used	Belief that a combined ISO 9000 and TQM approach to quality is used	Not sure of the approach to quality used in the organisation
1. Service	5 + 1 ^a	10	44 + 3	4
2. Management	1		21 + 4	
3. Service	6	5	13 + 1	1
4. Service		17	2	2
5. Service		14 + 1	5	3 + 1
6. Service		19 + 2	6	10
7. Service	7 + 1	14	9 + 1	2
8. Service		2	12 + 3	
9. Management	4 + 1		12 + 1	
10. Management	4	1	24 + 2	1
11. Service	3 + 1	1	23 + 1	
12. Service	5	1	13	1
15. Management	3	7	7 + 4	
20. Service	2	78 + 2	9	9
22. Service	2	4	26	

Note: ^a Number of quality specialist respondents in italics, number of respondents in all other job categories in romans

However, some strong negative feelings were expressed about the ISO 9000 approach and there were suggestions from some individuals that they were avoiding involvement with this approach.

Discussion of results

Importance of middle management

It was evident that the notion of middle management still has currency in practice. Contact people assisting the researchers had no difficulty in identifying who were middle managers in their organisations. It was quite clear that the concept of the middle manager still has considerable currency. It was also evident, particularly from the interviews carried out with senior managers, that the involvement of the middle management group in quality programmes is important for programme success. The results support the positive view of middle management work discussed above.

Beliefs about the effectiveness of TQM

An important finding of this research was that middle managers had a strong belief that the TQM approach to managing was effective. Both quantitative and qualitative results strongly supported this view. Some questionnaire comments did express negative views about TQM but there were generally

few. It should be stressed that the beliefs about how TQM was applied in organisations varied considerably across participating organisations. Given that participating organisations were selected because they had a quality programme, the high level of support for the TQM approach is surprising for the following reasons:

- There were major differences between the types of organisations participating. The sample is drawn from a wide range of different types of organisations, and organisations were at different stages of TQM implementation.
- Consistent scores across organisations were surprising as there were significant differences on a large number of other variables.
- As discussed above, there is a concern in the academic literature that TQM lacks a credible theoretical underpinning (Dean and Bowen, 1994).

A number of more general reasons why TQM might be declining in popularity can also be identified. A labour market view of TQM put forward by Knights and McCabe (1999) suggests that TQM can be used by management to increase control over employees. There was scant evidence of this view from middle managers participating in the research. There are recent change management approaches that could be seen as

competing with TQM, for example, business process re-engineering (Rigby, 2001). It is also evident both from the literature (Mann and Kehoe, 1995) and from this research that TQM is difficult to implement. A strong general belief among middle managers in an organisation that TQM is an effective way to manage can be seen as a force for unity with respect to the organisation's quality programme.

Quality specialists

It was argued that quality specialists who had a vested interest in their organisations' quality programmes and activities would have significantly more positive beliefs and attitudes toward quality and their quality programmes. The results generally support this hypothesis. Quality specialists rated the effectiveness of the TQM approach to running a business significantly higher than other groups that they were compared with. They also had significantly more positive beliefs on a number of variables related to the effectiveness of the quality programmes in their own organisations. A lesson for practice can be drawn from this result. It seems important that quality specialists should take into account when formulating quality strategy and running quality-related activities that middle managers in their organisations who are not quality specialists may not share their own high level of enthusiasm for these activities.

Relationship between job type and beliefs/attitudes towards quality

With the exception of quality specialists, middle managers' job roles did not seem to be related to their belief and attitudes to TQM or quality programmes in their organisations. This is an important finding. One possible reason for this result is that quality programmes using the TQM approach have been in use by major Australian non-manufacturing organisations for at least ten years. Also both TQM and ISO 9000 have widespread use in both manufacturing and service organisations. A number of Australian quality organisations such as the Australian Quality Council have been very actively encouraging interest in the TQM approach for some years. It is possible therefore that activities such as these together with the widespread use of quality programmes in all

kinds of organisations have diminished the strong association of quality with operations and manufacturing in the minds of middle managers. Therefore this result probably reflects the widespread publicising and use of quality programmes in all sectors and types of organisation, not just manufacturing. This result also suggests that at least in the minds of middle managers participating in this research the shackles of quality's past have been broken. Quality has many meanings and it was evident from the research that considerable confusion still exists regarding the differences between various approaches to quality. This is probably a factor that contributes to the divergence of opinions within organisations as to the type of quality programme they have (see Table II).

Issues relating to resistance by middle managers

The evidence of middle management resistance toward the implementation of their quality programmes in this research is rather inconclusive. The issue seemed to be quite a sensitive one. In two of the organisations visited interviews revealed that senior management had been aware of resistance by middle managers to quality programme implementation. The way in which organisation 1 dealt with the problem of middle management resistance was by empowering middle managers to decide whether or not the programme would continue. This approach shows the very high level of importance attached to their support by senior management. If middle managers were not going to be supportive then it was better to scrap the programme. The resistance by middle managers in this case would seem to have been fairly widespread. It was evident that top management had not adequately considered middle managers' needs in terms of the quality programme. This case illuminates an important point about the notion of resistance. The word itself holds negative connotations – that resistance is bad. But, as pointed out by Blumentritt and Hardie (2000), providing commentary and a different view, especially about complex issues like change programmes, can be an extremely healthy thing for an organisation to do.

More passive and isolated resistance to a quality programme, for example, avoiding

being actively involved, is probably more difficult to identify and perhaps therefore more difficult to ameliorate. An analysis of reasons for being or not being actively involved in the quality programme revealed that overall 36 per cent of respondents believed they were not actively involved. The range across organisations was from 58 per cent to 0 per cent (all respondents actively involved). In one organisation which had a well established quality programme the quality manager was surprised when told that only 43 per cent of respondents considered themselves to be actively involved in the quality programme. His belief was that all employees were involved. These results on active involvement may indicate that some middle managers pay lip-service towards the quality programme, even in organisations with an established quality pedigree. An alternative interpretation is that the meaning of active programme involvement is rather a grey area and open to alternative interpretations. For example, the activities of a quality programme may be so integrated into everyday work life that it is not perceived as a separate programme. Alternatively, the organisation may wish to encourage some differentiation.

The data did not suggest strong underlying resistance by middle managers to quality programmes in their organisations. The results suggest that overall middle managers view their quality programmes in a more benign way than might be expected from some of the earlier literature, for example, on the introduction of quality circles (Brennan, 1991). A possible reason for this is that most of the participating organisations had already been through a period of downsizing and most that were still downsizing were doing this through a policy of natural attrition. So middle managers in these organisations were generally not in danger of being made redundant. It is also clear from the *Australian Workplace Survey* (Morehead *et al.*, 1997) that changes in work practices such as the introduction of various kinds of group working and organisational restructuring such as delayering are now widely in place in Australian industry, at least in larger organisations. The strong overall support given by middle managers to the TQM approach to running an

organisation and discussed above is also a likely reason. Thus in general individuals did not seem to perceive their quality programmes as a danger to their security of employment. Their organisation's policies seemed to be supportive of their tenure and devolution of responsibility to lower level employees and restructuring had in many cases already occurred or were seen as inevitable. Generally, respondents valued possible programme outcomes positively and considered negative programme outcomes relatively unlikely

Conclusion

Care should be taken in generalising the results of the research, given the limitations on organisation and middle manager sample selection. Nevertheless, the results are based on a relatively large overall sample of middle managers. The research supports the notion that the effective involvement of the middle management group is important for the success of a quality programme. The general belief among middle managers that TQM is an effective change management model can be a unifying factor among middle managers in an organisation implementing a quality programme. At least there is likely to be general agreement that a TQM approach is effective. The historical development of quality in manufacturing industry does not seem to be a significant factor in forming middle managers' beliefs and attitudes towards TQM or quality programmes in their organisations. The ideas of TQM seemed to be equally accepted in service organisations and in manufacturing organisations. Significant differences in middle managers' beliefs and attitudes regarding the quality approach to organisational change seemed to be more related to organisational context rather than the type of organisation or the role of the middle manager. The positive view of the role of middle management in organisations was supported by the findings. Middle managers were even relatively comfortable with the idea of devolution of some of their responsibility to lower level employees. The notion of active quality programme involvement warrants further investigation. The findings suggest it is important that organisations should involve middle

managers in quality interventions at an early stage. Also, that they should listen to critical comment by middle management on complex issues such as a quality intervention. Their views, based on an intimate knowledge of processes, can be highly constructive.

References

- Ajzen, I. (1988), *Attitudes, Personality and Behaviour*, Open University Press, Milton Keynes.
- Bardoel, E.A. and Sohal, A.S. (1999), "The role of culture audit in implementing quality improvement programs", *International Journal of Quality & Reliability Management*, Vol. 16 No. 3, pp. 263-76.
- Blumentritt, R. and Hardie, N. (2000), "The role of middle managers in the knowledge-focused service organization", *Journal of Business Strategies*, Vol. 17 No. 1, pp. 37-48.
- Brennan, M. (1991), "Mismanagement and quality circles: how middle managers influence direct participation", *Employee Relations*, Vol. 13 No. 5, pp. 22-32.
- Dean, J.W. and Bowen, D.E. (1994), "Management theory and total quality: improving research and practice through theory development", *Academy of Management Review*, Vol. 19 No. 3, pp. 392-418.
- Dopson, S. and Stewart, R. (1993), "Information technology, organizational restructuring and the future of middle management", *New Technology, Work and Employment*, Vol. 8 No. 1, pp. 10-20.
- Dopson, S. and Stewart, R. (1994), "What is happening to middle managers in Europe? Problems and promises associated with their changing roles and responsibilities", *The International Executive*, Vol. 36 No. 1, pp. 55-78.
- Fenton-O'Creevy, M. (1998), "Employee involvement and the middle manager: evidence from a survey of organizations", *Journal of Organizational Behaviour*, Vol. 19, pp. 67-84.
- Floyd, S.W. and Wooldridge, B. (1990), "The strategic process, middle management involvement, and organizational performance", *Strategic Management Journal*, Vol. 11, pp. 231-41.
- Garvin, D.A. (1988), *Managing Quality*, The Free Press, New York, NY.
- Hilmer, F.G. and Donaldson, L. (1996), *Management Redeemed: Debunking the Fads That Undermine Corporate Performance*, The Free Press, Sydney.
- Jones, A.P., Glaman, J.M. and Johnson, D.S. (1993), "Perceptions of a quality program and relationships with work perceptions and job attitudes", *Psychological Reports*, No. 72, pp. 619-24.
- Knights, D. and McCabe, D. (1999), "Are there no limits to authority? TQM and organizational power", *Organization Studies*, Vol. 20 No. 2, pp. 197-224.
- Lovelock, C.H. (1992), *Managing Services: Marketing, Operations and Human Resources*, Prentice-Hall, Englewood Cliffs, NJ.
- Mann, R. and Kehoe, D. (1995), "Factors affecting the implementation and success of TQM", *International Journal of Quality & Reliability Management*, Vol. 12 No. 1, pp. 11-23.
- Morehead, A., Steele, M., Alexander, M., Stephen, K. and Duffin, L. (1997), *Changes at Work: The 1995 Australian Workplace Industrial Relations Survey*, Addison-Wesley/Longmans Australia Pty Ltd, South Melbourne.
- Nonaka, I. and Takeuchi, H. (1995), *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Oxford University Press, New York, NY.
- Palmer, I. and Dunford, R. (1999), "Beyond rhetoric? A systematic investigation of new organization form practices", in Dowling, P.J., Hanson, D., Garnham, J. and Lehman, K. (Eds), *ANZAM 99 Conference Proceedings* (CD-ROM), ANZAM C/Macquarie Graduate School of Management, Macquarie University.
- Piderit, S.K. (2000), "Rethinking resistance and recognising ambivalence: a multidimensional view of attitudes towards organizational change", *Academy of Management Review*, Vol. 25 No. 4, pp. 783-94.
- Rigby, D. (2001) "Management tools and techniques: a survey", *California Management Review*, Vol. 43 No. 2, pp. 139-60.
- Scase, R. and Goffee, R. (1989), *Reluctant Managers, Their Work and Lifestyles*, Unwin Hyman, London.
- Sohal, A.S., Samson, D. and Ramsay, L. (1998), "Requirements for successful implementation of total quality management", *International Journal of Technology Management*, Vol. 16 Nos. 4, 5 and 6, pp. 505-19.
- Stewart, R. (1967), *Managers and Their Jobs*, Macmillan, London.
- Terziovski, M., Sohal, A. and Moss, S. (1999), "Longitudinal analysis of quality management practices in Australian organisations", *Total Quality Management*, Vol. 10 No. 6, pp. 915-26.
- Thomas, R. and Dunkerly, D. (1999), "Careering downwards? Middle managers' experiences in the downsized organization", *British Journal of Management*, Vol. 10 No. 2, pp. 157-69.
- Wilcox King, A., Fowler, S.W. and Zeithaml, C.P. (2001), "Managing organizational competencies for competitive advantage: the middle management edge", *Academy of Management Executive*, Vol. 15 No. 2, pp. 95-106.
- Wilkinson, A. and Witcher, B. (1991), "Fitness for use? Barriers to full TQM in the UK", paper presented British Academy of Management Fifth Annual Conference, University of Bath, September.
- Zeithaml, V.A., Parasuraman, A. and Berry, L.L. (1990), *Delivering Quality Service: Balancing Customer Perceptions and Expectations*, The Free Press, New York, NY.

Perspectives

Service quality in call centres: implications for customer loyalty

Alison M. Dean

The author

Alison M. Dean is Senior Lecturer in Management, Department of Management, Monash University, Churchill, Australia.

Keywords

Service quality, Customer orientation, Call centres, Customer loyalty

Abstract

Studies on call centres suggest that there is a focus on efficiency at the expense of effectiveness, where effectiveness is indicated by characteristics such as customer orientation, service priorities and quality. It therefore appears that customers will expect and experience low levels of service quality from call centres, with possible implications for their loyalty to the providing organisation. These issues are the focus of this study. A mail survey was conducted of recent clients of two call centres in Australia. The respondents were individual consumers in an insurance company ($n = 284$, 14 per cent) or business customers of a bank ($n = 325$, 16 per cent). Key findings are similar for the two samples. Both perceptions of quality and customer orientation of the call centre were related to loyalty to the providing organisation, and perceptions of quality partially mediated the customer orientation to loyalty relationship. The discussion includes managerial implications and potential future research.

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Managing Service Quality
Volume 12 · Number 6 · 2002 · pp. 414–423
© MCB UP Limited · ISSN 0960-4529
DOI 10.1108/09604520210451894

Introduction

There has been consistent recent growth in call centre services world-wide, with the call centre of the present predicted to evolve into the customer access centre of the future, providing a new competitive basis for many organisations (Anton, 2000; Feinberg *et al.*, 2000). However, descriptions of the call centre environment provide cause for considerable concern. In particular, an emphasis on control and efficiency is reported to be at the expense of employee stress and turnover, customer orientation and service priorities (Knights and McCabe, 1998; Taylor and Bain, 1999; Wallace *et al.*, 2000). Such findings from call centre studies intuitively suggest that it is difficult for front-line staff to be customer-oriented, and that customers would come to expect and experience low levels of service quality. However, there is little guidance in the literature about customers' perceptions of call centre quality and customer orientation, and their subsequent loyalty to the providing organisation. Further, the service quality to service loyalty area is underdeveloped, and its nature appears to vary across industries (Bloemer *et al.*, 1999; Cronin *et al.*, 2000; Zeithaml, 2000). This paper, therefore, reports on a study that explores the contribution of service quality and customer orientation of call centres to customer loyalty to the providing organisation.

