Navigating to read – reading to navigate

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Abbreviations

**AMEP**  Adult Migrant English Program
**CALL**  computer-assisted language learning
**CD-ROM**  compact disk read only memory
**CNN**  cable news network
**CSWE**  Certificate in Spoken and Written English
**DIMIA**  Department of Immigration and Multicultural and Indigenous Affairs
**EFL**  English as a foreign language
**ESL**  English as a second language
**FAQs**  frequently asked questions
**HTML**  hypertext mark-up language
**ICTs**  information and communication technologies
**IMHO**  in my humble opinion
**ISLPR**  International Second Language Proficiency ratings
**NESB**  non-English speaking background
**PDF**  portable document format
**SMS**  short message service
**TAFE**  Technical and Further Education
**TESOL**  teaching English to speakers of other languages
**UNHCR**  United Nations High Commissioner for Refugees
**URL**  unique resource locator
Acknowledgments

This book reports on research conducted collaboratively by Adult Migrant English Program (AMEP) teachers and the authors as part of the Special Project Research Program at the AMEP Research Centre, funded by the Department of Immigration, Multicultural and Indigenous Affairs, Canberra. The book frames this research within the broader research on reading the Web in language teaching and learning.

Special thanks are due to the AMEP teachers who collaborated in these action research projects. Also, we thank the AMEP service providers who encouraged participation of their teachers and to the curriculum coordinators who helped organise professional development sessions and made it possible for teachers to be released from their classes.

Also, special thanks to Philippa Lipscomb, one of the teacher-researchers on the project, who came up with the title for this volume.
Series introduction

Teacher research in the field of second language teaching and learning has gained prominence in recent years. Such re-examination of the activity of teaching ‘connects the “doing” of teaching with the “questioning” of research’ (Freeman 1998: ix), a practice that Freeman calls teacher-research. While action research is a popular research methodology used in teacher-research (see for example, Burns 1999; Edge 2001), action research and teacher-research are not synonymous. Action research has a broader focus than teacher-led inquiry, focusing as it does on the action research cycle – the iteration of findings of research that lead to action, which is again analysed, leading to further action. Teacher-research, however, is teachers’ judgements and beliefs, ‘based not simply on experience but on an articulated, disciplined understanding of that experience’ (Freeman 1998: 3), which may or may not involve action research as a methodology for inquiry. The focus, rather, is on inquiry and how inquiry leads teachers to better understand what is happening in their classrooms.

Teaching in Action volumes report on teacher-research – in some cases where action research was a pivotal methodology and in other cases where a variety of research methodologies were employed. The series is designed to present research-based activities that classroom teachers have developed and have trialled in their or others’ classrooms. The goal of the series is to reflect teachers’ experience and points of view, and to illustrate how that point of view or understanding developed as a result of their particular enquiry. Each volume focuses on a specific area of second language teaching and learning. Each volume in the series is divided into two sections. The first provides theoretical perspectives and a brief discussion of previous research findings on the topic. The second section has a practical orientation and illustrates the insights, activities, materials and strategies explored by teachers in their research. Through the chapters in the second section, we hope that teachers’ understanding of their experiences can be shared with readers – teachers who may in turn be encouraged to develop their own inquiry into their practice, and researchers who may be encouraged to develop new ways of approaching their own research and new ways of articulating their theoretical concerns.

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References


**Introduction**

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Increasingly, the World Wide Web is being incorporated into language teaching and learning. English language learners, whether in ESL or EFL contexts, find they need the literacies of the Information and Communication Technologies (ICTs) to meet their social, educational, and personal needs (Goodwin-Jones 2000). Within the multi-literate required to participate in the twenty-first century, researchers have identified a variety of literacies required to use ICT, such as computer literacy (Corbel and Gruba 2004), visual literacy (Kress 1997), and electronic literacies (Warschauer 1999). Snyder names what Warschauer calls ‘electronic literacies’ as ‘digital literacies’ (Snyder 1999) or ‘silicon literacies’ (Snyder 2002). What all these researchers have noted is that these new means of finding, selecting and using the information available in the new media have led to a redefinition of literacy. Reading and writing in these new media require rethinking literacy practices, especially the relationship between the text, the visual and the audio.

In the field of language education, there has been an assumption that the literacies of print texts will necessarily transfer to the new media without intervention. However, in a large, collaborative action research project conducted with 17 teachers in Australia, Murray and McPherson (2004) found that print literacy does not necessarily transfer to digital literacy. One of the teacher-researchers in this project (Philippa Lipscomb) found that even proficient readers of English print text struggled with reading the Web unless they had had previous experience with the Web in their home language (Lipscomb 2002; Murray and McPherson 2004). Lipscomb identified two different types of texts on the Web, which for her study she called conventional texts downloaded from the Web and Internet specific texts. The former included FAQs, maps and information texts and a procedural text for finding information on the Web. To remove the complicating factor found on a live screen, such as using a mouse and pop-up windows, Lipscomb printed out the texts and had learners respond to comprehension questions on the printed versions of these online texts. Other than some issues over vocabulary and forgotten geographical concepts, such as longitude and latitude, her learners had no difficulty reading these texts. However, the Internet-specific texts (a CNN homepage and the results of a search engine search) were impossible to read for those learners who had not had previous experience with the Internet. Intrigued by this finding, we wanted to investigate whether carefully scaffolded instruction would help such learners read the Web. We therefore coordinated another teacher-research study to develop scaffolded instruction and to determine whether it facilitated learner reading of the Web. We situated this study in the framework of scaffolded instruction.

**Theoretical framework**

Recent work on scaffolding has shown that learners benefit from two types of scaffolding – planned and contingent (Hammond and Gibbons 2001). Scaffolding is based on Vygotsky’s notion of the zone of proximal development (1978: 86):

The distance between the actual development level (of the learner) as determined by independent problem solving and the level of potential development
as determined through problem solving under adult guidance or in collaboration with more capable peers.

The term was originally used to explain the way tutors guide the development of problem solving in young children (Wood, Bruner and Ross 1976), and was later extended to describe how teachers assist learners in completing a task (Maybin, Mercer and Steirer 1992). Wood et al note that ‘the learner must be able to recognize a solution to a particular class of problems before he is himself able to produce steps leading to it without assistance’ (p 90). It is the assisting of the learner in this recognition, interpreting discrepancies and, finally, confirming the learner’s individual achievement that can be termed scaffolding. As Maybin et al note, scaffolding is more than help; it is deliberate strategies for providing support for learners so that they can eventually accomplish the task without support.

Hammond and Gibbons (Hammond 2001) have identified two types of scaffolding – micro and macro, also referred to as contingent and planned. Micro-scaffolding occurs through the ongoing classroom dialogue between teachers and learners. This work follows the tradition of education as a cultural, dialogical process developed through language. In this view, classroom talk is the site for learners to make sense of the content of the learning and to also develop new understandings and the language to explain those understandings. Planned or macro-scaffolding, on the other hand, refers to the selection and sequencing of tasks and interactions to achieve the overall curriculum goals. While the teacher-researchers in the study reported in this volume may have engaged in micro-scaffolding during classroom interactions, the design of the research was to examine only the purposeful, pre-designed activities that these teachers developed and observed in their own classrooms; that is, those ‘clearly articulated goals and learning activities which are structured in ways that enable learners to extend their existing levels of understanding’ (Hammond 2001: 6).

The research described in this volume was also grounded in reading theory, especially sociocultural approaches (eg Freebody and Luke 1990; Baynham 1995) which incorporate cognitive processes – such as decoding of text – with critical literacy processes – such as uncovering ideologies or questioning how written texts position both readers and writers (see Chapter 1 this volume for a discussion of different theoretical approaches to reading).

The research context

This research study involved five teachers across three states (Queensland, South Australia and Western Australia) in Australia’s Adult Migrant English Program (AMEP). The AMEP, funded by the Commonwealth Department of Immigration and Multicultural and Indigenous Affairs (DIMIA), is a fifty-year-old national program that provides English language instruction with a settlement focus for immigrant and humanitarian entrants to Australia. Immigrants and refugees for whom English is not a first language, and who have been assessed as not having functional English language skills, are entitled to 510 hours of English language instruction. More recently, additional hours of instruction are available for learners with special needs, such as youth with limited schooling or learners who have survived torture and trauma. The Commonwealth Government, through a competitive tendering process every five years, funds state and territory organisations to provide English language instruction as part of immigrants’ settlement. Classes are provided at various times and places and
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instruction includes a distance learning program, a home tutor scheme and independent learning centres.

English language provision is competency based and uses as the curriculum framework the Certificates in Spoken and Written English (CSWE) at four levels - I, II, III, and IV (NSW AMES 2003). These levels correspond at entry to the International Second Language Proficiency ratings (ISLPR) (Wylie and Ingram 1999: 7) as follows:

- Pre-CSWE pre-beginner ISLPR 0
- CSWE I beginner ISLPR 0
- CSWE II post-beginner ISLPR 1
- CSWE III intermediate ISLPR 1+
- CSWE IV advanced ISLPR 2+

Most AMEP learners are in Pre-CSWE, CSWE I and II, and many learners do not progress past CSWE I even after completing their 510 hours.

The CSWE framework uses a text-based approach to curriculum design (Feez 1998), and assesses learner outcomes through achievement of competencies. For example, a learning outcome might be ‘Can conduct a short telephone conversation’ or ‘Can read a short information text’. In addition, because there is a settlement focus, teachers use content that is relevant to the lives of learners new to Australia and often new to formal education, such as health and transport.

Immigrants to Australia come from a variety of different language and cultural backgrounds in the three migration streams. In the 2003–4 financial year, over 100 000 immigrants settled in Australia. Almost half of these came from non-English-speaking backgrounds. In 2002, AMEP provided tuition to over 32 000 clients drawn from 142 language backgrounds – the major countries of origin being China, Vietnam, Iraq, the Lebanon and Sudan. Different migrant groups settle in different areas of Australia, and this settlement pattern is reflected in the learners involved in this study.

The three organisations where the teachers worked (TAFE Language and Literacy Services in Queensland; LM Training in South Australia; and Central TAFE in Western Australia) are providers in the national AMEP. The sites where these teacher-researchers worked were in four different cities and towns. One teacher from Queensland worked in a metropolitan TAFE in the capital city, Brisbane; while the other worked at the Tropical North Queensland TAFE in Cairns. The learners in the capital were largely well educated in their home language and brought computer skills to their AMEP classes, while the learners in Cairns were from a variety of educational and cultural backgrounds. The teacher from South Australia worked in a private organisation providing AMEP services in the capital, Adelaide. Her learners were from a range of cultural and language backgrounds, however all had at least secondary education although they had differing levels of computer expertise. The two teachers from Western Australia worked in a TAFE in the capital, Perth. Their learners were also from a variety of backgrounds with at least secondary education but varying levels of computer experience. All learners in the project were at CSWE II or III level; that is, post-beginner and intermediate.
Introduction

**Research project goals**

The research project set out to:

- describe the structures of webpages and the results of web searches
- develop teaching materials for explicitly teaching learners these structures
- trial teaching materials
- evaluate learners’ ability to read webpages and the results of web searches.

**Research project methodology**

**Stage 1**

A research assistant (Jennifer Thurstun) examined the literature on the structure of webpages and developed recommendations for teachers regarding how webpages are structured, how to search the Web efficiently, and the principles teachers might use in choosing webpages for their learners and for teaching webpage reading. She shared her findings and recommendations with the five teachers at an initial project meeting (see Stage 2 below). These findings and recommendations are presented in this volume as Chapter 3. In addition, we (Denise Murray and Pam McPherson) conducted a literature search on scaffolding (see the section ‘Theoretical framework’ above for a summary of this literature), provided teacher-researchers with readings on scaffolding and conducted a workshop on this topic (see Stage 2 below).

**Stage 2**

The project was coordinated by two researchers from the AMEP Research Centre (Denise Murray and Pam McPherson), using a collaborative action research approach (Burns 1999). The research cycle consisted of the following phases:

- Teachers came together at the beginning of the project for a professional development session that included reporting from the previous research project as well as instruction in scaffolding theory and research and on the structure of webpages. Teachers also discussed their particular class and how they anticipated incorporating the Web to support the learning of English.
- In the first term, teachers observed and took notes as their classes used the Web for various instructional activities.
- At the end of the first, second and third terms teachers came together to report to each other on their class and learner profiles, their management of webpage use in their classrooms, and emerging issues.
- During the end-of-term reporting session, teachers learned from each other strategies that learners found useful and that supported language learning.
- Teachers adapted their strategies based on their own observations, input from fellow teachers and the profiles of the learners in their classes for the following term.
- Teachers observed and took notes as their classes used the Web for various instructional activities.
• Teachers came together to report on their findings at the end of the fourth term and to complete the writing of their reports.

Findings
The project revealed two distinct, but interrelated, reading activities that learners need to engage in to use the Web. These were: reading webpages to find their way around a website (i.e., reading to navigate); and navigating webpages in order to find and read information to achieve some other language learning goal (i.e., navigating to read).

