University of Ballarat
Learn to succeed

COPYRIGHT NOTICE

UB ResearchOnline
http://researchonline.ballarat.edu.au

Stuttering, disability and the higher education sector in Australia

GRANT MEREDITH[1], ANN PACKMAN[2] & GENÉE MARKS[1]

[1]*University of Ballarat, Ballarat, Australia, and* [2]*Australian Stuttering Research Centre, The University of Sydney, Sydney, Australia*

Abstract

The aim of this study was to ascertain the extent to which Australian public universities and their associated disability liaison services offer web-based information for current or prospective students who stutter. The disability pages of the websites of all 39 public universities in Australia were visited and the information about disability services assessed according to 12 criteria developed by the authors. Results indicate that there is a dearth of information on Australian university websites available for students or prospective students who stutter. Only 13% of the sites reported any form of alternative teaching and assessment procedures for speech-impaired students and only 51% of 39 Disability Liaison Officers responded when contacted by email. Such a student could not make an informed choice to enrol in a university based upon the information on disability services available on public Australian university websites.

Keywords: *Stuttering, universities, disability.*

Introduction

The effects of stuttering on communication

Stuttering is characterized by a temporary inability to move forward in speech due to the involuntary repetition of syllables or parts of syllables and/or the cessation of speech movements (see Teesson, Packman, & Onslow, 2003). These aberrant speech behaviours are time-consuming and typically impair the effectiveness of verbal communication. For a person with a severe stutter, speech rate can be slower than 50 syllables per minute, which reduces information transfer rate by ~ 75%. The speech behaviours of stuttering may be accompanied by facial grimacing and other superfluous behaviours, which can be distracting for the listener. Stuttering is a complex and unpredictable disorder which can vary significantly in occurrence and severity from word to word, from situation to situation, and even from moment to moment, depending on many different factors (Yaruss & Quesal, 2001; Bloodstein & Ratner, 2008; Packman & Kuhn, 2009).

Adults who stutter have up to a 34-fold increased risk of meeting the criteria for a diagnosis of social phobia (Iverach et al., 2009; Blumgart, Tran, & Craig, 2010a). The primary feature of social phobia is heightened fear of being evaluated negatively in social situations. Adults who stutter also generally fear using the telephone and may have increased stuttering levels under such a circumstance (Petrunik, 1982; James, Brumfitt, & Cudd, 1999; Breathnach, 2000). For the most part, social phobia leads to avoidance of social situations, speaking in public, and using the telephone (Craig & Tran, 2006).

These raised anxiety levels are already present to some extent in many adolescents who stutter (Blood, Blood, Maloney, Meyer, & Qualls, 2007). It is known that adolescents who stutter are likely to be apprehensive about speaking, to feel they are less competent that others in communicating, and to be reticent to disclose that they stutter (Blood, Blood, Tellis, & Gabel 2001, 2003; Hearne, Packman, Quine, & Onslow, 2008).

Stuttering has an impact on educational attainment. A recent Australian study showed a relationship between stuttering severity and educational achievement (O'Brian, Jones, Packman, Menzies, & Onslow, 2011). As part of a large program of research, 147 adults who stutter and who were seeking treatment for their stuttering completed various assessments about their stuttering and life factors. These included reporting the highest educational level they had attained and ratings of the severity of their stuttering. For educational achievement, they were asked to indicate from the following their highest level of education: (1) did not finish high school,

(2) completed high school, (3) completed some university/college, but not graduated, (4) college diploma, certificate, or similar, (5) bachelor degree, (6) masters degree, (7) doctoral degree, (8) Other (please specify). For stuttering severity, they rated their typical and worst stuttering severity in eight speaking situations on a 9-point scale. There was a significant negative relationship between stuttering severity and level of educational attained. In other words, the more severe a person's stuttering, the less likely they were to complete high school and tertiary studies. This suggests, then, that young adults in Australia who stutter may not be achieving their educational and hence vocational potential. This is unfortunate given, among other things, the personal financial costs associated with stuttering (Blumgart, Tran, & Craig, 2010b).

The study reported here is part of a larger program of research investigating the experiences of adults who stutter in their interactions with Australian universities. Universities in Australia provide tertiary education from undergraduate to PhD level. Of all universities in Australia, the majority are publicly funded, with some fees payable by students.