Literature review

Definition of a call centre

In this study, the definition of call centres provided by Taylor and Bain (1999) has been adopted. The definition has three essential elements. First, the call centre is a dedicated operation with employees focused entirely on the customer service function. Second, those employees are using telephones and computers simultaneously and, third, the calls are processed and controlled by an automatic distribution system. This definition can be applied to a call centre where relatively low skilled and low paid service workers are responding to customer requests within a tightly controlled, heavily monitored and time-restricted system. In contrast, the definition can also apply to a call centre where highly skilled, highly paid knowledge workers



respond to calls from business customers about online service arrangements. Despite the differences, both these types of call centres are fundamentally characterised by the integration of telephone and computer technologies, and one of each forms the basis of the data for the study.

The call centre environment

In managing call centres, organisations are attempting to meet both budgetary and service priorities, often leading to conflicts such as “hard versus soft goals”, “intangible versus tangible outcomes” and “Taylorism versus tailormaking” (Gilmore and Moreland, 2000; Korczynski, 2001). The debate is sometimes seen in terms of a service quality-productivity nexus (Singh, 2000; Parasuraman, 2002) and reflects the recurrent theme in services management of challenges associated with balancing effective resource utilisation against customer satisfaction (Carson *et al.*, 1998; Wild, 1995). In call centres, most studies suggest that organisational control and efficiency are the dominating force, perhaps at the expense of employee wellbeing and turnover (Gilmore, 2001; Richardson and Marshall, 1999; Taylor and Bain, 1999; Wallace *et al.*, 2000).

Taking a customer perspective, the empirical evidence from studies in call centres is limited and inconclusive. For example, Feinberg *et al.* (2000) measured caller satisfaction and its links to system factors (such as response times, problem resolution, and abandonment rate) and staff practices and turnover, but did not include service consultant behaviours. Bennington *et al.* (2000) also explored customer satisfaction but considered comparisons with in-office provision of service, and the general attributes important to customers. Gilmore (2001) and Gilmore and Moreland (2000) explored service quality in an organisation with four call centres, and essentially found a production-line approach with little concern for intangible service delivery issues. Gilmore also found that service consultants felt restrained and frustrated in their attempts to answer customer queries effectively and efficiently, suggesting that customer orientation is not an organisational priority, nor is it likely to be achieved.

Service quality

In this study, perceived service quality is defined as:

... the consumer's judgment about an entity's excellence or superiority ... it is a form of attitude ... and results from a comparison of expectations with perceptions of performance (Parasuraman *et al.*, 1988, p. 14).

The conceptualisation and measurement of service quality have generated a great deal of ongoing discussion in the literature, of interest because literature from services marketing, services management and organisational psychology emphasises the importance of service quality in attracting, satisfying and retaining customers (Heskett *et al.*, 1997; Schneider *et al.*, 1998; Storbacka *et al.*, 1994). This literature provides evidence that service quality has an integrating role between the organisation and its customers. This integrating role is due to service quality being the outcome of internal organisational policies and practices, and fundamental in the service sequence that leads to customer value, satisfaction and loyalty (Cronin *et al.*, 2000; Heskett *et al.*, 1997; Storbacka *et al.*, 1994; Zeithaml *et al.*, 1996).

There are few reported studies on service quality in call centres and no reported studies that specifically explore the link between service quality and customer loyalty. The studies that have been conducted highlight some key areas that need to be considered. Feinberg *et al.* (2000) found that the operational factor in call centres that was most significantly related to caller satisfaction was the percentage of calls closed on first contact. This reinforces the effect that achieving an outcome can have on customer responses, a finding previously recognised in other industries (Powpaka, 1996). In contrast with Feinberg *et al.* (2000), Burgers *et al.* (2000) explored customer expectations of service consultants and subsequently developed a scale for the person-to-person component of call centre quality. Another important issue that emerges from the literature in relation to customers' attitudes to call centre operations is response times, total service time and queuing systems (Davis and Heineke, 1998; Gilmore and Moreland, 2000).

Customer loyalty

Loyalty encompasses a non-random behavioural response that results from evaluation processes that lead to commitment (Bloemer and Kasper, 1995). In this study, loyalty is to a service provider and is therefore service loyalty, rather than brand loyalty, which has been developed in relation to goods. Service loyalty is operationalised as an attitudinal concept, and it includes word-of-mouth communication and intentions to remain a customer (Zeithaml *et al.*, 1996). Unlike brand loyalty, service loyalty is under-represented in the literature and is an area of current interest (Bloemer *et al.*, 1999; Javalgi and Moberg, 1997).

Customer loyalty is acknowledged as an important indicator of the likely success of a business (Butcher *et al.*, 2001; Oliver, 1999; Reichheld and Sasser, 1990). As noted in the previous section, there is evidence to support a link between service quality and/or customer satisfaction to customer loyalty (see, for example, Cronin *et al.*, 2000; Bloemer *et al.*, 1999; Parasuraman and Grewal, 2000; Zeithaml *et al.*, 1996). More specifically, direct and significant paths have been demonstrated between service quality, service encounter satisfaction and customer loyalty (Butcher *et al.*, 2001). Similarly, customer orientation has been found to be related to customer service perceptions and outcome behaviors (Brady and Cronin, 2001).

Despite findings such as the above, the precise loyalty implications of service quality are still unresolved and they vary across industries (Bloemer *et al.*, 1999; Cronin *et al.*, 2000). Additionally, there is little evidence that the theory has been tested in call centres. An exception is the study by de Ruyter and Wetzels (2000), who tested the impact of employee listening behaviors on customers' satisfaction and trust, using a sample from the mobile telecommunications industry. de Ruyter and Wetzels found that both customer satisfaction and trust were significantly related to the customers' intention to call again, suggesting that customers' responses to service encounters lead to dimensions of loyalty. In view of the importance of customer loyalty to organisations and the unique nature of call centres, the overall question guiding this research is whether customers' perceptions of service quality of the call centre are related to their loyalty to the providing organisation. Given the comprehensive

literature that supports such a link in other industries, *H1* suggests that there will be a positive relationship.

Customer orientation

Customer orientation is a major component of service climate where service climate is defined as:

... employee perceptions of the practices, procedures, and behaviors that get rewarded, supported, and expected with regard to customer service and customer service quality (Schneider *et al.*, 1998, p. 151).

In terms of the practices related to service climate, Schneider *et al.* (1998) suggested three areas: customer orientation, managerial practices, and customer feedback. Managerial practices can only be assessed by employees but the customer orientation and feedback elements of service climate can be assessed by customers and hence are pursued here. Customer orientation is the degree to which an organisation emphasises meeting customer needs and expectations for service quality, while customer feedback involves the solicitation and use of feedback from customers regarding service quality. In this study, customer orientation incorporates both these elements, that is, it includes a commitment to customer needs, and gathering and using customer feedback. Other studies, predominantly in banks, have demonstrated a link between the elements of service climate (as perceived by employees) and customer perceptions of service quality (Lux *et al.*, 1996; Schneider *et al.*, 1998). Therefore, it appears that, if customers perceive the customer orientation and feedback components of service climate to be at a high level, then they will indicate high levels of service quality.

Customer orientation of the company also appears to be linked to customer loyalty. Marketing scholars consider customer orientation to be one of three dimensions of market orientation (Kohli *et al.*, 1993; Lukas and Ferrell, 2000). A market orientation results in a customer-driven company, which is rewarded with customer loyalty and retention, and consequently superior performance (Narver and Slater, 1990). Schneider *et al.* (1998) state that much of their construct of service climate maps well on to the construct of market orientation, suggesting that the common element, customer orientation, is likely to be associated

with both service quality and customer loyalty. Questions that arise seek answers to whether customer orientation and service quality directly affect customer loyalty, their relative contribution, and whether they behave independently.

In view of the literature that has been briefly reviewed above, the following hypotheses were formulated to guide the study:

- H1.* Perceived service quality of the call centre is positively related to customer loyalty to the organisation.
- H2.* Customer orientation of the call centre is positively related to customer loyalty to the organisation.
- H3.* Perceived service quality of the call centre mediates the link between customer orientation of the call centre and customer loyalty to the organisation.

Method

The nature of the two call centres

The "consumer" call centre employs 400 front-line staff and is part of a large Australian insurance organisation. Its service consultants receive calls directly from consumers. They provide a 24-hour service and take about 5 million calls per year. In the centre, the gender ratio of male to female staff is 40:60 and annual turnover is 7 per cent (excluding those staff who move to other internal positions). Employees are expected to complete calls within an average handling time of three minutes, which includes waiting, processing and any post-call work. The front-line staff can be considered to be typical "service" workers.

The "business" call centre is a smaller operation, also based in Australia, and is essentially a help-desk for a large bank's online service facility. Its customers are businesses which have paid a fee (A\$80 per month) for call centre support and 500 free transactions (for example, enquiries, payments, data exchanges, statements, payrolls). The staff gender ratio male: female is 80:20 and average turnover is usually 5 per cent (but was 12 per cent in 2000). Most employees (88 per cent) are in the 18 to 24 years age bracket and all have university-level qualifications in information technology. In this call centre, employees are expected to provide excellent service to business

consumers who may not be technology-literate, and so they do not have a time limit on their calls. The average handling time is about eight minutes, which includes customer interaction and after-call work (predominantly recording the reasons for the call and solutions that were proposed).

In summary, the two call centres satisfy the definition of Taylor and Bain (1999) adopted in the study but they represent quite different scenarios for both organisations and their client groups. The call centre for the end consumers of insurance is a service that accompanies the insurance product. Consumers do not pay extra for the service and it operates at considerable cost to the providing organisation. In contrast, the business call centre attracts a fee and is in itself a service "product". From the organisation's perspective, the business call centre is a potential revenue source and its managers are cognisant of both cost and investment factors.

Procedure

A customer questionnaire was developed and piloted, using scales for perceived service quality, customer orientation and loyalty, which were based on the relevant literature. As noted above, data were collected in Australia, from a large insurance company, and a large bank. In each case, the customer sample was accessed by mail, with the organisations having provided names and addresses of a random sample of 2,000 customers. Despite the anticipated problems with the low response rates of mail surveys, the mail survey methodology was adopted. A likely alternative, the telephone survey, was considered to be an inappropriate option for two reasons. First, it may have led to biased results because customers' responses to the telephony environment were being investigated and, second, organisations were not prepared to disclose names and telephone numbers of their clients, for confidentiality reasons.

Measures

The customer survey contained a number of scales: customer orientation, perceptions of service quality, and customer loyalty. Demographic data and open-ended questions were also included.

The customer orientation scale was adapted from the scales of Narver and Slater (1990)

and Schneider *et al.* (1998). It consisted of nine items each with a seven-point Likert response scale, anchored by “strongly disagree” and “strongly agree”. Typical items read: “The call centre at XYZ has the main objective of keeping me satisfied”; “The XYZ organisation encourages informal feedback regarding its services”. In an exploratory factor analysis of the nine items comprising the scale, principal component analysis extracted two factors, with an identical factor structure for both samples. The factors explained a total variance of 73 per cent (consumer) and 77 per cent (business). The reliabilities of the scales representing factors 1 and 2 were: 0.92 and 0.88 (consumer), and 0.92 and 0.89 (business), adequate for group research (Nunnally and Bernstein, 1994).

Perceptions of service quality were measured by customising the scale developed by Burgers *et al.* (2000). This scale was used in preference to SERVQUAL (Parasuraman *et al.*, 1988) because it specifically addressed expectations of call centre representatives. The scale consisted of 16 items representing the four factors shown by front-line service staff:

- (1) adaptiveness;
- (2) assurance;
- (3) empathy; and
- (4) authority.

To maintain a reasonable length, the number of these items was reduced to eight, and two extra items added to cover achievement of the core purpose of the call, and time spent in a queue. In summary, the scale consisted of ten items, with seven-point Likert responses anchored by “very low quality” and “very high quality”. A typical item read “My assessment of the XYZ call centre in relation to . . . the service consultant taking enough time and not rushing me is . . .”.

While it is generally accepted in the services literature that customers use expectations when evaluating service quality, researchers agree that the most psychometrically rigorous means of measuring service quality is to use scores for perceptions of quality only (Cronin *et al.*, 2000; Dabholkar *et al.*, 2000). Hence, expectations were not included in the analysis. The service quality scale produced one factor for both samples, explaining 72 per cent (consumer) and 69 per cent (business) of the variance. The reliabilities of these scales were 0.95 for the consumer

sample and 0.94 for the business sample, and were more than adequate for group research (Nunnally and Bernstein, 1994).

The definitions of service quality and customer-perceived customer orientation used in this study reflect the similar nature of the two constructs. Factor analysis was used to ensure discriminant validity between them. When the service quality and customer orientation scales were factor-analysed together three distinct factors emerged. The first of these included all the service quality items, while the second two factors represented customer orientation, as discussed above.

The customer loyalty scale, developed and refined by Zeithaml *et al.* (1996), and confirmed in subsequent studies (Bloemer *et al.*, 1999), was adopted unchanged. This scale consisted of five items, measured with seven-point Likert responses, and anchored by “strongly disagree” and “strongly agree”. A typical item read: “I am likely to say positive things about XYZ company to other people”. In the study the loyalty scale produced one factor for both samples, explaining 86 per cent (consumer) and 85 per cent (business) of the variance. The reliability of the scale was 0.96 for both samples, again quite adequate for group research (Nunnally and Bernstein, 1994).

Respondents

The customers of the insurance company ($n = 284$, 14 per cent) were individual consumers, 49 per cent males, and 51 per cent females, with average age 44.8 years. The majority of these respondents were calling for information (55 per cent) or to make a payment (32 per cent). In contrast, the sample from the bank ($n = 325$, 16 per cent) were business customers who use online services and who rang the call centre to get assistance (61 per cent) or to make a complaint (20 per cent). The business sample was 32 per cent males, and 68 per cent females, with average age 42.0 years.

Results and discussion

Testing of H1 and H2

The first two hypotheses tested whether perceived service quality and customer orientation of the call centre were related to customer loyalty to the organisation. To

commence the investigation, Pearson correlation coefficients between the variables were obtained (Table I). As indicated in the Measures section, customer orientation split into two factors. The first of these related to commitment to customers, understanding their needs, creating value for them and having the main objective of customer satisfaction. Items loading on the second factor related to organisational activity to support the delivery of service quality. These included monitoring satisfaction levels, attending to after-sales service, encouraging feedback and seeking evaluation of quality. These two factors are considered separately in the analyses.

The correlation coefficients show that all variables are highly associated and, as proposed in *H1* and *H2*, service quality and customer orientation of the call centre appear to be related to customer loyalty to the providing organisation. To pursue their relative contribution to loyalty (research question 3), a regression analysis was performed with loyalty as the dependent variable. The results are shown in Table II.

Data from Tables I and II support *H1* and *H2*. That is, perceived service quality of the call centres is positively related to customer loyalty to the organisation (*H1*). Similarly, customer orientation of the call centres is positively related to customer loyalty to the organisation (*H2*). Three interesting outcomes arise from the regression analyses summarised in Table II. First, the overall effect, shown by the Adj. R^2 values, is greater

for end consumers when compared to business customers. It is possible that the extra complexity introduced by the fees for the business customers may change their assessment of value and subsequently affect their loyalty (Heskett *et al.*, 1997). That is, for business customers, the service “product” may be subject to more influencing factors, which affect customers’ expectations and perceptions of quality, their interpretation of loyalty and their responses to the organisation.

The second outcome indicated by Table II is that service quality is a better predictor of loyalty than both customer orientation factors, for both samples. This result highlights the importance of actual outcomes for customers and the integrating role of service quality between the organisation and its customers. Finally, the second customer orientation factor, soliciting customer feedback, is not significant at the 95 per cent confidence level for the consumer sample. This result suggests that end consumers are very focused on having their needs met and are not so concerned with how the organisation might achieve this end. In contrast, for business customers, the two customer orientation factors appear to be equally important. That is, business customers want their needs met but they are also interested in providing input to ensure quality and improvement of after-sales service.