Structure of the book
This volume provides research-based teacher perceptions about using the Web to support language learning. The volume is divided into two parts. Section 1 (Chapters 1–3) presents the theoretical foundation of the teacher research reported in Section 2 (Chapters 4–8). In Section 1, we also include the theoretical and practical perspectives of reading the Web that Jennifer Thurstun investigated and shared with teachers (Chapter 3). As the study progressed, and as we reported on the research at professional meetings, we found the need to ground the entire volume in the more general literature on reading and also in the literature on the nature of electronic and print texts more generally. We have therefore included reviews of this literature (Chapters 1 and 2). Chapters 1–3 discuss what we know about literacies for the new media. Tindale in Chapter 1 summarises the literature on reading both print and electronic texts, explaining how reading electronic texts differs from, but also utilises, the same strategies as reading conventional print texts. She discusses both bottom-up and top-down approaches to reading. In Chapter 2, Tindale identifies the ways in which print and electronic texts are the same and different. In Chapter 3, Thurstun draws on the research conducted on webpage design to make recommendations for teachers concerning the websites that learners might find easy to navigate. She also describes the features of webpages that teachers may use when instructing learners how to read webpages.

In Section 2, each teacher-researcher reports on the use of the Web in their particular classroom. These reports do not provide a temporal narrative of the action research over the three terms of the study; rather, the reports are snapshots of teachers’ classrooms and activities. Teachers observed their learners and took notes about their learners’ ability to read webpages after scaffolded instruction across the three terms. As the learners in their classes changed from term to term and within a term (when some learners left and others joined the class), and teachers mostly focused on a subset of learners in the class, the snapshots are composites across the three terms.

The composite snapshots provide sufficient information for the reader to situate the discussion of the materials and strategies used and the issues that developed and were investigated. Each chapter therefore includes the particular research focus for the teacher; a description of the class and learners, including course goals; the stages of instruction used; the teacher’s rationale for the particular content and methodology used; what learners achieved in language learning, Internet skills and attitudes; and issues that arose in using webpages for learning and how they addressed them. In addition, each chapter includes sample activities or materials teachers used.
Notes

1 In Australia, immigrants are called migrants. Australia’s immigration program includes three major streams: migrants who are sponsored by family members already in Australia; humanitarian entrants, which includes refugees via the UNHCR and under Australia’s own humanitarian rules; and a skilled stream that includes entrants with work qualifications needed in Australia. While skilled stream migrants need to have English language proficiency to immigrate, their dependents may need English language instruction and are often in AMEP classes.

2 TAFE, which stands for technical and further education, is a system of institutes around Australia offering tertiary-level courses, many of which offer Certificates, Diplomas and Advanced Diplomas as part of the Australian Qualifications Framework. Many of the AMEP classes are offered through TAFE institutes.

3 The AMEP Research Centre is a collaboration between the National Centre for English Language Teaching and Research at Macquarie University and the School of Educational Studies at La Trobe University. The Research Centre undertakes research and provides professional development and information services to the AMEP across Australia. The Centre is funded by the Commonwealth Department of Immigration and Multicultural and Indigenous Affairs.

References


Section 1

Background
Chapter 1

Reading print and electronic texts

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Reading is a theoretically complex process for which there is, as for learning itself, no complete model or theory. While there are many similarities between reading print and electronic texts – given that they share symbol systems – it has been suggested that the shift to the electronic medium involves changes in comprehension and decoding and, more significantly, in ‘what counts as literacy’ (Leu et al 2004: 15841). Leu et al claim that, while reading electronic texts requires all that reading print texts entails – including ‘skill sets such as phonemic awareness, word recognition, decoding knowledge, vocabulary knowledge, comprehension, inferential reasoning ... and others’ – these skills are not enough to be fully literate in electronic media. However, as discussed later in this chapter, others argue that it is not helpful to question whether reading online texts is fundamentally the same as reading print texts, employing the same skills and strategies in a different medium (Burbules 1997: 102).

The tension between ‘traditional’ views of reading and literacy as they apply to print texts, and new conceptions of reading and literacy that take into account the nature of new media remains a matter for ongoing debate and discussion beyond these pages. Rather than attempt to resolve these issues, in this chapter I briefly examine a number of theoretical approaches to reading print texts, and consider how they apply to reading electronic texts on the Web. At the end of the chapter, I suggest some implications for teaching reading.

Although reading is best understood as involving a complex interaction between reader, text and socio-cultural context, it is useful to consider theoretical approaches to reading under two broad category headings:

• reading as cognitive process
• reading as socio-cultural practice.

Reading as cognitive process

For the purposes of this chapter, ‘reading as cognitive process’ will be used as an umbrella term to include theoretical approaches to reading that focus on lower level reading processes (sometimes termed ‘bottom-up’ approaches), such as decoding, and those that focus on higher level reading processes (‘top-down’ and ‘interactive’ approaches), such as comprehension. Although the research literature does not use these terms consistently, ‘bottom-up’ and ‘top down’ are sometimes used to refer to the direction of processing within theoretical models of text processing - either from decoding sounds and letters to words to sentences (bottom-up) or from the level of text comprehension (top-down).

Decoding print texts

Bottom-up approaches to reading assume that readers construct meaning in a linear
way; that is, readers start by decoding individual letters, then build up to clauses and sentences, 'sequentially processing the text into phonemic units that represent lexical meaning' (Hudson 1998: 46). Lower-level language processes are now recognised as an integral part of an interactive approach to reading and include: processes that contribute to word recognition1, syntactic parsing2, and semantic proposition formation3.

In efficient reading, word recognition, syntactic parsing, and semantic proposition formation work together in working memory, which keeps information active while processing takes place (Grabe and Stoller 2002: 24). Working memory also has a role to play in reading comprehension.

Hood, Solomon and Burns (1996) look at bottom-up approaches to reading in an historical context, aligning them with bottom-up approaches to language learning. They note that, in the context of second language learning, reading theory has a relatively recent history, taking ‘second place to theories about language and language learning’ (p 16) until the mid to late 1960s. Hood et al record the shifting emphases of reading theory and research following trends in theories of language learning – from a focus on applying grammatical rules (as in grammar-translation methods) and attention to lower level processes such as eye movement; to a focus on phonic approaches (grounded in structural linguistics and behavioural psychology); to methods based on Chomsky’s transformational generative linguistics (where knowledge of language rules were seen as innate, and ‘learning occurred by understanding the rules though observation and deduction’ (Hood et al 1996: 18). Reading instruction based on a bottom-up view of reading (up to the mid-1970s) concentrated on the development of ‘a hierarchy of skills learned through drills, rules, memorisation and categorisation’ (Hood et al 1996: 18).

Decoding electronic texts

Researchers with an interest in lower-level reading processes as they apply to reading electronic texts have focused on physical factors such as screen characteristics, text characteristics and page design. The conclusion of most studies in this area is that at the level of decoding, reading from a screen is more challenging than reading print texts.

Screen characteristics

Research suggests that reading from a screen is around 20–30 per cent slower than reading print texts (Dillon 1992 cited in Dyson and Haselgrove 2000: 210; Troffer 2000). Screen glare, screen resolution and screen size are three screen characteristics that have an impact on reading text from a screen (Troffer 2000). Other relevant factors include ‘luminance, contrast, stability and text visibility’ (Wang and Chen 2003: 250). The impact of all of these factors varies between different types of screens (for example liquid crystal display [LCD] or cathode ray tube [CRT]).

Text characteristics

Text on screen can be static or dynamic. Examples of dynamic text are ‘leading display’ and scrolling text. Leading display text is dynamic text that moves across the screen from right to left. It is frequently used on webpages (particularly on news media pages to show breaking news stories) and is also common in computer or video games. The speed of leading display text is seen as an important factor that affects reading performance (Wang and Chen 2003).
Although not specifically referring to issues of decoding, Kress (2003) describes his own difficulties in reading dynamic text in PlayStation games. Unlike his son (an experienced player), he is ‘unable to take in the written text and its information in the time during which it appears on the screen’ (p 163). He suggests that while he is ‘oriented to notions of “completed text”’ (in that he waits until a sufficient amount of text appears on the screen), his son is ‘oriented to notions of “information as it is supplied”’, recommending that ‘you read the letters as they come up’ (p 163). Kress predicts that while both orientations are useful, there is ‘no doubt as to which will be most essential in [the younger generations’] future lives’ (p 163).

Computer hardware now includes a scrolling device built into the mouse so that any static screen text (online or offline) can be scrolled manually, or set to scroll automatically at a rate set by the user. This can cause discomfort for some users, as it can lead to a type of motion sickness known as the ‘waterfall effect’ (Braun 2004).

Webpage design

Research literature on features of webpage design and their impact on reading has concluded that a number of factors can contribute to decoding text on webpages. These include: poor page design, including use of irregular fonts and point sizes; a lack of contrast between text and background; and the use of background patterns (Walz 2001; Wang and Chen 2003). Some research suggests that text in unusual fonts, sizes and/or colours can be more difficult for second language learners to read (Akamtsu 1996 in Walz 2001: 478).

The use of different colour combinations on webpages can also create difficulties for readers. ‘Inappropriate’ combinations of text colour and background colour can affect the readability of the text, and can lead to ‘visual discomfort’ for some readers (Matthews 1987 in Wang and Chen 2003). Greater colour differences between text and background (as measured in luminance contrast) make text easier to read (Shieh and Lin 2000 in Wang and Chen 2003). Text/background colour combinations with higher colour difference include black text on a white background, white on black, and blue on yellow. Combinations with a lower difference include red on white, blue on white and green on white. The combination of blue on white is common on the Internet, given the Web design convention of using blue for unvisited links. Nielsen (1999) argues that this is unfortunate given that links are ‘the most important text on the page’ and blue is recognised as a colour that reduces readability’ (para 8).

Comprehending print texts

Top-down and interactive approaches to reading focus on comprehension and other higher-level processes. The term ‘top-down’ is slightly misleading as it misrepresents this type of processing as the reverse of bottom-up processing, implying that the reader processes texts then sentences then sounds (Urquhart and Weir 1998). Rather, top-down approaches are those that emphasise ‘the interaction of reader with text, reading for meaning and reading as a psycholinguistic guessing game’ (Baynham 1995: 172). This approach sees readers as using their knowledge of the world and of linguistic organisation to help them predict while reading.

The role of the reader is seen as significant in top-down or psycholinguistic approaches. Reading is viewed as an active process in which readers use their syntactic and semantic knowledge ‘to reduce their dependence on the print and phonics of the
text’ (Hudson 1998: 47). A reader’s familiarity with textual elements and other background knowledge helps the reader make sense of the text at text level, clause level and word level (Grabe and Stoller 2002). Relevant background knowledge may include cultural knowledge as well as subject knowledge. In Goodman’s (1968) model, the reader makes use of ‘internal concepts of how language is processed, past experiential background, and general conceptual background’, as well as their knowledge of the language (Hudson 1998: 47). Within another model known as schema theory (eg Rumelhart 1980), readers make use of their knowledge of generic structures found in written texts, as well as their knowledge of the topic of the text (Freebody and Luke 1990).

Few researchers advocate ‘strong top-down views’ (Grabe and Stoller 2002: 32). Bottom-up and top-down views of reading can be placed at either end of a continuum, although ‘most current researchers adhere to what has been termed an interactive approach’ (Hudson 1998: 46). Interactive approaches see the relationship between lower and higher level processes as forming the basis of reading ability. Significant research by Carver (1997 in Grabe and Stoller 2002: 122) in this area shows that: a) reading rate is a product of word-decoding abilities and cognitive processing speed; b) comprehension accuracy is a product of word-decoding skill and listening comprehension abilities; and c) overall reading abilities are a product of comprehension accuracy and reading rate abilities. On this last point, the research literature recognises that reading speed varies according to reading purpose. Research suggests that ‘... 300wpm is the rate at which efficient reading takes place. If we are reading faster or slower than 300wpm we are not reading: we would be scanning, skimming, learning or memorising the material’ (Anderson 1999: 59).

The psycholinguistic approach has dominated reading instruction since the 1970s (Baynham 1995: 173). Typical approaches to teaching reading based on this model encourage the use of strategies such as inferencing and predicting. Grabe and Stoller (2002) describe the relationship between different reading strategies and higher- and lower-level reading processes. They note that ‘reading to find simple information will emphasise word recognition abilities and some background knowledge anticipation of what items (eg words, numbers) to look for’ (p 29), while reading for general comprehension and reading to learn use a range of higher level cognitive processes.

Comprehending electronic texts

Research on higher level or interactive reading processes in reading electronic texts includes investigations of the role of the reader (including the relationship between page design features and hypertext and cognitive load), the role of background knowledge, and the link between text format and reading strategies and rate.

The role of the reader

The impact of a change in text format (ie from print to electronic) on the role of the reader (or user) is the subject of some debate in the literature. The notion of ‘learner control’ is a key construct in learning in educational multimedia and hypermedia environments. It is generally assumed that hypertext provides learners with a high degree of control. Some researchers argue that reading hypertext therefore casts the reader into a more active role (eg Tuman 1992). Tuman refers to the idea of the ‘fully engaged reader’, arguing that ‘hypertext is a medium for literate exchange that
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truly engages students, lifting them out of the passivity and lethargy associated with being only the receivers of other people’s prepackaged ideas’ (p 66). Others question the idea that hypertext necessarily leads to a high level of learner control (eg Kumbruck 1998; Gabbard 2000). Learner control is linked to learners’ perceptions of what the hypertext offers and how this relates to his or her goals rather than to the ‘opportunity to visit multiple links’ (Barab 1999 in Calisir and Gurel 2003: 143).