Stuttering and the university context

There are negative perceptions and attitudes towards people who stutter in the general community and stereotyping is common (see Dorsey & Guenther, 2000; Blood et al., 2003; MacKinnon, Hall, & MacIntyre, 2007; Betz, Blood, & Blood, 2008; Hughes, Gabel, Irani, & Schlagheck, 2010). Unfortunately, such stereotyping is also found in universities, in both students and academic staff (also known as academics, professors and/or lecturers). For example, in a Canadian vignette study by MacKinnon et al. (2007), 183 university psychology students rated a hypothetical male who stuttered as 'more nervous, shy, self-conscious, tense, anxious, withdrawn, quiet, reticent, avoiding, fearful, passive, afraid, hesitant, insecure, and self-derogatory' (p. 303) than a typical male. In an American study, Dorsey and Guenther (2000) found that students rated the personality traits of a hypothetical student who stuttered more negatively than a normally fluent student and, notably, academic staff rated the stuttering student even more negatively than the students.

Given such attitudes and the likelihood of negative stereotyping, the reduced ability to get information across in a timely fashion and the fear and avoidance of talking in public, the university experience for those who stutter is likely to be more stressful than for students who do not stutter. As suggested by Westby (1997), the university student who stutters may be alarmed by any form of oral-based assessment. In addition, the student faces new and possibly challenging social situations in the university environment.

In light of the important finding that Australians who stutter more severely are less likely to attend university, this study investigates the extent to which Australian universities and their associated disability liaison services offer web-based information for current or prospective students who stutter. This includes whether the websites offer information about how a student's stuttering problem might be addressed throughout their academic career, especially about how any difficulties related to oral class participation and oral assessments would be accommodated. These are important issues because of the possible ramifications of universities failing to address, or failing to be seen to address, the potential problems that stuttering poses for a student. People who stutter who would like to attend university may decide not to do so because of fear of negative evaluation from their peers and academic staff and fear that they may not be able to fulfil the oral assignments that are typically required for the completion of most courses. Also, current students may decide to drop out of a course if they perceive their stuttering to be an obstacle to completion. Students who manage to largely conceal their stuttering by avoiding situations that they perceive may make them anxious, might be reluctant to disclose to university personnel that they require assistance. This may be especially true if there is not a sense that such disclosure would be dealt with in a sensitive and constructive fashion.

The cost of stuttering in these scenarios is considerable, both for the individuals concerned and also for society. For the individual, failure to realize one's potential in the higher education system because of stuttering is likely to engender disappointment and frustration, while society will suffer because such individuals will not contribute their special skills.

Stuttering and disability

The World Health Organization (2001) has declared that stuttering is recognized as a disability within the framework of its *International Classification of Functioning, Disability and Health* (ICF). Consequently, stuttering is listed as a disability on the website of the Australian Human Rights Commission (2009). Further, under the Australian Commonwealth Disability Discrimination Act (DDA) of 1992 (Australian Government Attorney General's Department, 2010), it is illegal to discriminate against people due to a disability. The DDA promotes the rights of people with disabilities in certain areas such as housing, education, and provision of goods and services.

Since stuttering falls under the DDA definition of a disability, universities must legally make reasonable adjustments for people who stutter. Even if a student does not feel disabled at all by his/her stutter, in Australia he/she still has the right to access university disability services and receive support.

Information about stuttering on a university website will necessarily be located in pages dealing with services for students with disabilities. However, there is no consensus among people who stutter and indeed in the wider community about whether stuttering should be labelled as a disability. The notion of disability is the cause of much debate because, 'There is no simple way of defining disability, it can be viewed from many perspectives' (French, 1994: 3). This notion of disability, and the consequences of being regarded as disabled, causes much debate amongst people who stutter. In fact, there is a clear divide over whether stuttering constitutes a disability, as is apparent on online stuttering forums (e.g., http://www.stutteringcommunity.com) and treatment-based support groups. For many, being labelled as disabled could have profound consequences on how people who stutter view themselves (Van Riper, 1982).

In contrast, however, the International Stuttering Association (ISA) recently confirmed its recognition of stuttering as a disability. The ISA (www.isastutter. org) is a non-profit umbrella association dedicated to fostering close co-operation among independent national and international self-help organizations of people who stutter. One of the main reasons given for this decision is that if stuttering can be associated with the world-wide disability movement, which is striving for attitudinal change and legislative actions for all disabled people, then people who stutter will be able to claim the welfare benefits of being deemed disabled, regardless of whether or not they consider themselves truly disabled (Irwin, 2005).