The high levels of association between variables shown in Table I indicate that there

Table I Correlation coefficients for variables

	Consumer sample			Business sample		
	CO1	CO2	SQ	CO1	CO2	SQ
Customer orientation – needs (CO1)	1.00			1.00		
Customer orientation – feedback (CO2)	0.66*	1.00		0.54*	1.00	
Service quality (SQ)	0.78*	0.68*	1.00	0.60*	0.44*	1.00
Loyalty (Loy)	0.72*	0.58*	0.77*	0.56*	0.47*	0.63*

Note: * $p < 0.01$

Table II Regression analyses (dependent variable loyalty)

Predictors	Consumer sample				Business sample					
	Beta	t	Significance	t	VIF	Beta	t	Significance	t	VIF
Service quality	0.46	5.57	0.000	2.77		0.40	6.56	0.000	1.59	
Customer orientation – needs	0.29	3.34	0.001	3.05		0.23	3.47	0.001	1.87	
Customer orientation – feedback	0.14	1.79	0.076	2.34		0.21	3.48	0.001	1.51	
Final statistics	Adj. $R^2 = 0.65$ $F(3,142) = 89.9$, significance 0.000					Adj. $R^2 = 0.49$ $F(3,215) = 70.2$, significance 0.000				

may be a problem with multicollinearity and it could therefore be difficult to separate out the effects due to the different independent variables (Wampold and Freund, 1987). For this reason, the variance inflation factor (VIF) values have been included in Table II. For the consumer sample, the VIF values and associated tolerance levels (0.33 to 0.43) indicate some multicollinearity and the results of the linear regression, with respect to the precise contribution of variables, need to be interpreted with caution. The VIF values for the business sample are lower and the tolerance levels higher (0.54 to 0.66), indicating that multicollinearity is not likely to be a problem in this case (Norusis, 1993).

Testing of H3

The third hypothesis was concerned with further exploring the effects due to customer orientation and service quality. In particular, as customer orientation relates to the organisational activity that precedes service delivery, and is expected to demonstrate a link to service quality, it has been hypothesised that service quality will mediate the effect of customer orientation on loyalty. To demonstrate mediation, it is necessary to show that customer orientation is related to service quality, customer orientation is related to loyalty, and then compare the effects when customer orientation and service quality are both included in the regression with loyalty (Baron and Kenny, 1986). The necessary data are shown in Tables II, III and IV. In Tables III and IV, VIF values have again been included, and they indicate that

multicollinearity is unlikely to be a major problem (Norusis, 1993).

Table III shows that both customer orientation factors are predictors of service quality, with a stronger relationship demonstrated by the factor that relates to customer needs (CO1). Similarly, the data in Table IV show that both customer orientation factors are predictors of loyalty, again with a stronger relationship for the first factor. Thus the first two relationships required to demonstrate mediation are fulfilled. When the customer orientation factors and service quality are all included in the regression (Table II), the beta values for the customer orientation factors decrease for both samples and service quality is the strongest predictor. Therefore customer orientation and service quality do not act independently on loyalty and the third hypothesis (that service quality is a mediator between customer orientation and loyalty) is supported. However, as the customer orientation factors still demonstrate a separate relationship with loyalty, the mediation is partial. The greatest change in beta values occurs for CO1, suggesting that service quality transmits much of this factor, with a small independent relationship demonstrated between CO2 and loyalty.

Discussion and managerial implications

The major finding from this study is that both service quality and perceived customer orientation of call centres affect customer loyalty to the providing organisation. This

Table III Regression analyses (dependent variable service quality)

Predictors	Consumer sample				Business sample					
	Beta	t	Significance	t	VIF	Beta	t	Significance	t	VIF
Customer orientation – needs (CO1)	0.58	7.76	0.000	2.13	0.51	7.78	0.000	1.46		
Customer orientation – feedback (CO2)	0.28	3.72	0.000	2.13	0.16	2.46	0.015	1.46		
Final statistics	Adj. $R^2 = 0.63$				Adj. $R^2 = 0.37$					
	$F(2,142) = 123.6$, sig. 0.000				$F(2,217) = 64.3$, sig. 0.000					

Table IV Regression analyses (dependent variable loyalty)

Predictors	Consumer sample				Business sample					
	Beta	t	Significance	t	VIF	Beta	t	Significance	t	VIF
Customer orientation – needs (CO1)	0.60	10.21	0.000	1.87	1.87	0.44	7.98	0.000	1.41	1.41
Customer orientation – feedback (CO2)	0.18	2.96	0.003	1.87	1.87	0.24	4.31	0.000	1.41	1.41
Final statistics	Adj. $R^2 = 0.53$				Adj. $R^2 = 0.36$					
	$F(2,250) = 144.6$, sig. 0.000				$F(2,292) = 83.9$, sig. 0.000					

finding was consistent for a consumer call centre staffed by service workers and a business call centre staffed by knowledge workers. Given that call centres are the major customer interface in many organisations, their management is therefore worthy of significant investment. In particular, attention needs to be directed to the elements of service quality: customers achieving a desired outcome, ensuring a prompt response and appropriate service time, and training and managing service consultants so that they are knowledgeable, helpful and courteous.

Customer orientation exhibited two dimensions:

- (1) understanding and meeting customer needs; and
- (2) organisational activity related to soliciting and using customer feedback.

The findings show that the first dimension is largely transmitted to loyalty by service quality. Therefore, it appears that customers receive and interpret messages about the organisation based on what happens during the voice-to-voice encounter in a call centre. This reinforces the importance of the service quality interface and the commitment to customers which underlies it. One way that this commitment can be managed is through the concept of service climate within the organisation. Service climate establishes the employee practices and behaviours that are supported, expected and rewarded with respect to customer service quality, and it is reflected specifically by measures of customer orientation, customer feedback and managerial practices (Schneider *et al.*, 1998).

While much of the first customer orientation factor was transmitted through service quality, mediation was partial and both customer orientation factors also related independently to loyalty. The relationship for the second factor, soliciting and using customer feedback, was greater for the business sample than the consumer sample. This indicates that the loyalty of business customers is influenced by whether or not the organisation seeks feedback, encourages evaluation of its service, monitors customer satisfaction, and communicates changes to its customers. It is likely that the fee structure for business customers contributes to an expectation of ongoing involvement in the service delivery that affects them. Managers are able to address the areas noted above and, in doing so, have the opportunity to communicate

positively with their customers, link customer feedback to improvement initiatives in their call centres and wider organisations, and enhance customer retention.

Limitations

While there is a great deal of literature on the conceptualisation and measurement of service quality, the literature on service quality in call centres and its implications for customer loyalty is very limited. Hence, the theoretical basis of this study had to be predominantly derived from evidence gathered in other contexts and the conclusions of the study require further testing with other samples and in different call centres. Other limitations relate to the methodology and sample. Refined instruments for service quality in call centres and the customer view of customer orientation were not available from the literature and were developed for the study. These instruments require extension and further psychometric testing. Data were collected by mail-out surveys in cross-sectional field studies. While this design was considered most feasible for call centre operations, it has limitations in terms of a low response rate and common method variance (Mitchell, 1985). Further, although the samples appeared to be representative, non-response error may have caused some bias in the results because access to non-respondents was not possible.

Future research

This study suggests interesting avenues for future research. In particular, an important question is whether the effects that were found were due to the differences between consumer and business samples, the specific characteristics of the samples, or the nature of the call centres and managerial attitudes within them. More research with different organisations is necessary to explore these areas. There is also great scope for qualitative research both in call centres and with different types of call centre customers. Such research is needed to confirm current assumptions and identify new issues, which can then be tested and compared with knowledge developed from different situations. A particular question is concerned with the impact of fee

payment for call centre access in the business sample. Future studies might consider qualitative research to identify and clarify the meaning of different types of call centre products and services to both customers and organisations, especially in terms of customer expectations and organisational emphases. Quantitatively, incorporating a variable to determine value (a function of quality and cost) and establishing its relationship to customer loyalty would produce interesting data.

For the customer respondents in this study, service quality mediated the customer orientation to loyalty relationship, with indications of different effects for the two different types of customer orientation. Exploration of both specific effects and the interaction of the service quality and customer orientation constructs would help our understanding of the role of the elements of service climate in determining customer responses and likely behaviours. Finally, this study customised a scale for expectations of service consultants in call centres (Burgers *et al.*, 2000) to measure service quality. The scale does not appear to have been tested since its development and, as the number of items in the scale was reduced and another two items added, to cover the outcome of the call and queuing, scale development is needed. As noted above in relation to the theory, qualitative research to further explore the attributes that contribute to service quality in different call centres, in order to extend and refine the scale, and identify any new issues, would make a useful contribution to understanding the phenomenon and implications of call centres.

References

- Anton, J. (2000), "The past, present and future of customer access centers", *International Journal of Service Industry Management*, Vol. 11 No. 2, pp. 120-30.
- Baron, R.M. and Kenny, D.A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality and Social Psychology*, Vol. 51 No. 6, pp. 1173-82.
- Bennington, L., Cummane, J. and Conn, P. (2000), "Customer satisfaction and call centres: an Australian study", *International Journal of Service Industry Management*, Vol. 11 No. 2, pp. 162-73.
- Bloemer, J.M.M. and Kasper, H.D.P. (1995), "The complex relationship between consumer satisfaction and brand loyalty", *Journal of Economic Psychology*, Vol. 16, pp. 311-29.
- Bloemer, J.M.M., de Ruyter, K. and Wetzels, M. (1999), "Linking perceived service quality and service loyalty: a multi-dimensional perspective", *European Journal of Marketing*, Vol. 33 No. 11/12, pp. 1082-106.
- Brady, M.K. and Cronin, J.J.J. (2001), "Customer orientation effects on customer service perceptions and outcome behaviors", *Journal of Service Research*, Vol. 3 No. 3, pp. 241-51.
- Burgers, A., de Ruyter, K., Keen, C. and Streukens, S. (2000), "Customer expectation dimensions of voice-to-voice service encounters: a scale-development study", *International Journal of Service Industry Management*, Vol. 11 No. 2, pp. 142-61.
- Butcher, K., Sparks, B. and O'Callaghan, F. (2001), "Evaluative and relational influences on service loyalty", *International Journal of Service Industry Management*, Vol. 12 No. 4, pp. 310-27.
- Carson, D., Gilmore, A. and Maclaran, P. (1998), "Customer or profit focus? An alternative perspective", *Journal of Consumer Marketing Practice: Applied Marketing Science*, Vol. 4 No. 1, pp. 26-39.
- Cronin, J.J.J., Brady, M.K. and Hult, G.T.M. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments", *Journal of Retailing*, Vol. 76 No. 2, pp. 193-218.
- Dabholkar, P.A., Shepherd, C.D. and Thorpe, D.I. (2000), "A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study", *Journal of Retailing*, Vol. 76 No. 2, pp. 139-73.
- Davis, M.M. and Heineke, J. (1998), "How disconfirmation, perception and actual waiting times impact customer satisfaction", *International Journal of Service Industry Management*, Vol. 9 No. 1, pp. 64-73.
- de Ruyter, K. and Wetzels, M.G.M. (2000), "The impact of perceived listening behavior in voice-to-voice service encounters", *Journal of Service Research*, Vol. 2 No. 3, pp. 276-84.
- Feinberg, R.A., Kim, I.-S., Hokama, L., de Ruyter, K. and Keen, C. (2000), "Operational determinants of caller satisfaction in the call center", *International Journal of Service Industry Management*, Vol. 11 No. 2, pp. 131-41.
- Gilmore, A. (2001), "Call centre management: is service quality a priority?", *Managing Service Quality*, Vol. 11 No. 3, pp. 153-9.
- Gilmore, A. and Moreland, L. (2000), "Call centres: how can service quality be managed?", *Irish Marketing Review*, Vol. 13 No. 1, pp. 3-11.
- Heskett, J.L., Sasser, W.E. Jr and Schlesinger, L.A. (1997), *The Service Profit Chain: How Leading Companies Link Profit and Growth to Loyalty, Satisfaction and Value*, The Free Press, New York, NY.
- Javalgi, R.G. and Moberg, C.R. (1997), "Service loyalty: implications for service providers", *The Journal of Services Marketing*, Vol. 11 No. 3, pp. 165-79.
- Knights, D. and McCabe, D. (1998), "What happens when the phone goes wild? Staff, stress and spaces for escape in a BPR telephone banking regime", *Journal of Management Studies*, Vol. 35 No. 2, pp. 163-94.

- Kohli, A.K., Jaworski, B.J. and Kumar, A. (1993), "MARKOR: a measure of market orientation", *Journal of Marketing Research*, Vol. XXX, November, pp. 467-77.
- Korczynski, M. (2001), "The contradictions of service work: call centre as customer-oriented bureaucracy", in Sturdy, A., Grugulis, I. and Willmott, H. (Eds), *Customer Service Empowerment and Entrapment*, Palgrave, Basingstoke, pp. 79-101.
- Lukas, B.A. and Ferrell, O.C. (2000), "The effect of market orientation on product innovation", *Journal of the Academy of Marketing Science*, Vol. 28 No. 2, pp. 239-47.
- Lux, D.J., Jex, S.M. and Hansen, C.P. (1996), "Factors influencing employee perceptions of customer service climate", *Journal of Market-Focused Management*, Vol. 1 No. , pp. 65-86.
- Mitchell, T.R. (1985), "An evaluation of the validity of correlational research conducted in organizations", *Academy of Management Review*, Vol. 10 No. 2, pp. 192-205.
- Narver, J.C. and Slater, S.F. (1990), "The effect of a market orientation on business profitability", *Journal of Marketing*, Vol. 54, October, pp. 20-35.
- Norusis, M.J. (1993), *SPSS for Windows Professional Statistics Release 6.0*, SPSS Inc., Chicago, IL.
- Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, 3rd ed., McGraw-Hill, New York, NY.
- Oliver, R.L. (1999), "Whence customer loyalty?", *Journal of Marketing*, Vol. 63, Special Issue, pp. 33-44.
- Parasuraman, A. (2002), "Service quality and productivity: a synergistic perspective", *Managing Service Quality*, Vol. 12 No. 1, pp. 6-9.
- Parasuraman, A. and Grewal, D. (2000), "The impact of technology on the quality-value-loyalty chain: a research agenda", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 168-74.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64, Spring, pp. 12-40.
- Powpaka, S. (1996), "The role of outcome quality as a determinant of overall service quality in different categories of services industries: an empirical investigation", *The Journal of Services Marketing*, Vol. 10 No. 2, pp. 5-25.
- Reichheld, F.F. and Sasser, W.E. Jr (1990), "Zero defections: quality comes to services", *Harvard Business Review*, September/October, pp. 105-11.
- Richardson, R. and Marshall, J.N. (1999), "Teleservices, call centres and urban and regional development", *The Service Industries Journal*, Vol. 19 No. 1, pp. 96-116.
- Schneider, B., White, S.S. and Paul, M.C. (1998), "Linking service climate and customer perceptions of service quality: test of a causal model", *Journal of Applied Psychology*, Vol. 83 No. 2, pp. 150-63.
- Singh, J. (2000), "Performance productivity and quality of front-line employees in service organizations", *Journal of Marketing*, Vol. 64 No. 2, pp. 15-34.
- Storbacka, K., Strandvik, T. and Grönroos, C. (1994), "Managing customer relationships for profit: the dynamics of relationship quality", *International Journal of Service Industry Management*, Vol. 5 No. 5, pp. 21-38.
- Taylor, P. and Bain, P. (1999), "'An assembly line in the head': work and employee relations in the call centre", *Industrial Relations Journal*, Vol. 30 No. 2, pp. 101-17.
- Wallace, C.M., Eagleson, G. and Waldersee, R. (2000), "The sacrificial HR strategy in call centres", *International Journal of Service Industry Management*, Vol. 11 No. 2, pp. 174-84.
- Wampold, B.E. and Freund, R.D. (1987), "Use of multiple regression in counseling psychology research: a flexible data-analytic strategy", *Journal of Counseling Psychology*, Vol. 34 No. 4, pp. 372-82.
- Wild, R. (1995), *Essentials of Production and Operations Management* (4th ed.), Cassell, London.
- Zeithaml, V.A. (2000), "Service quality, profitability, and the economic worth of customers: what we know and what we need to learn", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 67-85.
- Zeithaml, V., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60 No. 2, pp. 31-46.