Increased learner control also increases the cognitive load on the reader (Charney 1994). Much of the literature on cognitive load in reading electronic texts specifically relates to reading hypertext, although some researchers have investigated the impact of other features of webpages. Eye movement studies provide a source of information about orthographic processing and show that in efficient print reading, the eyes make regular projections and regressions across the page between fixations on the print. These projections and regressions ‘allow the reader to predict and confirm’ (Walz 2001: 478, after Nuttall 1996 and others). Horizontal scrolling interferes with this process - as the text is scrolled, chunks of text disappear to the right or left. Horizontal and vertical scrolling can lead to difficulties in locating information as cues to location are lost (Dyson and Haselgrove 2000: 219) and can make scanning through a page or a number of pages of text difficult. The upshot of all of the above is ‘considerable stress on the limited capacity of working memory’ (Walz 2001: 478, after Brown 1998).

Page design elements may also affect cognitive load. Some webpages will be more cognitively demanding than others, for example those that use a ‘complex or unconventionally designed screen which uses different fonts, objects, navigation tools and layout patterns’ (Abbey 2000: 51). The use of frames containing separate texts on a single page can also make reading more demanding (Moore 1996: 325). In Chapter 3, Thurstun notes some of the difficulties that the visual complexity of frames can create for readers.

Hypertext can cause disorientation and cognitive overload (Moore 1996; Thomas 1997; Boechler 2001; Chun 2001; Calisir and Gurel 2003; Lee and Tedder 2003). Disorientation problems include ‘not knowing how one arrived at a particular node, not knowing where to go next, not knowing where the information is, and not knowing how to get there’ (Edwards and Hardman 1989 in Calisir and Gurel 2003: 136). These problems may be resolved through effective design, or through the use of ‘landmarks’ to help users recall online information (Smart, Rice and Wood 2000: 596).

While reading hypertexts can be a cognitively demanding task, hypertext may also have some cognitive benefits. Readers can find it easier to comprehend a text when using hypertext, as the hypertext provides a simple way of accessing additional information (Chun 2001). Additionally, the Internet provides opportunities to think differently - in non-linear, non-sequential ways (Sutherland Smith 2002), and reading hypertext encourages ‘metacognitive awareness that recognises alternative forms of [information] organisation’ (Burbules and Callister 1996: 42-43).

Background knowledge

As when reading print texts, readers bring different levels of familiarity with textual elements and different types and amounts of other background knowledge to their experience of using hypertext. Experience with computer-based interfaces and navigation systems varies significantly between readers. Murray (2003) reports on a study
which found that proficient readers of print texts who lacked experience in using computers or the Internet had difficulties in reading print versions of webpages: ‘[W]hile they could read the words on the page, they could not interpret the text elements such as scroll bars, advertisements in windows or clickable items’ (p 34).

Several researchers have pointed to the difficulties readers may have in orienting themselves to hypertexts that do not have fixed boundaries in the way that print texts do (Tuman 1992; Lankshear et al 1997; Thomas 1997; Kumbruck 1998). In Chapter 3 of this book, Thurston suggests that this lack of fixed text boundaries ‘is probably the greatest challenge for the reader who is trying to get a sense of the text’.

In addition to their knowledge of textual elements, readers bring different degrees of understanding of the conceptual structure of the Internet to their use of online texts. One researcher distinguishes here between ‘immigrants’ and ‘natives’ in hyperspace, recognising the differences between readers who have ‘been born and grown up’ in net-space ... and those who have migrated to it’ (Barlow in Lankshear and Bigum 1998).

Another type of background knowledge is knowledge of the topic of the text. Experts and novices in a subject area use hypertext documents in different ways. Novices ‘just scrolled but did not jump around the hypertext, even if they were experienced in using the system’ while experts ‘jumped around’ and were better able to make use of what the hypertext had to offer (Kumbruck 1998: 168). Likewise, another study found that ‘knowledgeable subjects’ (postgraduates) were better at browsing and navigating hypertext in their area of study than non-knowledgeable subjects (first-year undergraduates) (McDonald and Stevenson 1998). These researchers suggest that certain text structures (hierarchical with referential links) might be easier to use for those users who lack conceptual knowledge.

A number of researchers have examined the cultural dimensions of visual design, and some have related this to the use of computer interfaces and hypertext design (eg Walton, Vukovic and Marsden 2002). Early research focused on the use of ‘“culturally inappropriate” [or illegible] visual metaphors’ in icons (for example, pointing fingers, eyes, hourglasses, trash cans and mailboxes), and the use of internationally recognisable and acceptable number, time and date formats, symbols and colours (Russo and Boor 1993; Yeo 1996; Smart et al 2000; Walton 2002). More recent research has gone beyond this, to examine the culturally specific origins of navigational elements of the Web. One example is the use of the hierarchical tree, which has been described as a ‘culture-specific visual form which can operate to exclude people on both graphical and ideological levels’ (Walton et al 2002: 531).

Reading strategies and reading rate

Readers of electronic texts employ a range of reading strategies according to their purpose, in much the same way that readers of print texts do. Researchers agree, however, that most readers of online texts generally skim texts rather than read them (Thurston, Chapter 3; Nielsen 1997; Dyson and Haselgrove 2000; Troffer 2000). While many assume this is an unconscious strategy - in response to either the amount of information, the way it is presented or the reader’s purposes (or all three) - Dyson and Haselgrove (2000) argue that skimming must be a more deliberate strategy, given that reading from the screen is generally slower than reading print texts. Obendorf and Weinreich (2003), on the other hand, suggest that links on a webpage may lead readers to scan texts.
A number of factors influence the speed of online reading. Hypertexts vary in structure and complexity (see Chapter 2). This influences how long it takes to read something, and how much of it can be remembered (Lee and Tedder 2003). Reading speed is affected by the amount of text that is visible within a window (this depends on the size of the window and text line length), as well as by readers’ scrolling patterns (Dyson and Haselgrove 2000).

**Reading as socio-cultural practice**

Although approaches to reading as a cognitive process generally view reading as a neutral cognitive skill, reading can also be viewed within a broader social and cultural context. An approach to language that considers its cultural and social dimensions (as adopted in genre theories) is one that ‘does not necessarily deny the importance of psychological factors’, but sees the cultural and social aspects of language as more interesting (Kress 1993: 23). Freebody and Luke (1990: 15) seek to incorporate cognitive processes and social context by describing reading as a process in which readers adopt four related roles: 1) code breaker (How do I crack this?); 2) text participant (What does this mean?); 3) text user (What do I do within this, here and now?), and 4) text analyst (What does all this do to me?). In more recent work, Freebody and Luke have revised the terms used in this ‘four resources’ model, to consider ‘practices’ rather than ‘roles’, hence: 1) breaking the code; 2) participating in understanding texts; 3) using texts; and 4) analysing texts (Luke and Freebody 1999).

A model of language in social context developed by Baynham (1995) consists of three embedded components: ‘the innermost layer is language as text, the middle layer is language as social process (getting things done through language) and the outer layer is language as social practice (how ideologies and institutions operate through language)’ (Baynham 1995: 88, italics added). In this model, Baynham seeks to expand on psycholinguistic views of language, to consider ‘what kind of higher-level orderings of textual organisation are available to the reader [ie social process] ... [and] the social world within which these cognitive orderings are produced [ie social practice]’ (p 205). In describing this model, he refers to the work of Freebody and Luke (1990), aligning the reader roles of code-breaker and text participant with a view of language as text, the role of text user with language as social process, and the role of text analyst with language as social practice.

**Language as social process**

The structure of a text reflects the social context in which it was created and its purpose. Texts that ‘share the same purpose in the culture ... will often share the same obligatory and optional structural elements and so ... belong to the same genre or text type’ (Butt et al 2000: 9). When considering genres of online texts, it is important to distinguish between those texts that approximate print texts (and may or may not also appear in print form), and those texts that appear only in electronic form. Internet genres have been defined by one researcher as those that only ever appear in electronic form on the Internet (Bauman 1999). Thurstun (Chapter 3 and 2004) considers the Internet homepage as an emerging genre that has achieved enough stability and consistency to be described in terms of its common structural elements. The textual features of online texts are discussed further in Chapters 2 and 3 of this book (as well as in Thurstun 2004).
Inexperienced readers may not recognise genres on the Internet: Murray (2003) reports on a study which found that ‘learners cannot recognise different Web genres (eg narrative, advertisements, factual information) unless specifically taught search skills’ (p 34). Bauman (1999) identifies three facets of Internet genres which ‘allow for new relationships between reader and writer – between actor and agent’ and ‘have profound effects on the way we read and write, and on the way we act in the world’ (p 273): ‘First, Internet texts always exist in multiple, ubiquitous copies ... Second, the Internet removes certain time constraints with respect to the production and reception of texts. And, finally, the Internet is collaborative in ways never before seen’ (p 273).

Language as social practice

Each theoretical approach to language has consequences for definitions of literacy. Literacy can be seen simply as mastery of the 'mechanical skills of encoding and decoding, together with whatever cognitive capacities go with skill mastery' (Lankshear et al 1997: 15). From a socio-cultural perspective, however, literacy is understood as 'the social practices and conception of reading and writing' (Street 1984: 1). According to this view, literacy and social practices are inseparable, and literacy is not neutral but rather is 'bound up with values, purposes, beliefs, aspirations, goals and the like' (Lankshear et al 1997: 16).

When literacy is considered within a sociocultural context, the notion of 'literacy practices' extends to take into account all technologies associated with reading and writing, and takes into account that changes in literacy practices are the result of 'mutually influencing social and technological factors' (Murray 2000: 43) rather than the direct consequence of changes to technology. As noted at the beginning of this chapter, Burbules (1997) regards the question of whether reading electronic texts is the same as reading print texts as unhelpful. He argues that 'reading is a practice and as such it partakes of the contexts and social relations in which it takes place; significant differences in those contexts and relations alter the practice' (p 102). Similarly, any differences between reading online and print texts can be linked to 'the roles the Web and the book are playing in society and the way information is stored and accessed in these media' (Warschauer 1999: 158).

Researchers generally agree that literacy practices have been ‘irrevocably altered by new technologies and media’ (Baynham 2001: 88), changes that parallel those related to the introduction of other technologies such as the printing press and the telephone. The implications of new technology for literacy practices include: changes to communication practices (eg through the introduction of email and online discussions); a blurring of the distinction between social practices related to home, work and entertainment; a move from verbal to more visual language; and, most significantly, a breakdown in the ‘separation between audiovisual media and printed media, popular culture and high culture, entertainment and education, information and knowledge’ (Snyder 2001: 121).

Central to language as social practice is critical reading or critical literacy and the notion that ‘texts can invite or be subject to more than one reading’ (Baynham 1995: 205). Critical literacy can be defined as ‘having an understanding of the political and ideological nature of literacy and ... being able to question how readers and writers are positioned socially by written texts’ (Burns and Hood 1998: iv). Developing critical
reading skills, including the capacity to ‘read, filter and evaluate information online’ is seen as one of the most significant educational issues arising from new forms of media, especially given the amount of information, and the speed at which it is multiplying on the Internet (Burbules and Callister 1997: 104). Burbules (1997) suggests that ‘hyper-reading can promote a significant kind of critical literacy, once the apparently neutral character of the “link” has been problematised’ (p 103). He uses the term ‘critical hyperreading’ to refer to those critical capabilities that enable readers to question the inclusiveness and neutrality of what they read (p 117).

Implications for teaching reading

The ‘four resources’ model of reading (Luke and Freebody 1999) provides a useful framework for thinking about issues related to reading print and electronic texts, and as a step towards addressing some of these issues within a language program. The reference to ‘issues’ rather than ‘methods’ or ‘strategies’ here is deliberate. As argued by Luke (1998: 2), the question for teachers is not necessarily ‘What is the best way to teach reading and writing?’ as ‘All literacy-based programs “work” to some degree or another’. A better question is ‘How and to what ends can we reshape students’ reading and writing practices … in communities facing new and old technologies, media and modes of expressions, emergent hybrid cultures and institutions, and forms of cultural identities and life pathways for which we have few precedents?’ To that end, some of the issues for teachers to consider in relation to reading electronic texts are suggested below. Thurstun elaborates on some of these considerations in Chapter 3.

Breaking the code

- What physical characteristics of electronic texts have an impact on learners’ ability to read them (for example screen characteristics, text characteristics, and the use of different fonts and colours)?
- What teaching and learning activities will support learners in dealing with the physical characteristics of electronic texts?

Participating in understanding texts

- What are learners’ experiences of using electronic texts?
- How do scrolling, elements of page design, and the use of frames affect learners’ ability to comprehend electronic texts?
- What do learners need to know about navigational elements of webpages (for example navigation bars, pull-down or pop-up menus, and ‘back’ buttons)?
- How can features of electronic texts such as ‘clickable’ definitions help language learners?
- What difficulties do learners have in interpreting icons, symbols and colours in electronic texts?
- How can learners develop their conceptual understanding of electronic texts? (eg How can they learn to orient themselves within texts? What difficulties
do they have in understanding and using different hypertext linking structures? See Chapter 2 in this book for a discussion of different types of linking structures).

- What teaching and learning activities will help learners build their knowledge of the topic or content to support their ability to navigate in an electronic text?
- What strategies do learners use to read electronic texts, and how do these relate to their purposes for reading different texts?
- What factors are influencing learners' reading speed, and what can they learn about electronic texts that will help them to increase this?

