A study of access to services within the call centre industry for the hearing impaired

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ABSTRACT
The call centre industry is a relatively new phenomenon within Australia. The sector has undergone a period of rapid growth and is estimated to be worth $2.5b with an annual growth rate of 25%. Previously in Australia only large companies such as airlines, telecommunications and banks established call centres. Advancements in telecommunications technology have contributed to the cost of establishing a call centre to decrease. Technology and the improved customer perception of customer service via the telephone have helped fuel growth in the industry. Companies are increasingly providing customer service and support via call centres, with expansion in regional Australia often as a result of government inducements. As more companies choose to provide customer service via telephones issues of access to services and service quality are raised. This paper presents the preliminary results of a study of Australian call centres containing 100 or more workstations. Results from a telephone survey of 88 call centres are presented together with analysis of the data collected. The paper examines access to services offered by call centres for the deaf/hearing impaired, customers or potential customers.
Introduction

There have been a number of areas in which service quality improvement has revolved around issues of access. Clearly, an inaccessible service is really no service at all. The importance of access as a component of customer service has been recognised in many areas, with increasing access at times and in locations which are convenient to the customer. Examples of this are in the retail industry where many retail outlets have increased the number of hours they are open. More supermarkets and service stations are now open 24 hours, 7 days, which has improved accessibility to retail services. In other cases, there have been enabling technologies which have served to improve access in a way that is convenient to customers. For example, the development of telephone banking has opened many banking services 24 hours, 7 days, providing convenient services with improved access achieved by extending the time period access is available. The ServQUAL (Zeithaml, Parasuraman and Berry, 1990) model of service quality recognises access as one of the characteristics for improvement. The development of call centres has also enabled companies to revisit the ways in which they manage their relationships with their customer base. The trend in retailing services, for instance in banking, has been towards providing access for longer periods of time to make services more accessible. This does result in improvements in accessibility but in the case of call centres, increased access is only available to a subset of potential customers. The proliferation of call centres has the potential to exclude some potential customers such as the deaf/hearing impaired potential customers. This is not only poor business strategy, it is in contravention of the companies’ statutory responsibilities. There is technology available that is compatible with call centres which would enable deaf/hearing impaired people to access services. Enabling technology in the form Teletypewriters (TTY) has been in existence for about 40 years allowing deaf/hearing impaired people to communicate via telephone. There would appear to be no defence in law for failing to comply, as there is enabling technology available that is relatively modest in cost, particularly relative to the total costs and the costs of the enabling technologies required to initiate a call centre service.

Business Excellence

The Australian Quality Council Australian Business Excellence Framework (AQC, 1999) focuses on seven critical success categories within an organisation, while the European Foundation for Quality Management Business Excellence Model (EFQM, 1999) focuses on nine fundamental concepts that underpin business excellence. Although the models vary in the numbers of components, there is a common thread in them, which recognises that the financial bottom line is not the only measure of businesses’ performance. Social responsibility and being a good corporate citizen is emphasised by both business excellence models and frameworks. All companies that aspire to business excellence must, as a minimum requirement, fulfill their statutory obligations. Any company which has a call centre as part of its service provision and is not making provision for deaf/hearing impaired people is not meeting this minimum requirement.

The Development of the Call Centre Industry

It is widely held in the service sector, where customer relationships are often ongoing, that it costs significantly more to attract new customers than it does to retain existing customers. With this in mind Customer Relationship Management is being viewed as a more important activity for companies as a means of retaining existing customers and ensuring that they are satisfied. Call
centres are an important element in this relationship management since they provide access to information, assistance and expertise to customers in real time. They also provide information and feedback to companies on the performance of their goods and services. The call centre industry is one of the most rapidly growing industries in the developed world today (Dalrymple and Phipps, 1999). The growth of the call centre industry demonstrates the commitment of companies to their relationships with customers. This development reflects the desire of companies to improve access to their services, in a cost effective manner, and retain satisfied customers (Bird, 1998).