Perspectives

Customers' perspectives on service quality and relationship quality in retail encounters

*Amy Wong and
Amrik Sohal*

The authors

Amy Wong is Junior Honorary Research Associate and **Amrik Sohal** is Associate Dean (Research), both in the Department of Management, Faculty of Business and Economics, Monash University, East Caulfield, Australia.

Keywords

Service quality, Relationship marketing, Services marketing, Retail trade, Australia

Abstract

This paper examines the relationship between service quality and overall relationship quality on two levels of retail relationships (employee and company level). Responses were received from 1,261 shoppers in a retail chain departmental store setting in Victoria, Australia. Findings indicate that there is a positive and direct relationship between service quality and relationship quality. The results show that empathy is the most significant contributor to relationship quality at both the employee and company levels. Implications for the management of customer relationships are discussed, while limitations and future research directions are proposed.

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Managing Service Quality
Volume 12 · Number 6 · 2002 · pp. 424–433
© MCB UP Limited · ISSN 0960-4529
DOI 10.1108/09604520210451902

Introduction

In today's marketplace, many service companies need to mobilise their internal energies in order to meet the challenges of a changing environment. Some of these challenges include the intensifying global competition, the continuous increase in customer expectations and customers' subsequent demands as the quality of service improves, the impact of e-businesses on services, as well as the infusion of information technology into service encounters (Bitner *et al.*, 2000; Parasuraman *et al.*, 1988). In such a context, quality drives several requirements. The first one hinges on customer satisfaction and its consequences on loyalty and market share. The second is the concept of quality and relationship quality management, and a high emphasis on quality is further cited as an essential element within customer relationship marketing/management (Christopher *et al.*, 1991). Consequently, achieving competitive advantage through quality requires an understanding of the quality requirements from the customers' perspectives (Hansen and Bush, 1999).

Despite the importance of relationship quality, relatively little attention is being paid to this issue within the literature on services marketing/management and customer relationship management (Naudé and Buttle, 2000). In addition, there has been a lack of studies that examine relationship variables at different levels of relationships (Macintosh and Lockshin, 1997). Splitting the relationship variables into different levels allows for the identification of basic differences in person-to-person (interpersonal) as well as person-to-firm (company) relationships. The recognition of these differences has practical implications for managers, as they can direct their efforts to improving important attributes on both the interpersonal as well as company level. In doing so, firms striving for true customer intimacy can find ways to bridge the perceptual gap between the two levels of relationships highlighted above.

This paper seeks to investigate the relationship between service quality and overall relationship quality on two levels of retail relationships (interpersonal and company level). First, we review the services marketing/management and customer



relationship management literature with regard to service quality and relationship quality and discuss their relationship. Next, based on the literature, we derive a conceptual model of service quality and relationship quality. Subsequently, we report on the results of a study that was conducted to empirically test our model. We conclude with a discussion of the theoretical and managerial implications and propose directions for future research.

Conceptualisation of service quality

From the review of literature on service quality, it has been found that early research efforts concentrated on defining and measuring the quality of tangible goods and products, while the seemingly more difficult services sector was ignored. Grönroos (1990a) has noted that product quality was traditionally linked to the technical specifications of goods, with most definitions of quality arising from the manufacturing sector where quality control has received extensive attention and research. On the other hand, Crosby (1979, p. 151) defined quality of goods as "conformance to requirements"; Juran (1980, p. 132) defined it as "fitness for use"; while Garvin (1983) measured quality by counting the incidence of "internal" failures (those observed before a product left the factory) and "external" failures (those incurred in the field after a unit had been installed). These product-based definitions of quality may be appropriate to the goods-producing sector; however, knowledge about the quality of goods is insufficient to understand service quality (Parasuraman *et al.*, 1985).

Literature published in the late 1970s and the 1980s provided a clearer understanding of service quality and its measurement (Lee and Hing, 1995). These efforts to define and measure service quality have taken a slower route and came into focus at a much later stage because of the four unique attributes of services which are difficult to define and measure. These attributes are:

- (1) intangibility (Bateson, 1977);
- (2) heterogeneity (Booms and Bitner, 1981);
- (3) inseparability (Carman and Langeard, 1980); and
- (4) perishability (Grönroos, 1990b).

Czepiel (1980) refers to the "double intangibility" of services as the key issue in

service management/marketing, namely its intangibility and inseparability which present managers with a complex task in that they have to satisfy customers under the constraints of economic efficiency and competitive challenges.

Definitions of service quality

Grönroos (1984, p. 38) defined service quality as a perceived judgement, resulting from an evaluation process where customers compare their expectations with the service they perceive to have received. The author also suggested that service quality issues could be split into technical quality (what is done) and functional quality (how it is done). Grönroos (1984) further declared that the quality of a service is dependent on two variables: expected service and perceived service, and that any previous experience with a service could influence the expectations of a consumer, whereas the perceived service is the result of a consumer's perception of the service itself. Holmlund and Kock (1995), studying industrial services, expanded on the ideas of Grönroos (1984) by adding a third dimension, economic service quality, which incorporates the idea that businesses must be profitable. Following on from the above definitions, service quality has also been described as a form of attitude, related but not equivalent to satisfaction, that results from the comparison of expectations with performance (Parasuraman *et al.*, 1988).

Similarly, Parasuraman *et al.* (1988, p. 17) defined service quality as "the degree of discrepancy between customers' normative expectations for the service and their perceptions of the service performance". Perceived service quality is then interpreted from the differences in degree and direction between perceptions and expectations, and this approach to service quality is adopted in this study. A good operational example of a standardised framework for understanding service quality is the SERVQUAL instrument developed by Parasuraman *et al.* (1988). These authors sought to determine common dimensions of service delivery beginning with focus group interviews of consumers. The researchers discovered ten general dimensions which they labelled:

- (1) tangibles;
- (2) reliability;
- (3) responsiveness;
- (4) competence;

- (5) courtesy;
- (6) credibility;
- (7) security;
- (8) access;
- (9) communications; and
- (10) understanding.

Later investigations by the same group of researchers showed that some of the ten dimensions were correlated; hence, refinements were made until the instrument was composed of five higher-order dimensions which subsumed the previous ten. These five dimensions are tangibles, reliability, responsiveness, assurance, and empathy.

Relationship quality

Relationship quality has been discussed as a bundle of intangible value which augments products or services and results in an expected interchange between buyers and sellers (Levitt, 1986). The more general concept of relationship quality describes the overall depth and climate of a relationship (Johnson, 1999). Additionally, relationship quality refers to a customer's perceptions of how well the whole relationship fulfils the expectations, predictions, goals and desires the customer has concerning the whole relationship (Jarvelin and Lehtinen, 1996). Consequently, it forms the overall impression that a customer has concerning the whole relationship including different transactions.

Gummesson (1987) identified two dimensions of relationship quality in the service interface. He defined them as:

- (1) professional relations; and
- (2) social relations.

The former relationship is grounded on the service provider's demonstration of competence, while the latter is based on the efficacy of the service provider's social interaction with the customer. Crosby *et al.* (1990) studied various aspects of relationship quality, and perceive it as a buyer's trust in a salesperson and satisfaction in the relationship. Relationship quality is accordingly a bivariate construct comprising trust and satisfaction. Therefore, high relationship quality means that the customer is able to rely on the service provider's integrity and has confidence in the service provider's future performance because the level of past performance has been consistently satisfactory. Besides, research

conducted by Bejou *et al.* (1996) concludes that customer-salesperson relationship quality is an important prerequisite to a successful long-term relationship.

Aims of the study

Given the preceding literature review, we propose that there is a positive and direct relationship between perceived service quality and overall perceived relationship quality. Consequently, customers' perceptions of overall relationship quality consist of how well the whole relationship fulfils their expectations and perceptions of the whole relationship (Jarvelin and Lehtinen, 1996), hence, when a customer's perception of the level of service provided by a firm is high, it is logical that the customer's overall perceived relationship quality will also be high. On the other hand, when the customer's perception of the service quality is low, the customer's overall perceived relationship quality will also be low.

We explore the relationships between the dimensions of service quality and overall relationship quality, on two levels of retail relationships:

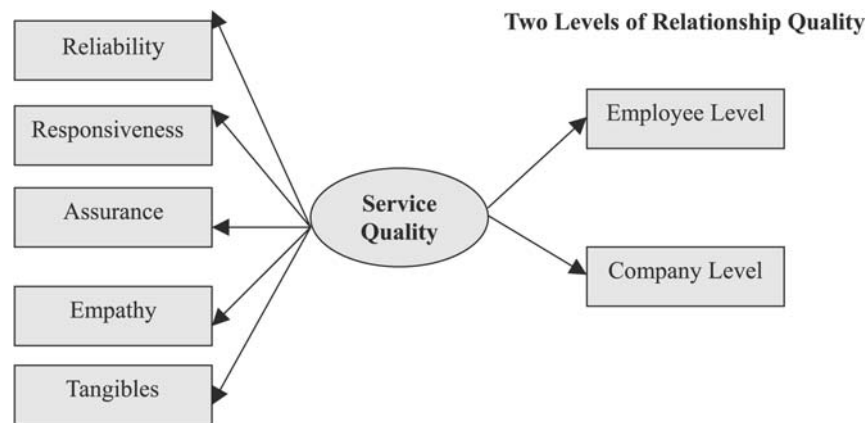
- (1) the salesperson level (interpersonal); as well as
- (2) the store level (company).

Researchers have argued that differences exist between these two levels of relationships (Iacobucci and Ostrom, 1996), and that positive feelings about the store develop depending on whether or not the customer has an interpersonal relationship with a salesperson (Macintosh and Lockshin, 1997). Hence, in order to attain the aims, a conceptual model of service quality and relationship quality (see Figure 1) is developed based on the literature and explored in this study.

Research methodology

A total of 1,261 usable questionnaires were administered in a convenience random fashion at eight retail outlets of a large chain departmental store between mid-September and mid-November in 2000. Every third adult shopper leaving the mall was approached and asked whether he/she would

Figure 1 A model of service quality and relationship quality



be willing to participate in the study. All refusals were recorded. Consequently, shoppers were also given the choice to take away the questionnaire and complete it in their own leisure time and space. To facilitate the return of questionnaires, shoppers who chose the latter option were given a reply paid, university-addressed return envelope. In addition, the respondents were advised to return the questionnaire within a ten-day period. Adopting this data collection procedure, a response rate of 45.5 per cent was generated via in-store survey administration, while a response rate of 37.2 per cent was achieved via reply paid mail.

The participants of this study were predominantly females (87 per cent). This is not surprising, as women are more positive about shopping than men, and many men view shopping as “effeminate” and will only shop where there is a real need to purchase something, rather than be engaged in “shopping for shopping’s sake” (Campbell, 1997). Further clarification with a manager of the retail chain revealed that the proportion of females in this study supports the target population of the chain.

Of the respondents, 25 per cent had a household income of between \$40,001 to \$60,000, and 28 per cent of the respondents were aged between 41 to 50. Of the respondents, 23 per cent had two children in the household, 12 per cent had one child, while 47 per cent had none. A total of 42 per cent of the respondents had a “Fly Buy” card, a store loyalty card system. In addition, 42 per cent of the respondents bought approximately 20 per cent of their retail purchases at the store in the past 12

months, while 30 per cent bought approximately 40 per cent of their retail purchases at the store in the past 12 months. Finally, 27 per cent of the respondents saw a very large advantage at the retail store over other retail stores, 46 per cent saw a moderate advantage over other retail stores, while 11 per cent saw no advantage over other retail stores.

Research instrument

Service quality was measured using a modified version of the SERVQUAL scale (Parasuraman *et al.*, 1988). The use of the SERVQUAL scale fits the purpose of our study, because it is comprehensive and empirically grounded. In addition, the dimensions of SERVQUAL subsumed the dimensions of service quality suggested by Grönroos (1984). Specifically, our study focused on the measurement of perceived service quality rather than gap analysis, as prior research has indicated the appropriateness of perceived service quality in explaining the variation in service quality. While reservations have been expressed about the suitability of the SERVQUAL scale (i.e. the use of gap scores, the generic nature of the scale) (Cronin and Taylor, 1992), the SERVQUAL scale is retained in this study due to its high reliability in terms of coefficient alphas (exceeded 0.8), which can serve as a yardstick of internal consistency (Parasuraman *et al.*, 1988). Moreover, to date, the SERVQUAL scale is still the most widely used measure of service quality (Sivadas and Baker-Prewitt, 2000). In addition to the modified SERVQUAL scale, relevant items from the retail service quality

scale were also incorporated (Dabholkar *et al.*, 1996).

We did not include the economic service quality dimension as suggested by Holmlund and Kock (1995) in this study. Although firms must be profitable, the inclusion of this dimension would require that we introduce the concept of price and, subsequently, the concept of value in this study. The objective of this study is to examine service quality independently of the confounding influence of value. Consequently, service quality is measured on a seven-point Likert scale ranging from 1 (completely failed to meet my expected service level) to 7 (far exceeded my expected service level).

On the other hand, relationship quality was assessed using a single item for both the contact employee and the store. Although several studies have measured relationship quality using dimensions such as trust, commitment, product/service-related quality perceptions, and customer satisfaction (Crosby *et al.*, 1990), these dimensions are measuring sources related to relationship quality. Hence, respondents were asked to state their overall assessment of the quality of their relationship with the contact employee, as well as with the company, on a seven-point Likert scale ranging from 1 (poor) to 7 (excellent).

Analysis and results

The data were analysed by structural equation modelling (SEM) using LISREL VIII, which traces structural relations in a data set (Jöreskog and Sörbom, 1993). LISREL uses correlations and the covariances of error terms as two independent sources of information, hence giving a more accurate picture of data variation. For further information on LISREL, see Bollen and Long (1993) and Jöreskog and Sörbom (1993). Consequently, the validity of the proposed research model is assessed using a two-step approach, first, testing the measurement model, and second, testing the structural equation model. The measurement model specifies how the latent or theoretical constructs are measured in terms of the observed variables and describes the measurement properties such as validities and reliabilities of the observed variables. On the other hand, the structural equation model specifies the causal relationships among the

latent variables and describes the causal effects and the amount of unexplained variance.

The means, standard deviations, correlations, and Cronbach alpha reliabilities of the constructs in the research model are presented in Table I, while the standardised solutions and corresponding *t*-values of the exogenous x (Λx) matrix (measurement model) are shown in Table II. Since the results indicated valid and reliable measures of the latent constructs, analysis proceeded to testing the proposed research model for an adequate model fit.

The chi-square statistic (χ^2), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), standardised root mean square residual (RMR), normed fit index (NFI), comparative fit index (CFI), and the parsimony goodness-of-fit index (PGFI) are presented in Table III. The relevant fit indices indicate that the proposed research model is a moderately good fit to the observed data. Similarly, the standardised solutions presented in Figure 2 are high, while the residual errors are low. In addition, as expected, there is a significant relationship between service quality and relationship quality, both at the employee level ($t = 22.91$, $p < 0.001$) as well as at the company level ($t = 21.86$, $p < 0.001$).