Using texts
- What kinds of electronic texts are appropriate to learners' needs and interests and program goals and objectives?
- In what ways do these texts differ in structure, organisation and language from print texts?
- How is the structure and organisation of a web text linked to the meaning and purpose of the text?
- How familiar are learners with the structure and organisation of homepages?
- In what ways do these homepages differ from other pages frequently used by learners?

Analysing texts
- What impact have electronic texts and the Web had on learners' literacy practices?
- What information can learners use to help them to assess the credibility of web texts?
- How can learners find out more about the authorship of web texts?
- What problems does a lack of identifiable author create for learners?
- What can learners learn about why a web text was produced?
- What differences can learners find between commercial and non-commercial websites?
- What teaching and learning activities will help learners develop an understanding of what the Web excludes as well what it includes?

Notes
1 Word recognition: Phonological processing or sound recognition strategies, orthographic processing or letter recognition (decoding) strategies, and lexical processing (Birch 2002: 5).
2 Syntactic parsing: Where a reader is able to ‘take in and store words together so that basic grammatical information can be extracted’ (Grabe and Stoller 2002: 22).

3 Semantic proposition formation: ‘The process of combining word meanings and structural information into basic clause-level meaning units’ (Grabe and Stoller 2002: 23).

4 Hypertext: Clickable links that take the user to another location within the text or within a different text (see Chapter 2).

5 Multimedia: Multimodal texts are those where the meaning of the text is carried by visual elements (images, colour and layout), and sometimes sound and gesture, as well as by language (see Chapter 2).

6 Hypermedia: Hypermodal texts are multimodal texts that use hypertext links.

References


Chapter 2
Comparing print and web texts

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According to Murray (2003), ‘much of the difference between reading print and computer-based interfaces results from the particular characteristics of the media themselves’ (p 34). In this chapter I will consider some of the features of print and web texts, and describe some of the features of web texts that affect their readability. This information is intended as a resource for teachers. The summary of features that affect web text readability at the end of the chapter could be used to help identify difficulties that learners may experience in reading web texts, or to guide the selection of web texts for learners. For a fuller discussion of some of the implications of the structure and characteristics of web texts for teaching and learning, see Chapter 3 of this book. Jennifer Thurstun’s article in Prospect (2004) also provides an excellent summary.

Print and web texts cannot be differentiated simply on the basis of their format. In structural terms, although there can be some significant differences between them, both print and web texts can be roughly categorised according to their typography, and their degree of organisation, multimodality and linearity. Although the differences between them will not be discussed in detail in this chapter, it is important to recognise that there are many different kinds of texts that appear on the Web. These different types of texts have been grouped or categorised in a number of ways by various researchers, often according to their structure or function. The term ‘internet genre’ has been used to describe ‘electronic texts which are implemented on the Internet – first appearing electronically, never appearing as stand alone texts’ (Bauman 1999: 273). According to Bauman, Internet texts ‘exist in multiple, ubiquitous copies’, and can be produced collaboratively and without the time pressures that constrain the production of print texts (p 273). While this characterisation provides a useful definition that can be used to articulate some of the characteristics that differentiate Internet texts from print texts, it is one that focuses more on the technology of text production than on the language and other semiotic and structural features of the texts themselves.

For teachers and learners, the language features of these texts are of more significance, and a distinction made by Lipscomb (2002) is potentially more useful. Lipscomb identifies two different types of text that appear on the Web – conventional texts and Internet-specific texts. She argues that conventional texts, or those that are essentially print texts in electronic format, are relatively straightforward for learners to read, while Internet specific texts, which do not correspond to print text types or genres, are more difficult to read without prior experience of these types of texts. Although ‘constant change and experimentation’ are defining features of the Internet, homepages on the Internet have ‘consolidated [in design and structure] to the extent that [they] can be considered a text type’ (Thurstun 2004).

Typography
Although one dictionary definition of typography is ‘the general character or appearance of printed matter’ (Delbridge et al 1997), its meaning can be extended to take
account of the use of various design elements to convey meaning (Smart, Rice and Wood 2000). Both print and web texts could be located anywhere along a continuum of readability, depending, among other things, on their use of typeface or fonts (including size and colour), character spacing and background colours and patterns. As noted in Chapter 1, researchers have concluded that ‘irregular’ design can contribute to decoding difficulties – an issue that applies to print texts as well as to web texts. Along this continuum, the authors of a text may or may not have made choices to use these design elements in meaningful ways. Depending on the nature of these choices by the author, and on readers’ background and cultural knowledge, the meanings conveyed by these design choices may or may not be comprehensible.

Although it is beyond the scope of this chapter to comment in depth on how typography is used differently in print and web texts, authors of web texts are ideally positioned to manipulate typographical characteristics. The electronic medium now creates the potential for all text producers, not just a specialist group, to manipulate texts. Indeed, the tools for text production focus on visual aspects – such as font types and size, layout, visuals to accompany the linguistic text – much more so than did the former technology of typewriters and typesetting (Kress 1997: 56). In the early days of the Internet, and early versions of HTML (one of the first programming languages used to create webpages), web designers had less need to attend to typographical issues because users controlled elements such as font type, size, style, weight and colour through their browser settings and preferences (Smart et al 2000). More recent languages used to create webpages provide authors with more flexibility. At the same time, Internet users and their expectations have changed now that the Web is no longer the ‘narrow domain of scientists’ (Smart et al 2000: 595).

Although there has been a significant amount of research on the relationship between typography and legibility and reading speed in reading print texts (see Schriber 1997 for a summary), the investigation of this relationship in relation to web texts is a relatively new but growing area of research. Future research could address the following questions in more depth (adapted from Smart et al 2000: 596):

• What is the impact of typeface and other typographical elements used in web texts on legibility and reading speed?
• Is chunking information different for web texts than for print text?
• Does the user’s task (scanning to locate information or reading for content) affect the type and amount of white space needed?
• Do certain typographical elements – colour, bolding, italics and underlining – have certain advantages in some situations?
• How is the use of these attributes affected by users’ monitor resolution and browser version?

Organisation

Both print and web texts vary considerably in the extent to which they are organised. In a text-based approach to language teaching and learning, a text is defined as ‘any stretch of language which is held together cohesively through meaning’ (Feez 1998: 4). A text can be of any length, and in print terms can vary from a single page or part of a
page to any number of pages. Print texts of more than one page may be bound together in booklet or book form, and pages may be numbered or otherwise identified in some way. Further, the text may be organised into sections, with or without headings or subheadings, and may be indexed - either by key words or concepts as in an index, or by sections as in a table of contents. Web texts can potentially be divided into sections in the same way as print texts, with the added advantage that sections can be linked via hypertext to facilitate movement between sections (see ‘Linearity’ below), and may also include a table of contents, with or without hyperlinks.

In some cases, web texts are reproductions of print texts with the same capacity for page numbering. PDF documents are an example of this. Apart from texts of this type, however, webpages do not have set lengths. This has implications for readers who are viewing webpages on screen. When reading texts that are longer than what will fit on the screen, the reader must scroll up and down through the text to be able to read the entire text. As noted in Chapter 1, the lack of cues to location, such as page numbers, can lead to difficulties in finding information within the document and makes scanning the document more difficult. Despite this, and although early web design guidelines suggested that pages be kept to a size that would fit on a single screen to minimise scrolling, recent research suggests that readers ‘prefer scrolling to viewing several screen-sized, linked pages and are able to locate information more successfully on the longer pages’ (Smart et al 2000: 597).

In addition to using organisational structures based on those used in print texts, web designers have access to structures that are unique to the Web or computer environment. Webpages can be fully searchable, either through a browser supported ‘find’ command, or through a search function within the page or group of pages. Pull-down or pop-up menus, navigation bars, and scroll bars can be integrated with the text to support text organisation and facilitate navigation. Many webpages provide inbuilt navigational aids in the form of ‘breadcrumbs’ (think Hansel and Gretel). These usually consist of a bar or single line at the top of the page that represents the hierarchical structure of the site, and the user’s position within that hierarchy. Typically, they are single words or short phrases with ‘hierarchy separators’ (for example, a colon or small arrow) between. Another navigational tool is the ‘back’ button, which enables users to retrace their steps through sites visited. Although most browsers are configured with a listing of pages visited under the ‘back’ button, these histories usually provide only page titles - which may or may not help users who are trying to orient themselves within a framework of linked pages.

**Multimodality**

The term ‘multimodality’ originates from discourse analysis, where it is used to take into account the meanings carried by image, sound and gesture as well as by language (Iedema 2003). Researchers in this field (notably G Kress, J D Bolter and T van Leeuwen) have noted the trend - or in a sense, the return - from the verbal to the visual in literacy practices to the extent that ‘we are faced with sound and image taking over tasks associated with the role of language ... and thus to some extent displacing language’ (Iedema 2003: 33).

The trend towards the visual is particularly evident in literacy practices that involve new technology. Although to some extent this trend is made possible by the growing use of and changes in technology, it cannot be wholly attributed to this (Kress 1997;
Snyder 1999; Iedema 2003). Kress relates the trend to ‘profound social and political causes such as changes to the global economy and the growth of multiculturalism/multilingualism’ (Snyder 1999: 14); while Bolter links it to the impact of film and television (Snyder 1999). On this last point, Snyder argues that despite the cultural significance of film and television, computer technology is having a greater influence on the changing nature of print texts as they come to ‘resemble a computer screen, not a television screen’ (p 19).

The trend towards multimodality has two consequences for texts, regardless of whether their format is print or electronic. The first is that the role of language in making meaning is less central – meaning can also be carried by image, colour, layout, and document design (Iedema 2003). This is particularly evident in the design of multimedia and electronic texts, although is by no means limited to these. Iedema, for example, notes the ‘remarkable’ extent to which ‘formal bureaucratic and corporate organisations have adopted multimodal ways of (self-) representation’ (p 38) in published print reports and other documents.

Secondly, the trend to multimodality results in a ‘re-visiting and blurring of the traditional boundaries between, and roles allocated to, language, image, page layout, document design and so on’ (Iedema 2003: 33). From a multimodal perspective, language, image and other semiotics (such as layout and design) are all seen as integral to an understanding of the text – although in any given text, one semiotic may be in the foreground and another in the background. Iedema gives the example of the journal article in which he writes: ‘[like this page in this book], the articleforegrounds printed language but does so thanks to its visual dimensions (font, colour, page layout and so on) being very strictly constrained; that is automatised ... [so that] the meanings made through font size, colour, etc. can become taken for granted, and attention shifts to those aspects of the meaning-making process carried by the words of the text (p 40).

This does not mean that visual and linguistic structures are the same. Although both carry meanings and these meanings can overlap (ie some things can be expressed visually and verbally), meanings are carried in different ways. Meanings that are ‘expressed in language through the choice between different word classes and semantic structures’ are expressed visually ‘through the choice between, for instance, different uses of colour or compositional structures’ (Kress and van Leeuwen 1996: 2).

Kress (2003) explores the notion of ‘reading path’ in relation to traditional and multimodal texts, the latter being those multimodal texts where text and visual images have complementary functions. In order to extract meaning from traditional texts in English, the reader needs to follow a linear reading path: ‘Start at the top-left corner, read across to the right, return to the left one line down, and continue’ (p 157). The reader may choose to depart from this path for particular purposes, such as to skim the text. Multimodal texts present readers with a different set of reading path or strategy decisions to be made. Kress suggests that in reading these texts, we proceed differently, as ‘the reading path is not regular in spatial or linear terms ... The reading path is established according to the principles of relevance of the reader’ (p 162). The reader follows a number of steps which may occur close to instantaneously, as follows:

1. Scan the whole page. This allows the reader to determine that ‘the text is composed of elements of distinct modes’.
2. Decide which mode is dominant (writing or image), or whether modes are equal and to be read conjointly.
3 Decide on the structural and meaning-related functions of each mode.

4 Select an appropriate reading strategy or path. This will depend on both the spatial organisation of the page (as determined through scanning the page) and the ‘disposition’ of the reader (i.e., their ‘socialisation’ into traditional forms of reading... or newer forms of organisation’ (p 159). The reader is assisted by visual cues such as ‘salience, colour, texturings [and] spatial configurations of various kinds’ (p 162).

The nature of multimodal print and web texts presents challenges to readers, but also to language teachers. Although we have generally been taught to ‘overlook’ multimodality, and to think of ‘images as illustrations’ (Snyder 1999: 21), these changes to texts are something more fundamental that need to be understood within a framework that sees multimodality as central to making meaning (Iedema 2003).

**Linearity**

Although non-linearity is sometimes seen as a defining characteristic of web texts, print texts – and particularly those with footnotes, cross-references and indexes – are also non-linear to some extent (Sussex 1996; Kumbruck 1998; Lemke 2002). Further, print texts can be, and often are, read in a non-linear way (Kumbruck 1998; Lemke 2002). Unlike web texts, however, non-linear print texts usually contain references to segments within the text itself or, in the case of references and bibliographies, to a finite set of other texts. The World Wide Web is one of many types of hypertext systems, all of which promote non-linearity by allowing linkages between segments of a text or texts – clicking on a link within the text takes the reader to another part of the text or to another, separate text.

