The Elizabeth Usher Memorial Lecture
Harnessing the Net:
A Challenge for Speech-Language Pathologists

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For Speech-Language Pathologists (SLPs) the Internet's potential as a tool for communication, collaboration, service delivery, research, education, mentoring, peer support, professional development, marketing, health information provision, and grass-roots intervention, has hardly been tapped. But many thinking professionals are repelled by the jargon of Information and Communication Technology (ICT), and the perceived complexity of achieving computer literacy. Those who possess the necessary skills may be cautious about incorporating ICT into their practices, appreciating the ethical, practical and aesthetic challenges involved in using the Internet safely, responsibly and well. How can we, as a profession, harness the Net for ourselves, infuse its capabilities into practice and employ it to our best advantage? Can we improve on what is available, and what might the effects of doing so be?

The Internet allows people with computers to communicate with each other via a universal network of networks. In the multifaceted field of speech-language pathology (SLP), the Internet's potential as a clinical, teaching and research tool (Hallett, 2002) and for marketing what we do (Lawless, 2003) has hardly been tapped. For some of us, therein lies its allure, and we have joined the estimated 9.6% of the people of the world with Internet (Net) connections (see Table 1).

Table 1: How many online?

	DATE	NUMBER	% Population	SOURCE
WORLD	Sep 2002	605,600,000	9.57	NUA Ltd
Australia	Feb 2002	10,630,000	54.38	Nielsen Net Ratings
Canada	Mar 2002	16,840,000	52.79	NUA Ltd
China	Jul 2002	45,800,000	3.58	CNNIC
France	May 2002	16,970,000	28.39	Mediametrie
Germany	Aug 2002	32,100,000	38.91	71 Interactive
Hong Kong	Apr 2002	4,350,000	59.58	Nielsen Net Ratings
India	Dec 2001	7,000,000	0.67	ITU
Indonesia	Jan 2002	4,400,000	1.93	KOMITEL
Iraq	Dec 2000	12,500	0.05	ITU
Ireland	Sep 2002	33,720,000	33.72	NUA Ltd
Japan	June 2002	56,000,000	44.1	Min Posts Telecom
Malaysia	Dec 2001	5,700,000	25.15	ITU
New Zealand	Aug 2002	2, 006, 000	52.70	Nielsen Net Ratings
South Africa	Dec 2001	3,068,000	7.03	ITU
Singapore	Apr 2002	2,310,000	51.84	Nielsen Net Ratings
United Kingdom	Sep 2002	34,300,000	57.24	NUA Ltd
United States	Apr 2002	165,750,000	59.10	Nielsen Net Ratings
Vietnam	Dec 2001	400,000	0.49	ITU

SOURCE http://www.nua.ie/surveys/ Accessed March 30, 2003

The Universal Resource Locator (URL) or web address: **http://www.nua.ie/surveys/** in the footnote links to a massive database of Internet use, showing that while many places outside the industrialized world may have state of the art Information and

Communication Technology (ICT) only small proportions of their populations have the means to use it. With 54% of our population online, Australia ranks quite high in world terms. This is interesting to know in relation to the 2002 Labour Force Data Report of the Speech Pathology Association of Australia (Lambier, 2002), which showed that almost 92% of the 1,514 respondents had work and/or home Internet access, compared with 63% in 2001. But of course not everyone with ready Net availability wants to use it, or infuse ICT into practice.

Lifestyle, technical and aesthetic considerations

Throughout the 1990s many SLPs, including those experienced in accessing the World Wide Web (the Web) and electronic mail (email), for other purposes, were reserved when it came to incorporating ICT into their work (Hodgson, 1997). Some were wary of the ethical and legal implications of going online; concerned about the numerous *lifestyle*, *aesthetic* and *technical* issues involved in using the Net safely, responsibly and well; and skeptical about *standards of content* (Masterson, Wynne, Kuster & Stierwalt, 1999; Sivin & Bialo, 1992).