Initial exploration of the possible relationships between the dimensions of service quality and the two levels of relationship quality (employee and company level) was conducted using the Pearson correlation analysis (Table IV). Subsequently, multiple regression analysis was conducted to find out which of the independent service quality dimensions is the best contributor to overall relationship quality, both at the employee level (Table V) and at the company level (Table VI).

As seen in Table IV, significant relationships exist between the dimensions of service quality and the two levels of relationship quality. The highest positive relationship is exhibited between empathy and overall relationship quality on an employee level, with an *R* value of 0.515, while the other dimensions have *R* values ranging between 0.393 to 0.504.

To determine the best contributor of overall relationship quality at an employee level, a multiple regression analysis was conducted. As shown in Table V, the five factors explained 29 per cent of the variance in

Table I Means, standard deviations, correlations, and Cronbach alpha reliabilities

Variable	Mean	SD	1	2	3	4	5	6	7
1. Reliability	4.85	0.93	(0.83)						
2. Responsiveness	4.72	1.16	0.720	(0.89)					
3. Assurance	4.85	1.04	0.713	0.829	(0.87)				
4. Empathy	4.71	1.08	0.016	0.794	0.865	(0.87)			
5. Tangibles	5.28	0.89	0.541	0.536	0.625	0.602	(0.89)		
6. Employee (RQ)	4.26	1.31	0.426	0.488	0.504	0.515	0.393	(^a)	
7. Company (RQ)	4.38	1.27	0.431	0.436	0.488	0.491	0.412	0.819	(^a)

Note: Construct reliabilities (α) are reported along the diagonal; ^aReliability not calculated for construct as construct consists of only one item

Table II Measurement model of exogenous variables

Greek letter	Latent construct	Standardised solution	t-value
λ_{X11}	Reliability	0.72	28.60*
λ_{X21}	Reliability	0.78	31.97*
λ_{X31}	Reliability	0.80	33.18*
λ_{X41}	Reliability	0.80	32.87*
λ_{X51}	Reliability	0.61	23.10*
λ_{X62}	Responsiveness	0.76	31.47*
λ_{X72}	Responsiveness	0.83	35.99*
λ_{X82}	Responsiveness	0.90	40.86*
λ_{X93}	Responsiveness	0.88	39.25*
λ_{X103}	Assurance	0.86	37.66*
λ_{X113}	Assurance	0.79	33.11*
λ_{X123}	Assurance	0.81	34.46*
λ_{X133}	Assurance	0.73	29.88*
λ_{X143}	Assurance	0.72	29.15*
λ_{X154}	Empathy	0.64	25.13*
λ_{X164}	Empathy	0.94	44.38*
λ_{X174}	Empathy	0.95	44.76*
λ_{X184}	Empathy	0.82	35.17*
λ_{X194}	Empathy	0.55	20.94*
λ_{X205}	Tangibles	0.61	23.14*
λ_{X215}	Tangibles	0.76	31.02*
λ_{X225}	Tangibles	0.81	34.10*
λ_{X235}	Tangibles	0.84	36.55*
λ_{X245}	Tangibles	0.80	33.68*
λ_{X255}	Tangibles	0.76	31.12*
λ_{X265}	Tangibles	0.78	32.23*
λ_{X275}	Tangibles	0.67	26.10*
λ_{X285}	Tangibles	0.58	21.71*
λ_{X295}	Tangibles	0.57	21.30*

Note: *Significant at $p < 0.001$

overall relationship quality, which is significant as indicated by the F -value ($f(5,1251) = 102.992, p < 0.001$). In this case, the F -value is required to exceed 3.02 for significance at 99 per cent confidence level (Kenkel, 1989).

An examination of the β -values in Table V indicates that the best contributor to overall

Table III Fit indices of the research model

Statistic	Value
Probability value for the χ^2 statistic ($\chi^2 = 629.03, df = 14$)	0.000
RMSEA	0.187
Goodness of fit index (GFI)	0.875
Adjusted goodness of fit index (AGFI)	0.750
Standardised root mean square residual (RMR)	0.0816
Normed fit index (NFI)	0.886
Comparative fit index (CFI)	0.887
Parsimony goodness of fit index (PGFI)	0.438

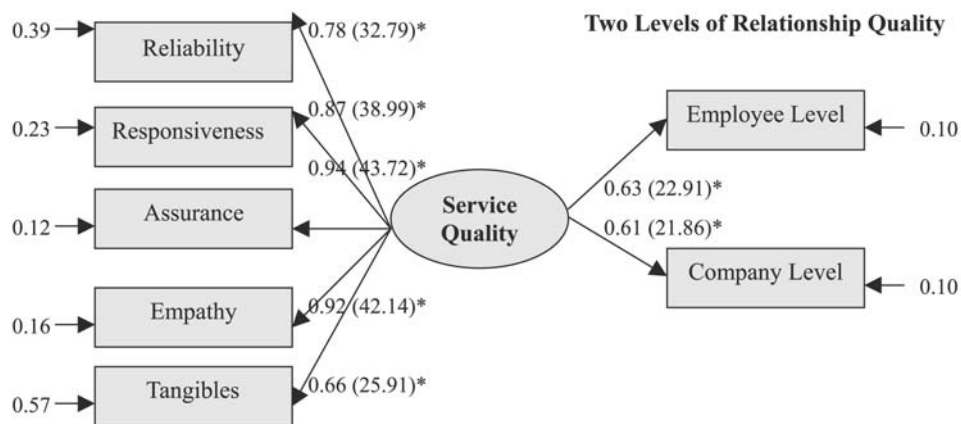
relationship quality at an employee level is empathy. Furthermore, the corresponding t -value is greater than the required level of 1.96 (Parasuraman *et al.*, 1991). On the other hand, reliability and assurance did not emerge as significant contributors, at the 95 per cent confidence level.

To determine the best contributor of overall relationship quality at a company level, a multiple regression analysis was conducted. As shown in Table VI, the five factors explained 27 per cent of the variance in overall relationship quality, which is significant, as indicated by the F value ($f(5,1249) = 94.531, p < 0.001$). In this case, the F -value is required to exceed 3.02 for significance at 99 per cent confidence level (Kenkel, 1989).

An examination of the β -values in Table VI indicates that the best contributor to overall relationship quality at a company level is empathy. Furthermore, the corresponding t -value is greater than the required level of 1.96 (Parasuraman *et al.*, 1991). At the company level, responsiveness did not emerge as a significant contributor.

Discussion and managerial implications

In this article, we have proposed a model that strives for a better understanding of the

Figure 2 A model of service quality and relationship quality path coefficient

Notes: $n = 1,261$. Results are based on standardised solutions. Numbers in parentheses represent t -values associated with each coefficient and their respective significance is denoted as $*p < 0.001$

Table IV Pearson correlation coefficient – overall relationship quality

	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Employee	0.426	0.488	0.504	0.515	0.393
Company	0.431	0.436	0.488	0.491	0.412

Note: Correlation is significant at the 0.01 level (two-tailed)

Table V Model summary – overall relationship quality (employee level)

Model	Unstandardised coefficients	Standard error	Standardised coefficients, beta	t	Significance
(Constant)	0.588	0.203		2.889	0.004
Reliability	0.043	0.052	0.031	0.838	0.402
Responsiveness	0.168	0.052	0.149	3.242	0.001
Assurance	0.124	0.070	0.098	1.771	0.077
Empathy	0.280	0.062	0.231	4.549	0.000
Tangibles	0.141	0.046	0.096	3.076	0.002

Notes: Independent variables – reliability, responsiveness, assurance, empathy and tangibles. Dependent variable – overall relationship quality (employee). Equation – ORQ (employee) = 0.588 + 0.043 (reliability) + 0.168 (responsiveness) + 0.124 (assurance) + 0.280 (empathy) + 0.141 (tangibles)

Table VI Model summary – overall relationship quality (company level)

Model	Unstandardised coefficients	Standard error	Standardised coefficients, beta	t	Significance
(Constant)	0.638	0.199		3.201	0.001
Reliability	0.136	0.051	0.100	2.647	0.008
Responsiveness	0.002	0.051	0.002	0.042	0.966
Assurance	0.189	0.068	0.155	2.761	0.006
Empathy	0.234	0.060	0.200	3.879	0.000
Tangibles	0.199	0.045	0.140	4.425	0.000

Notes: Independent variables – reliability, responsiveness, assurance, empathy and tangibles. Dependent variable – overall relationship quality (company). Equation – ORQ (company) = 0.638 + 0.136 (reliability) + 0.002 (responsiveness) + 0.189 (assurance) + 0.234 (empathy) + 0.199 (tangibles)

dimensions of service quality on long-term relationship success between customers and service firms. Our results indicate that there is a positive and direct relationship between service quality and relationship quality. The results also show that empathy is the most significant contributor to relationship quality at both the employee and company levels. This further adds to our existing knowledge of the relative significance of the various retail service quality dimensions influencing overall relationship quality.

In this instance, empathy factors are conducive to the formation of customer relationships in services. These factors are important at an interpersonal level as employees play a major role in shaping the service experience due to the inseparability of the interface between the service and its provider. Hence, service encounters or moments of truth relating to the caring and individualised attention that a service provider gives to customers take on added significance. Consequently, understanding a customer's specific needs and having the customer's best interest at heart send a powerful signal to customers as to the quality and performance of the service delivered to customers.

Because of the characteristics of retail services, all interactions between the service provider and the customer present an opportunity to portray the firm in a positive – or negative – light, and this inevitably has a major impact on customers' perceptions of the quality of their relationships with the employees as well as with the firm they represent. Moreover, past research has shown that, within the retail service setting of customer care, the basis for effective communication is, in the broadest sense, empathy (Parasuraman *et al.*, 1988). Empathy allows individuals to understand others and predict how others might respond in special situations. Understanding and prediction make empathy a potential tool for developing effective communications and relationships among employees, between employees and customers, and between employees and management. Specifically, managers of retail firms who seek to improve existing customer relationships should hire individuals who are empathetic. Tests can be given indicating which applicants to select. In hiring front-line employees, it would appear that individuals who are highly empathetic by

nature would be more willing to respond to the needs of customers and less likely to have conflicts with fellow employees and management.

With the significant contributors (i.e. service quality dimensions) to relationship quality uncovered, retailers could allocate resources more efficiently in providing customer services in general and, more specifically, in training employees to respond to relevant customer needs and priorities. With regard to this, employees should be trained to deal with customers and to rectify any inevitable service problems that may arise. In the event of service failures, employees should be taught to be responsive, empathetic, and reassuring in dealing with customer problems. Furthermore, employees should also be trained in both technical and functional skills, to listen to customers' problems, to defuse customer anger, and to provide customised responses. To this end, employees who are well equipped to perform their jobs are likely to stay longer to build and maintain long-term quality relationships with customers who benefit by dealing with experienced staff who are familiar with their needs. In a similar vein, the firm, besides benefiting from the development and maintenance of long-term customer relationships, also saves on recruitment and selection costs.

Consequently, managers of retail firms should be aware that, although the concept of service quality is multidimensional, not all dimensions contribute equally to customers' perceptions of overall relationship quality. Superior performance on the more important dimensions may be requisite to providing quality, whereas performance on dimensions of lesser importance may not significantly influence customers. With the important service quality dimensions revealed in our findings, retail managers can develop a rational improvement plan, one that considers company expertise and resources, depending on whether the company aims to establish and maintain customer relationships on an interpersonal or a company level. It is also possible that the greatest success will result from an improvement strategy that concentrates on one specific dimension of service quality, with the retail firm seeking clear leadership on that dimension, rather than from one in which the retail firm

improves marginally on several dimensions (Hansen and Bush, 1999).

Conclusion, limitations and future research

The research presented here provides an investigation into the impact of service quality dimensions on relationship quality on two levels of retail relationships: person-to-person (salesperson level) and person-to-firm (store level). These findings afforded an extended perspective in customer relationship management research. The findings of this research revealed the role and importance of service quality and its impact on relationship quality.

As explained above, the two regression models, although statistically significant, account for only 29 and 27 percent of the total variance in relationship quality, at the employee and company level respectively. To investigate other possible antecedents of relationship quality, future research should examine the impact of other independent variables that are potentially important. For example, variables such as trust, commitment, the age of the relationship, and the intensity of the relationship can also have an effect on overall relationship quality. In addition, due to the dynamic nature of relationships, each customer-contact employee interaction is seldom static and likely to change with time. This is because the participants in the interactions may react differently depending on the different phases in the relationship formation and development process. Furthermore, due to the inseparability of the service from its provider, the provision of service quality will be affected by the various moods of the contact employee as well as the participation of other customers in the service delivery process, and this will inevitably have an impact on overall relationship quality.

Another limitation of this study is that the cross-sectional nature of the data only allows for correlational, rather than causal, inferences to be made. Therefore, the research model developed and tested in this study could benefit from being tested in a longitudinal design, so that actual behaviour of respondents can be taken into account. Besides, findings from this study are limited to the retail industry in Victoria, Australia,

thus the effects of extraneous variables based on industry or cross-cultural differences may limit its potential generalisability to other service-oriented industries, both within Australia and overseas. In order to apply the model to extended service settings or to a cross-cultural context, there is a need for further customisation of the measurement scales used in this study.

Finally, the issue of external validity should be questioned, as the sample for this study is drawn from the state of Victoria in south-eastern Australia. Accordingly, the findings should not be generalised without caution to other sample populations. Also, there were more female than male respondents. Conceivably, external validity may not be an issue with regard to gender in the current study, as shopping has primarily been regarded as a feminine activity (Witkowski, 1999). In fact, women constitute the majority of customers in department stores and are the primary consumers of such retail services (Reekie, 1992). Furthermore, when it comes to the purchase of retail services, women may be the main decision makers.

