

**Please reference as:**

Darcy, S. (2010). Inherent complexity: Disability, accessible tourism and accommodation information preferences. *Tourism Management*, 31(6), 816-826.

**Inherent complexity: Disability, accessible tourism and accommodation information preferences.**

Simon Darcy  
Faculty of Business  
University of Technology, Sydney  
P.O. Box 222  
Lindfield NSW 2070  
Ph: 61 2 9514-5100  
simon.darcy@uts.edu.au

**ABSTRACT**

Studies have identified constraints with the way that accessible accommodation information is documented and marketed. Yet, no research has investigated the criteria that people with disabilities determine as 'important' to selecting accommodation and their preference for presenting this information. This paper presents the results of a survey to determine the relative importance of room selection criteria through the development of a 55-item Hotel Accessibility Scale. Four information formats were then presented to ascertain the preferences of the respondents. The results suggest that while socio-demographic variables offered some insight into criteria selection, the most significant explanation for criteria selection and information preferences were the dimensions of disability and level of support needs. The preferred format of accessible accommodation information provision was based on a combination of textual, floorplan and digital photography. The management implications suggest that detailed information provision using this format has benefits for accommodation stock yield and social sustainability.

**Keywords:** Hotel Accessibility Scale; accessible tourism; disability; accommodation;

## 1 INTRODUCTION

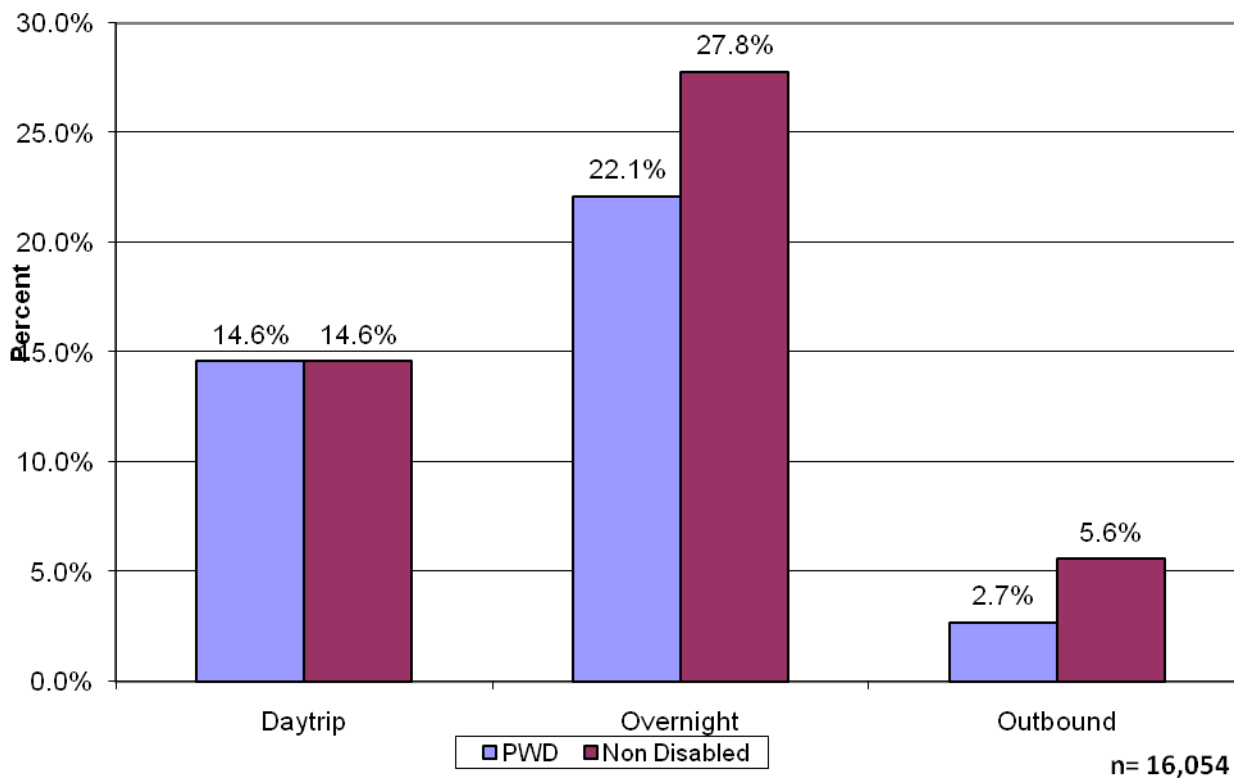
A great deal of research has investigated consumer selection criteria for hotels, evaluation of service quality and benchmarking determinants that may contribute towards hotel selection (e.g. Bell & Morey, 1996; Callan, 1998; Hsieh, Lin, & Lin, 2008; Nash, Thyne, & Davies, 2006; Warnken, Bradley, & Guilding, 2005). At the same time, there has been a series of well-documented constraints and problems that people with disabilities (PwD) encounter with accessible tourism accommodation (Access For All Alliance (Hervey Bay) Inc, 2006; Bi, Card, & Cole, 2007; Daniels, Drogin Rodgers, & Wiggins, 2005; Darcy, 1998, 2002a; Innes, 2006; Tantawy, Kim, & SungSoo, 2004). These issues are not confined to Australia but are a universal experience of PwD wanting to travel. Based on Australian and international academic research, the major issues identified were that accessible accommodation information is poorly documented, not detailed enough, not room specific and do not have an equal amenity to nondisabled rooms. From a supply perspective (Darcy, 2000; O'Neill & Ali Knight, 2000), owners and managers do not recognise disability as a market and, hence, do not promote the rooms in an appropriate manner for PwD to make an informed choice about their accommodation needs. In addition, accommodation managers report low occupancy of the accessible rooms and that non-disabled customers do not like using accessible rooms (Australian Hotels Association, 1998; Davis, 1981; Healey, 2008). As suggested by Packer, McKercher and Yau (2007), there is a complex interplay between the individual, the tourism context and the environment, where in this case, little is understood about the criteria that consumers regard as being important to their choice of accessible accommodation. Further, there has been no research

investigating the ways in which the criteria should be presented through accommodation management information systems. This research seeks to redress the situation.

## **2 LITERATURE**

It has been noted that tourism experiences for PwD are more than access issues (Shelton & Tucker, 2005; Stumbo & Pegg, 2005; Yau, McKercher, & Packer, 2004). Yet, for people with mobility disabilities a foundation of any tourism experience is having accessible destinations (Israeli, 2002) and locating appropriate accommodation from which to base oneself while travelling (Darcy, 2002a). Quite simply, to stay a night away from their normal residence requires appropriate accommodation that allows access to a bedroom and bathroom as a base for their stay. As shown in Figure 1, Dwyer and Darcy (2008) use the Australian National Visitor Survey demographic data to identify the statistically significant differences between the comparative travel patterns of PwD and the nondisabled. While day trips occur at the same level ( $p = .992$ ), the nondisabled travel at 21% higher rate for overnight stays ( $p = .000$ ) and 52% higher rate for overseas travel ( $p = .000$ ). Other studies have identified that problems with finding accessible accommodation during the travel planning stage was noted as a significant constraint to overnight and overseas travel.

**Figure 1: Comparative travel patterns between PwD and the nondisabled**



Two studies specifically identified the relative degree of impairment, mobility aid used and level of independence as significant influences on tourism requirements and accommodation choice (Burnett & Bender-Baker, 2001; Darcy, 2002a). Studies in Australia (Access For All Alliance (Hervey Bay) Inc, 2006; Darcy, 1998; Market and Communication Research, 2002; Murray & Sproats, 1990) and overseas (Burnett & Bender-Baker, 2001; Daniels et al., 2005; HarrisInteractive Market Research, 2003; Shaw & Coles, 2004; Turco, Stumbo, & Garnarcz, 1998) have shown that PwD have indicated that there are serious constraints and problems with locating accessible accommodation. Intertwined with locating accessible accommodation is the planning of the trip, accessing information, negotiating directly with providers or, less frequently for PwD, engaging travel agents (Darcy, 1998; McKercher, Packer, Yau, & Lam, 2003). These complexities are further compounded by the way that information is documented, promoted and marketed by the accommodation sector in particular. In the Australian

context, these studies have been validated by the Human Rights and Equal Opportunity Commission (HREOC) complaints cases and Federal court actions (Human Rights and Equal Opportunity Commission, 2006) taken by PwD against accommodation providers. A number of studies have reviewed these issues through examining the actions taken under disability discrimination legislation (Darcy, 2002b; Darcy & Taylor, 2009; Goodall, 2002; Goodall, Pottinger, Dixon, & Russell, 2004; Miller & Kirk, 2002; Shaw, 2007).