The recently published *World Report on Disability* (World Health Organization, 2011) puts forward a view of disability that may be more attractive to people who stutter. According to the report, a 'difficulties in functioning approach' instead of an 'impairment approach' (p. 45) better reflects the notion of disability. Within this framework, people who stutter may be comfortable seeing themselves as having a functional difficulty in communicating, rather than an impairment.

The present study

The research question guiding the present study, then, was: Could a prospective university student seeking assistance to accommodate their stutter in class and assessment situations make an informed choice about the level of support available, based upon information about disability services available on Australian university websites? As far as the authors are aware, this is the first study to address this question.

Method

Development of criteria

In the first instance, the first author compiled a list of the information about disability services that would potentially be of interest and assistance to a student who stutters. The first author is an academic staff member at an Australian university, teaching undergraduate students in the field of information technology and related areas. He is also a person who stutters. He completed his undergraduate studies at an Australian university and hence has experience both as a student who stutters and also as a university teacher. He can also be seen to have unique insights into how best to accommodate stuttering in the classroom and for oral assessments and to have specialized knowledge in the construction of websites. For the purposes of this study, he scanned the disability websites of Australian universities for the sorts of information generally provided and compiled the list, which is shown in Table I. The broad categories are: (a) Policy and Legislation (Items 1–4), (b) User Access (Items 5–7), (c) Teaching and Learning (Items 8–10), (d) Social (Item 11), and (e) Responsiveness to Enquiries (Item 12). Category (a) was considered to be the most critical, given that in Australia stuttering is legally regarded as a disability. Category (b) was considered important, as easy access to information about disability services is critical for a prospective student, especially one with a disorder of communication. Category (c) refers to the information available on policies and procedures to facilitate the teaching and assessment of disabled students. While category (d) is relatively less important, it was considered of interest to see if universities provide scholarships (financial support) for students with a disability and whether they facilitate social interaction for such students in the university context. Category (e) was adopted to determine the extent to which web-based disability services respond to student enquiries. After discussion with three other university academics, there was consensus that these five categories covered the relevant and appropriate information for the purposes of this study.

Procedure

Between July–August of 2008, the first author accessed the websites of all 39 Australian public universities to ascertain how much of the information listed in Table I was freely available to the general public. It was decided to survey web-based information in preference to the paper-based information that may be available on campus because the Internet is widely used and always available. Also, this informational avenue is likely to be very appealing to a person who stutters and who may be anxious about initiating face-to-face communication.

This study did not seek information beyond each university's internal site and its associated links. The first author assumed the role of a web browser, as defined by Dacor (2009). This is a user type who browses the contents of a site using only the obvious

Table I. The 12 criteria of enquiry.

Item	Desirable features
1. Disability Discrimination Act (DDA)	Acknowledgment of DDA • summary of its importance to education, • link to its government online location.
2. Disability Action Plan	An Action Plan should: • eliminate discrimination in an active way; • improve services to existing consumers or customers; • enhance organizational image; • reduce the likelihood of complaints being made; • increase the likelihood of being able to successfully defend complaints; • increase the likelihood of avoiding costly legal action; • allow for a planned and managed change in business or services; • open up new markets and attract new consumers (Australian Human Rights Commission, 1998).
3. Disability Policy	Formal, university-sanctioned 'disability policy'.
4. Disability Access Strategy	Strategy in place and advertised about procedures for disabled students to access their services.
5. Disability Liaison Officers (DLO)	Details of how to directly contact a disability liaison officer (DLO).
6. Registering for Disability Services	Details on how to register for help beyond simply asking a visitor to make contact for assistance should be available.
7. Disclosure	Assurance of confidentiality when a student discloses their disability.
8. Guidelines for Staff	Information about • teaching and assessment of disabled students, • more specifically, stuttering or speech impaired students.
9. Alternative assessment	Information about • procedures for alternative assessments, • reasonable adjustments for students with disabilities.
10. Scholarships	Scholarships for disabled students.
11. Social activities	Links to campus-based disability social activities.
12. Responsiveness to enquiries	DLOs responsive to enquiries about services for students who stutter.

links available, as opposed to what is termed a web searcher, who is more inclined to use onsite search facilities (Dacor, 2009).