In terms of *lifestyle*, many colleagues share my misgivings about correlations between Internet use and various negative health, and developmental phenomena, such as childhood obesity (NSW Health, 2002), and the so-called geek syndrome (Silberman, 2001). Putting the related areas of child pornography and paedophilia to one side, as communication experts we are justifiably disturbed by images of sun-starved, sedentary cyber-junkies and tech-heads 'communicating' hour after hour with computer screens. *Aesthetically*, many are repelled by the jargon of IT, and reluctant to embrace Netspeak: the language of email and the Web (Crystal, 2001). On the *technical* side, some are still deterred from joining in by the perceived complexity of achieving computer literacy. Tim Berners-Lee, the Web's inventor, strikes a reassuring note in this regard, portraying the Internet more as a social creation than a technical one (Berners-Lee, 1999). And it is true that email and the World Wide Web, the Net's most popular components, require little, if any, technical know-how.

Computers and ICT

My introduction to the world of computers and ICT was a lengthy process. It began during the final stages of completing my doctoral research, in April 1995, when, of necessity, I abandoned my dedicated word processor with its 14-line liquid crystal display (LCD) and bought my first Personal Computer (PC). The computer fulfilled the basic requirements of the day, running Windows 3.11 and virus software. Today, minimal requirements for our ICT purposes as speech-language pathologists include a computer (see Table 2) with a CD-ROM drive; a good quality ink jet or laser colour printer; and a reliable, economical Internet connection with adequate *expert* technical support. Essential software includes Office (or a compatible suite), an email program, a browser such as Internet Explorer or Netscape, anti-virus software, Adobe Acrobat Reader, and PowerPoint Reader. A removable hard drive or magnetic tape device to regularly backup everything on the hard drive is a good safeguard, and a flatbed scanner very handy.

Table 2: Suggested minimum configurations for new computers

Hardware	Windows	Macintosh
Processor	Pentium IV, or equivalent desktop/laptop	PowerPC G4 - 733 or Powerbook G4
Memory (RAM)	256 MB (minimum) 512 MB recommended	512 MB (minimum)
Hard Drive	20 GB (minimum)	20 GB (minimum)
Monitor	17" Colour SVGA, 75Hz refresh rate 12" colour (laptop)	17" Colour, 75Hz refresh rate 14" colour (laptop) (minimum)
Video Adaptor	AGP w/32MB RAM (desktop); AGP w/16MB RAM (laptop)	NVIDIA GeForce2 MX w/64MB video RAM(desktop); ATI Rage Mobility Radeon w/32MB RAM (laptop)
Multi-Media	Soundblaster 16bit compatible (with speakers)	Built-in
CD-RW or DVD	Essential	Essential
Removable Media	1.44MB 3.5" floppy	
Operating System	Windows XP	MacOS System 9.2 or OS X
Software	MS Office XP or higher	MS Office X or higher

SOURCE: http://www.vcu.edu/sci/spec_detail.html (March 7, 2003 version) Accessed April 1, 2003

Three years passed before I had an Internet connection. Meanwhile I gained valuable skills, first in conquering Minitab and SPSS, the statistical software packages used to analyse clinical data for my thesis, and second in learning to use word processing software to write the thesis (Bowen, 1996) and a book for families and teachers about developmental phonological disorders (Bowen, 1998a). In March 1998, stirred by an article in the ACQ (Beer, McLeod & McCabe, 1997) I had a CD-ROM drive installed, upgraded to Windows 95, and catapulted into cyberspace with a home dialup connection. I soon found that the best source of information on how to make the most of the Internet is online tutorials (Barker, 2002; Microsoft, 2003; Netscape, 2002).

Personal frame of reference

As I naively took stock of the 'state of the Net', and started thinking seriously about ICT, I was in my 23rd year of private clinical practice as an SLP. A record of professionally related volunteerism was motivated by a fascination with our knowledge base and pleasure taken in being with colleagues, rather than altruism. This may have reflected a need to feel connected with the mainstream of the profession, something that is not always easy to sustain in private practice, or as we become more specialized clinically, and more focused on a particular area of research.

A problem-based task

In the early stages of exploring the Net, none of the *lifestyle*, *aesthetic* and *technical* concerns mentioned above gnawed at me as much as the problematic variation in the *standards of content* of the web sites purporting to represent our profession on the international stage. Of particular concern to me, given my clinical and research interests, was the quality of information for consumers, students and professionals about children's speech sound disorders. While there was some information of an exceptionally high standard to be found, much of what was there was inaccurate, simplistic, badly written, difficult to locate, and rarely adequately referenced. As well, controversial practices

(Creaghead, 1999; Duchan, Calculator, Sonnenmeier, 2001) were often presented in a misleading way, and dubious treatments were prominently represented, with slick web sites, touting untested cures and products (Kuster & Bowen, 2002).