## **2.1 Access and the Built Environment**

In the Australian context, the government regulates all aspects of the built environment through legislation, codes, standards and development control processes (Bates, 2006; Stein & Farrier, 2006). Central to the environmental planning process is that the Building Codes of Australia (Australian Building Codes Board, 1996) must address access and mobility through the Australian Standards (AS1428 Parts 1-4) (Standards Australia, 1992a, 1992b, 2001, 2002). Within the building codes, tourism accommodation is referred to as Class 3 development where a proportion of accommodation (approximately 5%) is required to be accessible for PwD. Australian Standards AS1428 for access and mobility have specific requirements for this class of accommodation.

The requirements for the built environment operate in parallel to the *Disability Discrimination Act, 1992* (DDA) that makes it illegal to treat a person differently before the law because of their disability. Similar approaches to the built environment and disability discrimination are found in most Western nations (e.g. ADA in the United States and the DDA in the United Kingdom). The outcome of the building codes and the

disability discrimination legislation is that Australians with disabilities have a right to accessible accommodation that must meet stringent access criteria.

The accessibility requirements of AS1428 involve literally thousands of detailed measurements and protocols that create the built environment. In the past, this complex information has been interpreted by the Australian Automobile Association (AAA) AAA *Tourism* accreditation and presented in their mainstream accommodation directories through a dual access icon rating system – wheelchair “independent access” or wheelchair “access with assistance” (see Darcy, 2007). The iconic representations are based on the Australian Council for Rehabilitation of the Disabled (ACROD) assessment tool for hotels and motels developed for AAA *Tourism* (ACROD, 1994; 1999), which is, in turn, based on the AS1428. This system was withdrawn from the accommodation directories because third-party based assessment criteria is being reviewed (AAA Tourism, 2006). While no explanation is given as to the reason for the review, there had been a series of HREOC complaint cases about the accessibility of tourism accommodation (HREOC, 2006). To this point in time, no replacement access information is provided by this organisation.

Disability and access requirements are dynamic and evolving in the same way that the spirit and intent of the DDA surpassed the previous conceptualisations of mobility, hearing, vision and cognitive dimensions of access. The effect of the DDA on the Building Codes of Australia and AS1428 created an ‘uncertainty’ in the development processes from an industry perspective. After intense lobbying, the Australian Building Codes Board (2004b) entered into a process with the Commonwealth Attorney General's Department and the HREOC (2004) to harmonise the DDA with the Building Codes through the development of a *Draft Disability*

*Standard for Access to Premises* (Commonwealth Attorney General's Dept., 2004, 2008). While agreement exists as to what constitutes accessibility across the four dimensions of access, there is significant industry resistance over the level of compliance and the number of access rooms to be included within tourist accommodations (Darcy, 2004; Innes, 2006). Part of the concern involves the perceived cost of access inclusions and the relative occupancy of current accessible accommodation stock (Australian Hotels Association, 1998). However, as previous research and the HREOC complaint cases have identified a great deal of 'disabled rooms' built as accessible accommodations do not comply with AS1428. It has been suggested that these breakdowns in compliance are an aggregation of professional misunderstanding at the planning, design, construction and operation phases of development. Yet, the processes developed for the Sydney 2000 Olympics and Paralympic Games have shown that with political will the accessibility of the built environment can be radically improved (Cashman & Darcy, 2008).

Currently there is also an undertaking by Tourism Australia and all state tourism organisations (STOs) to work towards an inclusion for accessible accommodation on the Australian Tourism Data Warehouse (ATDW) (Tully, 2006). The ATDW 'provides a central *distribution* and storage facility for tourism product and destination information. The information is compiled in a nationally agreed format and electronically accessible by operators, wholesalers, retailers and distributors for use in their web sites and booking systems' (Australian Tourism Data Warehouse, 2006). It has approximately 22,000 product listings that are distributed to Tourism Australia's online website, the STOs' websites and a series of commercially operated websites. Yet, this opportunity is absent for accessible tourism operators who have good access

provisions but have no agreed format to list on the ATDW. As there is no accessible tourism information available electronically from the ATDW, day-trippers, domestic tourists and international tourists with access requirements are effectively excluded from the benefits of electronically accessing the designated premier search engines of the NTO and the STOs.

## **2.2 Accommodation Research**

Given the recent action by AAA Tourism and the position of the *Draft Disability Standards for Access to Premises*, it is an opportune time for the accommodation sector to take stock of accessible accommodation. Yet, outside of the identification of accommodation as a constraint to travel, very little Australian or overseas research has been done on the importance of criteria choice for accessible tourism accommodation. Israeli's (2002) preliminary work on site accessibility provided an understanding of the importance of the seven components that need to come together to make a site accessible. The Australian and overseas studies identified the constraints to accessible accommodation provision as:

- the lack of accessible accommodation;
- accessible accommodation that did not comply to the access standards;
- the importance of accommodation to trip satisfaction trip;
- problems locating accessible accommodation even when it did exist; and
- the level, detail and accuracy of information about accommodation as inadequate (Access For All Alliance (Hervey Bay) Inc, 2006; Darcy, 1998; Market and Communication Research, 2002; Murray & Sproats, 1990).



Relatively few quantitative studies of tourism experiences of PwD have been undertaken. Almost all of these studies involved mobility disability and a number of significant differentiators have been noted that provide insights into the visitor experience for whether PwD travel, the sectors that they interact with and the relative levels of accessibility. Darcy (1998, 2002a) identified impairment, independence, level of support needs and mobility aid as being statistically significant determinants of where a person stayed and how often they travel. He also found that the demographic variables of income, age and lifestyle circumstances had a significant effect on accommodation choice. Burnett & Bender-Baker's (2001) study on travel criteria of people with mobility disabilities included four criteria for accessible accommodation that found the level of support needs was a significant differentiator of PwD travel criteria. They also found that gender, age, income marital status and employment status were significant components. With the specifics of accommodation, they found that over two thirds of respondents would travel more if they felt welcome at accommodations and over 70% said they would travel more if they could locate accessible accommodation more easily. Further, they identified seven criteria that PwD would change to improve their stay in the future: easy to push on floor surface; extend or motorize drape pulls; widen hallways; change door direction to swing open; place light switch close to bed; place phone close to bed; and too much furniture.

The two previous supply side perceptions studies concluded that accommodation managers did not understand the access features of their rooms or provide any level of detailed information outside of whether an establishment had a 'disabled room' (O'Neill & Ali Knight, 2000; Tantawy et al., 2004). Supporting these findings, a market research study that looked at what PwD most wanted in the way of

product development concluded that accurate and detailed information about accommodation was a prerequisite for determining their destination of choice (Market and Communication Research, 2002). Further, in 2005 the Sustainable Tourism Cooperative Research Centre funded a workshop to set a national research agenda for disability tourism that involved stakeholders from all sectors of the industry, government and disability advocacy. Two of the outcomes have direct relevance in that one of the key areas of recommendation was the improvement of information provision generally and, with specific reference, to the accommodation sector (Darcy, 2006).

A number of recent studies have used quantitative approaches to ascertain accessibility and attitudinal barriers to transport, accommodation, hospitality and attractions in the USA and China (Avis, 2005; Bi et al., 2007). Statistically each of these studies produced different yet significant results with Avis suggesting that gender and age provided some explanation for different levels of accessibility required by the group and Bi, Card and Cole suggesting that functional ability was a major influence on perceived accessibility of accommodation. While the cultural context may provide some explanation for these differences, the statistical results may be tempered because of the accessibility scales for the industry sector camouflage the complexity and interplay between disability, the environment and tourism (Packer et al., 2007). To reduce the accessibility of any industry sector to a single scale measure is fraught with difficulty due to the multivariate nature of any of the sectors' accessibility considerations. For example, Israeli (2002) identified some seven basic considerations for destination site accessibility.

### **2.3 Seniors with Access Needs**

The other market segment with a nexus to PwD is seniors with access needs.