For the purposes of gathering information for category (e), during the study's time span the first author also contacted a representative disability liaison officer (DLO) from each university by email and asked the following:

… I was wondering if your university had a Disability Action Plan or Strategy in place that I could access. Also do you have any specific strategies in place for handling/teaching/assessing a stuttering or vocally impaired student? Any help would be great. At the moment I am trying to understand all the different universities' approaches to these students.

Results

The findings are summarized in Table II, which shows the five categories and 12 items (criteria), as presented in Table I, and the number of universities providing information relating to them. Findings are discussed below.

Policy and legislation

Reference to the Disability Discrimination Act (DDA, 1992) (Item 1) was the information most widely available on university disability services web pages (90%).

Of the 24 university websites that linked to a Disability Action Plan (DAP) (Item 2), two had broken links, meaning that a visitor would be unable to view them. A broken link means that the document that the hyperlinked text is pointing to either does not exist or is referenced incorrectly. Further, of the 24 that did have a DAP only nine of the linked pages were current. Some of those that were out of date had a creation date but did not advertise an expiry date. No specified time span for the life of many documents was given, which meant that only 23% of universities had a current DAP on their website.

Of the 11 universities that advertised a Disability Policy (Item 3), one had a broken link. This meant that in reality only 10 (26%) universities had web-accessible policies. In the defence of the universities involved, their disability policies may have in fact

Table II. Number and percentage of 39 Australian university websites providing information about students with disabilities.

Information sought	Websites providing this information
Policy and Legislation	
Disability Discrimination Act (DDA)	35 (90%)
Disability Action Plan (DAP)	24 (61.5%)
Disability policy	10 (26%)
Disability Access Strategy	1 (3.6%)
User Access	
Disability Liaison Officers (DLO)	21 (54%)
Registering for Disability Services	29 (74%)
Disclosure	18 (46%)
Teaching and Learning	
Guidelines for Staff	17 (44%)
Alternative assessment	5 (13%)
Scholarships	11 (28%)
Social	
Social activities	12 (31%)
Responsiveness	
Responsiveness to enquiries	20 (52%)

been part of some type of overall equity policy. If this is the case then this needs to be clearly stated and clarified by the institution. Only three universities outlined in plain language that they had a disability policy and what it meant, but they did not show links to their policies. Hence, only 36% of universities either had an accessible disability policy statement or an accessible disability policy.

Only one university had an advertised and accessible Disability Access Strategy (Item 4). A strategy is an agreed-upon method of putting a policy into place. This single university out of all 39 performed very well overall and had a disability policy, a disability strategy, and DAP online for a potential student to access.

User access

While all universities offered a range of alternative methods to contact a DLO (Item 5), including postal, email, and telephone options, only 21 named a point of contact. Of the 29 universities that presented the visitor with a detailed description of how to register for Disability Services (Item 6), three advertised the use of a registration card. With this card, a disabled student could more readily access onsite disability services and alert staff to their need for assistance, if required.

Of the 18 universities that outlined the process of disclosure of disability (Item 7), 17 gave information about both the registration process and the process of disclosure.

Teaching and learning

Almost half of the universities had links to disability-related teaching information (Item 8) that was accessible to the general public; however, public access was blocked for some of these sites. These information guides covered commonly known disabilities such as hearing impairment, vision impairment, mobility impairment, mental health conditions and even heart conditions. One university highlighted its Inclusive Practice Awards, which are presented annually to staff members who have demonstrated exceptional commitment to assisting students with disabilities. Three universities advertised a form of 'Disability Advisory Committee' or 'Inclusive Practices Committee' which are designed to advise on and promote full and equal participation of students with disabilities.

Only five (13%) sites advertised any form of alternative teaching and assessment guide (Item 9), with sections specifically focused on speech-impaired students. The information that was presented was very general and was not given as much text space as that of other disability types. At times speech impairment was mentioned in the context of other disabilities, more notably hearing impairment. For speech impairment, in general two assessments strategies for oral assessment were given; presentations being audio recorded prior to the assessment and one-on-one interviews with the lecturer. The information ranged from some very basic information to well developed policies. Twenty-seven (69%) universities advertised assessment information in some form.