International Data Corporation (IDC) estimate that worldwide spending on customer relationship management services, such as call centers and online computer help desks, are expected to rise at least 20% to more than $US40 billion this year. And it should more than double that figure in the next four years. By the year 2003 companies are expected to spend $US90 billion a year on the management of customer relationships. This in contrast to a 1998 worldwide CRM total of $US33 billion in spending. (International Data Corporation, 1999)

Based on dividing the overall call center service market into the following segments: consulting, systems integration and outsourcing; the worldwide call center services market totalled $US23 billion in revenues in 1998 and is projected to double to $US58.6B by 2003. Outsourcing is the largest segment with $US17 billion in 1998 or 74% of the total market, headed for $US42 billion in 2003. (IDC,1999)

The number of people employed in teleworking field is currently growing in Europe at an estimated 40% per annum (Egan and Molloy, 1999). Around 1 in every 250 of the working population within Europe work either full or part time in call centres, and this figure is set to rise by the year 2001. The UK accounts for over half of Europe’s teleworkers, with 1.1% of the workforce currently employed in this sector. This is expected to rise to 2.2% by the year 2001 (Datamonitor 1996, cited in Phipps, 1996)

While the industry in Australia is relatively new the trend of growth is consistent with the rest of the world. The Australian call centre market reportedly continues to grow at a rate of 25 per cent a year. With this rapid growth it is important that quality remains paramount otherwise the customer service industry will inevitably falter (The Australian, 1999).

Before September 1996 the Australian Call Centre industry was small and dominated by a selected few industries-telecommunications, credit cards, airlines and car hire taxi companies. Australia then had maybe 800 call centres in total containing possibly 10,000 employees. Since 1996 the number of call centres has grown from 800 to 5-6000 sites and employment has grown from 10,000 to 100,000. (Kjellerup, 1999) Current estimates suggest that somewhere between 60,000-100,000 are employed in call centres, rising to 250,000 by 2008. (Kjellerup, 1999)

The use of call centres in Australian customer service has only recently been adopted by medium sized companies. The early adopters were large companies such as airlines, telecommunications companies and major banks. (Johnson, 1998). Medium sized companies can now afford to set up call centres due to improvements in telecommunications technology and lower barriers to entry. The viability of call centres for these organisations has also increased with the improved customer perception of telephone services, often offered via toll free number (Phipps, 1996)

Companies may have their call centre services structured in a number of ways. The service may be provided internally with the company’s brand. The service may be outsourced. Decisions must be made whether to operate from a single site or multiple sites. There are call centres that are
managed and operated by companies using their brand and image on a single site. Larger organisations may use their own brand but from multiple sites or different levels in the same building perhaps to service customers with different needs e.g domestic/international. An example of this is Centrelink whose TTY services are nationally serviced from call centres located in Bendigo, Moorabbin, Perth and Bunbury. There are also companies that subcontract their call centre activities to call centre companies who operate from a large single site but provide service to multiple client companies. This type of service bureau call centre is the one most likely to be favoured by the medium sized company, and there is significant growth in this sector. The advantage of bureaus for medium sized and smaller companies is that the operators already possess the knowledge of how to operate a call centre and they are already set up, so the organisation avoids a large portion of set up costs.

In terms of location of centres, the large call centres have traditionally been located in large cities. The industry is increasingly developing in the regions of Australia– the smaller cities and country towns. Areas like Gosford, Broken Hill, Launceston, Bunbury, Orange, Newcastle, Wollongong, Geelong, Sale and Traralgon are popular locations as well as towns in country NSW and the Gold Coast. Bendigo is said to be the regional call centre capital of Australia, with about 11 sites and 1000 people in a town with a population of 85,000 employed in call centres (Johnston, 1999).

**The Frequency of Occurrence of Hearing Impairment**

In 1993, 18.1 per cent (3,176,700) of the Australian population had one or more disabilities. Of these 999,800 persons, 31.5% reported a hearing impairment. The incidence of hearing impairment increases with age (ABS, 1993). However the proportion of people with a disability who have a hearing impairment only, remains relatively constant across age groups, showing that the rate of increase with age is similar to that for all disabilities. Add to the hearing impaired and deaf people those with speech disability and those who cannot use conventional speech telephones and this constitutes a significant market. Australia, in common with many developed countries, has an increasing ageing population. In 1993 there were 2,763,000 person aged 60 or more and, of those 21.1 per cent (581,900) had a hearing impairment. (ABS, 1993)

In Europe it is estimated that about 14% of the population suffer some form of hearing impairment (Phipps, 1996). Clearly those who have deafness or are hearing impaired represent a significant and growing market. The companies which provide goods and services through call centres may miss important market segments and opportunities if they fail to service that market.

**Australian Legislative Framework**

“In Australia, the Disability Discrimination Act (1992) is “An Act relating to discrimination on the grounds of disability” This Act seeks to eliminate discrimination on the grounds of disability in work, the provision of goods and services and in general under the law. The Act provides for there to be a Disability Discrimination Commissioner. The Human Rights and Equal Opportunities Commission is the body which is empowered to investigate and determine cases. In the case of Australia, discrimination on the grounds of disability is treated in the same way as discrimination in the grounds of gender or race.” (Dalrymple and Phipps, 1999). The Australian legislation is now relatively mature and is more robust than the UK Disability Discrimination Act 1995. Because it is older it could reasonably be expected that the legislation would be more embedded in the policies of companies and the ways in which they operate. It could be hypothesised that this
would be evident in the results examining fundamental discrimination issues such as access and equity.