There is a well established nexus between ageing and increasing levels of disability and access needs over lifespan (Australian Bureau of Statistics, 2004; World Health Organization, 2007). While a great deal is known about the senior traveler in Australia and overseas (Fleischer & Pizam, 2002; Glover & Prideaux, 2009; Horneman, Carter, Wei, & Ruys, 2002; Queensland Office of Ageing, 1998; Ruys & Wei, 1998), relatively few studies have provided a detailed account of the constraints faced by the group (Fleischer & Pizam, 2002). Yet, each of the studies recognizes some inherent constraints and facilitators to tourism with a proportion of senior travelers having specific access requirements with accommodation being a significant issue. A study of the accommodation needs of mature travelers by Ruys & Wei (1998) identified that a proportion of senior travelers had accommodation access needs. In their study, five major dimensions were identified as important to mature travelers: safety, convenience, security, service, and comfort and recreation. The five dimensions included 44 criteria, many of which PwD would interpret as central to access and mobility as outlined by AS1428. The study concluded by recognising the accommodation sector's ageing client base and suggested that changes to design and planning could improve the peace of mind and satisfaction of senior travelers.

## **2.4 Summary**

In summary, the background context and literature clearly identifies that accessible tourism is both an issue and a significant emerging market that the global tourism industry must plan to address sooner rather than later. The Australian literature on accessible tourism identifies that there have been significant issues with respect to locating, gaining reliable information and having satisfying accessible accommodation

experiences. The contemporary Australian situation has seen three convergences that make an investigation of access room criteria and accessible tourism information provision timely: the withdrawal of the AAA Tourism assessment of accessible accommodation; the work of the NTO and STOs to operationalise access within the ATDW; and the recent identification of accessible accommodation information as a strategic research agenda. To this point in time, no research has been published that tested what are the important access room criteria and which gives the acceptable formats of accommodation information provision for PwD. As such, research related to this issue is clearly warranted.

### **3 RESEARCH QUESTIONS**

1. What are the key selection criteria for accessible rooms on which PwD make decisions about whether the rooms suit their access needs?
  - a. Are there any differences between the respondents preferences based on the demographic variables collected as well as disability type and level of independence?
2. Which of the three-industry standard and one innovative accessible accommodation information formats do PwD prefer?
  - a. Are there any differences between the respondents' preferences based on the demographic variables collected as well as disability type and level of independence?
3. Is there congruence between the information presented and the respondents' assessment of the accessible rooms?

## 4 RESEARCH DESIGN

The research design employed an online questionnaire to draw a sample of PwD through an electronic snowballing technique (Dillman, 2000; Veal, 2006). Specifically it targeted the population of PwD who use accessible rooms designated under the Building Code of Australia while travelling. This population was then asked the relative importance of room criteria for their accommodation choice and to determine their information format preferences. The sample was drawn from over a hundred disability, seniors and government organisations through an electronic snowballing technique that took place over the second half of 2007. An information notice about the research was formulated and circulated electronically to the organisations with a link to the online questionnaire. The organisations then provided the notice to their members through either: direct e-mail out; included within the electronic or hard copy newsletters; placed on their website notices; or distributed through some other means. This form of electronic snowballing has proved successful in previous research.

### 4.1 The Hotel Accessibility Scale

In taking direction from Ruys and Wei (1998), recent overseas research (Europe for All, 2007), the Building Code of Australia (Australian Building Codes Board, 1996, 1997, 2004a, 2004b), the Draft Standards for Access to Premises (Commonwealth Attorney General's Dept., 2004, 2008) and referenced Australian Standards for Access and Mobility (Standards Australia, 1992a, 1992b, 2001, 2002), the *Hotel Accessibility Scale (HAS)* was developed to test the relative importance of room criteria for PwD. Some 55 individual items were tested in a five point likert scale from 1 'not at all

important' to 5 'very important'. The HAS was tested for internal reliability (Cronbach Alpha coefficient), subjected to a principal component analysis to ascertain the relative grouping of items and tested for between group difference through Chi-square test for independence, independent samples t-test and ANOVA (sociodemographic, disability and level of support need variables) (Pallant, 2007).

#### **4.2 The questionnaire**

An online and a paper-based questionnaire was then prepared. The questionnaire was also prepared in alternative information formats for people who were blind or visually impaired including an option for Braille, large print and alternative completion through the provision of phone assistance. The questionnaire consisted of five parts: demographic profile; impairment specific profile; accommodation attributes; accommodation information preferences; and travel patterns. These five parts were organised into 35 questions collecting approximately 180 variables, including three open-ended qualitative questions. A copy of the instrument is included with the online version of the article.

#### **4.3 Accommodation information preferences**

Together with industry assistance (Accor & Youth Hostels Australia), a preliminary assessment of hotel accommodation stock in Sydney was undertaken to determine hotels and accessible accommodation of 'best practice'. Access audits of the premises and the best accessible rooms in establishments were then conducted based on AS1428 (Standards Australia, 2001) and universal design principles (Preiser & Ostroff, 2001). Information was then prepared in three industry-standard formats and a fourth format of innovation. The formats drew on iconic, textual, spatial and digital

photographic approaches. Specifically, the access information was presented in the four following ways:

1. AAA Tourism access icons (Australian Automobile Association, 2005);
2. textual presentation (Australian Quadriplegic Association, 2002; Fodor's, 1996);
3. textual and spatial presentation (Cameron, 2000; City of Melbourne, 2006);
4. textual, spatial and digital photography, (Eichhorn, Miller, Michopoulou, & Buhalis, 2008; Europe for All, 2007).

#### **4.4 Product testing**

A number of respondents (n=6) who answered the online questionnaire were recruited to product test the accessible accommodation to see whether the information preference formats matched actual room. After a site visit, the respondents were first individually interviewed and then brought together for a focus group. The interviews were taped and transcribed for analysis, where the focus group was facilitated and a note taker documented the emergent points of discussion.

#### **4.5 Limitations**

While the sampling method of electronic snowballing is an efficient means of contacting organisations of PwD and those with access needs, there are limitations to the method with respect to those who have access to the internet, those members who regularly check their organisational website or their electronic or hard copy publications. Further, as noted in the discussion of the sample characteristics below, the electronic snowballing technique may have created a level of non-completion (1070

people responded with 566 fully completed) as professionals associated with disability, building and the accommodation sector who were not the primary population for the study took the opportunity to review the research instrument online without completing questionnaire. However, this did not compromise the integrity of the study because non-completed questionnaires were excluded from the analysis. A number of these people contacted the research team and provided insight into accessible accommodation that was used in another part of the research.

## **5 FINDINGS**

### **5.1 Sample:**

Over 1070 people responded to the survey, with 566 fully completed questionnaires used for the analysis. An extensive profile of sociodemographic and psychographic variables was collected, together with their travel patterns, accommodation preferences and information sources. Of these 58 percent were female and 42 percent male, with a relatively even distribution of age. The dominant lifestyle groups were midlife singles, older working couples, younger singles living at home and older non-working couples. The sample was well educated with 48 percent having a University qualification and 20 percent TAFE educated. The majority of people were full-time (33%) or part time (17%) employed with 24 percent retired or receiving a pension. Over 75 percent were Australian-born with a low affiliation to other cultural or ethnic groups (8%). In comparison to the Australian national statistics on disability (Australian Bureau of Statistics, 2004), the sample has a higher proportion of people with mobility disabilities, similar proportions of people with vision, hearing, and cognitive disabilities and an under representation of those with mental health disabilities. This was expected as accessible accommodation standards are focused on



those with mobility, vision and hearing disabilities. The respondents identified 1077 dimensions of access, suggesting that people identified as having multiple dimensions of disability. Of these people, 39 percent identified as being independent or low support needs, 25 percent medium support needs and 36 percent having high or very high support needs. Table 1 presents a breakdown of the sample indicating the statistical significance of the relationship for the sociodemographic variables by the level of support needs using either independent t-test or ANOVA.

**Table 1: Sociodemographic variables by Level of Support Needs**

<b>Demographic</b>	<b>P Value</b>	<b>Ind%</b>	<b>Low%</b>	<b>Medium%</b>	<b>High%</b>	<b>Very High%</b>
<b>Gender</b>	<b>0.851</b>					
Male		17	23	28	22	10
Female		16	28	24	20	11
<b>Age</b>	<b>0.006</b>					
Under 35		21	22	22	20	14
36 – 60		17	25	23	23	11
60+		10	31	39	16	3
<b>Employment</b>	<b>0.000</b>					
Not in Employment		8	23	32	24	13
Employed		25	28	20	19	8
<b>Country of Birth</b>	<b>0.007</b>					
Australia		14	26	25	23	12
Overseas		25	25	30	17	3
<b>Education</b>	<b>0.000</b>					
Primary/Secondary		9	17	28	27	19
Trade/TAFE		23	28	31	11	7
Uni/Postgrad		18	30	23	22	6
<b>Dimension of Access</b>	<b>0.000</b>					
Power WC/scooter		6	18	22	40	13
Manual W.C.		26	28	28	16	1
Other Mobility		16	35	30	15	4
Vision/Hearing/Cognitive/other		10	19	25	20	26

## 5.2 Internal Consistency and Principal Component Analysis (PCA)

The Hotel Accessibility Scale's (HAS) Cronbach Alpha coefficient of .965 indicates excellent internal consistency for the 55 items of the scale. As the HAS was part of scale development, there are no directly comparable studies. However, there are commonalities between PwD and seniors in that many have access needs due to the increasing acquisition of disability as people age. Hence, their travel behavior and needs have connections to accessible tourism. As such, the Ruys & Wei (1998) study was a valuable starting point for the development of HAS.