In looking for scholarships or monetary support (Item 10), only 11 universities provided some form of information and links to either university scholarships or scholarships designated for a specific disability.

Social

The social activities (Item 11) mentioned for disabled students included blogs, discussion groups, newsletters, and news reports. However, a newsletter from one university had not been issued for a period of 2 years and one from another university was almost a year out of date. Another university offered a very informative *news and current events* section on their site, with success stories of current and past disabled students.

Responsiveness

Of the 39 DLOs contacted by email (Item 12), only 20 (51%) responded and they offered little information or guidance about stuttering. The informal responses from the DLOs fell into three distinct categories:

(1) There were no formal structures in place for the teaching and assessment of stuttering students, and in some cases speech-impaired students;
(2) Such students were usually looked at on a case-by-case basis; and
(3) DLOs rarely, if at all, had professionally encountered a stuttering student requiring their assistance.
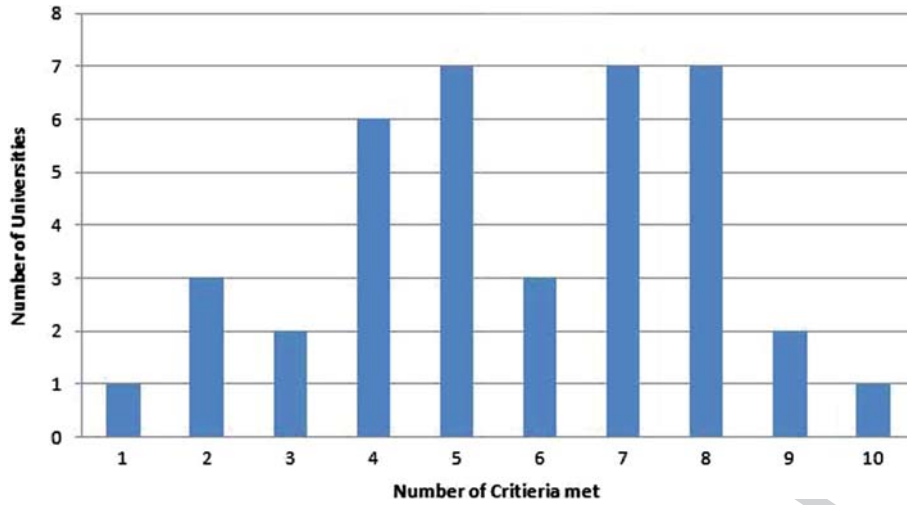
Figure 1. XXX

The number of each of the above 12 criteria met by individual Australian university disability services is shown in Figure 1. Clearly, no one university met all criteria, with the best performance being one university meeting 10.

Discussion

To our knowledge, this is the first study of the availability of university disability services for people who stutter. From the results it is apparent that on Australian public university websites there is a dearth of information about disability in general and about stuttering in particular. Only 13% of universities had any available guide to indicate how communication-impaired students might be assisted and only four of those mentioned stuttering. While the content of these guides provided very little information, there were many more guidelines for catering for other disabilities. For example, five guides had sections relating to Asperger's Syndrome. This is surprising, because it is thought that ~ 1 in 1000 have this condition continuing through to adulthood (Saracino, Noseworthy, Steiman, & Fonbonne, 2010), which is low compared to the generally accepted figure of 1 in 100 for stuttering in adolescence and adulthood (Andrews & Harris, 1964; Ginsberg, 2000; Ginsberg & Wexler, 2000). Overall, however, the websites were deficient in providing information for all disabilities, with no university meeting all 12 criteria, the best being one university meeting 10 of them.

Particularly disturbing to find was the lack of guidelines regarding teaching and assessment strategies to assist students who stutter. Further, the assessment guides were generally generic in nature, referring to speech impairment as a whole and offering poorly-defined options. It would seem that alternative assessment options and guides should be prominent for students who stutter, because having this information could give a prospective student some confidence that the university has flexible assessment procedures and can meet their individual needs. A student who stutters and who is fearful of public speaking and hence worried about oral assessments would benefit greatly from this information. It is likely that the student would look more positively on a university that advertised that is was open to arranging suitable assessment procedures for students with a communication disorder.