Here was an irresistible challenge, begging to be tackled using problem-based learning principles. Problem-based tasks have four critical components: the problem must be open-ended (with no 'right' answer, and no single route to the answer); the problem must be authentic, related to real-life; it must be complex, involving a variety of skills and a breadth of content; and, it should be open to self-assessment, so the learner can determine for him or herself what they need to do to advance to more expert levels of performance. So, instead of starting with a particular aspect of ICT such as building a Web Site, and then designing content to fit it, I started with a goal that allowed for a variety of technology uses throughout its implementation. Above all I wanted to take a problem-based approach to the task of getting key information from the research evidence base, including aspects of our own research, 'out there'. My goal was to take on the Internet and infuse its resources, or at least the ones that were valuable to me, into my practice as a clinician and researcher.

Infusing ICT into practice

Highlighting the distinction between *using* technology and *infusing* technology into practice, Sculla (1999) saw three trends that threaten to impede what she called the "transformational impact of technology" on any instructional environment. First, the push for educators to become computer literate without providing them with the instructional strategies needed to infuse technological skills into the learning process. Second, the myopic view that student can 'teach the teacher'. That is, teachers' limitations in, or fear of using technology can be neutralised by having students with good "computer savvy". And third, the tendency for computer use to be seen as an end in itself, rather than assigning it to its rightful role as an integral tool in learning.

The availability of Internet resources has had a powerful impact in enabling me to work full time as a clinician and pursue and publish clinical research. The research started in earnest when, with my doctoral supervisor Dr Linda Cupples, I proposed and evaluated a broad-based, family-centered therapy methodology for developmental phonological disorders called *Parents and children together*, or PACT. The efficacy of the approach with children with mild, moderate and severe phonological issues was reported in the peer-reviewed literature in a case study (Bowen & Cupples, 1998) and in a clinical forum (Bowen & Cupples, 1999a, 1999b), sparking stimulating discussion and debate (Fey, 1999; Grundy, 1999; Ingram & Ingram, 1999). Excitingly, we were asked to contribute a paper to a French journal about the family variables that can optimize phonological therapy (Bowen, 2000), and more recently to a British one (Bowen & Cupples, 2003 in press). An important message from the research was that the initial severity of the children's phonological disorders was the sole predictor of the frequency and duration of consultations required for their speech patterns to fall within the normal range.

A key characteristic of PACT is that families are actively engaged in its five dynamic components: family education, metalinguistic tasks, traditional phonetic production

procedures, multiple exemplar techniques (minimal contrast, focused auditory input activities), and homework. The therapy itself is administered in planned blocks and breaks. The PACT approach requires family members to learn technical information and develop novel skills to use, with professional guidance, in relation to their own child and his or her specific speech clarity issues. In the efficacy study, this information was provided through discussion, as notes in children's speech books, and in the form of the original manuscript of an informational book for families and teachers (Bowen, 1998a) now translated into French and Spanish and awaiting publication in those languages.

In presenting our research at conferences and seminars in Australia, New Zealand, the UK and the US (e.g., Bowen, 1998b) we slowly infused ICT into our practice (Sculla, 1999), finding more creative, user-friendly ways of providing *family education*, and producing a series of handouts and consumer slideshows (see Bowen, 2002a). With increasing professional interest in PACT from metropolitan, rural and remote Australia, and from overseas, some of the information was made available as email attachments and .pdf files. Posting it to the Net was the next logical step, and building started on **www.slpsite.com** (Bowen, 2003b) in June 1998. One month later, and regularly since, the site was announced to the major search engines.

Search engines

Search engines are the computer programs most people employ to locate (using key-word searches) and access information on the Internet (see: **http://www.searchtools.com/**). 'Announcing' a site is the process of adding the URL of a site, or page, to the big search engines like Google and Yahoo (see: **http://www.tips-tricks.com/announce.asp**). To help them maintain the highest possible ranking, important or revised pages on a site should be re-announced regularly. Web weavers can go directly to the search engines' 'add URL' pages, and to free promotion services that allow you to fill out a form and submit a site or page to multiple search engines (e.g., **http://www.addme.com/**).