The HAS was then subjected to a principal component analysis (PCA) using SPSS Version 16. Prior to performing the PCA, the suitability of data for PCA was assessed. Inspection of the correlation matrix revealed the presence of most coefficients of .3 and above. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy value of 0.969 exceeds the recommended value of .6 (Kaiser 1970, 1974) and Bartlett's Test of Sphericity was statistically significant to the 99 percent level ( $p = .000$ ), supporting the factorability of the correlation matrix (Bartlett 1954).

The PCA revealed the presence of eight components with Eigenvalues exceeding 1, explaining 65 percent of the variance. Inspection of the screeplot revealed a clear break at the third component with the elbow continuing down to the eighth component, which was confirmed using Cattell's (1966) scree test. A Parallel Analysis (using Monte Carlo PCA) was then undertaken that showed six components with Eigenvalues exceeding the corresponding criteria values for a randomly generated data matrix the same size (55 variables x 566 respondents). The six components were retained as the principal components and explained 60 percent of variance.

To aid in the interpretation of the six components, Direct Oblimin rotation was

performed. The rotated solution revealed the presence of simple structure (Thurstone 1947), with all 6 components showing a number of strong loadings and all variables loading substantially on only one component, Component 1. Given that the HAS is part of scale development there is no direct comparison with other studies. Table 2 presents the Pattern Matrix to explain the relative component groupings as well as presenting the component Cronbach Alpha coefficients, which were all above .7 indicating a good internal consistency of each component. The components can be named along functional lines based on AS1428 as indicated in Table 2.

**Table 2: Component Structure of Accommodation Criteria Selection**

Component (Cronbach Alpha) & Criteria	Pattern Matrix Load	Component (Cronbach Alpha) & Criteria	Pattern Matrix Load
<b>Component 1: Core Mobility (.941)</b>		<b>Component 4 - Service &amp; Security (.893)</b>	
17. Flexi bed configuration	0.768	47. Room service	-0.310
19. Bed height	0.748	53. Dietary consideration	-0.313
18. Under bed clearance	0.694	5. Clear signage	-0.323
20. Firm mattress	0.621	42. Luggage assistance	-0.383
37. Clear circulation in bathroom	0.594	11. In room temperature control	-0.508
38. Table/kitchen bench clearance	0.551	39. Can do customer service attitude	-0.510
48. Low pile carpet	0.544	40. Orientation to the room	-0.520
32. Handheld shower head	0.524	46. Emergency phone in lift	-0.537
30. Roll in shower	0.492	55. Alarm system	-0.540
36. Toilet seat height	0.486	41. Evacuation orientation	-0.607
35. Accessible vanity unit	0.457	44. Well lit public areas	-0.659
14. Clear circulation space	0.417	<b>Component 5 - Amenity (comfort/recreation) (.814)</b>	
49. Extra linen	0.396	51. Gym access	0.784
33. Lever water taps	0.386	50. Pool access	0.757
21. All controls visible from bed	0.361	52. Self serve laundry	0.696
16. Bar fridge for medication	0.303	54. Complimentary newspaper	0.497
<b>Component 2: Hearing &amp; Vision (Communication) (.893)</b>		34. Adjustable magnifying mirror	0.458
24. Non audible door bell	0.830	<b>Component 6 - Supplementary Mobility (.889)</b>	
25. Access to TTY	0.818	4. Split level reception desk	0.696
22. Teletext decoders	0.812	2. Intercom at accessible height	0.670
6. Alternative format guest info	0.710	3. Independent access entrance	0.624
23. Phone with vol control and alert	0.709	13. Height of switches and controls	0.578
26. Internet access	0.378	10. Rooms of equal level of comfort	0.510
43. Illuminated switches	0.353	15. Reachable in room tea/coffee	0.476
<b>Component 3 - Ambulant (Safety) (.870)</b>		7. Continuous accessible path	0.452
29. Grab rails in bathroom	0.829		
8. Handrails throughout	0.784		
31. Bench in shower	0.645		
9. Seats near the lift	0.593		
27. Non-slip bathroom floor	0.496		
28. Call button in bathroom	0.478		
45. Room near lift	0.386		
12. Easily operated door handles	0.333		

**Note: Eigenvalues for each Component: Component 1 = 21.274, Component 2 = 5.011,**

**Component 3 = 2.085, Component 4 = 1.977, Component 5 = 1.599 & Component 6 = 1.440. Items**

**shown in table are those with Component loadings  $\geq$  .300**

### 5.3 Between Group Variance:

Within the structure of the online questionnaire the demographic variables of gender, age, life cycle, country of birth, cultural or linguistic background, highest education, current work status and geographic location were collected. There were also disability specific variables collected: dimension of access (disability type); level of support needs; aids used; and equipment requirements. The sociodemographic variables were tested for between group differences against the relative importance of access room criteria producing statistically significant results to the 95 percent level ( $p < .05$ ). Table 3 presents the independent samples t-test statistically significant criteria for gender (11 items) and country of birth (8 items), and ANOVA for age (7 items), employment status (18) and highest education level (19). As Table 3 shows, a number of the criteria were identified as being significant across three and four of the socio-demographic variables. While not shown in Table 3 due to the number of items identified, it was disability type (47 items) and level of support needs (38 items) where the greatest between group variance was explained (ANOVA  $p < .01$ ). The results demonstrate that there was significant variation in criteria preferences between people with mobility, vision, hearing, cognitive and multiple dimensions of disability suggesting a highly individualised discourse of access.

**Table 3: Criteria preferences across sociodemographic variables where p < .05**

Criteria Order of Sig.	Gender	Age	Country of Birth	Employment	Highest Education
1.	easily operated door handles	accessible parking	bar fridge for medication	independent access entrance	rooms as equal level of comfort
2.	nonslip bathroom floor	reachable tea and coffee	^flexible bed configurations	split-level reception desk	in room temperature controlled
3.	grab rails in bathrooms	controls accessible from bed	bed height	clear circulation space	bar fridge for medication
4.	bench in shower	^ well lit public areas	phone with volume control	reachable in room tea and coffee	^flexible bed configurations
5.	table/kitchen bench clearance	#room near lift	#well lit public areas	#flexible bed configurations	under beds clearance
6.	#can do customer service attitudes	^pool access	extra linen	bed height	non audible alarm
7.	luggage assistance	gym access	^pool access	roll in shower	adjustable magnifying mirror
8.	^well lit public areas		#dietary considerations	hand held shower hose	clear circulation in the bathroom
9.	#room near lift			leave the water taps	table/kitchen bench clearance
10.	emergency phone in lift			toilet seat height	#can do customer service attitude
11.	#dietary considerations;			#can do customer service attitude	orientation to room
12.				orientation to the room	evacuation orientation
13.				room near lift	illuminated switches
14.				low pile carpet	^well lit public areas
15.				^pool access	#room near lift
16.				gym access	emergency phone in lift
17.				self-service laundry	extra linen
18.				#dietary considerations	^pool access
19.					self serve laundry

^ Denotes four occurrences across the sociodemographic variables

# Denotes three occurrences across the sociodemographic variables

The criteria preferences had a further level of complexity when the level of support needs was overlaid. This complexity included specialist equipment that respondents travelled with, the interaction with attendants for personal care assistance and the dynamics of the group with whom people travelled. In particular, group related purposes required the need for multiple accessible rooms with some groups requiring up to 20 accessible rooms for sport and advocacy events where most hotels in Australia have between 1-3 accessible rooms.