Finally, the lack of scholarships and information about social activities for disabled students is also of concern. For some disabilities, the costs associated with attending university could be prohibitive. If scholarships act to encourage disabled students to enrol in a university course, then it could be argued that more scholarships should be available. Organizing and/or advertising social events with other disabled students might also encourage a prospective student to enrol and might also discourage a socially anxious student from dropping out.

On a more positive note, a large percentage of universities acknowledged the DDA. This at least indicates that they acknowledge the Australian government requirements that they are legally obliged to abide by. Also, a large majority of universities did outline the registration process, which would help ease a student's anxiety about seeking support because of their stuttering. On the other hand, a lack of current disability action plans could deter disabled students.

The fact that fewer than half of universities gave a potential student a direct contact point for disability-based assistance would be disheartening for the student. Of more concern is the fact that only around half of the email enquiries made to university disability services were responded to. It is worth stressing that university disability services for students who stutter will only be used if those students seek them out. Hopefully, regarding stuttering as a participation problem rather than a disability, as proposed by the recent World Report on Disability, may encourage such students to seek

[AQ5]

[AQ7]

out these services, if needed. This may go some way to reversing the current trend in Australia for stuttering severity to be associated with lower educational achievement.

Conclusions

It can be concluded from the findings of this study that a prospective student needing support because of a stutter could not make an informed choice to enrol in an Australian public university from web-based disability services. In our view, based on the evidence presented in this paper, universities need to provide more information for potential or current students about services and strategies for accommodating stuttering, and indeed for other communication disorders.

It is not clear why there is such a gap in this information. It may be that university disability services are not aware of the experiences and hardship that students who stutter may encounter at university. This may be due in part to the generally low profile of stuttering in the community. Nonetheless, stuttering is legally regarded as a disability in Australia and universities need to demonstrate their understanding that it is against the law to discriminate against anyone with a disability.

It is of course of interest that the present study was conducted in Australia. Australia provided a suitable country to study because (1) stuttering is legally regarded as a disability, and (2) it is against the law to discriminate against people with a disability. Research into this topic in other countries would be of great interest. While other countries will have different legislation regarding disability, it is certainly clear from previous studies (Dorsey & Guenther, 2000; MacKinnon et al., 2007) that stereotyping of students who stutter by other students and by academics occurs in other countries.

This area of enquiry would also benefit from research exploring the experiences of university students who stutter. The findings of such research could raise awareness of positive and negative student experiences, help students feel more confident about disclosing their stutter, and suggest ways in which academic staff and disability services can best support such students to achieve their educational and vocational potential.

[AQ4] *Declaration of interest:* The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

References

Andrews, G., & Harris, M. (1964). *The syndrome of stuttering*. London: Heinemann.

Australian Government Attorney General's Department. (2010). *Disability Discrimination Act 1992*. Available online at: http://www.comlaw.gov.au/comlaw/management.nsf/lookupindexpagesbyid/IP200401406?OpenDocument, accessed 30 December 2010.

Australian Human Rights Commission. (1998). *Developing an effective action plan*. Available online at: http://www.hreoc.gov.au/disability_rights/action_plans/effective_plan/effective_plan.html, accessed 15 February 2010.

Australian Human Rights Commission. (2009). *Who is protected by the DDA?* Available online at: http://www.hreoc.gov.au/disability_rights/faq/Who_is_protected_/who_is_protected_.html, accessed 3 March 2010.

Betz, I. R., Blood, G. W., & Blood, I. M. (2008). University students' perceptions of pre-school and kindergarten children who stutter. *Journal of Communication Disorders, 41*, 259–273.

Blood, G. W., Blood, I. M., Maloney, K., Meyer, C., & Qualls, C. D. (2007). Anxiety levels in adolescents who stutter. *Journal of Communication Disorders, 40*, 452–469.

Blood, G. W., Blood, I., Tellis, G., & Gabel, R. (2001). Communicating apprehension and self-perceived communication competence in adolescents who stutter. *Journal of Fluency Disorders, 26*, 161–178.

Blood, G. W., Blood, I., Tellis, G., & Gabel, R. (2003). A preliminary study of self-esteem, stigma, and disclosure in adolescents who stutter. *Journal of Fluency Disorders, 28*, 143–159.

Bloodstein, O., & Ratner, N. B. (2008). *A handbook on stuttering* (6th ed.). New York: Delmar.