**Hypertext systems**

A large number of researchers have sought to define hypertext (see Wardrip-Fruin 2004 for a summary). The term stems from work in the mid 1960s by Nelson (Whitehead 2000), whose original definition (circa 1965) was: “‘Hypertext’ means forms of writing which branch or perform on request; they are best presented on computer display screens... [H]ypertexts consist of separate pieces of text connected by links” (cited in Wardrip-Fruin 2004). The word ‘hypertext’ implies both ‘a super text; a text that, due to interlinking, is greater than the original texts; and a super weaving of words, creating new texts from old’ (Whitehead 2000: 8).

In its simplest form, hypertext can be used to include ‘pop-ups’ or links within a work to definitions, glosses or explanations. Hypertext systems can also be used to establish complex links within a work or between a few or many works. Links can be categorised as associative or structural. Associative links are those that express a semantic association between pieces of information, usually appearing as ‘clickable words’ that ‘connect words or phrases embedded in longer passages of text with other chunks of information that relate to the meaning of the phrases in the starting context’ (Obendorf and Weinreich 2003: 736). Structural links are not usually found within paragraphs but are generally more obvious on the page. They are designed ‘to express and navigate logical structures’ (p 736) and are therefore often displayed in a logical pattern such as a hierarchy or sequence. Some research suggests that more structural links are used on the Web than associative links (Obendorf and Weinreich 2003).
Within a text, associative links generally appear as text (usually a word or group of words), while structural links can appear as text, a button, an icon or a cursor. Links that appear as text are generally identifiable through colour, underlining or a change in font style or size (or a combination of any of these). Research on the impact of different types of link marker on readability (Noirhommme-Fraiture and Serpe 1998; Obendorf and Weinreich 2003) has identified the following effects:

- The use of colour to indicate links can present a number of problems for readers: colour-blind readers may not be able to discriminate between colours used; some combinations of text and background colour make text more difficult to read (as noted in Chapter 2); colours to indicate links are not used consistently on the Web.

- Changes in font size and style can present problems for readers: changes in size can affect line spacing, making text appear unevenly spaced, and users may not have access within their system to different fonts used to indicate links.

- Underlining can reduce the readability of text as it changes the shape of words and interferes with letters such as g, j and p that go below the line.

- Although they can be simple to use, both buttons and icons can affect text continuity, and are best used within lists or margins.

Several different types of hypertext linking structures have been described in the literature. Among others, these include hierarchical, network and mixed (a combination of both) linking structures. Hierarchical linking structures are those where nodes are connected in a hierarchy - from a node at one level, it is only possible to access those nodes directly above or below it (metaphorically speaking). This would be like reading a book in which your page-turning was restricted, so that from any one page, you could only turn to the next page or the previous page. Within a network structure, nodes can connect to any, although not every, other node in the system, allowing greater freedom and non-linear access to other linked nodes, in the same way that the reader of a print text can turn to any page at will.

Hierarchical and network structures present different challenges to readers. Although the reader has more control over their reading path within a network structure, this may result in a higher cognitive load (as discussed in Chapter 1). Some research has found that readers prefer, and find it easier to navigate within, mixed linking structures (McDonald and Stevenson 1998); while others have found little difference in reader performance and preferences between hierarchical and mixed structures (Calisir and Gurel 2003). Although hypertexts are by nature non-linear, like any text, they can still only be read sequentially in a linear way (Kumbruck 1998). Nevertheless, unlike in a print text, where the author can generally assume (or at least hope) that depending on the size and nature of the text, ‘the average reader will read the entire text ... , the author of hypertext can make no such assumption. The reader can find no default path, no suggested order of text blocks from one page to the next, and can never be sure that [they] have found every node’ (Brent 1997).

The World Wide Web is only one of at least 35 different types of hypertext systems (HyperCard is another well known hypertext system). Beyond the Web, hypertext can be used for scholarly purposes (for example, research and analysis), and is increasingly
being employed for poetic and literary uses, as well as for more mundane purposes such as document management. Works of fiction, non-fiction and poetry produced using hypertext tools – such as Storyspace (Eastgate Systems 2004) – are known as hypertexts. Hypertexts are generally published on CD-ROM, but can also be published on the Internet, sometimes in Internet journals (for example, the journal Mangrove published by staff of the University of Queensland [University of Queensland 2004]). It is likely that hypertexts will continue to be published on CD-ROM or similar formats, as the technology of the Web does not support the development or use of all features of hypertext.

The hypertext of the Web differs in several significant ways from literary, poetic and other hypertexts published on CD-ROM or similar formats, differences that also serve to distinguish them from print texts as follows:

- **Inclusivity**

  The literary and other hypertexts described above are more similar to print texts, and differ from the hypertext of the Web in that the former are ‘closed’ systems; that is, the links within the text are internal, not to other works. While some web texts contain only internal links, many contain links to other works, which in turn may be linked to other works, creating texts without fixed boundaries. This has implications for texts and for users. In terms of texts, ‘notions of textual unity and discreteness are weakened, and even disappear’ (Thomas 1997: 484). Thomas goes on to suggest that hypertext ‘represents an embodiment of literary notions of intertextuality’ (p 485).

  A considerable amount of the research in reading hypertext has focused on reading ‘closed’ hypertexts – meaning that it has not addressed the issues faced by readers of web texts (Thury 1998). The characteristics of the Web present a different set of problems for readers who are faced with an ‘information network that is not large but vast and, in addition, dynamic, so that it is difficult for even researchers (not to mention users) to describe the nature of the universe being traversed’ (Thury 1998: 266). As noted in Chapters 1 and 3, the lack of text boundaries can create significant problems for readers who can lose their bearings within a web of linked works.

- **Authorship and readership**

  As with print texts, closed hypertexts published on CD-ROMs are generally created by one, or a set number of, authors and each copy of the text is read by a single user at a time, with some scope for shared reading. Although print texts can lack an identifiable author, often the author(s) or source are identified in published print texts such as books. While authors can be identified in some web texts, many are anonymous, making it difficult for readers to critically evaluate them.

  In addition, the nature of authorship also differs between print and web texts. For example, Moore (1996) suggests that the notion of an originator (as opposed to author) is ‘more appropriate, as some texts on the internet depend on a whole range of people creating them’ (p 320). Similarly, Tuman (1992) argues that ‘the author of an online text is nothing but the source (often corporate rather than personal), responsible for establishing and maintaining the rules for operating that database’ (p 65). Thomas (1997) goes further, claiming that ‘hypertext undermines
notions of authorial primacy and authorial property’ (p 485). The nature of hypertext allows readers to participate in the text to such an extent that some researchers argue readers become ‘co-authors’ (Gee 2001: 4). Although in this chapter I will not consider the broader philosophical questions that this raises, it is interesting to reflect on the blurring of boundaries between author and reader in such texts as a page of results from a search conducted with a search engine.

• Time shift

There is always a time shift or delay between the production and consumption of print texts, closed hypertexts and web texts – unlike means of communication such as online chat and radio, and so on which occur in real time. The time-shift between the production and consumption of print, Web and closed hypertexts can vary considerably; the delay between the printing and reading of a book can be much longer than that between printing and reading the daily newspaper. Web texts have the potential to be produced and consumed in something closer to real time, although they are often not. Further, web texts are essentially dynamic in nature, with the potential to be constantly changing, and are more ephemeral than print texts and closed hypertexts that have been published on CD-ROM. These features of web texts mean that the reader has the advantage of access to very recent news and information, but the frustration of attempting to return to sites that are unrecognisable or non-existent, and that sometimes contain no information about their date of publication.

Summary

The main features of web texts that may affect readability are summarised below. Teachers may want to consider these in choosing webpages for learners and in teaching learners to navigate the Web. Thurstun (Chapter 3) expands on some of these issues.

Typography

• irregular font size, type and colour
• insufficient character spacing
• lack of colour difference between text and background
• unusual background colours and use of background patterns
• use of dynamic text such as ‘leading display’ and scrolling text.

Organisation

• lack of identifiable ‘pages’
• lack of cues to location within ‘pages’
• use of integrated navigational tools, such as pull-down or pop-up menus, navigation bars and scroll bars and other navigational aids such as ‘breadcrumb’, ‘back’ buttons and histories of pages visited – depending on the user’s level of experience, these tools can support or interfere with readability.
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Multimodality

- images, colour, page layout and document design carry meaning in addition to text
- meaning is extracted via a different ‘reading path’.

Linearity

- use of different link markers – for example, the use of different colours, changes in font size and style, underlining, buttons and icons
- use of different hypertext linking structures – hierarchical, network or mixed
- lack of fixed text boundaries in web texts containing external links
- lack of identifiable author or source for some web texts
- lack of publication dates on some web texts
- dynamic and ephemeral nature of web texts.

Notes

1 Although PDF is also a variable length format, users have the option to view and print the text in a range of sizes that match standard paper sizes (A4, A5, etc).
2 Lemke argues that ‘a printed text is not itself truly linear or sequential as a medium in the sense that, say, spoken monologue is’ (2002: 300).

References


Chapter 3
Learning to use the World Wide Web

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The Internet is an actual physical network with more than a million computers constantly exchanging information. Websites containing information on almost every conceivable topic are placed on the Internet and are linked together by structures such as search engines, thus forming what is known as the Web. And there are more than 500 million individual users like ourselves interacting and sharing this very complex web of information online.

The World Wide Web is a rich source of language and information, and leading educators (eg Hawisher and Selfe 1989; Warschauer 1999) have stressed the benefits of exposing learners to its possibilities by including computer and Internet use in the language classroom. Many TESOL courses offer instruction in computer use for language teaching (Kamhi-Stein et al 2002), and teachers and teacher trainers in both the first and second language environment are responding to government policies that link literacy with technology and the World Wide Web. Some have suggested that failure to teach learners web literacy may result in their disadvantage within the global literacy community (Sutherland-Smith 2002), and have pointed out that the literacies of the new technologies are a subset of the literacies needed in a learner’s personal, work and community life (McPherson and Murray 2003).

However, some educators have cautioned that information technologies in education are frequently driven by commercial rather than educational interests (eg Kenway 1995; Bigum 2002). While teachers need to be sure that the technology works for them and their learners, not vice versa, there is little doubt that teachers and learners need to be involved in learning about and using the Web. It is an undeniable and increasingly important part of our world, and ‘literacy involves gaining the skills and knowledge to read and interpret the text of the world and to successfully navigate and negotiate its challenges, conflicts, and crises’ (Kellner 2002: 157). Successful use of the Internet and the World Wide Web, however, requires learners to develop special skills and understandings. Electronic text differs radically from print text (Thurstun 2000; Tindale Chapter 1) and creates quite different challenges for the reader and the teacher of reading (Tindale Chapter 1). According to Snyder (2002: 3): ‘People have to learn to make sense of the iconic systems evident in computer displays – with all the combinations of signs, symbols, pictures, words and sounds’.

The Internet began as an English language phenomenon, and English continues to dominate cyberspace (Murray 1999; Warschauer 2002; Murray 2004). So for speakers of English as a second or foreign language, the Internet experience combines the dual challenge of understanding text and understanding the conventions and symbols that have developed in the English speaking world for presenting information via the computer, the Internet and the World Wide Web. The cyberlibrary of information made accessible through the World Wide Web is made up of websites (and search engines are the key to accessing these websites), while the first experience of a particular website is usually its homepage. Search engines and homepages are therefore the learner’s entry point to the World Wide Web.
This chapter presents the results of a literature review on search engines, web searches and homepages. I undertook the review to pinpoint information that is relevant to the teaching and learning of the skills involved in using and reading the results of a search engine search and homepages.

**Using search engines**

The first step into the Web for the learner is to learn to use a search engine, and teachers need to decide which search engine will best serve their purposes.

**The anarchic nature of the Web and the importance of keywords**

The web is rather anarchic, and some search engines index sites indiscriminately (although Google ranks them according to popularity and relevance). So searching can be a problem for everyone (see McLean 2000), not just second language learners. Keywords often fail, perhaps because the most useful keyword or phrase has not been chosen, perhaps because of lack of understanding about how search engines work, or perhaps because the keywords placed on the Web are misleading.

Searching is a skill, and the complexity of the World Wide Web means that searching it without skills is likely to lead to frustration and reduced productivity. ‘Effective searching of the Web is a complex reasoning and decision-making process’ (Todd 2000: 119), more complex than many people acknowledge. Basic searching skills are usually sufficient for searching the Web; however, searches for something specific or contentious require more expertise and experience. Since searches in many ESL classes are most likely not for anything very specific or contentious, the complexity of the second language learner’s task can be reduced considerably.

Searching is also an art. There are various features built into most search engines to help advanced searchers (for example, related searches, clustering, find similar, stemming, search within, search by language, page translation, porn filter, customise results, sort by date). These extra, possibly daunting complications probably do not need to be mentioned to beginning language learners. However, the teacher and learner would do well to treat searching as an art, and give time to the formulation of search terms and to understanding simple Boolean search techniques.

Searching can also be treated as an attitude. Learners might be encouraged to think, ‘somebody, somewhere, probably knows the answer or has this information and has put it on the Web’. Success at finding the answer depends on skill at phrasing a research question and the ability to read and judge the results.

**Search engines preferred by ESL teachers**

There are many search engines. This chapter will be limited to the ones Australian ESL teachers say they use most frequently: that is, Google, Yahoo! and WebWombat. Each has specific features, so teachers should experiment a little with the different search engines and decide which to recommend to learners on the basis of the type of search task being assigned.