International Comparison

The Australian legislation is similar to the Americans with Disabilities Act (ADA 1990) rather than to the UK DDA 1995. The UK DDA has a Disability Commissioner to advise on issues, but it relies upon on individuals who have been discriminated against to bring forward cases. The ADA was enacted on July 26 1990 and became effective in July of 1992. The purpose of the act is to prevent discrimination against people with disabilities. In the USA the Americans with Disabilities Act 1990 makes comprehensive provision for all disabled in an Act “To establish a clear and comprehensive prohibition of discrimination on the basis of disability”. Discrimination in Employment is dealt with by the Equal Opportunities in Employment Commission as the body which is empowered to investigate and determine cases. In this case discrimination on the grounds of disability is treated in the same way as discrimination on the grounds of gender or race. (Oyez, 1998)

Thus, there are examples of anti-discrimination law in Europe and the United States. The Australian and USA legislation establish organisations which are proactive and seek out discrimination and seek to remedy discriminatory practices. The UK legislation is less robust and provides only for an advisory body. However, in all cases, the legislation makes discrimination in employment, or the provision of goods and services, on the grounds of disability illegal. Call centres which do not make appropriate provision for deaf and hearing impaired customers and employees are, therefore, failing to fulfil their statutory duty. This research seeks to establish the level of compliance of a sample of the Australian call centres with the statute.

Methodology

A list of 100 call centres with more than 100 workstations was obtained from the Australian Call Centre Directory to be used as the sample. Of the 100, 88 were selected based on their ability to be contacted directly and therefore used as part of the sample for the customer service questionnaire. This list provided the names, addresses, phone, fax and industry of the 88 call centres.

<table>
<thead>
<tr>
<th>Table 1.0 Call Centres Sample Industry Breakdown</th>
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<tbody>
<tr>
<td>Industry Sector</td>
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<tr>
<td>Automotive</td>
</tr>
<tr>
<td>Computing</td>
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<tr>
<td>Entertainment</td>
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<tr>
<td>Hospitality</td>
</tr>
<tr>
<td>Office Supplies</td>
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<tr>
<td>Taxi</td>
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</tbody>
</table>
Call centres were contacted by the researcher on behalf of a deaf person to find out about how that person could access the services of the call centre. Each call centre was then asked:

- if they had a teletype (TTY) line,
- the number and the hours the TTY service was available

If the company did not have a TTY line they were asked if they would accept a call from the Australian Communication Exchange-National Relay Service. This is a National Relay Service which acts as an intermediary in relaying messages in each direction between a person operating a Teletypewriter (TTY) and a standard speech telephone operator. Calls were timed and Operators were given a rating according to a method devised by Phipps (see Table 1.1). This rates the knowledge of the operator about how deaf and hearing impaired customers can use services. Notes were also taken of the conversations that took place with operators.

### Table 1.1 Operator Ratings - Phipps Method

<table>
<thead>
<tr>
<th>Rating</th>
<th>Conditions Encountered</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>The operator had the information and could answer the questions immediately</td>
</tr>
<tr>
<td>2</td>
<td>The operator thought there was a TTY service but had to find details</td>
</tr>
<tr>
<td>3</td>
<td>The operator did not know if there was a TTY service available and needed to find details</td>
</tr>
<tr>
<td>4</td>
<td>The operator did not know what a TTY was, and this had to be explained by the interviewer before the question could be answered</td>
</tr>
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#### Results

88 call centres in total were sampled on the customer service questionnaire. The 88 call centres represented 52 different companies.
TTY
32 of 88 call centres reported having TTY’s (36.4% of call centres sampled had TTY’s). 12 of the
52 sampled companies reported having had TTY’s (23.1% of companies reported having TTY’s).
As can be seen from Graph these 12 companies came from the Automotive, Airline, Banking,
Government, Telecommunications, and Taxis sector.