Blumgart, E., Tran, Y., & Craig, A. (2010a). Social anxiety disorder in adults who stutter. *Depression and Anxiety, 27*, 687–692.

Blumgart, E., Tran, Y., & Craig, A. (2010b). An investigation into the personal financial costs associated with stuttering. *Journal of Fluency Disorders, 35*, 203–221.

Breathnach, C. S. (2000). Scanning the stammering brain. *Irish Journal of Psychological Medicine, 12*, 173–186.

Craig, A., & Tran, Y. (2006). Fear of speaking: chronic anxiety and stammering. *Advances in Psychiatric Treatment, 12*, 63–68.

Dacor, A. (2009). *Two types of web users*. Available online at: http://www.great-web-design-tips.com/web-site-design/150.html, accessed 25 August 2009.

Dorsey, M., & Guenther, R. K. (2000). Attitudes of professors and students towards college students who stutter. *Journal of Fluency Disorders, 25*, 77–83.

French, S. (1994). What is disability? In S. French (Ed.), *On equal terms: Working with disabled people* (4th ed.) (pp. 3). Oxford: Butterworth-Heinemann.

Ginsberg, A. P. (2000). Shame, self-consciousness, and locus of control in people who stutter. *Journal of Genetic Psychology, 161*, 389–399.

Ginsberg, A. P., & Wexler, K. B. (2000). Understanding stuttering and counseling clients who stutter. *Journal of Mental Health Counseling, 22*, 228–239.

Hearne, A., Packman, A., Quine, S., & Onslow, M. (2008). Stuttering and its treatment in adolescence: The perceptions of people who stutter. *Journal of Fluency Disorders, 33*, 81–98.

Hughes, S., Gabel, R., Irani, F., & Schlagheck, A. (2010). University students' perceptions of the life effects of stuttering. *Journal of Communication Disorders, 43*, 45–60.

Irwin, M. (2005). Disability or not? *One Voice*, 25–26. [AQ6]

Iverach, L., O'Brian, S., Jones, M., Block, S., Lincoln, M., Harrison, E., et al. (2009). Prevalence of anxiety disorders among adults seeking speech therapy for stuttering. *Journal of Anxiety Disorders, 23*, 928–934.

James, S. E., Brumfitt, S. M., & Cudd, P. A. (1999). Communicating by telephone: Views of a group of people with stuttering impairment. *Journal of Fluency Disorders, 24*, 299–317.

MacKinnon, S. P., Hall, S. H., & MacIntyre, P. D. (2007). Origins of the stuttering stereotype: Stereotype formation through anchoring-adjustment. *Journal of Fluency Disorders, 32*, 297–309.

O'Brian, S., Jones, M., Packman, A., Menzies, R., & Onslow, M. (2011). Stuttering severity and educational attainment. *Journal of Fluency Disorders, 36*, 86–92.

Packman, A., & Kuhn, L. (2009). Looking at stuttering through the lens of complexity. *International Journal of Speech-Language Pathology, 11*, 77–82.

Petrunik, M. (1982). Telephone troubles: Interactional breakdown and its management by stutterers and their listeners. *Journal of Symbolic Interaction*, 5, 299–310.

Saracino, J., Noseworthy, J., Steiman, M., & Fombonne, L. R. E. (2010). Diagnostic and assessment issues in autism surveillance and prevalence. *Journal of Developmental and Physical Disabilities*, *22*, 317–330.

Teesson, K., Packman, A., & Onslow, M. (2003). The Lidcombe behavioral data language of stuttering. *Journal of Speech, Language, and Hearing Research*, *46*, 1009–1015.

Van Riper, C. (1982). *The nature of stuttering* (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Westby, C. E. (1997). There's more to passing than knowing the answers. *Language, Speech, and Hearing Services in Schools*, *28*, 274–287.

World Health Organization. (2001). *International Classification of Functioning, Disability and Health*. Available online at: http://www.who.int/classifications/icf/site/onlinebrowser/icf.cfm, accessed 4 January 2010.

World Health Organization. (2011). *World Report on Disability*. Available online at: http://whqlibdoc.who.int/publications/2011/9789240685215_eng.pdf, accessed October 2011.

Yaruss, J. S., & Quesal, R. W. (2001). The many faces of stuttering: Identifying appropriate treatment goals. *ASHA Leader*, *6*, 4–5.