Google (http://www.google.com) ranks its websites by popularity and relevance and, being a search engine of search engines, is more likely to capture everything available. It works well for sites the searcher knows little about in advance, and is good at finding sites if the title or company or full name of the website is known. Google
provides the option of worldwide searching or searching for pages only in Australia. It also indents internal pages that it finds.

Yahoo! (http://yahoo.com) is considered very good if searchers know exactly what they are looking for. It can be used either with search words or as a subject directory. The latter is best when searching for information that lends itself to a particular category (e.g., sport or health), and it is necessary to keep the search words simple. It has an Australian site: Yahoo! Australia.

WebWombat (http://www.webwombat.com.au) is a search engine for Australian and New Zealand sites.

The results of the three search engines look very similar to one another and have similar readability. Google, perhaps, has the advantage of ranking according to popularity and relevance and of indenting internal webpages. It also has a very simple, usable presentation of the homepage and is therefore useful for language learners as there is very little to confuse and distract the learner from the important slot into which the search words are to be typed.

More on characteristics of search engines can be found at http://home.sprintmail.com/~debflanagan/main.html

Tutorials

A number of tutorials which give instructions and tips on searching are available on the Internet. For teachers, there’s helpful advice at:

- http://webresearch.webpower.nl

Elsevier Press has a useful tutorial for academics which could also be helpful for teachers at:

- http://webresearch.webpower.nl

There is another at:


NC ELTR has a tutorial for learners at:


Common problems when searching

The results of a search appear in lists with the words used for the search highlighted. It is important for learners to understand that records are not presented as grammatical sentences, but key words and phrases, so they need to skim for words rather than read for meaning.

It helps if learners can recognise where sites come from so they can judge whether the information is likely to be reliable and also whether it is likely to be promotional (Murray and McPherson 2004). The list of search results does not provide information about a website’s reliability. So, for second language learners, who are less likely to have an ‘instinct’ about reliability of sources, judging quality and genre of a website generated by an automated search engine can be a problem and they can find themselves dealing with misinformation. Teachers therefore need to teach strategies to help
learners choose credible websites. For example, learners can be taught to identify government and university websites, museums, and so on by looking for .gov and .edu sites in the list. Even .edu sites may be problematic if they are sites of primary schools with texts written by young children.

Learners can also be easily waylaid by advertisements. Advertisers want people to come to their sites, but commercial sites are less likely to deliver useful information about a topic (unless it is something they’re selling). It is therefore important for learners to keep a critical eye on what is likely to be commercial and what is likely to provide information. Some software can eliminate some advertisements. ‘Pop-up Stopper’ controls pop-up windows and flashing advertisements. It is available free of charge from http://www.panicware.com. Teachers might consider having it put onto computers learners use to eliminate this distraction. Alternatively, teaching learners to recognise and close or ignore annoying, distracting advertisements is a more proactive approach and more useful to learners outside the classroom.

Vocabulary can also be problematic. Buttons like Search, Show, Go get it, Find it are transparent, but what of Wired, HotMetal, Electric Wizard? (McLean 2000). On the Yahoo! page are the terms like SpamGuard and Wal-Mart. On WebWombat are HotHatch, Bogeyman and Ringtones. The learner is presented with a screen full of words, many of which are likely to be meaningless. It is important for them to understand that the search engine is simply a tool, that the slot for the search words is the only aspect of the page that the learner needs to understand, and that nothing else should demand too much attention, concern or interpretation.

**Tips for effective searching**

The following tips are useful for both teachers and learners.

- Recognise the importance of time spent wording/framing the question.
- Start by building a vision of the information you seek. Who would publish it? Why? How and where would you find it?
- Use simple Boolean search skills. (Look at [http://cn.net.au/webpage.htm](http://cn.net.au/webpage.htm) for Boolean search skills.)
  - If you want all the words you write to appear in the results, use + before each search word (+word1+word2). This basically says that you want this word and the other word as well. Google does this automatically.
  - Quotes keep words together (‘word1 word2’) and say that you are looking for exactly this combination of words together.
  - Explore the Boolean search functions (the use of ANDs, ORs and NOTs) to help the search engine work well. Most search engines only allow AND (+) and NOT (-) but Altavista implements OR. It is important to use the quotes or + signs to narrow searches, otherwise the words will be considered optional, and you can get millions of answers to a search. Use of the NOT symbol (-) can be useful at times to eliminate a criterion (for example +desert+animals+Australian-Nullabor

The following tips are useful for teachers when helping learners to use search engines:
• Allow learners time to use an online tutorial (e.g., the NCELTR tutorial).
• Decide on a search engine.
• Help learners to recognise advertisements and other irrelevant content.
• Teach simple Boolean search skills.
• Encourage learners to spend time and care wording their search question.
• Teach learners to identify reliable websites.
• Give learners practice in scanning search results.

Reading homepages
Once the learner can use a search engine and knows how to read the results of a search, the World Wide Web is just a click away, and the click will probably lead to a homepage. The homepage presents the learner with a unique reading experience, and the purpose of this part of the chapter is to analyse that experience and to show that the reading of a homepage can be taught in the same way as the reading of any other text type.

Despite the anarchic nature of the Internet and the constant change and experimentation occurring in cyberspace, the design and structure of the webpage, particularly the homepage, has consolidated in recent years. Usability studies, largely led by American usability researcher Jakob Nielsen of Sun Microsystems, test the ease or difficulty with which users read and negotiate websites and have influenced the design of sites. Advice given to website designers (Nielsen 2000) indicates that a preferred structure for homepages has emerged with clear design and technical and linguistic characteristics. In this section I will describe these characteristics and suggest that the evolution of the homepage has consolidated to the extent that it can be considered a text type, thus facilitating the teaching and learning of this aspect of online literacy. I will also make suggestions to teachers about choosing websites for learner use and strategies for effective ‘reading’ of webpages.

Research on the structure of homepages
The term ‘homepages’ here refers to the external pages of a site – the pages which provide a map of the website and which are the user’s introduction to the site (it does not include the more internal pages, which may not be text at all but pictures or sound clips). The term ‘text type’ here refers to organisational patterns within a discourse (Johns 2002).

Homepage as text type
The homepage can, by and large, be considered a text type with its own particular organisational patterns, characteristics and purposes. A description of the text type in broad terms can help teachers explicitly teach and scaffold webpage reading so that learners can anticipate its characteristics and use it more effectively.

The Internet is a moving, changing, evolving phenomenon, and the teaching and learning of the skills needed for handling it must also allow for a certain amount of flexibility and openness to the unexpected. However, as there is solid research that indicates
which design elements improve and which hinder the readability and use of websites, we can describe the structure and characteristics found in most homepages. Teachers can use this research to make informed choices about the websites they recommend for learner use, and they can help learners to understand and anticipate the characteristics of the text type, to increase the efficiency with which learners read and use it.

The typical homepage referred to by Nielsen (2000) has evolved with a basic structure that tends to cross borders of language and culture. The homepages of the World Bank (http://www.worldbank.org) or Lonely Planet (www.lonelyplanet.com) are good examples. The page tends to be designed in a two or three column format with a heading and perhaps a menu set out in a row at the top. In a three-column format, the central column is likely to contain most detail and content, the left column usually serves as a table of contents and the right column provides functional links (such as print, subscribe, download PDF file). Where there are only two columns, the functional links (if there are any) might be incorporated into one of the other two columns.

Not all homepages follow this format. Some designers seem to have limited awareness of these conventions and the advice of usability studies, and some experimental sites (music, film, art, literary sites for example) purposely break the mould. However, usability researcher Jacob Nielsen (1998) considers the established approach - despite its drawbacks - the most usable format, largely because users have come to expect this design.

Nielsen's research (1998) shows that users are very conservative and, having become accustomed to the established design, reject innovations and advanced design concepts. He considers that, since users frequently move back and forth between pages and between sites, ‘the entire corpus of the Web constitutes a single interwoven user experience ... The Web as a whole is the foundation for the user interface, and any individual site is nothing but a speck in the Web universe.’ His studies show that users expect webpages to work as they do elsewhere. He therefore sees the value of webpages conforming to the particular structure that has evolved, and considers that designers should only attempt to bring in innovations very gradually. The homepage has, it would seem, established itself as a text type.

Relevance of information on homepages

The homepage is a text type set within the limited confines of a screen, but which provides access through links to the vastness of cyberspace. In a study of fifty commercial homepages, Nielsen (2003) found that on average, the screen space for a homepage was used for the following:

- 19% for operating system and browser overhead
- 20% for navigation
- 20% for content of interest to users
- 2% for advertisements
- 9% for self promotions
- 5% for welcome, logo, tagline, other site identification
- 5% for filler (useless stock art)
- 20% unused
Of these uses, navigation and content are the only categories that are obviously useful and/or interesting to users; other categories contain fillers that users tend to ignore (promotions, site identity, filler clipart, and unused pixels as opposed to white space or separators). Navigation and content, the parts that are most useful to users, account for only 40% of space. Teachers might therefore want to direct learners’ attention to this 40% of space, and develop awareness of the areas that are not particularly useful, such as advertisements, self-promotions and browser overhead.

The area containing content is usually the central column in a 3-column homepage, or the right column in a 2-column homepage. It is usually text based and contains links. It acts as a table of contents for the site. The area for navigation can be scattered - to the right, left, above and/or below, but is generally found in the left-hand column and is sometimes repeated as a menu at the top of the page. It is made up of single words or groups of words or icons, all of which are clickable and lead to another page as (hopefully) indicated by the words or icons.

With a clearer idea of where the most and least useful information is likely to be found on the screen, learners can save themselves time and frustration, and enter an information-finding task with increased confidence.

Technical characteristics of webpages

Webpages generally (and homepages in particular) have technical features that learners need to be able to use. Most obvious among these are windows, scrolling and links; and in order to use a site’s homepage, these must be understood and mastered. Largely, familiarisation with these is a matter of practice, preferably under the supervision of a teacher who is confident about the way computers and the Web and the user interact. Teachers would also benefit from awareness of the way websites are organised so that they can choose websites that use manageable organisational structures.

Windows

Windows are an important characteristic of webpages, described by Abbey (2000) as areas of the screen that provide a particular view, including windows, palettes, icons, buttons and tools. They are used to represent or display information, and can expand the amount of information available. Multiple pages and frames can exist within a single page, creating visual complexity and thus the potential for information overload due to a combination of browsing and complex visualisation – particularly if the user has not developed an adequate mental map of the knowledge and organisational structure being presented.

Scrolling

Scrolling (marked in English language websites by the arrows column on the right side of a window and also sometimes below) is the system used on a webpage (or a window within a webpage) to allow the user to see what is beyond the limits of the screen. Scrolling has been considered a problem in screen reading (Thurstun 2000), with users reporting that they become lost and feel uncomfortable scrolling long documents. According to Spool et al (1999) readers dislike horizontal scrolling even more than vertical scrolling.
Links

Links are extremely important. If they appear in text, they are usually presented in blue text and are underlined. They establish pathways of movement within the web space and permit access to specific information. Unless they have been thoughtfully signalled, work properly and lead to useful destinations they can cause frustration and waste time. The one graphic element that Spool et al (1999) found was helpful is the blue underline link that turns to purple to show where the user has already gone. Nielsen (2000) agrees with the usefulness of this design element, but considers the use of the colour blue for hypertext links ‘the mother of bad web design conventions’, since blue is a colour known to reduce readability.

Organisation

Going beyond the physical appearance of the homepage is the organisation of the material that the homepage leads into. The Style manual for authors, editors and printers (Commonwealth of Australia 2002) lists organisational structures as:

- sequential for small electronic documents
- hierarchical for more detailed material (not too deep or reader will become frustrated by having to click through a number of menu pages to reach information, not too broad so as not to give so many choices that reader finds it hard to identify the right one)
- web-like structures that are arranged in associative patterns, trying to offer access to everywhere from everywhere within a site. (For less experienced users, the many options and navigation paths can create confusion.)

Whitbread (2001) recommends that designers use a hierarchy of design that allows the user to get to information with no more than three clicks beyond the homepage (he would, presumably, recommend this even more strongly for second language learners). He recommends keeping navigational icons intuitive (but there are many questions about what is intuitive in a cross-cultural environment – a shopping trolley, for example, does not bring to mind shopping for people to whom they are unfamiliar).

There is good reason for language teachers to try to direct learners to websites that follow the conventions and advice about design given by researchers like Nielsen. As Abbey (2000) observes, cognitive load refers to the demands on a learner’s working memory during instruction, and:

a complex or unconventionally designed screen which uses different fonts, objects, navigation tools and layout patterns will generally have a high procedural or functional cognitive load because each component will need to be perceived and interpreted by the learner. A screen which uses standard conventions in text, graphics, navigation and layout will be more easily interpreted and consequently have a much lower cognitive load. (Abbey 2000: 51)

The user experience reflected here is also reflected in the usability studies and design recommendations, which have led to the consolidation of the homepage into what can be considered a text type.
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Linguistic and textual characteristics of homepages

Like the language of any other text type, the language of homepages and of cyberspace in general, has its own characteristics. Awareness of these characteristics can help teachers prepare students for reading that differs quite radically from traditional paper-based reading (see Thurston 2000). Text is presented and formatted in a particular way to facilitate screen reading and the finding of information linked to the homepage. In addition, the vocabulary of the new technology reflects its inventors and its purposes. According to Gibbs (2000: 23):

A disadvantage of cyberlanguage is that it may be perceived to offer a running and superficially attractive undermining of educational attempts to foster generally accepted decorums of linguistic convention.