#### **5.4 Access information preferences:**

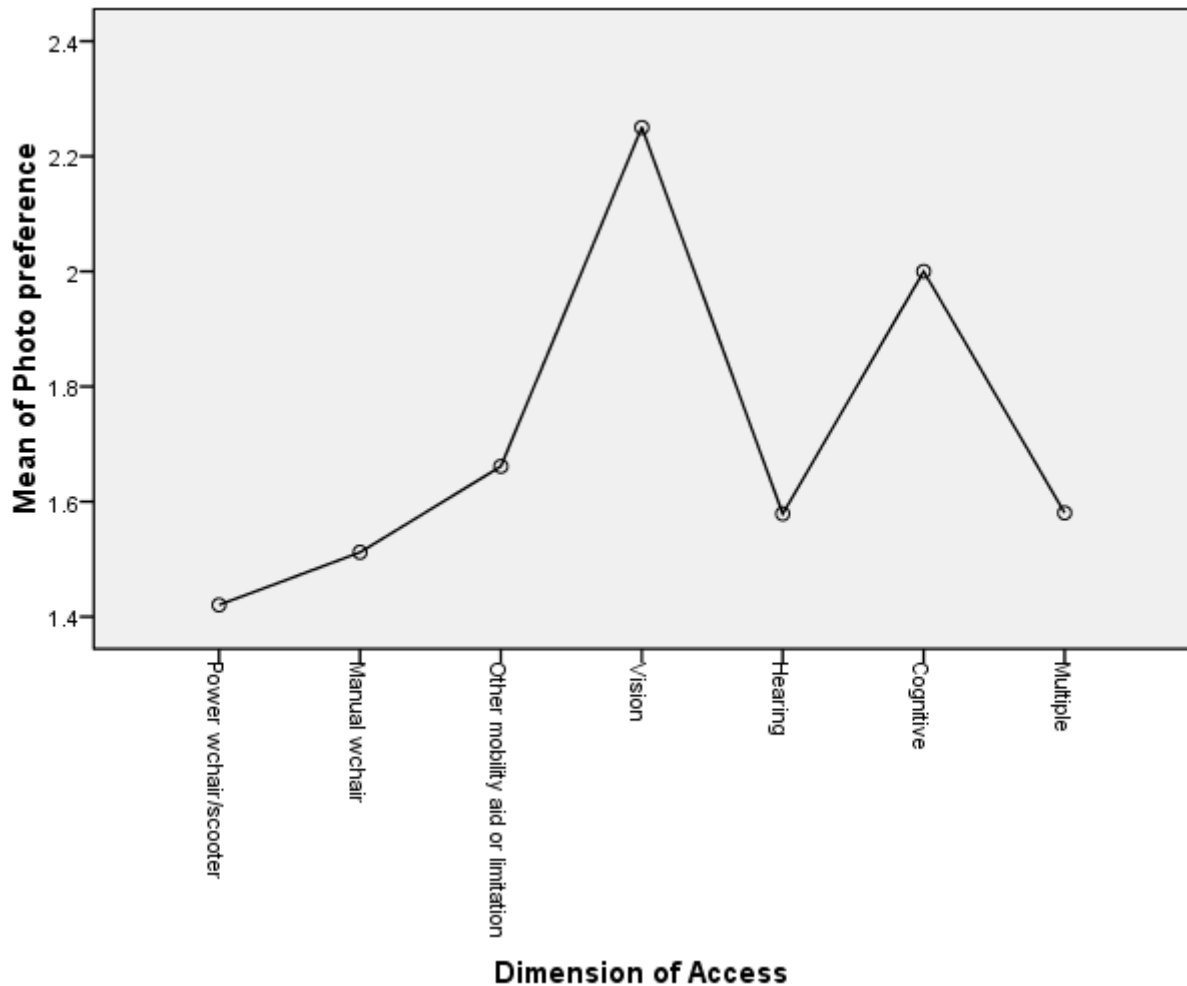
The results for access room criteria can be further contextualised through reviewing the access information preferences for accessible accommodation. As Table 4 reveals, the respondents were asked to rank their preferences (from 1 first preference to 4 fourth preference) with the main preference being digital photography with floorplan and textual (70% mean = 1.54) followed by textual with floorplan (15% mean = 2.14), text (6% mean = 2.79) and AAA icon (9% mean = 3.53). Figure 2 presents the mean plots for each dimension of access and shows the commitment to this format by people with aggregate mobility and multiple disabilities, where there was a markedly higher mean by people with vision and cognitive disabilities. Not surprisingly, people who were blind or visually impaired did not find the digital photography useful for their purposes but found the rich text description very helpful. People with cognitive disabilities did not have the same needs for visual or spatial orientation.

**Table 4: Accessible accommodation information preference**

Format	Mean	Std. Dev	Variance
1. AAA icon	3.53	.954	.909
2. Textual	2.79	.695	.483
3. Floorplan	2.14	.720	.519
<b>4. Digital images</b>	<b>1.54</b>	<b>.943</b>	<b>.888</b>

(n=566)

**Figure 2: Mean Preference for Digital Photography, floorplan and textual by Dimension of Access**



The level of support needs provided a similar pattern of a lower mean for the higher the support needs (e.g. high need mean = 1.42). However, there was an anomaly of people with very high support needs having a higher mean (mean = 1.51). Further analysis revealed that those with very high support needs were people with multiple disabilities rather than the more homogenous high needs people who predominantly had mobility disabilities. There



were no statistically significant differences between sociodemographic groups for information preference. Outside of these observations, what becomes apparent is that there is a relative homogeneous preference for the digital photography that included floor plans and textual information.

The product testing confirmed that the most important information for people determining the appropriateness of accommodation for their needs was the consideration of the bedroom and the detailed criteria of the bathroom. Interviews and a focus group with respondents (n=6) to the questionnaire who product tested the information provision at the hotel, suggested that the photographs needed to address these issues rather than the general accessibility of the hotel as they are the most critical considerations to deciding to stay at an accommodation. They were willing to overlook the general accessibility of public areas of the hotel if they could be assured that the room and bathroom had the access criteria that they needed.

While the individuals in this part of the research all had mobility disabilities, each identified particular room criteria that they regarded as essential to their decision-making process. Each said the level of detail provided was essential as it identified particular information that they sought. Further, while the textual and the floorplan provided a solid basis, the digital photography provided a visual reinforcement that confirmed the accessibility for their needs. Half of the respondents then went on to say they would have liked more photos of the room/bathroom and less of the general property as it was the accessibility of the room that was most important to their decision-making. People with ambulant disabilities were particularly interested in detailed information and photos of the position of the handrails. Handrails were critical not only to their mobility but also as the contributing component to ensuring their safety from slips and falls.

## **6 DISCUSSION**

### **6.1 Research Question 1: Relative importance of room criteria**

As stated in the findings, HAS has proved to be a valid and reliable instrument on which to gauge the relative importance of room criteria for PwD and those with access needs. The relative importance of the 55 room criteria, however, was dependent principally on disability type and level of independence. These findings further support Burnett and Bender-Baker's (2001) findings for the implications for market segmentation the group. However, the findings extend this work by moving beyond the mobility dimension of disability to include the other groups in the sample. This research included those with vision, hearing, cognitive and those who have multiple disabilities. Too often PwD are seen as a homogenous whole or tightly confined to the definitional categories identified by the World Health Organisation (2001). Yet, as the respondents in this study identified many had multiple disabilities that presented a further complexity to understanding consumer needs. While most major disability data sources recognise this as a fact (e.g. Australian Bureau of Statistics, 2004) most research is still operationalised within tightly confined definitions.

The sociodemographic variables that provided further insight into access needs are now examined. As Table 3 presented, the common room criteria that were statistically significant across gender, age, country of birth, employment situation and highest level of education. When these are considered in isolation, whether an individual criterion is statistically significant may not be an important outcome in itself. However, when the commonalities across the sociodemographic variables are examined, a number of important themes emerge. First, gender and age individually were the least statistically significant. Yet, further analysis showed some interesting considerations. For example, older women with disabilities travelled less than other groups and identified safety and security components as the most important criteria outside of the accessibility criteria. Second, their employment

situation and highest level of education also had the highest commonality for amenity (comfort/recreation) components. When this was analysed further, those with full-time employment and tertiary qualifications regarded these considerations higher than other groups. This could be explained through their awareness of their legal rights, demanded access to all areas of the premises and expect a high level of customer service than other groups. This explanation is supported in the literature regarding affluent baby boomers and their expectations in tourism participation (Cleaver & Muller, 2002; Glover & Prideaux, 2009; Muller & Cleaver, 2000). This would suggest that disability considerations should be considered within further senior and baby boomer research as there is a significant relationship between disability and ageing (Australian Bureau of Statistics, 2004).