Table 1.2 Organisation reporting TTY availability

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Frequency</th>
<th>Organisation</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ansett</td>
<td>4</td>
<td>Qantas</td>
<td>3</td>
</tr>
<tr>
<td>Bank West</td>
<td>1</td>
<td>RACV</td>
<td>1</td>
</tr>
<tr>
<td>Centrelink</td>
<td>8</td>
<td>St George</td>
<td>2</td>
</tr>
<tr>
<td>Commonwealth Bank</td>
<td>3</td>
<td>Taxis Combined</td>
<td>1</td>
</tr>
<tr>
<td>National Australia Bank</td>
<td>2</td>
<td>Telstra</td>
<td>2</td>
</tr>
<tr>
<td>Optus</td>
<td>4</td>
<td>Westpac</td>
<td>1</td>
</tr>
</tbody>
</table>

Two of the call centres could not provide the TTY number but reported that they did have a TTY
line. RACV indicated that the operator would need to know what the call was regarding before
providing the TTY number as the different departments all have different TTY numbers and it
would be useless unless the service required was known. Telstra Telecard Services advised to
look up the number in the Whitepages Directory and that the number was at the front of the
directory.

Graph B: Operators reporting TTY availability by Industry Sector

Of the other 56 call centres that did not have TTY’s 9 (16.1%) reported that they would not accept
calls from ACE NRS, while the other 47 (83.9%) reported that they would.
Graph C: Operator Ratings Vs Frequency of Occurrence

![Graph C](image)

Graph D: Call Duration Vs Frequency of Occurrence

![Graph D](image)
Table 1.3 – Mean Time and Standard Deviation

<table>
<thead>
<tr>
<th>Mean Time (minutes)</th>
<th>Standard Deviation</th>
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</thead>
<tbody>
<tr>
<td>3.46</td>
<td>2.06</td>
</tr>
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</table>

Graph E: Mean Call Duration for Operator Ratings Analysis

Analysis

From the industry breakdown of the call centres sampled it can be seen that Betting and Gaming (5), Airline (6), Government (9), Bureau (11), Telecommunications (11) and Banking (21) make up a large portion (71.6%) of the sample. This is perhaps, to be expected given that the sample contains call centres with 100 workstations or more which are not small call centres by industry standards. As the large cities contain the large call centres the sample contains call centres predominantly from major cities.

32 (36.4%) of the 88 call centre operators sampled reported having Teletypewriter (TTY) services available. This figure requires qualification, as the 32 call centres that responded that they have TTY’s were from only 12 organisations. Only 12 (23.1%) individual companies out of a total of 52 sampled reported having a TTY service.

When examining the 12 companies that reported having a TTY service available it can be seen that most of the companies are from the Airline, Banking, Government and Telecommunications sector. One Taxi and one Automotive company reported having a TTY service. The automotive company operator responded that they have TTY facilities but before I could be given a TTY number I had to know what the person was calling about so I could be given a TTY number appropriate to my inquiry. Having TTY facilities but not giving out a number until you know what the caller is calling regarding defeats the usefulness of the TTY as a means for deaf/hearing impaired people communicating in a confidential way.
Many of the large organisations, specifically the banks, airlines and telecommunication companies have had call centres established the longest and are the pioneers of the Australian call centre industry. Because of this, the results suggest that they are more aware of the issues of access for deaf and hearing impaired customers and potential customers.

For the Government organisation, Centrelink it would be reasonable to expect that a government organisation would comply with the legislation and be somewhat of a leader in the field. For telecommunications companies who possess expertise in communicating via technology it would appear to be logical that they would deploy enabling technology to service potential customers. There appears to be some link between the size of an organisation and the likelihood that it will offer TTY services. In banking and the airline sectors, the high public profile of the operators and corporate responsibility may explain the high incidence of appropriate practice.

Absent from the companies reporting TTY services was the Bureau sector with none of the 11 sampled reporting TTY facilities. Clearly bureaus as call centre service providers to other companies might be expected to be very aware of the importance of issues of access to services, particularly those who are unable to use the phone, since provision of service via the phone is their core business. Also absent was the Betting sector which was represented by 5 call centres in the sample. With the move towards phone betting and the increase nationally in gambling in Australia this is, perhaps, surprising.

56 call centres operators from 40 different companies reported that they do not have TTY services available. Of those not reporting TTY facilities 47 (84.9%) reported that they would accept calls from the Australian Communication Exchange – National Relay Service (ACE-NRS) while 9 (16.1%) reported that they would not accept calls from the NRS.

Given that 32 call centres from 12 companies reported TTY facilities while 56 call centres from 40 companies did not it suggest that if a company operates on more that one site the more likely to have TTY facilities available. It could be assumed that if it operates on more than one site then it is a larger organisation. Therefore, the larger an organisation is, the more likely it is to be aware of these issues.