The language teacher is quite likely to find that conventional advice about reading print text does not always apply to the reading of electronic text and webpages. So it could well be a matter of teaching new skills and awareness to enable learners to feel comfortable in the vast ocean of language and information made available to them via the World Wide Web. Relevant research on the language of the web is summarised in this section.

Characteristics of the language used in homepages, and often internal pages of a site, include the chunking of information, special conventions for indicating stress, increased lexical density and nominalisation. Page layout, structure for accessing information and vocabulary are also influenced by electronic delivery, and icons frequently replace text altogether.

Chunking

Text needs to be presented differently on screen from the way it is presented in print form, since the reading skills required for online reading are different. Recognising the difficulties of online reading, writers for the screen tend to minimise text (Thurston 2000). The attitude to text can be summed up in Bolter’s claim that:

multimedia designers consider it an admission of failure to clutter the screen with blocks of text. The worst criticism one can make of a multimedia system is to call it a mere ‘page turner’, a set of texts that the user examines one after another - in other words, the electronic equivalent of a book. (Bolter, 2003: 124)

A study carried out by Morkes and Nielsen (1998) claims that for online texts, halving the number of words in the document improves readability by 58%, and a scannable layout with bulleted lists makes it 47% more readable.

So text becomes reduced and denser online, and information is often chunked, for example in dot point form. Dot (bullet) points are used frequently and nominalisation can be expected to be used more heavily than in equivalent print text. Spool et al (1999) produced the surprising finding that text that is considered difficult to read in print is more useful to onscreen readers than texts with a less difficult reading index. (See ‘How readers read websites’ later in this chapter for an explanation of this phenomenon.) Because condensing and reducing text appears to help online reading, there is strong agreement among designers and usability researchers on the need to break print content down into smaller, logical units (or chunks) when organising material for onscreen use. This chunked text is often very spare and lexically dense, since writers of
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electronic text take pride in presenting meaning with as few words as possible. One of the most important skills of the Internet writer is considered to be the skill of reducing text while retaining meaning (A’Herran 1997), and chunking facilitates this.

Arrangement of text-based material on screen

The arrangement of text-based material on the screen is important for the ease with which the user can deal with it, and teachers and learners should be aware of the preferred conventions for directing attention to information. The Style manual for authors, editors and printers (Commonwealth of Australia 2002) recommends signposting relevant material by the use of bridging words between sections of texts, cross-references or hyperlinks. It also recommends visually highlighting material by headings (which map the document’s structure, show the reader where to find information, group information into readily comprehensible chunks, indicate what follows etc), lists (bullets draw attention to elements of a discussion, but need to be prefaced with a lead-in phrase), bold or coloured keywords to improve scannability (not italics, which are difficult to read onscreen, or underlining – the method for indicating links), and placing text in boxes. All these are desirable organisational structures, aimed at making the scanning of text easier.

Stress

Stress in text is normally created with italics, but on-screen italics are not very readable. Whitbread (2001) recommends use of colour variation and underlining, and that bold should be reserved for headings. However, underlining can cause confusion because it is also used as an indication of linking.

Page layout

The page layout on homepages also needs to be a focus of instruction. Apart from the typical two or three column format mentioned earlier, the sort of page layouts that make scanning and searching easier is controversial. Nielsen's website (1999) has recommendations for the enhancement of readability that include navigation, for example:

- name and logo placed on every page of a site, with the logo linking to the homepage
- straightforward, simple headlines and page titles
- groupings and subheadings to break long lists into smaller units (to facilitate scanning)
- avoidance of clutter and cramming
- use of link titles so that users know where each link will take them.

Learners could be helped by being taught to anticipate those conventions used for presenting text that facilitate navigation.

Organisational structure

Awareness of the organisational structure of a particular website is also helpful to both teachers and learners, and is likely to be reflected in the homepage. Design for access-
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Accessing information is of two different types: exact access schemes (alphabetical, chronological, sequential or geographical – as in dictionaries, radio guides, instruction manuals, atlases etc); and ambiguous access schemes – where information is divided into topics, and the reader is free to search in a different way to that in which the author has structured the material (Commonwealth of Australia 2002). The different structures are suited to presenting different types of information, and learners therefore need to become familiar with the two different structures and be able to predict the structure they are likely to be dealing with for a particular topic.

Vocabulary

The vocabulary of cyberspace is a growing area of research. Morkes and Nielsen (1998) found that the use of objective rather than subjective language makes a text 27% more readable, and Gibbs (2000) notes the ‘maleness’ of cyberlanguage, much of which has been coined by males with a scientific orientation. Terms with an undercurrent of violence or maleness such as abort, execute, crash, firewall, zap, hit frequently appear on the screen.

Another area of vocabulary that may need clarification for language learners is the likelihood of needing to deal with the language of youth culture (not necessarily found in dictionaries) which tends to find its way into cyberspace. It may well be that the youth culture is influencing the language of webpages just as it has influenced the language of electronic communication, especially text messaging. Wong (2000) points out that Cyberspace is an ‘adolescent’ space – hence the likelihood of encountering cartoon culture and adolescent language. She suggests that a more phonetic way of writing may develop. Text messaging may also be influencing the language of the Web, along with conventions used in email and chat rooms. These conventions evolve and change rapidly, particularly with many abbreviated forms – including acronyms such as IMHO (for ‘in my humble opinion’), abbreviations as in SMS messaging (where r u from?), emoticons, deliberately informal spellings and lack of punctuation (dunno) (Murray 1999; Gibbs 2000; Murray 2004). This may be influencing the language of webpages.

Icons

Icons frequently replace text on homepages and webpages in general, particularly to indicate functions and actions that the user can perform. Kress (1995: 1) suggests that technology is ‘taking us both backwards and forwards into a new era of iconic forms of communication, backwards and forwards into hieroglyphics’ (see also Murray 2004). He considers that this move to icons is related to an increasing awareness of the problems of using language alone as a form of communication in heterogeneous and multicultural societies. It also seems to be a development imposed by the nature of the technology itself. However, icons that are easily identifiable in one culture may not be transparent in another, and language learners may need to have some icons translated and explained. Ganderton (1998) studied Australian learners using French websites in a French language classroom and found that icons were not helpful in the learning of vocabulary. One participant stated that they were ‘hard to understand if you didn’t know the French words. We couldn’t really pick what it was from the picture’.
How readers read websites

There is conflicting opinion and evidence about the way readers read websites, perhaps because it is a very new area of research (see also Chapter 1 this volume). The research, which was conducted with native speakers of English, has ramifications for design (which tends to be transferred from English to other language websites); however, we can extrapolate from this research in the hope that it may help teachers advise their learners about approaches to the reading of homepages.

It has been assumed (Whitbread 2001; Thurston 2002) that the eye starts ‘reading’ a webpage by going first to any moving image, then to still images or graphics wherever on the screen. Only then, according to this theory, does the eye go to text, starting around the top centre of the screen, then scanning with a left-right pattern as the user judges the likelihood of each of the three areas (left, right and central columns) containing useful information. In this view, the area at the bottom of the frame is often neglected. However, doubts have arisen about some aspects of this approach.

Although designers have sought to attract the attention of the user through the use of graphics and all the bells and whistles made possible by computer technology, research now shows that graphics do not increase the usability of the site, and that users direct considerably less attention to graphics than to text. The Eyetrack (2000) study, carried out by the Poynter Institute and Stanford University in 2000, tracked the eye movements of subjects as they viewed their favourite news sites. Designers were confounded by evidence that graphics actually attracted so little attention from readers. The following shows the attention given to different aspects of a page:

<table>
<thead>
<tr>
<th>Aspects of page</th>
<th>Percentage looked at</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text articles</td>
<td>92%</td>
</tr>
<tr>
<td>Briefs</td>
<td>82%</td>
</tr>
<tr>
<td>Photos</td>
<td>64%</td>
</tr>
<tr>
<td>Banner ads</td>
<td>45%</td>
</tr>
<tr>
<td>Graphics</td>
<td>22%</td>
</tr>
</tbody>
</table>

The Eyetrack (2000) study investigates news sites, but subjects were logging onto an accustomed site, so we do not know how generalisable this finding is. Nielsen (1997a) suggests that readers scan, looking for headings and keywords, rather than read in depth, particularly on a homepage. Once they have found the information they are looking for, they are more likely to read carefully in depth from beginning to end. However, screen reading is considered 25% slower than print reading (Nielsen 1997b).

Abbey (2000) describes the browsing experience in which users may not even read text, but instead skim and scan looking for comprehensible key words and headings. The degree of content knowledge the user brings to a site is critical to the amount of textual and contextual detail preferred. Those with high content knowledge prefer higher density information screens, those with little domain knowledge prefer less information, and more explanations. The browser mentality involves skimming rather than reading text, rapid visual search and selection of buttons or hyperlinks, and impatience to move onto the next page. The web supports this kind of interaction.

Research (Spool et al 1999) shows that readability scales (e.g., Flesch Reading Ease,
the Gunning Fog Index and the Flesch-Kincaid Grade Level) give opposite results for print and screen (for L1 subjects). It appears that greater lexical density and text difficulty make it easier to find onscreen information. The study showed that users were more successful with the less print-readable sites and considered them more authoritative, clear, complete, satisfying and useful. Users found these sites less overwhelming, less over-detailed than the more wordy ('readable') sites.

The Gunning-Fog index measures the average number of words, sentences and words of more than three syllables in a text. The higher (i.e. more unreadable) the index, the more successful the site proved to be. The authors consider that what these scales are measuring is something that helps information-finding, possibly related to making materials easier to skim and scan:

Hard-to-read sites have fewer conjunctions and standard grammatical structures. Since all the elements on a screen are competing for the user’s attention, it makes sense that the extra words we normally use to complete a sentence may get in the way of the meaningful words in the text. Removing them, and thus making the text harder to read by traditional measures, may increase scanability. (Spool et al 1999: 74)

It is the function words that are often omitted in chunked, online text. They are part of the redundancy built into language to allow for interference in processing (for example, over the telephone) and to try to ensure communication of the intended message. When these are left out, language becomes more dense - a particular challenge to language learners who need to be able to adjust to text that is quite different to the print texts they are more familiar with. In homepages they are likely to find lexically dense text and condensed sentences.

The lack of predictable patterns or schema is considered a major challenge for website users, and lack of familiarity with English can be assumed to exacerbate the difficulties. Hypertext allows the user to change the structure of most texts by clicking on links, so any structure or schema that the writer may try to establish is likely to be changed, leaving the user without the structural patterns that might identify its genre and predict its development. Charney (1994) claims that the greater control offered by hypertext places pressure on the user. This is particularly the case when there are too many links and the structure is confusing (Tuman 1992). The fact that the text lacks fixed boundaries is probably the greatest challenge for the reader who is trying to get a sense of the text (Thurstun 2000). Cognitive abilities are related to efficient use of hypertext (Castelli, Colazzo and Molinari 1998), but even the best cognitive performers in their study, with well integrated analytical and synthetic skills, could only handle a limited number of links and clearly connected pathways. Castelli et al (1998) also suggest gender differences. Females gave more time and attention to texts, concentrated more on what they were searching for, and showed less distraction. Males, however, were more able to experiment with and control spatial exploration and performed better on navigation.

Finding information on the Web can be difficult regardless of gender, language background and even age. However, if designers provide useful content in a format that works the way people expect it to, difficulties can be minimised. Advice from Spool et al (1999: 33 – adapted below) on the basis of a detailed usability study of nine sites includes the following points which teachers might keep in mind when selecting websites for use by learners:
• When users can predict where a link will lead, they are more successful in finding information.

• The success of a link depends on how well users can differentiate one link from another (spacing, different aim from other links) – they need to be able to eliminate links that seem obviously wrong for their search.

• Problems with navigation occur when users do not have domain (content, business area) knowledge needed to navigate a site.

• Users have problems with ambiguous terms used in links (for example, global vs international) – users don’t know they’re in the wrong place.

• There is a negative correlation between the number of links and success.

• Links embedded in text don’t work well, and wrapped links are worse and confusing.

• Links outside to other sites can be perplexing if users can’t get back home.

• Making comparisons is difficult because of the need to jump between sites and keep several in memory.

Implications for the teacher and learner

Usability studies and research on the way readers read websites have influenced website designers to produce homepages with structures and characteristics suited to the medium, the purpose and the user. This, combined with user reluctance to change the way they read from one website to another, is producing enough predictability to allow homepages to be considered (with some flexibility) a text type. Homepages have come to have their own very specific characteristics – their own structure, technical, linguistic and textual features. In this chapter I have outlined the need for specific strategies for the teaching of this text type.

The basic message to teachers is that learners can be helped to understand this text type and thus enabled to anticipate its structure and certain characteristics, facilitating their reading and use of the web. It is possible for the informed teacher involved in web-based teaching to select sites that follow the recommended conventions and which can be expected to be easier to use. The teacher should also be aware of poorly designed websites, which can place undue frustration or cognitive load on the learner and are best avoided. Learners can be encouraged to anticipate the characteristics they are likely to encounter in the presentation and language of the homepage, and to adopt strategies that can reduce the frustrations and increase the value of using this global resource, the World Wide Web.