HTML

The functions that a word processor can perform, such as making text bold or italic, have to be coded into web pages using Hypertext Mark-up Language, or HTML. HTML files are plain text files, so they can be composed and edited on any type of computer. Figure 1 shows the structure of a typical web page.

```
<HTML>
<HEAD>  META tags go here
<TITLE>The title of your page goes here </TITLE>
</HEAD>
<BODY> The text, pictures, and other content go here.
</BODY>
</HTML>
```

Figure 1: The structure of a typical web page

HTML code is a language used to specify the structure of web documents (including text, pictures, sounds, and links). HTML involves adding commands, called tags, to the

information the author wants to include on the page, so that web browsers (e.g., Netscape and Internet Explorer, to name two of many) 'know' how to render it. Most tags work like switches that either turn a feature on or turn it off. A tag is a piece of code that is placed inside the, less than symbol, "<", and the greater than symbol, ">". To turn a feature on you simply place the code between these two symbols.

For example, to start displaying in bold text you use <B>.To turn that feature off you do exactly the same thing but place a forward slash, / directly in front of the code. So, to stop displaying in bold text you use </B>. The HTML for "I **love** phonology." would be "I <B> love </B> phonology." And for "I *love* phonology." "I <EM>love</EM>phonology." Every start tag should have a corresponding end tag. Everything included between <TITLE> and </BODY> is visible in the browser while META tags comprising a description of, and keywords for a site, placed between <HEAD> and </HEAD> are hidden. Figure 2 contains Judith Kuster's Stuttering Home Page META tags.

<META NAME="description" CONTENT="Information about stuttering, stuttering therapy, cluttering, confederacies, course syllabi, books about stuttering, stuttering support organizations."> <META NAME="keywords" CONTENT="stuttering, stuttered, stutter, studdering, studderer, studder, stammering, stammerer, stammer, fluency, dysfluency, disfluency, cluttering, speech therapy, speech-language pathology, communication disorder, PWS, impediment, disability, impairment, handicap, children, adults, teachers, parents, information, conference, Stuttering Home Page, treatments, kuster">

Figure 2: Stuttering Home Page META tags

The importance of inclusion of keyword META tags is debatable. Until recently they were regarded to be essential to having search engines index a site and to have it rank high in key word search responses. With no fanfare, Lycos dropped its support of the keyword tag in 1998, and AltaVista in July 2002. The newer search engines such as Google and FAST never used them in their ranking algorithms. On the other hand, all the search engines support the META description tag (see Figure 2), which states in a sentence the content of a site or page. At least as important as the META description is the <TITLE> and the correlation between the title and the content in the first paragraph (or so) on the page (Sullivan, 2003).

Geo-stats or 'top domains'

'Internet' is a contraction of 'international network'. As soon as Australians create a speech-language pathology web presence they create an international presence among four or five billion unique, publicly available web pages (Murray and Moore, 2000). Adequately announced in, and indexed by, search engines, and if the topics they cover are in demand, unless they have a very specialised 'Australian' site, their web traffic will quickly reflect the universal nature of the Web. Web trackers (software programs used to record web traffic) are not particularly reliable. For example, if an Internet Service Provider (ISP) caches a site in memory, the site will not be reflected accurately in web tracker statistics. Nonetheless, the information from web trackers is useful in determining general trends.

Looking at the traffic to my own web site (Bowen, 2003b), in Table 3, it can be seen that of the 2 million hits between May 1, 2000 and March 6, 2003, the American domains **.COM .EDU** and **.US** account, in combination for 37%. The **.NET** hits, also predominantly American, come in at the 24% level and **UNKNOWN** at 20%. Australia (**.AU**) is on 6%, and both **.CA** and **.UK** are on 2%, and **.ORG** 1%. The remaining 8%, accounting for 138 domains, each contribute less than 1% of the total.