References

- Bateson, J.E.G. (1977), "Do we need service marketing?", *Marketing, Consumer Services: New Insights*, Marketing Science Institute, Cambridge, MA, pp. 77-115.
- Bejou, D., Wray, B. and Ingram, T.N. (1996), "Determinants of relationship quality: an artificial neural network analysis", *Journal of Business Research*, Vol. 36, pp. 137-43.
- Bitner, M.J., Brown, S.W. and Meuter, M.L. (2000), "Technology infusion in service encounters", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 138-49.
- Bollen, K.A. and Long, J.S. (1993), *Testing Structural Equation Models*, Sage Publications, Newbury Park, CA.
- Booms, B.H. and Bitner, M.J. (1981), "Marketing strategies and organization structures for services firms", in Donnelly, J. and George, W. (Eds), *Marketing of Services*, American Marketing Association, Chicago, IL, pp. 47-51.
- Campbell, C. (1997), "Shopping, pleasure and the sex war", in Falk, P. and Campbell, C. (Eds), *The Shopping Experience*, Sage Publications, London, pp. 166-75.
- Carman, J.M. and Langeard, E. (1980), "Growth strategies of service firms", *Strategic Management Journal*, Vol. 1, January-March, pp. 7-22.
- Christopher, M., Payne, A. and Ballantyne, D. (1991), *Relationship Marketing: Bringing Quality,*

- Customer Service and Marketing Together*, Butterworth-Heinemann, London.
- Cronin, J.J. and Taylor, S.A. (1992), "Measuring service quality: a re-examination and extension", *Journal of Marketing*, Vol. 56, July, pp. 55-68.
- Crosby, L.A., Evans, K.R. and Cowles, D. (1990), "Relationship quality in services selling: an interpersonal influence perspective", *Journal of Marketing*, Vol. 54, July, pp. 68-81.
- Crosby, P.B. (1979), *Quality Is Free: The Art of Making Quality Certain*, New American Library, New York, NY.
- Czepiel, J.A. (1980), *Managing Customer Satisfaction in Consumer Service Businesses*, Marketing Science Institute, Cambridge, MA.
- Dabholkar, P.A., Thorpe, D.I. and Rentz, J.O. (1996), "A measure of service quality for retail stores: scale development and validation", *Journal of the Academy of Marketing Science*, Vol. 24 No. 1, pp. 3-16.
- Garvin, D. (1983), "Quality on the line", *Harvard Business Review*, Vol. 61, September-October, pp. 65-73.
- Grönroos, C. (1984), "A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 18 No. 4, pp. 36-44.
- Grönroos, C. (1990a), "Relationship approach to marketing in service contexts: the marketing and organizational behavior interface", *Journal of Business Research*, Vol. 20, pp. 3-11.
- Grönroos, C. (1990b), *Service Management and Marketing: Managing the Moments of Truth in Service Competition*, Lexington Books, Lexington, MA.
- Gummesson, E. (1987), *Quality – The Ericsson Approach*, Ericsson, Stockholm.
- Hansen, E. and Bush, R.J. (1999), "Understanding customer quality requirements: model and application", *Industrial Marketing Management*, Vol. 28, pp. 119-30.
- Holmlund, M. and Kock, S. (1995), "Buyer-perceived service quality in industrial networks", *Industrial Marketing Management*, Vol. 24, pp. 109-21.
- Iacobucci, D. and Ostrom, A. (1996), "Commercial and interpersonal relationships: using the structure of interpersonal relationships to understand individual-to-individual, individual-to-firm, and firm-to-firm relationships", *International Journal of Research in Marketing*, Vol. 13, February, pp. 53-72.
- Jarvelin, A. and Lehtinen, U. (1996), "Relationship quality in business-to-business service context", in Edvardsson, B.B., Johnston, S.W. and Scheuing, R. (Eds), *QUIS 5 Advancing Service Quality: A Global Perspective*, Warwick Printing Company Ltd, Toronto, pp. 243-54.
- Johnson, J.L. (1999), "Strategic integration in industrial distribution channels: managing the interfirm relationship as a strategic asset", *Journal of the Academy of Marketing Science*, Vol. 27 No. 1, pp. 4-18.
- Jöreskog, K. and Sörbom, D. (1993), *LISREL8: Structural Equation Modeling with the SIMPLIS Command Language*, Lawrence Erlbaum Associates, Hillsdale, NJ.
- Juran, J.M. (1980), *Quality Planning and Analysis: From Product Development through Use*, McGraw-Hill, New York, NY.
- Kenkel, J.L. (1989), *Introductory Statistics for Management and Economics*, PWS-Kent Publishing Company, Boston, MA.
- Lee, Y.L. and Hing, N. (1995), "Measuring quality in restaurant operations: an application of the SERVQUAL instrument", *International Journal of Hospitality Management*, Vol. 14 No. 3/4, pp. 293-310.
- Levitt, T. (1986), *The Marketing Imagination*, The Free Press, New York, NY.
- Macintosh, G. and Lockshin, L. (1997), "Retail relationships and store loyalty: a multi-level perspective", *International Journal of Research in Marketing*, Vol. 14 No. 5, pp. 487-97.
- Naudé, P. and Buttle, F. (2000), "Assessing relationship quality", *Industrial Marketing Management*, Vol. 29, pp. 351-61.
- Parasuraman, A., Zeithaml, V.A. and Berry, L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, Vol. 49, Fall, pp. 41-50.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-40.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1991), "Refinement and reassessment of the SERVQUAL scale", *Journal of Retailing*, Vol. 67 No. 4, pp. 420-50.
- Reekie, G. (1992), "Changes in the Adamless Eden", in Shields, R. (Ed.), *Lifestyle Shopping: The Subject of Consumption*, Routledge, London, pp. 170-94.
- Sivadas, E. and Baker-Prewitt, J.L. (2000), "An examination of the relationship between service quality, customer satisfaction, and store loyalty", *International Journal of Retail & Distribution Management*, Vol. 28 No. 2, pp. 73-92.
- Witkowski, T. (1999), "The early development of purchasing roles in the American household", *Journal of Macromarketing*, Vol. 19, December, pp. 104-14.

Perspectives

E-services and their role in B2C e-commerce

Mohini Singh

The author

Mohini Singh is a Senior Lecturer in E-Business at the School of Business Information Technology, RMIT University, Melbourne, Australia.

Keywords

Electronic commerce, Service, Internet, Customer service

Abstract

E-services are important in B2C e-commerce for managing customer relations and enhancing sales. In the electronic world the customer and the merchant do not meet face-to-face, and the clients are more discerning with increased options and solutions available to them online. With the click of a mouse a customer can find another provider. As customers embrace e-commerce their expectations about service, support, and how they make purchases are changing. Services to customers offered electronically to enhance their online shopping experience include search support, e-response to customer queries, orders and transactions, e-payment, e-transaction record management, e-assurance and trust, e-help and other online support in the B2C e-space. This paper discusses the role of e-services in B2C e-commerce and how they can be applied to enhance the online customer shopping experience. Findings of two research projects that shed some light on both business and customer perspectives of the role of e-services in the B2C e-commerce are launched in this paper.

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<http://www.emeraldinsight.com/0960-4529.htm>

Managing Service Quality
Volume 12 · Number 6 · 2002 · pp. 434–446
© MCB UP Limited · ISSN 0960-4529
DOI 10.1108/09604520210451911

Introduction

As customers embrace e-commerce they have escalated expectations about service and support to enable them to shop online. Customer service applications in electronic commerce are more critical than in conventional sales, since customers and merchants do not meet face-to-face. A click of a mouse is enough for an online customer to select a new provider. Electronic commerce is exponentially increasing the availability of information, giving customers access to more knowledge, of better quality and faster than before. Businesses online provide an information-rich environment by which competitors can identify, match and improve product innovation. A company that can respond to the needs of customers, accommodate their requests promptly and support their buying decisions creates value and wins customer patronage and loyalty (Singh *et al.*, 2001). A proactive strategy to assist customers with online services is thus an important attribute of B2B e-commerce. In this paper an e-service in business-to-consumer e-commerce refers to an online service offered to customers to support their shopping experience over the Internet.

Online customers expect fast, friendly and high quality service. They want choice, convenience and a responsive service with a personal touch (Zhao and Gutierrez, 2001). In the electronic commerce environment clients are more discerning with increased options and solutions available to them. The increased information available to marketers and advertisers, the streamlined supply chain, and the new retail channel, made possible by electronic commerce, significantly affect the satisfaction of customers, whether they are individual consumers or in other businesses (Adam *et al.*, 1999). Ho and Wu (1999) suggest that in electronic commerce all potential Internet users are potential customers. For businesses to win these potential customers and to convert them into real ones depends on effective customer relationship management. E-services that win customers and positively contribute to effective customer relationship management also enhance B2C e-commerce and the volume of transactions. Online services such as easy search of products and services, provision of product specifications that reduce communication costs, secure



electronic payment systems to complete transactions, updated product delivery information and quick responses to customer queries are important to win online customers and to make them keep coming back to the site for further purchases (Turban *et al.*, 2000).

Archer and Gabauer (2000) emphasise that building and maintaining customer relationships are the key to success in e-commerce, which depends on maintaining effective customer service. They also suggest that in e-commerce, unless service is maintained, customer loss may result, more than offsetting any cost-efficiencies due to the introduction of e-commerce technology. Relationships in the business-to-business environment are based heavily on information exchange, which has a fundamental effect on market growth and structure. In B2C e-commerce Singh *et al.* (2001) suggest that effective customer support and services are vital to encourage customers to shop online as it is a lonely experience, does not allow touch and feel and has a high degree of concern regarding security and privacy of information. Archer and Gabauer (2000) further explain that, when a network links supplier and customer, in each of these functions information is entered, used, generated, and transmitted by internal information systems, which potentially may be shared between the parties. In each function there are opportunities to gather information during customer procurement activities, and to use this information to improve the possibility of continuing a profitable relationship between partners. Information is integrated to improve service, save customers' time and ease frustration.

The acquisition of e-customers is difficult and expensive (Singh *et al.*, 2001). Customers can quite easily evaluate and compare the benefits of competing services which result in low switching costs. Relatively little is known about how consumers perceive and evaluate electronically offered services and how they develop loyalty to their providers (Riel *et al.*, 2001). This paper discusses the applications of e-services, and tools and techniques for providing these services to customers in an electronic commerce environment. It also presents research findings of two projects from which the role of a number of e-services in the B2C e-commerce have been determined. A discussion of the two

perspectives highlights some differences and similarities between the providers and receivers of e-services.

Literature review

A customer realises the full value of a company's offering through its service. According to de Ruyter *et al.* (2001, p. 186), "an e-service is an interactive, content-centred and Internet-based customer service, driven by the customer and integrated with related organisational customer support processes and technologies with the goal of strengthening the customer-service provider relationship". Providing personalised and accurate customer information with better tracking, delivery and payment details is an online service in B2C e-commerce generally appreciated by customers. Other services such as interactive and personalised customer communications, speed and accuracy, enhanced capability to track and measure transactions, instantaneous 24 × 7 communications, and the ability to offer different combinations of product and service elements please customers and improve buyer and customer relationships in the B2C e-space.

Since e-commerce is a new way of doing business for both the customers and online businesses, research and literature on e-services that support B2C e-commerce are scarce. Riel *et al.* (2001) support this claim by emphasising that research on e-services is in its infancy and there are no generally accepted theories for customer evaluations of these services. However, the importance and relevance of e-services in customer service support in the B2C e-space have been realised (Turban *et al.*, 2002). Voss (2000) illustrates three levels of service delivered over the Internet, namely, foundations of service, customer-centred service, and value-added service. Foundations of service include site responsiveness, meaning how quickly and accurately the service is provided, site effectiveness, meaning how well it meets the needs of users, and order fulfilment, meaning fast delivery and global payment capability. Customer-centred services include order tracing, configuration, customisation and security and trust. Value added services include a proactive strategy to assist customers with various applications of

exchange, experience and exploitation of information. Five service quality dimensions identified by Parasuraman *et al.* (1988) are:

- (1) tangibility;
- (2) responsiveness;
- (3) reliability;
- (4) assurance; and
- (5) empathy.

Riel *et al.* (2001) suggest that these dimensions can be applied in e-commerce by replacing tangibility with the user interface, since it, to some extent, describes how the service is offered to customers.

Responsiveness could refer to the speed of the company's response to the customers, reliability could relate to timely delivery of ordered goods, accurate information and correct links. Assurance could be interpreted as the safety of online transactions and the policy for using personal information by the company, while empathy could refer to the degree of customisation of communications based on customers' personal needs.

E-service functions that support online shoppers identified from the literature (Korner and Zimmermann, 2000; Otto and Chung, 2000; Turban *et al.*, 2000, 2002; Voss, 2000; Watson *et al.*, 1999) are discussed in this section of the paper. The functions are described and discussed in relation to the eight steps of consumer mercantile activities identified by Kalakota and Whinston (1997).

The eight steps are:

- (1) product search;
- (2) comparison shopping;
- (3) product selection;
- (4) negotiation of terms;
- (5) placement of orders;
- (6) payment authorisation;
- (7) receipt of product; and
- (8) after-sales customer support.

Customer activities in B2C e-commerce

Kalakota and Whinston (1997) are of the opinion that an online customer goes through the following activities to make a purchase online with the expectations of quality, convenience, value, low price and control.

Product search

During this phase customers are searching for a product that best meets their needs with attributes such as best price, service and support and quality of product. Customers place great importance on the ability to get free information on demand. Detailed

information as well as general browsing, readily available at the click of a mouse on a point of interest provided as a service during the pre-purchase phase, become as important as the purchase itself. Innovative use of links and key words need to be the norm for building Web sites that keep the consumer coming back for more information. The Internet provides the ability to embed numerous links into other information sites to get further useful information on products, transactions and relevant information from experts.

Search support with the application of intelligent and software agents may also be provided. Software agents are computer programs that help customers find and compare products. Such agents enable customers to conduct routine tasks, search and retrieve information, support decision making and act as domain experts without the need for human intervention. Photographs of products, video presentations, textual descriptions, articles, reviews and downloadable demonstration files provided electronically assist customers to determine their needs. Providing customers with an experience on the Web such as access to games, entertainment, music, chat and online community or interest group membership gives them an experience and encourages them to return to the site.

Comparison shopping

A consumer generally compares product attributes available from different sellers. A decision support system available on some sites (such as www.dell.com) aids user decision making. Some sites provide links to efficient search engines such as compare.com for such purposes. Search engines that support customer comparison-shopping are described as "computer programs that can automatically contact other network resources on the Internet, search for specific information using key words and report the results" (Turban *et al.*, 2000, p. 103). With so many stores online and many more added constantly, it is difficult for a customer to quickly find what they want and make a decision to buy. E-service functions incorporated on e-commerce sites that can quickly provide online shoppers with decision-making support win e-customers and get them to make a purchase. For example, 1-800-Flowers Web site provides useful

information from experts on their site or allows customers to enter online contests. This value added service motivates customers to choose 1-800-Flowers as their floral delivery provider (Turban *et al.*, 2002).

Product selection

Interactive experiences need to be tailored to induce the customer to commit to a purchase. Once a customer is decided the shopper can be presented with a variety of useful information concerning the product. For example, airlines and hotels are offering customers the services of providing links to maps, price comparisons, and information about cheap tickets to favourite destinations, weather, travellers' experiences, and other relevant news. Other sites offer information on product size, weight, final cost including tax, loan terms, additional product requirements such as batteries or fuel, complementary items and opinions of other users. The ability to place orders at any time over the Internet has expanded business hours to round-the-clock for both vendors and consumers. Customer service by Dell Computers includes pre-packaged "specials" to customers who are given the option to "custom-build" systems. Add-ons, troubleshooting, and frequently encountered problems are handled with ease on these sites. The ability to download manuals and problem solutions at any time is another innovation of electronic commerce customer service.

Negotiation of terms

As a customer negotiates for terms and conditions, electronically available information regarding price, delivery, payment methods and after-sales support is an e-service appreciated by customers. Services such as a free product for trial or free bill payment differentiate an online provider and win customers. Assurance to customers such as delivery information and secure transactions are also important for shoppers to accept this service.

Placement of orders

E-services that allow customers to order online include e-order placement, automated e-mail response to confirm receipt of order, delivery information and total costs. Additional information on products ordered such as recipes with food items, links to "how to use" manuals, membership to

e-communities comprising other users of the product, clubs and information on additional related products or warranties cover make up for online business deficiency of "immediate gratification".

Payment authorisation

E-payment systems, digital cash, ensuring secure transactions with data encryption, information on security, as well as multi-payment systems such as by cheque, money order, cash on delivery to allow customers the comfort of using a payment method they are familiar and happy with are important services that support online purchase of goods and services. Information about each payment method and system should be included on the Web sites and available to customers, to enable them complete the transaction.

Receipt of product and after-sales customer support

Notification to customers by e-mail of the acceptance of an order, the anticipated delivery date, and later the actual delivery date is a further service that customers appreciate. A thank you, an apology (for delays) and a greeting to customers strengthens the relationship between the shopper and seller. Phone and e-mail contacts for assistance with setting up or installing the purchased product, troubleshooting, the warranty period, and contacts for repairs and improvements information can be packaged and presented as a link on the Web site.

E-service tools for B2C e-commerce

There are many new Web-related tools available to provide e-services in electronic commerce. These tools can be applied in innovative ways to offer online services to customers in e-commerce.