Operator knowledge of the Australian Communication Exchange as an organisation was exceptionally low. A majority of operators seemed to have knowledge of a relay service but probably could not name the service as the national relay service. Once the relay service was explained most operators responded that they would accept calls from the relay service with a handful volunteering information about it before it was asked. However, for many it had to be explained before the operator could answer. When a response was given it appeared as if it was not information which the company had provided the operators and thus it was an area that they had not been trained to deal with. The results strongly suggest that for many call centres there is no strategy in place for providing access to services for deaf or hearing impaired customers or potential customers.

A number of trends are evident in the operator ratings that highlight this. One is that 28 of the 88 (31.8%) call centre operators sampled gained a rating 4. What this means in real terms is that roughly 1 in every 3 operators sampled is likely to have no idea what a TTY is. Furthermore about 70% of operators sampled, which incorporates operator ratings 2, 3 and 4, could not give an immediate answer when asked about their TTY facilities and roughly 30% of operators did not know what a TTY is. On the other hand 26 of 88 (29.6%) of operators gained a rating 1 and knew
immediately of the services provided by their company. However, this statistic requires further analysis as six of the rating 1’s were for Centrelink call centres. It was postulated that Centrelink as a government organisation would be a leader in areas of disability discrimination in the call centre industry and the results support this. For the purpose of analysis it is necessary to exclude Centrelink from the results to gain a clearer picture of what is actually happening in the call centre industry. Centrelink’s inclusion skews the results because of the large number of Centrelink call centres sampled (9) and because Centrelink call centres were among the better performing. If Centrelink was excluded then the results would be markedly worse. If other organisations with multiple call centres who obtained more than one rating 1 are excluded a clearer picture of the industry is starting to form in which Centrelink, Banks, Airlines and Telecommunication companies are better addressing the issues of access to services for deaf and hearing impaired customers. There is a large portion of operators who are unaware of what TTY and relay services are and whether their company offers these services and this is reflected in the results.

The mean time for a call to enquire about the services for deaf and hearing impaired customers took 3.46 minutes, while the standard deviation was 2.06 minutes. 3.46 minutes is quite a long time to be on the phone enquiring about what should be pretty standard information in the call centre industry. 65% of calls took longer than two minutes.

Analysing the mean time for the different operator ratings it is clear that the mean time for operators who gained a rating 1 and knew what they were doing was about two minutes. While those who gained a rating 4 had no knowledge of TTY and needed to have it explained were took roughly four minutes.

Operators who did not know what they were doing detained the caller for about 2 minutes more than those who did. A difference of two minutes between ratings 1 and 4 highlights the importance of and the need for operator training. In the time a poorly trained or untrained operator can handle one of these queries a well trained operator can handle two. In the call centre industry where calls are made and received by the hundreds, a difference of two minutes per call would have an enormous financial impact on any company’s call centre.

While 29.6% of operators gained a rating 1 because they had the relevant information to hand and could answer the questions immediately this figure may be misleading. An operator may respond immediately but the answer given could be innaccurate and may not reflect the service actually available.

Further studies will investigate the difference between the service that is being reported by operators and the service that exists. If an operator responds to an inquiry by stating that they do not have a TTY line when in fact they do then effectively it is the same as the organisation not having a TTY.

Also there is an issue for companies who think that operators providing internet addresses to the deaf/hearing impaired is satisfactory service. Providing internet access alone is not an alternative to TTY. There has in the past been a suggestion that computer literacy levels as well as ownership statistics are quite low for the deaf and hearing impaired. The last ABS study was completed in 1993 and the next update is due later in the year 2000 which may provide more insight in to these important issues.

Companies often use their website to get customers into their call centres and often do not view the services as mutually exclusive, but rather complementary. If a service is available to
customers via phone then it is discriminatory to not make provision so that the service can be similarly accessed by deaf and hearing impaired customers, where it can be reasonably afforded. Video-monitor phones are currently being developed and are not yet a viable alternative as they are not in widespread use. Meanwhile teletypewriters remain affordable and relatively easy to operate with operators requiring only minimal training to be able to use a TTY proficiently. Call centres operators are the gate-keepers to information about the company. Unless they are trained to be able to provide accurate information about how deaf/hearing impaired customers can access their services the company is not fulfilling its statutory responsibilities.

Conclusions

Although the Australian Disability Discrimination Act 1992 is now nearly 8 years old and should be embedded in the policies and procedures of companies, particularly those that aspire to business excellence, evidence suggests this is not the case in the call centre industry. Exceptions to this can be found in the Airline, Banking, Government and Telecommunications sectors. Clearly further research is warranted investigating employment in the call centre industry and the difference between the services reported and those actually existing.

Acknowledgements

The authors gratefully acknowledge the support of Computing Devices Canada - a General Dynamics Company - in carrying out the research reported in this paper. The authors accept sole responsibility for the contents of this paper.

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