Table 3: Geo-stats for www.slpsite.com 01.05.00 – 06.03.03
NOTE: THESE ARE THE HITS FOR THE ENTIRE SITE DURING THAT PERIOD
Source: http://www.thecounter.com/

DOMAIN / COUNTRY	HITS	PERCENTAGE
Commercial (.COM)	575,531	28
Networks (.NET)	494,909	24
Unknown (.???)	412,821	20
AUSTRALIA (.AU)	126,444	6
Educational (.EDU)	122,597	6
UNITED STATES (.US)	63,465	3
United Kingdom (.UK)	58,664	2
CANADA (.CA)	50,184	2
Organizations (.ORG)	27,017	1
SUB TOTAL	**1,931,632**	**92**
*138 "other" domains	68,368	8
TOTAL	2,000,000	**100**

* See: http://members.tripod.com/Caroline_Bowen/domains.htm

A comparison of geo-stats or "top domains" for the index pages of two Australian sites, four United States sites, and one UK site, all seven of which I refer to frequently because of the high quality of their content, and my own (Australian) site, is contained in Table 4. Despite Australia's relatively small population (of nearly 20 million) we can see that **.AU** emerges quite high in the overall "geo-stats". It comes in fourth, fifth or sixth position for all the sites with META tags, namely Bowen's **www.slpsite.com** Home Page (column 3); Judith Kuster's Net Connections Home Page (column 4) and the Stuttering Home Page (column 5); the University of Iowa's Hardin Meta Directory Index Page (column 6); Sandy Herring's Speech Language Pathology Resources Page (column 7); and Vanessa and Dave Jones' Speech Teach Home Page (column 8). By contrast neither the Speech Pathology Australia Home Page (column 1) nor the Australian Stuttering Research Centre Home Page (column 2) have META tags and we can see that they both go against the general trend with very high **.AU** geostats and low US **.EDU** geostats.

If we follow the lead of 49% of visitors to the ASRC site, and 76% of visitors to the Stuttering Home Page, and enter the search word "stuttering" in our search engine (Google), the Stuttering Home Page is in position 1, and the ASRC is buried somewhere between positions 38 and 42. Simply by adding META description tags the ASRC site could improve its ranking in search engines.

Writing and reading on the Web

Crystal (2001) believes Netspeak is fundamentally different from writing and speech. Indeed, he sees it as a completely new language medium, adding a fourth dimension to comparative linguistic enquiry. From now on, he says, we must consider language in terms of speech vs. writing vs. sign vs. computer-mediated language.

Table 4: Comparison of geo-stats ("top domains")

	*1 AU SPA	**2 AU ASRC	3 AU Bowen	4 US Kuster NC	5 US Kuster SHP	6 US Hardin MD	7 US Herring	8 UK Speech Teach
META keywords	NO	NO	YES	YES	YES	YES	YES	YES
META description	NO	NO	YES	YES	YES	YES	YES	YES
Ranking for .AU	**1**	**1**	**4**	**5**	**5**	**6**	**5**	**5**
DOMAINS	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Unknown	<1	27	30	36	37	37	21	29
Network .NET	19	10	20	20	22	20	32	18
US .COM	7	10	24	22	21	21	28	30
Australia .AU	**64**	**39**	**9**	**3**	**2**	**1**	**2**	**3**
US .EDU	1	2	5	9	7	6	6	2
United States .US	<1	<1	3	2	2	1	2	2
Canada .CA	1	2	2	2	2	2	2	2
UK .UK	2	1	3	1	1	2	1	10
Singapore .SG	<1	<1	<1		<1	<1	<1	<1
New Zealand .NZ	1	1				<1	<1	<1
Netherlands .NL	<1					1	<1	<1
Non-profit .ORG	<1							<1
Sweden .SE	<1							

*   Percentages in Column 1 are for 12 months.
** Percentages in Columns 2 to 8 are for periods in excess of 2 years.