Personalised Web pages

Many companies are allowing customers to create their own Web pages. These pages can be used to record customer purchases and preferences. Also, customised information such as product details, add-on purchases and warranty information can be delivered on these Web pages. The information is easily disseminated when the customer logs on to the electronic commerce Web site. Not only can the customer pull information as needed, information analysed to match customer interests is pushed to him/her. The customer

databases record purchase queries, problems and requests. This information can be analysed and utilised to improve customer service. Personalisation is important for Internet marketing, and especially for managing customer relationship to increase customer loyalty. Involving customers in the personalisation process makes them feel more comfortable with, and more in control of, their Web site visits (Deitel *et al.*, 2001).

FAQs

Frequently asked questions (FAQs) are the simplest and least expensive tool to deal with repetitive customer questions. FAQs are developed to provide answers to common questions about products, services or their applications. Self-service FAQ software and Web software assist companies in providing helpful answers to common customer questions. Online customers use this tool by themselves (on the Web), which makes delivery cost minimal, freeing up time for customer service representatives to handle questions that cannot be answered without human interaction. FAQs are e-services on Web sites presented via links.

A chat room

Online text chatting provides real time communication between customers and suppliers. Those who are not able to get an answer online have the option to contact a service representative immediately if the company offers text chatting (Deitel *et al.*, 2001). Chat rooms also attract new customers, increase customer loyalty and enhance relationships. For example, a virtual vineyard's chat room allows a customer to discuss issues with both company experts and wine lovers. This is an e-service that is widely used to support e-communities. E-mail addresses of loyal customers can be provided to prospective customers to enable them to seek the opinions of other users of the product on sale.

E-mail and automated response

The most popular tool for customer service is e-mail. Inexpensive and fast, e-mail is used to disseminate information (e.g. catalogues), to send product information and order confirmations, to conduct correspondence regarding any topic with customers and business partners, and responding to enquiries from customers. To answer a large number of e-mails quickly and cost-efficiently

automated e-mail reply systems are increasingly implemented. Automated e-mail reply responses to customer inquiries are developed using intelligent agents that recognise key words and quickly respond to common queries. However, the greatest advantage of e-mail as a communication tool is providing quick and accurate information to all customer queries. E-mails can include forms, reviews, referrals and new contacts sent to customers as attached files.

Help desks and call centres

To find answers to electronic commerce queries customers can communicate by telephone, fax or e-mail. However, because this communication was done initially by phone these remote help desks are referred to as call centres. For electronic commerce new technology products are extending the functionality of the conventional call centre to e-mail and to Web interaction, integrating these into one product. For example, eFrontOffice combines Web channels such as automated e-mail reply, Web knowledge bases, and portal-like self-service, with call centre agents or field service personnel. Such centres are sometimes called telewebs.

Ho and Wu's (1999) research indicates that the most important factors in electronic commerce e-services appreciated by customers are logistical support, technological characteristics, information characteristics, homepage presentation and product characteristics. Logistical support requires quick response to customers' needs via e-mail or fax, quickly delivering goods to customers, and providing after-sales service. Technological factors include modern computer and network facilities and well-structured information systems. Information factors encompass reliable output information and secure transaction. Homepage presentation should provide for an easy to use interface and detailed information about goods. Product characteristics include the details of a variety of goods and services made available at lower prices.

Turban *et al.* (2000) suggest that increasing customer satisfaction increases customer loyalty. It has been suggested by Doney and Cannon (1997), cited by Jarvenpaa *et al.* (2001), that trust is an "order qualifier" for purchase decisions. Jarvenpaa *et al.* (2001) have further qualified trust to be a belief or expectation that the word or promise by the

merchant can be relied on and the seller will not take advantage of the consumer's vulnerability. It is a critical factor in any relationship in which the trustor (e.g. consumer) does not have direct control over the actions of a trustee (merchant or store), and there are possible negative consequences of one party not fulfilling its promise (Deutch (1958) and Mayer (1995) cited in Jarvenpaa *et al.* (2001)). It is also necessary for customers to have trust in electronic commerce infrastructure and environment. E-services that provide detailed information on trust and the security system implemented by companies for secure transactions are important attributes in B2C e-commerce.

Research methodology

This paper discusses the findings of two research projects that highlight the importance of e-services in B2C e-commerce from the business and the customer points of view. The first research project was an exploratory study investigating e-commerce initiatives, opportunities and trends with the early adopters of e-commerce in Australia. An analysis of the findings of this project revealed the importance of customer service support in e-commerce from the business perspective. The second project was an extension of the first project to confirm some of the claims made by the business organisation representatives interviewed in project one by analysing their company Web sites; and establishing the opinions of customers to qualify the use of e-services offered online and to explore the impact of e-services on their online shopping experience. E-commerce being new and unproven has wide scope for research, however, the discussion in this paper concerns the findings of two small projects that were exploratory in nature.

Project one

During 1999 an exploratory study in electronic commerce was conducted in Australia to identify electronic commerce initiatives, opportunities and trends. Data were gathered from 20 online organisations by means of semi-structured interviews with e-commerce project leaders or managers of the 20 organisations. The interviews explored reasons for adopting e-commerce, anticipated opportunities, challenges encountered and the

impact of electronic commerce on business. The companies were selected on the basis that they had been identified as undertaking significant e-commerce initiatives. The names of companies were acquired from documents that listed them as "electronic commerce success stories" (Phillip, 1998) and from Internet searches. Although it was intended to investigate different industry sectors, the 20 e-commerce enterprises with which semi-structured interviews were conducted were those organisations that agreed to participate in this project. Initial contact was made by phone with the person who headed the electronic commerce project at the organisation. Since this research project was exploratory, the semi-structured interview method was considered to be the most appropriate for data collection. Yin (1994), describes exploratory studies to contain a number of "what?" and "how many?" type of enquiries, which were the nature of questions included in the interview tool used to collect data. E-commerce project leaders in each of these organizations were interviewed. With the permission of the interviewees all interviews were recorded on tape and later transcribed. Data collected were qualitatively analysed using a meta-matrix. Miles and Huberman (1994) have described meta-matrices as master charts assembling descriptive data from each of several cases in a standard format.

Of these 20 companies three were "pure plays", that is businesses that had an online presence only, with no bricks and mortar outlet. Others were examples of "clicks and bricks", which are businesses that have been bricks and mortar, but adopted the Internet as a new channel of business. While most of the organizations investigated were business-to-consumer retail businesses, four were examples of government, city council and university services to consumers. E-services identified from this part of the research are presented in column one of Table I as business perspectives of customer service support.

Project two

Project two was conducted in the year 2000 in two parts. Part one of this project entailed an analysis of ten e-commerce sites by the author to identify e-service tools and techniques applied by the businesses investigated in project one to offer customers convenience and support their online shopping experience. These ten

Table I E-services in B2C e-commerce – research findings

E-service	Business perspective	E-service application	Customer perspective
Supporting customer search for products	24 × 7 shop front, comprehensive product selection, online catalogues, targeted responses, shopping privacy, one-stop shop for customers, suppliers dealing directly with customers, FAQs, help desks, Web site attractors	24-hour access to product information, FAQs for quick response to common questions, search facilitated by key words, search engines, links, icons to additional information, e-mail, FAQs, chat, Web page design and updates	65 percent indicated that easy to follow information on the Web site was important, 8 percent ranked convenience (24 × 7) to be an important issue, links to additional information and key word search reduced search time, finding information from search engines
Comparison shopping	Easy comparison shopping with product and price information highlighted, e-mail responses addressing customers with first names to strengthen one-to-one relationships	Links to additional information of how to use the product and inclusion of Web sites of suppliers of complementary products, e-mail addresses of other users, information on e-communities, chat and product highlights	88 percent indicated they compared product price from different providers, 72 percent indicated a personal greeting, e.g. a thank you and an apology were appreciated, they appreciated being recognised after one enquiry, links to additional information on products and their use/applications were also useful
Product selection support	Determine customer demands, interests and changing needs with cookies and data mining and push information relevant to customer queries, reviews and online communities	Information and demonstrations of complementary and additional products, automated e-mails to acknowledge orders, queries, prices and registration request, personalised greetings	Accurate transaction records, total costs including tax and delivery costs, e-responses provided quick communication
Negotiation of terms	Offer customers multi-payment methods, after-sales service, contact phone numbers of regional support personnel, annual service	Customer registration, personalised Web pages	Personalised Web pages, if available, gave customers more control, 48 percent indicated personalised feel was appreciated, help in filling in the forms appreciated
Placement of orders	Online orders avoid human error, illegible data on handwritten faxes, and typographical errors, electronic order receipt response	Online ordering, inclusion of security information on their home pages either as a link or as an icon, specified fields and characters for online orders, e-mails	100 percent indicated that security was the most important issue they considered when placing an order, confirmation of orders via e-mails was important, information on total costs was useful
Authorisation of payment	E-payment, credit card and multi-payment methods	Multi-payment methods	Payment with cheques was useful
Receipt of product and after-sales service	Online account history post-sale product information	Online invoices, receipt of payments, e-mails with delivery information, tracking	Follow-up e-mails, online catalogues, useful links to information
Other	Effective Web page design, e-mailing online catalogues, regular updates, all customers treated the same, e-services offered online is the same to all customers	Some provided information about how to use the product, new product information, links to e-communities	Web page design, easy navigation, updated information, 10 percent considered product range was important, 5 percent indicated that access from remote areas was useful, 85 percent indicated that timely delivery of product was important

sites were a subset of the 20 organisations investigated in project one. This part of the research was conducted to confirm the customer service claims made by e-commerce organisations identified from project one.

The author became a member of the e-commerce sites that required customers to

become members and made a purchase to experience the online customer service. Thus the e-commerce sites chosen for analysis were those that offered a variety of affordable products. E-service applications identified from the analysis of e-commerce sites are presented in column two of Table I.

Part two of project two was carried out to get the customers' perspectives of e-services in B2C e-commerce. It was accomplished via structured interviews with a cohort of 35 people who were randomly selected from age groups of 18 and above, and from different professions based on the assumption that these people were more likely to have shopped online. The participants were chosen on the basis that they had access to computers, Internet connections and credit cards. A sample size of 35 was considered sufficient due to the scope of this project. They were all presented with the same set of questions which established their online shopping experience, age, e-services that affect their decisions to shop online, importance of these services, and the impact of tools and techniques that enabled ease of tracking their orders and completing a transaction. Customer service support to customers with the application of innovative tools and techniques, and how these supported their decision to shop online was established.

Of the 35 customers who agreed to participate in this project, 50 percent were between the ages of 18 to 24, 32 percent were between the ages of 25 to 34, 14 percent were between the ages of 35 to 44 and the other 4 percent were between the ages of 45 and 54. Hence, most of the respondents were the younger generation. Data gathered from this part of research are presented in column three of Table I as customer perspectives of e-services.

Findings

Findings of the two projects are presented in Table I, which indicate that business organisations placed a lot of emphasis on customer service support in B2C e-commerce. They supported customer search for products by offering a 24 × 7 access to information on their Web sites, a comprehensive product selection guide with useful, friendly information to enable customers find what they are looking for. Three organisations offered customers a one-stop shop to complete their transaction and also incorporated personalized e-responses to customer queries. The value of FAQs and help desks was recognized by many of the business respondents. All of these organisations provided online catalogues on

their Web sites. Analysis of e-commerce sites indicated that information on products sold was available 24 × 7, most had built-in FAQs even if it provided only very basic information, and in two cases search was facilitated by key words. From the customer point of view it was clear that at the product search stage a comprehensive Web site with easy to follow information was important. Customers appreciated search facilitated by key words and links to additional information on products, however, very few valued round the clock information access. Products offered online were generally found from different search engines.

Business organisations provided product details including prices on their Web sites. They strongly believed that friendly and polite e-mail responses to customer queries, addressing them by their first names, developed a strong one-to-one relationship, which encouraged customers to buy from them. Product attributes such as quality, applications, warranty period and other details also won online customers. Site analysis proved that most sites included links to additional information about the products, price of products, payment methods and e-mail addresses of some valued users of the product. From the customer perspective price of product was the most important factor affecting their decision to buy. Personalised greetings and product details also affected customers' decision to return to an online provider's site.

A few of the more developed business organizations applied data-mining and warehousing tools to analyse customer demands and interests, and send them relevant information. Others used cookies to record the number of visits to their sites and accordingly updated information. Most of the businesses investigated were eager to explore and implement new technologies to assist customers in their decision to purchase process. Site analysis identified the applications of a lot of useful links and the implementation of some new technologies. From the customer point of view it was apparent that detailed information about total costs, delivery charges and tax implications were important issues that influenced their decision to choose a provider.

As customers negotiated the terms of purchase, some business organizations offered buyers multi-payment methods and after-sales

support. A few e-commerce sites included some advanced technological applications of customer registration and personalized Web pages to give customers control and privacy of shopping. A large number of the customers interviewed indicated that a personalized feel during their online shopping experience was appreciated.

To allow customers to place orders online most e-commerce sites included online catalogues from which items could be selected and dropped into online shopping carts. E-forms with specified fields for alphanumeric and numeric data with allocated space for decimal points were significant features of online orders on e-commerce sites. Different payment methods, e-mail responses to confirm orders and inclusion of security information were identified to be prominent features of Web sites analysed. All the customers interviewed indicated that assurance of secure data transmission was most important for them to commit an online purchase. Customers also appreciated quick electronic responses to confirm orders and clear indications of total costs of the purchase. To pay for online purchases most businesses preferred payment by credit cards, however, it is clear from this research that using traditional methods of payment was an advantage. Customer response confirmed that they were more comfortable with traditional methods of payment due to security reasons.

Business organizations emphasised the importance of providing customers with online account history and post-sale product service information. Site analysis proved order tracking on most sites, delivery information and account history. Follow-up e-mails, new product information updates, and useful new links were appreciated by customers. Other issues important to businesses were treating all online customers the same and offering the same e-services to all of them. Site analysis showed the inclusion of information about how to use the product, links to new products, online communities and other useful information. From the customer point of view Web page design was important for easy navigation. Some considered product range and access from remote locations to track their shopping records as useful aspects of e-commerce. However, most

emphasised that timely delivery of products bought was essential.

Discussion and summary of major findings

From the findings of the two projects, it is apparent that services offered online to support online customers have an important role in B2C e-commerce. Services included in the B2C e-space that assist customers to make a purchase are those that aid product search, promptly answer customer queries, enable completion of transactions online and offer trust and assurance of security and privacy of data transmitted. Although no statistical analysis on data was carried out, it is apparent from the findings discussed above and presented in Table I that the following e-services have an important role in B2C e-commerce.

E-search

From the findings of this research listed in Table I it is apparent that an important online service that supports customer search for products is enabling information access 24 hours a day, seven days a week. This information is made available in the form of online catalogues, which include product description and prices, after-sales support, payment methods and opinions of some valued users of the product. Search for products is facilitated by key words and by listing businesses on various search engines. Customers also appreciated information about complementary products during the search process. Site analysis highlighted an extensive application of links to additional information which customers could access if they desired. E-search was enhanced with the application of new technological developments such as intelligent agents, which are software that support the search process with key words from information bundled together. Other technologies that supported online search evident from this research were data warehousing and mining. These technologies analysed information for complex queries, identified customer demand trends enabling online businesses to send information pertinent to customer interests rather than inundating them with extraneous information. Web sites that were

easy to navigate also supported customer search for information and products.