## **6.2 Research Question 2: Accessible accommodation information format preference**

This research has reinforced that people requiring accessible accommodation information do so at a level of detail not previously considered by the accommodation sector specifically and, by inference, the tourism industry as a whole. Their experiences and evidence identified through complaint cases brought under disability discrimination legislation has been far from satisfactory (Darcy, 2002b; Darcy & Taylor, 2009; Goodall, 2002; Goodall et al., 2004; Miller & Kirk, 2002; Shaw, 2007). Hence, the respondents in this study identified the innovative approach to information provision that brought together the textual elements of AS1428 for access and mobility, the socio-spatial floorplan and digital photography to provide a triangulation of data as a distinct advance. This triangulation of access information allows individuals to make informed choices as to whether the accessible tourism accommodation is accessible for their needs. This is an important finding in itself, as expectation management is critical to customer satisfaction (Gnoth, 1997; Oliver & DeSarbo, 1988; Rodríguez del Bosque, San Martín, & Collado, 2006). An accommodation would be

better placed by providing detailed information in an appropriate format so that a realistic expectation of the accessibility can be determined by the individual. An individual may decide that the premise cannot meet their needs. This is far better for the person and the premise than having an unrealistic expectation due to poor information provision. In such a circumstance, the customer would be upset by their expectation not being met and would pass on their dissatisfaction through bad word of mouth.

What became apparent in the qualitative parts of the questionnaire and in the interviews and focus group with the respondents, whom tested the product, was that each individual had idiosyncratic elements of the room criteria that they regarded as being important. These varied for individuals based on their sociodemographics, disability type, level of independence and equipment that they used. As an outcome of these components, certain criteria were valued by certain groups with clear delineation between power wheelchair users, manual wheelchair users, those with ambulant disabilities, those who are blind or vision impaired, those who were Deaf or hearing impaired and a number of other groups. The top 10 criteria mean scores for each of these groups varied significantly.

As evidenced by HREOC (2006) disability discrimination cases, one of the clear challenges for organisations given that the internet has become one of the main forms of distribution for the industry, is that this type of online information must comply with W3C international protocols which also include the provision of alternative information formats. A series of structural exclusions to online information provision have been well documented in the tourism literature (Foggin, Cameron, & Darcy, 2004; Gutierrez, Loucopoulos, & Reinsch, 2005; Williams, Rattray, & Grimes, 2006). To operationalise this research would require an organisational commitment to the W3C accessibility standards and an upfront commitment to collecting and verifying the information. The outcomes for the organisation would be significant in that they would have a competitive advantage to market to a group of people

that are rarely commercially marketed (DePauw & Gavron, 2005; Reedy, 1993). Word-of-mouth and disability advocacy networks provide a low cost marketing opportunity for a low upfront investment. Another approach would be for premises to provide accessible accommodation information to collaboratively market in conjunction with a government tourism marketing authority, not-for-profit or an industry association. An excellent example of this type of collaborative marketing has occurred with the Deaf community and the Australian Hotel Motel and Accommodation Association after coming to an agreement as to inclusive provisions for the Deaf and hearing impaired. Members who comply with the inclusive provisions are marketed through an online website by the Deafness Forum (Deafness Forum & HMAA, 2005).

### **6.3 Research Question 3: Congruence of information to the room**

The six respondents who product tested provided a great depth of meaning outside of the statistical results. Another paper is in preparation dealing with the qualitative results of this question as well as the consumer perception of non-disabled hotel guests to accessible rooms and the supply side of hotel management to their product. What was striking with the interviews and focus groups was what critical disability studies explains as the ‘embodied ontology’ (Shakespeare & Watson, 2001). While social constructionist approaches to disability emphasised the importance of providing an enabling environment and welcoming attitudes, the individual’s embodiment is crucial to their particular identification of specific room criteria. This can be explained where there are certain provisions that are regarded important for the access requirements of a particular group (e.g. continuous pathway for mobility disabilities) but individuals have specific requirements based on their impairment (embodiment), level of independence and interaction with the environment (Packer, McKercher & Yau 2007). Within the accessible accommodation context, this creates an

inherent complexity to manage the impairment related considerations. Yet, the implications for management are relatively straightforward once the detailed information systems are in place – a person needs to be considered as an individual with their own needs. This is not an earth shattering outcome but an important one in that rather than responding to a wheelchair user or the frail aged or the blind or the Deaf, the interaction must go beyond the group access needs to engage with the individual as you would with the other customer.

## **7 APPLICATION OF RESULTS**

This research has provided greater empirical understanding of the access considerations of PwD and hotel accommodation. In particular, it has highlighted the complex level of information required for people to make an informed decision about their accommodation needs. The research suggests that previous attempts to create an iconography or rating system for accessible accommodation are misguided. A radical simplification of the high level of detail presented in the Building Code of Australia and the AS1428 for access and mobility is not possible without compromising the detail required by PwD using accessible accommodation. In particular, the digital photography and floor plans provide a socio-spatial context to information decision-making where an individual's needs can interpret a better understanding of the spaces that they are to use. With the case of accommodation, the detailed criteria associated with the room and the bathroom that are critical.

While access has a group context based on their dimension of access, there is an individual *access discourse* where people expressed their desire for detailed information, visual reinforcement, and an understanding of the spatial dimension of the room are important elements on which to make an informed decision for their access needs. The resulting *access discourse* places a weighting on which of these criteria was crucial for each individual to

make an informed decision and, hence, the criteria and weighting varied between individuals. The more detailed the information on accommodation within clearly defined criteria, the more appropriate, effective and efficient the organisational response for presenting accommodation information for accessible rooms. The efficiency of this approach is that information for the accessible rooms is compiled once and then can be continually disseminated through online sources, hard copy and as individual requests coming through the reservation procedures. Of course, this requires organisations to have developed an access culture and a continual process of disability awareness training (Daruwalla & Darcy, 2005).

Unsatisfactory experiences have significant implications for the individual through the stress and anxiety created, while the premise then has to deal with a dissatisfied customer who will provide poor word-of-mouth and may take a disability discrimination action against the premise. This research potentially offers the tourism industry a better means by which to collect, collate, market and promote accessible accommodation information to PwD to improve expectation management. Two access information templates provide the accommodation sector with an understanding of how this can be accomplished (Darcy & Cameron, 2008; Europe for All, 2007). Further, there are many other benefits to improving accessible information systems including the improvement the economic and social sustainability of their enterprises (Eichhorn et al., 2008). This research offers the potential to contribute to the neglected area of social sustainability, which has until recently, been a poor third in relation to environmental and economic sustainability, through its contribution to the development of inclusive practices and a more enabling accommodation sector. Currently many premises with accessible rooms do not even represent to the public that these rooms exist. This is economically inefficient for the premise and socially inefficient for PwD. Diversity is recognised as an area of competitive advantage in globalised business practice (Harvey & Allard, 2005) but disability has had relatively less inclusion within organisational

diversity strategies than other areas (e.g. gender, ethnicity and sexuality).

While the sample was adequate for the purposes of this research, a larger sample size of a number of the different disability groups should be the focus of further research. This research was largely carried out in the Australian context with some limited involvement of respondents from other nations. It is recognised that there are cultural contexts to disability that should be researched further in tourism.

## **8 CONCLUSION**

In summary, the research has the potential to contribute to a business case for accessible tourism accommodation by allowing a much more detailed understanding of the consumer needs of PwD. In particular, by using the outcomes of this research the accommodation sector may implement a new system of information collection, presentation, marketing and promotion that will be more effective and efficient in the management of accessible accommodation stock. The significant business outcome of a new system of knowledge management would contribute towards improved occupancy for accessible accommodation in the future. This would be achieved at the same time as more effectively meeting the expectations of this consumer group so that they can make decisions on the accessibility of a premise for their access needs and individual *access discourse*.

Operationalising this research within the accommodation sector offers an opportunity for corporations and governments to gain a competitive advantage. It is recognised that there is an upfront cost associated with carrying out the access audits, formatting information and establishing W3C compliant online environments. However, this upfront cost is small in comparison to the benefits gained. Lastly, this research has significant international implications in relation to understanding and meeting the challenges of ageing and disability related issues and the social sustainability of the global accommodation sector.