COLUMN
1. Speech Pathology Australia Webalizer Version 2.01
2. Australian Stuttering Research Centre Home Page http://u.extreme-dm.com/?login=asrcusyd
3. Bowen Home Page http://extremetracking.com/open?login=cbowen
4. Kuster Net Connections Home Page http://w.extreme-dm.com/?login=jakuster
5. Kuster Stuttering Home Page http://w.extreme-dm.com/?login=jkuster
6. Hardin MD Index (University of Iowa) http://w.extreme-dm.com/?login=hmdindex
7. Herring Speech Language Pathology Resources Webalizer Version 2.01
8. Jones' Speech Teach (consumer home page) http://v.extreme-dm.com/?login=sponna

Writing for the Web's diverse audience, poses special challenges (Morris, 1999; Hammerich & Harrison, 2002; Morkes & Neilsen, 1997). Most of the rules that apply in writing a research paper, such as adopting a formal tone, for a narrow professional audience (Bowen, 2002b), do not apply. By the same token, using too casual a tone is also inappropriate. Metaphors, similes, puns, literary allusions, commercial references, political quotations, witty asides, deliberate ambiguity, and slang that may be all right in an Australian or EFL context can diminish the acceptability, comprehensibility and impact of a web document.

People do not read text on computer screens in the same way that they read the printed page. Neilsen (1997) emphasized that because 79% of users skim print on the screen rather than reading all the words, web pages have to consist of what he called 'scannable text'. The attributes of scannable text include highlighted keywords, meaningful headings rather than 'clever' ones; bulleted lists; one idea per paragraph; the inverted pyramid style **http://www.useit.com/alertbox/9606.html**, that starts with the conclusion; and half the word count (or less) than in conventional writing. These are sensible guidelines not

only for web content, but also for composing word-processed documents and .pdf files that the reader is likely to read on the screen, as well as message board entries, emails, and contributions to listservs.

Listserv

A very satisfying coming together of the resources and communication opportunities provided by the Internet has been the Phonological Therapy listserv (online discussion group), founded in November 2001. This listserv provides its rising membership (just over 800 in May 2003) an opportunity to discuss any theoretical, research or clinical aspect of child speech development and disorders that interests them. Members, include students, clinicians, researchers and university teachers, mainly in the fields of SLP and Linguistics. All members have access to each other, and to a related web site (**http://groups.yahoo.com/group/phonologicaltherapy**) comprising an archive of all messages posted to the group, links, files and other resources. The discussions are interesting, insightful, supportive, stimulating, sometimes provocative, practical, and fun.

Has the Internet changed practice?

In preparing this lecture, I asked the group whether the Internet had changed their practice as clinicians. The overwhelming response, on and off the list, was yes. The enthusiasm with which colleagues from around the world talked about their positive experiences of the Internet and how it had *indeed* changed not only their practice but also their world-view, as professionals, was remarkable. Student clinicians emphasised the benefits of email and listserv collaboration, and chat groups (McLeod, Barbara, Wilson & McAllister, 2002), commenting on how much they learned from listservs that included professionals and consumers as members. Doctoral and other higher degree candidates, student advisors and researchers emphasized the ease with which they could access databases and articles, on the Web, as well as the important role of email in supervision and collaborative writing. Faculty members described the wondrous effects of being able to use multimedia e-learning technology (Hallett, 2002) like webCT format (**http://www.webct.com/**) in their teaching. Clinicians recounted that the availability of journal articles online meant that they were now more likely to read them, and that the Internet figured large in their professional development activities. Several members commented on the role of families in educating their therapists, especially in relation to clients with low incidence disorders, whose families, thanks to the Net, are often better informed than professionals.

Highlights

True to Berners-Lee's 1999 view, my web site, the listserv, and collaborating via email are as much a social experience as a professional one. The impetus to sustain the work and effort that goes into these things has come from encouragement and feedback from students, consumers, colleagues, friends and of course family. As well as enjoying the challenges of problem based learning, I have made new friends, expanded my research-network, gained skills, and been invited to contribute to exciting projects. Some of these

things may have happened anyway, without the creation of **www.slpsite.com**, but most of them arose either directly from it, or from my interest in phonology.

The highlights include launching the site in 1998; having the opportunity to write the Webwords Columns for the ACQ since February 1999 to date (Bowen, 2003a); participating with American colleagues as a consultant in the Internet Access and Learning for Communication Disorders project (Kuster, 1999), and presiding over the NZSTA Internet Café in 2000; seeing the site featured in The Therapist's Internet Handbook (Stamps & Barach, 2001), and various web guides in 2001; collaborating with Judith Kuster in an article on web forums (Kuster & Bowen, 2002) in 2002; having an article from the site reprinted as a book chapter (Bowen, 2003c) in 2003. Also exciting was to see the site receive its millionth hit on April 3, 2002, and the two millionth on March 6, 2003 (counting since June 26 1998).