E-response

Findings of the three components of research presented above highlight the fact that e-responses to customer queries, order acknowledgement, delivery and payment information via e-mails or automated responses are greatly appreciated by customers. It has also been highlighted that the nature of e-responses also helps strengthen the relationship between the supplier and the customer and makes up for the personal response that prevails in the traditional shopping arena. One of the business respondents emphasised that “via e-mail order acknowledgment, we recognise and address our customers by their first names”, strengthening e-relationships with this service. Another business was of the view that “a close relationship with customers can be developed from a distance with e-responses”. E-mail responses were widely used by businesses to acknowledge receipt of orders, payment and delivery of information. An e-response to say thank you, an apology for any delays, tailored e-mails from analysis of shopper profile to provide online shopping guidance, and to announce the release of new products and specials supported online shoppers. Customer responses confirmed the value of e-responses in the B2C e-space.

E-transaction and e-payment

It has been confirmed from the online businesses investigated that orders received online compared to handwritten ones received via fax assured accuracy and further improved customer satisfaction. Orders placed online were done on standard forms with allocated spaces (fields) for numeric and alphanumeric characters avoiding wrongly read and printed figures, further enhancing assurance. Customers were given control by allowing them simple enquiries like account history and checking order status online. Account balances could be called up and simple problems solved independently by clients. Customers could enquire and inform the supplier about any discrepancies in their orders such as incomplete information, typographical errors and incorrect account details. The customers surveyed appreciated this service, and their ability to check orders and total costs before the shipment of goods.

Although most e-commerce organizations allowed their customers to shop at ease by allowing them to use a payment method that suited them best such as by cheque, money order, or cash on delivery, e-payment methods are essential in e-commerce to attain the speed of processing payments and for accuracy of transaction information. Site analysis confirmed additional payment methods, although credit card payments were the most popular method.

E-assurance and trust

Online business organizations investigated had realized secure transactions and transmission of information to be an important service offered to customers. It was emphasized by one of the respondents that “many potential Web shoppers abort their transactions due to security fears”. Another business indicated that a better relationship with customers is developed by trust, letting them know how well they are recognised by the seller, and that their personal data are not available to others. Another response was “online customers are won or lost by a company’s privacy policy”. Site analysis indicated that these organizations had incorporated secure transmission of information and transactions. All the online e-commerce sites analysed had taken measures to inform customers that transactions and communication between them were secure by providing security information on their home pages either as a link or via an icon. All of the customers interviewed indicated that security of online information was the most important factor affecting their decision to make a purchase online.

E-help and e-technologies

Supporting customer queries with product information, FAQs, photographs of products and inclusion of opinions of some valued customers on their Web sites were popular methods of promoting sales. One business response was “customer service is improved through the introduction of comprehensive electronic tools and technologies”.

E-commerce site analysis confirmed that many organisations were taking advantage of the hyper link capability of the World Wide Web to provide customers with information about new products and services. They were also applying technologies such e-mail, fax on

demand, online information and chat to provide better pre- and post-sale support to customers. Business organizations had also realized the importance of new and fresh information on the Web site to keep customers interested and to make them visit the site again and again. As quoted by one of the business respondents, “it is important to regularly update Web pages to keep customers interested”. Site analysis identified the applications of help-desks, technical support systems, Web site attractors, FAQs, chat and automated responses. It was apparent from site analysis that organizations capitalised on multimedia applications to better present information and services to customers. One e-commerce site programmed Web capabilities to deliver gratitude, congratulations and confirmations to clients. Customers, on the other hand, highlighted the importance of online support in filling in online forms, being able to save the form for completion at a later time or date for continuation. They also indicated that they appreciated Web page designs that were easy to navigate, self-explanatory and easy to follow while completing an electronic transaction request.

Other findings

Other e-services evident from the research are providing a “one-stop shop for customers” allowing them to complete all transactions electronically. Another view captured in this research was that “with electronic business all customers are treated the same”. The nature of business is global and services offered on the Web are the same; therefore customers from different countries, regions, social status and age are treated the same. Business organisations investigated were of the opinion that products and services, along with friendly e-services made available online, result in satisfied first-time customers who will “gain the education/knowledge to use it again”. Some sites asked customers their birth dates so that they could push information to them about products suited to their age group. Others recorded delivery addresses and messages incorporated in gifts ordered by customers to remind customers if they wanted to use the service again at each anniversary. Most sites provided information about new products and special deals. A few had well developed links to information about customer experiences and opinions such as

reviews. Others provided information about how to use the product.

Managerial implications

B2C e-commerce is still new and unproven to many customers. Companies need to develop e-commerce with a customer focus to increase market share. E-services discussed above, carefully planned and applied to e-commerce, support customers in finding what they are looking for and completing their transactions with confidence. A proactive strategy to develop and implement e-services is an important requirement in B2C e-commerce.

Most customers like to find out things their own way and in their own time. Convenient shopping hours, 24 × 7, are a service that also takes care of problems of parking, waiting in queues for shop attendants, and other hassles of traditional shopping. B2C e-commerce also offers customers shopping privacy, which is a unique characteristic of e-commerce.

Adoption of new technologies to offer e-services that assist customers in their search process, comparison shopping, find quick answers to queries, and assure trust and secure transactions wins customers. Trust and assurance increase satisfaction, reduce risk, encourage anticipated continuity and promote favourable pricing (Pavlou, 2002).

From the research findings presented above, it is apparent that the quality of e-services in the B2C e-commerce environment can be enhanced with the application of new tools and techniques. The Web activities of users give businesses an opportunity to create user profiling to build a customer database for providing value added e-services. Companies that implemented technologies to gather and store information about individual customers, which can be accessed every time an individual interfaces with the organization, could easily understand customers' changing needs and accordingly provide e-services to satisfy those needs. Data mining helps online businesses to streamline and develop services only of interest to specific customers. By targeting clients with personal offers, advertisements, promotions and other e-services online businesses proffer individual attention, winning customer loyalty. Thus new technologies should be implemented effectively and quickly to augment additional e-services.

In the online environment the power is fast shifting to consumers who can switch to a new provider with a click of a mouse. This necessitates that online enterprises offer extraordinary services and create positive customer experiences. It can be seen that a complete organisational focus on e-services supported by appropriate electronic technology is essential to maintain loyal customers, improve operational efficiencies and boost revenues as promised by electronic commerce.

Maximum efficiency is gained when customer contacts are managed by tying Web technology with back office systems such as order processing, purchasing, payment integration and after-sales service. An integrated and responsive e-business is then able to present itself to the consumer as an online store front. Clients would then satisfactorily receive end-to-end customer service from initial contact through to the purchasing cycle from order taking to delivery and after-sales service. Ideally there would be quick and appropriate responses to queries, complaints, product returns and billing, adding to overall customer comfort. In a market where so many players are now customer-centric, organizations which view the Web as a completely separate entity from their back-end systems and customer service functions may not achieve success.

Conclusion

This paper discussed the role of e-services from the business as well as customer perspectives in e-commerce. The success of a company is measured by how effectively it interacts with its customers. Thus customer-centricity, facilitated by the Internet and the Web, is at the heart of electronic commerce. Site analysis findings listed in Table I indicate more features on e-commerce sites than those claimed by businesses in column one; however, this can be attributed to the fact that project two was carried out a year later and the nature of e-commerce is such that it is fast evolving and these new developments were quickly adopted.

Research findings presented in this paper clearly highlight the fact that online businesses in Australia have realised that the nuances of customer service in electronic commerce need to be handled by systems that

are easy and intuitive to use, that furnish timely and accurate responses to customer requests and handle secure information transmission. To increase the customer base in e-commerce it is important to implement and continuously review the quality of e-services. It can also be concluded that further research is required to identify the value of each e-service in B2C e-commerce.

References

- Adam, N., Oktay, D., Gangopadhya, A. and Yesha, Y. (1999), *Electronic Commerce Technical: Business and Legal Issues*, Prentice-Hall, Englewood Cliffs, NJ.
- Archer, N. and Gebauer, J. (2000), "Managing in the context of the new electronic marketplace", *Proceedings of the First World Congress on the Management of Electronic Commerce*, McMaster University, Hamilton, Ontario (CD-ROM).
- de Ruyter, K., Wetzels, M. and Kleijnen, M. (2000), "Customer adoption of e-service: an experimental study", *International Journal of Service Industry Management*, Vol. 12 No. 2, pp. 184-207.
- Deitel, H.M., Deitel, P.J. and Steinbuhler, K. (2001), *e-Business and e-Commerce for Managers*, Prentice-Hall, Englewood Cliffs, NJ.
- Ho, C. and Wu, W. (1999), "Antecedents of customer satisfaction on the Internet: an empirical study of online shopping", *Proceedings of the 32nd Hawaii International Conference on Systems Sciences*, pp. 1-9.
- Jarvenpaa, S., Tractinsky, N., Saarinen, L. and Vitale, M. (2001), "Consumer trust in an Internet store: a cross-cultural validation", *Journal of Computer-Mediated Communications*, Vol. 5 No. 2, pp. 1-30.
- Kalakota, R. and Whinston, A. (1997), *Electronic Commerce: A Manager's Guide*, Addison-Wesley, Reading, MA.
- Korner, V. and Zimmermann, H. (2000), "Management of customer relations in business media (MCR-BM)", *Electronic Markets*, Vol. 10 No. 3, pp. 162-8.
- Miles, M.B. and Huberman, M.A. (1994), *Qualitative Data Analysis*, 2nd ed., Sage Publications, London.
- Otto, J. and Chung, Q.B. (2000), "A framework for cyber-enhanced retailing: integrating e-commerce retailing with brick-and-mortar retailing", *Electronic Markets*, Vol. 10 No. 3, pp. 185-91.
- Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988), "SERVQUAL: a multiple item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-40.
- Pavlou, P.A. (2002), "Impersonal trust in B2B electronic commerce: a process view", *Business-to-Business Electronic Commerce: Challenges and Solutions*, Idea Group Publishing, Harrisburg, PA, pp. 71-89.
- Phillip, M. (1998), *Successful e-Commerce*, Bookman, Melbourne.
- Riel, A.C.R., Liljander, V. and Jurriens, P. (2001), "Exploring consumer evaluations of e-services: a portal site", *International Journal of Service Industry Management*, Vol. 12 No. 4, pp. 359-77.

- Singh, M., Costabile, A. and Paull, S. (2001), "E-commerce and customer relationship management (eCRM)", in Singh, M. and Teo, T. (Eds), *E-Commerce Diffusion: Strategies and Challenges*, Heidelberg Press, Melbourne, pp. 95-108.
- Turban, E., Lee, J., King, D. and Chung, H.M. (2000), *Electronic Commerce: A Managerial Perspective*, Prentice-Hall International Inc., Englewood Cliffs, NJ.
- Turban, E., Lee, J., King, D. and Chung, H.M. (2002), *Electronic Commerce: A Managerial Perspective*, Prentice-Hall International Inc., Englewood Cliffs, NJ.
- Voss, C. (2000), "Developing an Eservice strategy", *Business Strategy Review*, Vol. 11 No. 11.
- Watson, R.T., Berthon, P., Pitt, L. and Zinkhan, G. (1999), *Electronic Commerce*, The Dryden Press, Orlando, FL.
- Yin, R. (1994), *Case Study Research Design and Methods*, Sage Publications, New Delhi.
- Zhao, Z. and Gutierrez, J. (2001), "The fundamental perspectives in e-commerce", in Singh, M. and Teo, T. (Eds), *E-Commerce Diffusion: Strategies and Challenges*, Heidelberg Press, Melbourne, pp. 3-20.

Note from the publisher

Over the past 12 months we have initiated many changes by Emerald and the Editor which we hope will be of benefit to our readers, our authors and hopefully our new authors. I would like to take this opportunity to highlight a summary of these enhancements:

- I would like to formally welcome Dr Ton van der Wiele to the Journal. Ton has very kindly agreed to perform the role of European Editor. Ton is Associate Professor of Quality Management & Organisational Performance, at the Erasmus University, Rotterdam, in The Netherlands. Ton has published extensively in the fields of quality management and business excellence. European-based authors are encouraged to contact Ton and his details can be found on the Journal inside cover and the Journal Web site.
- I would also like to formally welcome Professor Bernd Stauss to the Editorial Advisory Board.
- We have improved and expanded our authors' resources Web sites (www.emeraldinsight.com/literaticlub). Here you will find much useful information on how to get published, your copyright rights, call for papers, Literati Awards, etc. We also have two new sections: "Conference Central" will continue to grow to be a one-stop shop to find the most relevant conference to attend; "Editing Service" puts authors, whose command of English is not up to publication standard, in touch with a person who, for a fee, will liaise with the author to improve the grammar of their article.
- Our Research Register (www.emeraldinsight.com/researchregister/index.htm) continues to grow. This is an online forum for the circulation of pre-publication information. By registering and broadcasting your current research activities you will gain exposure to potential collaborators and it will put you in the spotlight of Editors. It also

informs our readers as to what is the cutting edge of current research.

- The managing editors (myself included) have been running Author Workshops, both at international conferences and by invitation to university departments. These workshops provide an insight into the world of scholarly publishing and give advice to new authors on how to get their research findings into a piece of publishable work. If you feel that this service would be of use to your department or conference, then please do get in contact with me.

The past 12 months have seen an excellent growth in the usage of the Emerald Fulltext database. In this time the database has been accessed over 21 million times, from which in excess of 5.5 million articles have been downloaded. Over 800 universities, corporate and public institutions now subscribe to the Fulltext database.

The past year's usage statistics of *Managing Service Quality* are also excellent. The Journal has been viewed online nearly 285,000 times, from which nearly 82,000 articles have been downloaded. The most popular of these articles to date are:

- "Measuring and managing service quality: integrating customer expectations", Robledo, M.A., *Managing Service Quality*, Vol. 11 No. 1, 2001, pp. 22-31 (1,434 downloads).
- "Service quality and e-commerce: an exploratory analysis", Cox, J. and Dale, B.G., *Managing Service Quality*, Vol. 11 No. 2, 2001, pp. 121-31 (1,277 downloads).
- "Tourists' perceptions towards and satisfaction with service quality in the cross-cultural service encounter: implications for hospitality and tourism management", Weiermair, K., *Managing Service Quality*, Vol. 10 No. 6, 2000, pp. 397-409 (986 downloads).

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John McHale

Managing Editor

jmchale@emeraldinsight.com

Call for papers



Managing Service Quality

Special Issue on

Quality and e-Service

Managing Service Quality is pleased to announce a special issue focusing on Quality and e-Service under the guest editorship of Dr Frances Hill and Shirley-Ann Hazlett from the School of Management and Economics at Queen's University, Belfast. In a recent issue of *Managing Service Quality* (Vol. 12 No. 3, 2002, pp. 135-8) Professor Valarie Zeithaml stated that: "Significant research and managerial attention have been devoted to service excellence over the last 20 years. We now need to focus some of that attention on service delivery through electronic channels. Evidence indicates that service is critical to online customers and that it is generally poor." Thus we invite contributions to address one or more of the following:

- **the distinctive features of e-service;**
- **the fit between existing service paradigms and the e-environment;**
- **the conceptualisation of e-service quality and its measurement;**
- **the delivery of e-service quality in practice;**
- **consumer attitudes and behaviours in relation to e-service.**

We welcome papers that adopt theoretical, empirical, methodological or practitioner stances and are interested in contributions located at varying levels of analysis. Four copies of each paper must be received by the guest editors on or before 31 January 2003. The editors will review each paper, and if it is judged suitable for this publication, it will then be sent to two referees for double blind peer review. Papers should be in the format specified in the Notes for Contributors (www.emeraldinsight.com/journals/msq/notes.htm).

Address to which papers should be sent is:

Dr Frances Hill

School of Management and Economics

Queen's University of Belfast

25 University Square

BELFAST BT7 1NN

Northern Ireland, UK

For further information contact: f.hill@qub.ac.uk,
s.hazlett@qub.ac.uk

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