## REFERENCES

- AAA Tourism. (2006). Withdrawal of accessibility rating icons. Retrieved 8 August, 2006
- Access For All Alliance (Hervey Bay) Inc. (2006). *Survey Into the Barriers Confronted By Tourists With Disabilities - When Making Travel Arrangements, Finding Accommodation and Visiting Tourist Venues*. Hervey Bay: Access For All Alliance (Hervey Bay) Inc.
- ACROD. (1994). *Building Access - AAA Accommodation Checklist*. Canberra: ACROD.
- Australian Automobile Association. (2005). Accommodation guide. Retrieved 10 August, 2005, from <http://www.accommodationguide.com.au/>
- Australian Building Codes Board. (1996). *Building Code of Australia*. Canberra: CCH Australia.
- Australian Building Codes Board. (1997). *Provisions for People with Disabilities (RD97/01)*. Canberra: Australian Building Codes Board.
- Australian Building Codes Board. (2004a). *Disability Standards for Access to Premises: Draft Regulation Impact Statement*. Canberra: Australian Building Codes Board.
- Australian Building Codes Board. (2004b). *Draft Access Code for Buildings* (Press release). Canberra: Australian Building Codes Board.
- Australian Bureau of Statistics. (2004). *Disability Ageing and Carers Summary Of Findings, 2003 (Cat No. 4430.0)*. Canberra: Australian Bureau of Statistics.
- Australian Council for Rehabilitation of Disabled (ACROD) Ltd. (1999). Room 206 - Accommodating travellers with disabilities. 4th. Retrieved 17 May, 2002, from [www.acrod.org.au/access/room206.htm](http://www.acrod.org.au/access/room206.htm)
- Australian Hotels Association. (1998). *Catering for Guests with Disabilities: Survey of AHA Members*. Canberra: AHA.
- Australian Quadriplegic Association. (2002). *Access Sydney: the Easy Guide to Easy Access* (1st ed.). Sydney: Australian Quadriplegic Association.
- Australian Tourism Data Warehouse. (2006). About the Australian Tourism Data Warehouse. Retrieved 12 July, 2006, from <http://www.atdw.com.au/>
- Avis, A., J.A. Card, S. T. Cole. (2005). Accessibility and Attitudinal Barriers Encountered by Travelers With Physical Disabilities *Tourism Review International*, 8, 239-248.
- Bates, G. M. (2006). *Environmental law in Australia* (6th ed.). Chatswood, N.S.W.: LexisNexis.
- Bell, R. A., & Morey, R. C. (1996). Purchase Situation Modeling: The Case of Hotel Selection Criteria for Corporate Travel Departments. *Journal of Travel Research*, 35(1), 57-63.
- Bi, Y., Card, J. A., & Cole, S. T. (2007). Accessibility and Attitudinal Barriers Encountered by Chinese Travellers with Physical Disabilities. *Int. J. Tourism Res*, 9, 205-216.
- Burnett, J. J., & Bender-Baker, H. (2001). Assessing the travel-related behaviors of the mobility-disabled consumer. *Journal of Travel Research*, 40(1), 4-11.
- Callan, R. J. (1998). Attributional Analysis of Customers' Hotel Selection Criteria by U.K. Grading Scheme Categories. *Journal of Travel Research*, 36(3), 20-34.
- Cameron, B. (2000). *Easy Access Australia* (2nd ed.). Kew, Vic: Kew Publishing.
- Cashman, R., & Darcy, S. (2008). *Benchmark Games: The Sydney 2000 Paralympic Games*. Petersham, NSW Australia: Walla Walla Press in conjunction with the Australian Centre for Olympic Studies.
- City of Melbourne. (2006). *Accessing Melbourne*. Melbourne: City of Melbourne.
- Cleaver, M., & Muller, T. E. (2002). The Socially Aware Baby Boomer: Gaining a Lifestyle-

- Based Understanding of the New Wave of Ecotourists. *Journal of Sustainable Tourism*, 10(3), 173-190.
- Commonwealth Attorney General's Dept. (2004). Draft Disability Standards for Access to Premises (Buildings) 200X. Canberra: AGPS.
- Commonwealth Attorney General's Dept. (2008). Disability (Access to Premises - Buildings) Standards. Retrieved 2 December, 2008, from <http://www.ag.gov.au/premisesstandards>
- Daniels, M. J., Drogin Rodgers, E. B., & Wiggins, B. P. (2005). "Travel Tales": an interpretive analysis of constraints and negotiations to pleasure travel as experienced by persons with physical disabilities. *Tourism Management*, 26(6), 919-930.
- Darcy, S. (1998). *Anxiety to Access: The Tourism Patterns and Experiences of New South Wales People with a Physical Disability*: Tourism New South Wales.
- Darcy, S. (2000). *Tourism Industry Supply Side Perceptions of Providing Goods and Services for People with Disabilities*. Sydney: report to New South Wales Ageing and Disability Department.
- Darcy, S. (2002a). Marginalised participation: Physical disability, high support needs and tourism. *Journal of Hospitality and Tourism Management*, 9(1), 61-72.
- Darcy, S. (2002b, 16-18 May). *People with disabilities and tourism in Australia: a human rights analysis*. Paper presented at the Tourism and Well Being - 2nd Tourism Industry and Education Symposium, Jyväskylä, Finland.
- Darcy, S. (2004). Practice Note: Harmony and Certainty? The Status of the Draft Access to Premises Standard. *Annals of Leisure Research*, 7(2), 158-167.
- Darcy, S. (2006). Setting a Research Agenda for Accessible Tourism. In C. Cooper, T. D. LacY & L. Jago (Eds.), STCRC Technical Report Series pp. 48). Available from <http://www.crctourism.com.au/BookShop/BookDetail.aspx?d=473>
- Darcy, S. (2007, 11-14 February). *A methodology for assessing class three accessible accommodation information provision*. Paper presented at the Tourism - Past Achievements, Future Challenges, Manly Pacific Novotel, Manly - Sydney Australia.
- Darcy, S., & Cameron, B. (2008). Accessible Accommodation Assessment Template [Software template]. Sydney: © University of Technology, Sydney and Easy Access Australia.
- Darcy, S., & Taylor, T. (2009). Disability citizenship: An Australian human rights analysis of the cultural industries. *Leisure Studies*, 28(4), 375-398.
- Daruwalla, P. S., & Darcy, S. (2005). Personal and Societal Attitudes to Disability. *Annals of Tourism Research*, 32(3), 549-570.
- Davis, E. (1981). *Handicapped persons full participation in tourism - CEO of the Australian Hotels Association*. Paper presented at the International Year of the Disabled - Tourism Seminar, Sydney Opera House.
- Deafness Forum, & HMAA. (2005). *Accommodation Industry Voluntary Code of Practice for the Provision of Facilities for the Deaf and Hearing Impaired* Sydney: HMAA.
- DePauw, K. P., & Gavron, S. J. (2005). *Disability and sport* (8th ed.). Champaign, IL: Human Kinetics.
- Dillman, D. A. (2000). *Mail and Internet surveys: the tailored design method*. New York: John Wiley.
- Dwyer, L., & Darcy, S. (2008). Chapter 4 - Economic contribution of disability to tourism in Australia. In S. Darcy, B. Cameron, L. Dwyer, T. Taylor, E. Wong & A. Thomson (Eds.), *Technical Report 90040: Visitor accessibility in urban centres* (pp. 15-21). Gold Coast: Sustainable Tourism Cooperative Research Centre.
- Eichhorn, V., Miller, G., Michopoulou, E., & Buhalis, D. (2008). Enabling access to tourism through information schemes? *Annals of Tourism Research*, 35(1), 189-210.