The future

While celebrating these highlights, like my friend Judith Kuster of the highly successful Net Connections and Stuttering Home Page, I am conscious of my amateur status as a web weaver. Currently, **www.slpsite.com**, the email it generates, the phonologicaltherapy listserv, and related projects are about as much as I can handle on top of my day job. To revamp my site, using the knowledge I have now, to professional standards, applying sound web design principles, ensuring that it is fully W3C compliant (**http://www.w3.org/**) and accessible to people with disabilities (Margolin, 2003) and to develop my ICT pursuits further I would need an injection of technical and financial help. But that is not one of my current goals. What I would like to do is encourage, perhaps even inspire, members of our profession, wherever they are, to share the task of optimizing SLP's Net potential, with Berners-Lee's guiding principle foremost.

> *The most important thing about the World Wide Web is that it is universal. By exploring this idea along its many axes we find a framework for considering its history, its role today, and guidance for future developments.* Berners-Lee, 2002

Our professional knowledge base and skills in oral and written communication, coupled with a little study, hands-on practice and peer support mean that motivated SLPs are perfectly poised to play their part in harnessing the Net for our profession. Using problem-based strategies, and understanding that we are tackling an international medium, we can critically and systematically evaluate web resources, improve what is there, and fill the gaps we find. The effects of doing so are potentially far-reaching in terms of improving heath information delivery.

For me, the essence of the task is to think in terms of creating an exemplary, global, SLP 'web presence' that the profession can celebrate. By this I do not mean one enormous web site, but a consortium of sites all conforming to an internationally agreed standard. Like the Internet itself, no one need 'own' such a project. Just as the Internet has no central headquarters, no regulatory body overseeing its content, no ethics committee, and no censor, once an agreed blueprint based on existing codes of ethics and standards of

practice was set up, self-assessed contributions could come from the pooled resources of national associations, educational institutions (faculty and students), practitioners working singly or in groups, consumer advocates, and experts in a variety of communication disorders and ICT related fields. The money that is poured into producing the 'embarrassing' face of SLP on the web, and funding that only serves to reduplicate available information, could be redirected to the project.

Thinking about this idea takes me back to a very good NIH grant proposal (Kuster, 1999) I was privileged to work on with Judith Kuster, Scott Yaruss, Bobbie Lubker, Patricia Hargrove, Scott Bradley, Mark Mizuko, and Phyllis Palmer. Ahead of its time, funding for the project was denied, so it did not come to fruition. The ideas behind it remain exciting and worth pursuing, in modified form, as more members of our profession become ICT literate and aware of the Net's power as a vehicle providing high quality *health information*. The term health information is being used here in relation to human communication disorders to connote well-established clinical diagnostic entities, as well as their epidemiology, their association with other health conditions, their evaluation and treatment, and their prevention. In brief, the project was about establishing and evaluating web-based centres of excellence, directed to both consumers and professionals, in the form of seven authoritative Internet communities, comprising discrete web sites for prevention / epidemiology, augmentative communication, child language disorders, dysphagia, hearing and hearing disorders, speech sound disorders, and stuttering.

It does not matter whether we speech and language professionals make our mark on the Net in a small way (by contributing cogently to listserv discussions, or by providing feedback and ideas from the perspective of well-informed Internet users) or in a big way (by developing original evidence-based content for web sites). What matters is, that when we make our contributions, we do so conscious that we represent our profession and our professionalism internationally.

The Internet influences our world-view and the way we practice. It changes the way we communicate, and alters our language irretrievably, inspiring new words, and new meanings for old words. One of the new words, *networking*, is now used popularly to refer to the establishing of communication links with other people as a means of exchanging ideas and information. A *networker* is a person who is skilled in drawing on the resources of others. One of our heroines, Elizabeth Usher, whose work in the seemingly impossible task of establishing the first Speech Therapy degree program in Australia this annual Memorial Lecture commemorates, was, by all accounts, a consummate networker (Dornan, 1996). At the core of everything she stood for, and of everything our profession stands for, is quality of client care. The challenge for our profession in harnessing the Net is to follow that pioneering example, and to become international networkers in the common goal of creating a web presence worthy of personal and professional pride, and universal recognition.

Acknowledgements

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