- Europe for All (2007). Tourism Providers reports on The Europe for all Self-Assessment Questionnaire: For owners/managers of Hotels and Self-Catering Establishments & The Europe for all Photo and Measurement Guide., (Vol. 2008, pp. Website). Available from <http://www.europeforall.com/tourismProviders.seam?conversationPropagation=end&conversationId=162076>
- Fleischer, A., & Pizam, A. (2002). Tourism constraints among Israeli seniors. *Annals of Tourism Research*, 29(1), 106-123.
- Fodor's. (1996). *Fodor's Great American Vacations for Travelers with Disabilities* (2nd ed.). New York: Fodor's Travel Publications Inc.
- Foggin, S. E. A., Cameron, B., & Darcy, S. (2004, 6-9 July). *Towards Barrier Free Travel: Initiatives in the Asia Pacific Region*. Paper presented at the Refereed conference proceedings of Developing New Markets for Traditional Destinations' - Travel and Tourism Research Association (TTRA) Canada Conference 2003, Ottawa.
- Glover, P., & Prideaux, B. (2009). Implications of population ageing for the development of tourism products and destinations. *Journal of Vacation Marketing*, 15(1), 25-37.
- Gnoth, J. (1997). Tourism motivation and expectation formation. *Annals of Tourism Research*, 24(2), 283-304.
- Goodall, B. (2002, 16-18 May). *Disability discrimination legislation and tourism: The case of the United Kingdom*. Paper presented at the Tourism and Well Being - 2nd Tourism Industry and Education Symposium, Jyväskylä, Finland.
- Goodall, B., Pottinger, G., Dixon, T., & Russell, H. (2004). Heritage property, tourism and the UK Disability Discrimination Act. *Property Management*, 22(5), 345-357.
- Gutierrez, C. F., Loucopoulos, C., & Reinsch, R. W. (2005). Disability-accessibility of airlines' Web sites for US reservations online. *Journal of Air Transport Management*, 11(4), 239-247.
- HarrisInteractive Market Research. (2003). *Research among adults with disabilities - travel and hospitality*. Chicago: Open Doors Organization.
- Harvey, C. P., & Allard, M. J. (Eds.). (2005). *Understanding and Managing Diversity: Readings, Cases And Exercises (International Edition)*. New Jersey: Pearson Prentice Hall.
- Healey, B. (2008, 29-31 October). *The Australian Hotel Association Position: Current status and future of tourist accommodation for people with disabilities*. Paper presented at the CREATING INCLUSIVE COMMUNITIES - conference of the Association of Consultants in Access, Australia, Hyatt Regency, Adelaide.
- Horneman, L., Carter, R. W., Wei, S., & Ruys, H. (2002). Profiling the senior traveler: An Australian perspective. *Journal of Travel Research*, 41(1), 23.
- Hsieh, L.-F., Lin, L.-H., & Lin, Y.-Y. (2008). A service quality measurement architecture for hot spring hotels in Taiwan. *Tourism Management*, 29(3), 429-438.
- Human Rights and Equal Opportunity Commission. (2006). Disability Discrimination Act Complaints Cases Register and Decisions. Retrieved January, 2002, from [http://www.hreoc.gov.au/disability\\_rights/decisions/](http://www.hreoc.gov.au/disability_rights/decisions/)
- Innes, G. (2006, 21 January). Building access and no holiday for the disabled. *The Daily Telegraph*,
- Israeli, A. (2002). A preliminary investigation of the importance of site accessibility factor for disabled tourists. *Journal of Travel Research*, 41(1), 101-104.
- Market and Communication Research. (2002). *People with Disabilities: a Market Research Report*. Brisbane: Tourism Queensland - Special Interest Tourism Unit.
- McKercher, B., Packer, T., Yau, M. K., & Lam, P. (2003). Travel agents as facilitators or inhibitors of travel: perceptions of people with disabilities. *Tourism Management*,

- 24(4), 465-474.
- Miller, G. A., & Kirk, E. (2002). The Disability Discrimination Act: Time for the stick? *Journal of Sustainable Tourism*, 10(1), 82-88.
- Muller, T. E., & Cleaver, M. (2000). Targeting the CANZUS baby boomer explorer and adventurer segments. *Journal of Vacation Marketing*, 6(2), 154-169.
- Murray, M., & Sproats, J. (1990). The disabled traveller: Tourism and disability in Australia. *Journal of Tourism Studies*, 1(1), 9-14.
- Nash, R., Thyne, M., & Davies, S. (2006). An investigation into customer satisfaction levels in the budget accommodation sector in Scotland: a case study of backpacker tourists and the Scottish Youth Hostels Association. *Tourism Management*, 27(3), 525-532.
- O'Neill, M., & Ali Knight, J. (2000). Disability tourism dollars in Western Australia hotels. *FIU Hospitality Review*, 18(2), 72-88.
- Oliver, R. L., & DeSarbo, W. S. (1988). Response Determinants in Satisfaction Judgments. *Journal of Consumer Research*, 14(4), 495.
- Packer, T. L., McKercher, B., & Yau, M. (2007). Understanding the complex interplay between tourism, disability and environmental contexts. *Disability & Rehabilitation*, 29(4), 281-292.
- Pallant, J. F. (2007). *SPSS survival manual: a step by step guide to data analysis using SPSS for Windows (Version 15)* (3rd ed.). Crows Nest, N.S.W.: Allen & Unwin.
- Preiser, W. F. E., & Ostroff, E. (2001). *Universal Design Handbook*. New York: McGraw-Hill.
- Queensland Office of Ageing. (1998). *Not over the hill - Just enjoying the view: A close-up look at the seniors market for tourism in Australia*. Brisbane: Seniors Card Tourism Scheme - Office of Ageing, Department of Families, Youth and Community Care.
- Reedy, J. (1993). *Marketing to consumers with disabilities: how to identify and meet the growing market needs of 43 million Americans*. Chicago, Ill: Probus Pub Co.
- Rodríguez del Bosque, I. A., San Martín, H., & Collado, J. (2006). The role of expectations in the consumer satisfaction formation process: Empirical evidence in the travel agency sector. *Tourism Management*, 27(3), 410-419.
- Ruys, H., & Wei, S. (1998). Accommodation needs of mature Australian travellers. *Australian Journal of Hospitality Management*, 5(1), 51-59.
- Shakespeare, T., & Watson, N. (2001). The social model of disability: An outdated ideology? In S. N. Barnartt & B. Mandell Altman (Eds.), *Exploring Theories and Expanding Methodologies* (Vol. 2, pp. 9-28). Stamford: JAI Press.
- Shaw, G. (2007). Disability legislation and empowerment of tourists with disability in the United Kingdom. In A. Church & T. Coles (Eds.), *Tourism, Power and Space* (pp. 83-100). London: Routledge.
- Shaw, G., & Coles, T. (2004). Disability, holiday making and the tourism industry in the UK: a preliminary survey. *Tourism Management*, 25(3), 397-403.
- Shelton, E. J., & Tucker, H. (2005). Tourism and disability: issues beyond access. *Tourism Review International*, 8(3), 211-219.
- Standards Australia. (1992a). *AS 1428.2 - Design for access and mobility - Enhanced and additional requirements - Buildings and facilities* ([Rev. ] ed.). North Sydney, NSW: Standards Australia.
- Standards Australia. (1992b). *AS 1428.3 Design for access and mobility - Requirements for children and adolescents with physical disabilities* North Sydney, NSW: Standards Australia.
- Standards Australia. (2001). *AS 1428.1 Design for access and mobility - General requirements for access - New building work*. Homebush, NSW: Standards Australia.
- Standards Australia. (2002). *AS/NZS 1428.4 - Design for access and mobility - Tactile*

- indicators* North Sydney, NSW: Standards Australia.
- Stein, P. L., & Farrier, D. (2006). *The environmental law handbook: planning and land use in NSW* (4th ed.). Sydney: UNSW Press.
- Stumbo, N. J., & Pegg, S. (2005). Travelers and tourists with disabilities: a matter of priorities and loyalties. *Tourism Review International*, 8(3), 195-209.
- Tantawy, A., Kim, W. G., & SungSoo, P. (2004). Evaluation of hotels to accommodate disabled visitors. *Journal of Quality Assurance in Hospitality & Tourism*, 5(1), 91-101.
- Tully, J. (2006). Accessible Tourism Update Working Party. Retrieved 1 September, 2006
- Turco, D. M., Stumbo, N., & Garnarcz, J. (1998). Tourism Constraints - People with Disabilities. *Parks and Recreation Journal*, 33(9), 78-84.
- Veal, A. J. (2006). *Research Methods for Leisure and Tourism: A Practical Guide* (3rd ed.). Essex, England: Pearson Education Limited.
- Warnken, J., Bradley, M., & Guilding, C. (2005). Eco-resorts vs. mainstream accommodation providers: an investigation of the viability of benchmarking environmental performance. *Tourism Management*, 26(3), 367-379.
- Williams, R., Rattray, R., & Grimes, A. (2006). Meeting the On-line Needs of Disabled Tourists: an Assessment of UK-based Hotel Websites. *International Journal of Tourism Research*, 8(1), 59.
- World Health Organization. (2001). *International Classification of Functioning, Disability and Health (ICIDH-2)*. Geneva: World Health Organization.
- World Health Organization. (2007). Global Age-friendly Cities Guide from [http://www.who.int/ageing/age\\_friendly\\_cities/en/index.html](http://www.who.int/ageing/age_friendly_cities/en/index.html)
- Yau, M. K.-s., McKercher, B., & Packer, T. L. (2004). Traveling with a disability: More than an Access Issue. *Annals of Tourism Research*, 31(4), 946-960.