Advice to teachers and learners that has emerged from this research can be summarised as follows:

STRATEGIES FOR TEACHERS

Look for

• preferred format/webpage structure

• clear, functional links (not too many)
Learning to use the World Wide Web

• familiar content
• chunked information
• ease of skimming (signposting, highlighting)
• uncluttered appearance
• simple organisational structure
• light cognitive load

and set suitable tasks.

Avoid

• horizontal scrolling
• complexity and clutter
• too much freedom (lost in cyberspace).

STRATEGIES FOR LEARNERS

• Work out what’s useful (recognise fluff, recognise content and navigation areas)
• Anticipate characteristics of website (structure, scrolling, windows, links)
• Anticipate search styles (exact or ambiguous access schemes)
• Understand how text is presented. Use skimming skills (for chunked, dense, signposted text)
• Avoid information overload.

References


Websites of interest relating to search engines and web searches

(Addresses current at May 24, 2004)

A comprehensive list of search engines with brief descriptions can be found at http://www.kurunjangsc.vic.edu.au/home/library/search_engines.htm

Tips for web searching and using search engines better are available at http://searchenginewatch.com/facts/index.html

The Spire project (an Australian initiative) has a section called ‘Searching the Web’ at http://cn.net.au/webpage.htm

A good tutorial on web search strategies can be found at http://home.sprintmail.com/~debflanagan/main.html

If you are interested in honing your skills and developing advanced search techniques, http://searchenginewatch.com/facts/assistance.html might be helpful.

For information on advertising and the Web and the popularity of different search engines, see http://helpnet.com.au/search/index.html

‘Collection sites’ are explained, leading to useful sites for teaching at http://llt.msu.edu/vol5num1/onthenet/default.html
Further reading


Section 2
Classroom perspectives
Chapter 4

Strategies for extracting information from websites

Katherine Hail – LM Training Specialists

Context

This research was based on information collected over three terms. At the beginning of each term there was, on the whole, a new set of learners with different computing experience levels and language needs. Learners were given two hours in the computing room each 16 class hours. One hour was devoted to the Internet and the other was used for word processing and other programs. Research with learners at the extremes of abilities focused on ways to enable those with little or no experience to use the Internet and those who had a lot of experience using computers to develop their reading skills.

Learner profiles

The class involved in the action research project was at post-beginner level and the focus learners ranged in age from 27 to 42 years, with all having either secondary or tertiary education. There were five males and four females, from six different countries. A profile of these students appears in Table 1.

Table 1: Student profile (Teacher: K Hail)

<table>
<thead>
<tr>
<th>Teacher assessment of computer literacy</th>
<th>Self assessment of computer literacy</th>
<th>Previous Internet experience</th>
<th>Level of education</th>
<th>Gender</th>
<th>Age</th>
<th>Country of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>33</td>
<td>Russia</td>
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<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Secondary</td>
<td>M</td>
<td>27</td>
<td>Serbia</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>M</td>
<td>30</td>
<td>S.Korea</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>35</td>
<td>Russia</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
<td>Yes</td>
<td>Secondary</td>
<td>M</td>
<td>27</td>
<td>Holland</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>No</td>
<td>Secondary</td>
<td>M</td>
<td>25</td>
<td>Sudan</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>No</td>
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<td>M</td>
<td>42</td>
<td>Serbia</td>
</tr>
<tr>
<td>Low</td>
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<td>F</td>
<td>28</td>
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</tr>
<tr>
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<td>No</td>
<td>Tertiary</td>
<td>F</td>
<td>29</td>
<td>India</td>
</tr>
</tbody>
</table>

Course goals

The aim of the computing component of the course was to integrate the use of the Internet into the curriculum to give learners a sense of the value of the Internet while developing and practising keyboard and core language skills.

The writing focus of the class throughout the project was on writing short information reports. In addition, other learning outcomes were covered during the computing
classes including: reading a procedural text, responding to spoken instructions, and reading a short information text. Frequent peer teaching also led to interactions involving explanations, though not all of these were conducted in English.

**Stages of teaching**

The stages used over the course of a term included:

- reading, writing and listening skills development tasks
- pre-teaching of general web navigation tools
- pre-teaching of specific website layouts
- reading a number of websites to obtain information.

By reading a variety of information texts on different subjects throughout the term and answering questions on context and specific information, learners were taught to locate relevant information in a text using skimming and scanning techniques, with a focus on the use of headings and sub-headings.

**Lesson 1**

See sample material at the end of this chapter:

- Worksheet 1: How to read information texts
- Worksheet 2: Questions for Australia – A model text
- Worksheet 3: Australia – A model text

The aim of the lesson was to teach the learners to skim and scan text. Too often learners feel they must read and understand every word in a text, which is not possible when reading webpages. A complete overview of the lesson procedure is given at the end of this unit, before the sample worksheets.

- Focus was first put on learners’ prior experience of reading information texts and the kinds of problems they had. This brought up a lot of discussion, especially on vocabulary and the use of dictionaries. Learners were reminded how they might find information in a telephone directory by looking for specific headings and individual words.

- An OHT of Worksheet 1: ‘How to read information texts’ was displayed on the board, learners were given time to read it and it was then discussed. Next, questions were asked to check learners’ understanding. One question was: ‘Should you check every word you don’t understand?’ Some learners admitted they found it hard not use to their dictionaries all the time. So a discussion ensued about what they would do if they didn’t have their dictionaries with them and how it would help their ability with English if they tried to work out the meanings of unknown words from context.

- I then gave learners Worksheet 2: ‘Questions for Australia – A model text’ and they looked at question 3 and discussed the key words. The learners read through the remaining questions, underlined key words and discussed
the answers in groups, then as a class. This highlighted the type of words which were vital in order to understand meaning.

- I then gave learners Worksheet 3: ‘Australia – A model text’. They read the text as quickly as possible without using their dictionaries and answered the context questions. This was again checked in pairs, then as a class to ensure that learners had an overall idea of the purpose of the text.

- Learners then re-read the text and answered the remaining questions with an emphasis on speed, accuracy and writing brief answers rather than just copying chunks of text. This proved difficult for some so they were reminded to concentrate on key words.

- We discussed answers as a class and any difficulties were dealt with.

- The learners then worked in pairs or groups to write a report about Australia from their notes.

Follow-on activities

The reading of instructions also continued throughout the term with a focus on following each instruction sequentially and teaching the types of vocabulary that would be needed in the computer room; for example, click, icon, type, scroll and enter.

While the ultimate aim was for the learners to write their own information reports, they also had to develop note-taking skills in order to record the information they would require for the task. Thus, activities, such as reducing a familiar text – either written or spoken – to a set of notes which could then be used to reproduce a report, were used throughout the term. Initially learners were encouraged to try to reproduce the text as closely as possible in order to scaffold their writing. However, in time they were more able to use notes to write more independently.

The format which learners had to follow in order to achieve the report writing competency was also focused on within the classroom throughout the term by: analysing the structure of model texts; practising grammatical forms; teaching appropriate vocabulary; and writing as a class, in groups, pairs and individually. Examples of staged reports where learners could follow the required format were also used to help them gain confidence in their writing ability.

Lesson 2

See sample material at the end of this chapter:

- Worksheet 4: ‘Adelaide – Lonely Planet’

A complete overview of the lesson procedure is given at the end of this unit, before the sample worksheets.

- Prior to entering the computer room, I displayed on the board an OHT of the website’s homepage (www.lonelyplanet.com/destinations/australasia/adelaide). I taught the learners the actions they would have to follow in order to enter and use the webpage. These included:
  - Typing the URL and the importance of accuracy and clicking on go or enter
Chapter 4
Strategies for extracting information from websites

- The meaning of the most frequently used icons on the tool bar
- Moving round the webpages by clicking on tabs, scrolling, using the back, forward and go icons.

• The answers to questions about how to move around the site were elicited in order to gauge learners' previous knowledge and teach learners who had none.

• Learners also studied the layout of webpages before entering the computer room in order to familiarise themselves with patterns they could look for which would help them to find the information they wanted on a site. The layout of the Lonely Planet page was highlighted, focusing on the banner across the top which shows who the site was written by and the three columns beneath this showing headings, factual information and links. This focused on the use of menus, tabs and headings. Many of the learners who had used the Internet previously were able to answer these questions with relative ease, but reacted as if they hadn't been aware of this common pattern before.

• The meanings of the headings were then discussed and any necessary vocabulary was taught. This threw up a few problems because some of the phrases, such as 'Off the beaten track' were unfamiliar. Learners were then given Worksheet 4 and encouraged to answer as many of the questions in Part A as possible. Answers were discussed in pairs then as a class.

• Focus then switched to the information the learners were required to find. The questions in Part B were read, key words chosen and predictions made about where the relevant information would be found. Again, answers were discussed in pairs then as a class. Drawing on their experience from the previous class on reading information texts, learners found this process quicker and easier.

• By the time the learners entered the computer room they were familiar with the layout of the website they were going to use, which made them feel more confident. They went to the site - though a number had to be reminded of the need for accuracy in address typing. Learners were encouraged to work as independently as possible to navigate the website in order to answer the questions in Part B. Assistance was given on a needs basis with an emphasis on eliciting answers and scaffolding the client's knowledge, and using what they could deduce from the information on their screens.

• After the computing session, the answers to the questions on the worksheet were discussed in small groups and then as a whole class. There was also a discussion on how they felt about using the computer in this way. The overall feeling was that they liked the structured approach as they felt more comfortable and confident.

The information learners collected was used as a basis for writing an information report on Adelaide.
Rationale for content and methodology

The aim of the action research project was to focus on the skimming and scanning strategies that learners need in order to extract information from websites which can then be used to write short information reports.

Follow-on activities

Throughout the project strategies were refined, and by the end there was a much greater emphasis on pre-teaching than there had been at the beginning. The same stages were followed through each term and repeated for different fields in order to scaffold learners’ prior knowledge and develop both skills and confidence.

Learner achievements

Learners achieved the following formal learning outcomes:

• reading short information texts
• reading procedural texts
• responding to spoken instructions
• writing short information reports.

In addition to these outcomes, learners became more confident in their overall computing abilities. Learners who had previously been reluctant to attend computing sessions became more enthusiastic due to the familiar structure and step-by-step approach.

Issues

Initially some learners were reluctant to participate in computing sessions. However, given support and purpose this issue lessened over time and the learners could see the relevance of the Web to them.

The changing content of websites, sometimes within 24 hours, was an issue especially with job search sites. However, this was overcome, to some extent, by making questions on worksheets more generic.

Pre-teaching was initially done using a data projector in the computer room. However, due to time constraints and the lure of the learners’ own machine being too distracting, pre-teaching with an OHT of the relevant webpages in the classroom was used to better effect towards the end of the project.

Being able to give learners as much individual attention as they would like is always an issue in the classroom and this is highlighted in computing sessions. Pre-teaching by the class teacher and team teaching with the computing teacher take some of the pressure off. In addition to this, encouraging peer teaching and discussion between learners boosts the confidence of both parties.

Vocabulary load is an issue when lower-level learners use the Internet. However, reminding learners that they do not need to understand every word in order to obtain the information they need, and careful choice of websites overcomes this to a certain extent.

The ability of learners to type web addresses accurately posed a few problems but they soon learnt that this was vital in order to get on to the appropriate site. Having a link to some of the sites on the college’s intranet page was a great help.
Sample materials

Overview of lesson procedure

Lesson 1
Aim of lesson: To teach skimming and scanning reading skills

Prior lesson: Learners had learnt relevant vocabulary

Field: Places

Materials
- How to read information texts
- Questions for Australia - A model text
- Australia - A model text

Overview
- The learners discussed in groups ways they used to find information in a text quickly.
- Ideas were pooled and further ideas were elicited.
- An OHT of ‘How to read information texts’ was then displayed on the board, read as a class and discussed.
- Learners then followed the steps recommended and the answers were discussed at the end of each step:
  1. Learners were given the questions ‘Questions for Australia - A model text’ and discussed as a class what the key words were in the third question.
  2. Learners were then encouraged to underline key words in the remaining questions.
  3. Learners discussed their decisions in pairs then as a class. This highlighted the type of words which were vital to understanding meaning.
  4. An OHT with just the headings was displayed on the board and the kind of information which might be found in each section and which questions these related to was then discussed.
  5. Learners read ‘Australia - A model text’ as quickly as possible without using their dictionaries, and answered the context questions.
  6. They then re-read the text and answered the remaining questions, writing only brief answers.
  7. The answers were discussed as a class and any difficulties were dealt with.
- The learners then worked in pairs or groups to write a report about Australia from their notes.
Worksheet 1: How to read information texts

How to Read Information Texts

When you are reading an information text or a webpage on the Internet you are looking for specific information and you can find this more quickly by following a few simple rules.

1. Look at the title of the text.
   Think about these questions: What is the subject? What do you think it will be about? What do you know about the subject already?

2. Look at any headings.
   They will tell you what is in each paragraph or part of the text and can help you to find the information more quickly.

3. Read the questions and underline the **KEY WORDS**.
   This will help you think about the information you are looking for.

4. Think about which questions might be answered by each part of the text.

5. Read through the text as quickly as possible to give you an idea of the purpose of the text and where you might find it, for example: in a newspaper, a travel brochure or a text book.

6. Re-read the text looking for **KEY WORDS** in the text and just read the sentences before and after these words.

7. Don’t worry about understanding all the words in the text, concentrate on the information you need.

8. When answering a question don’t write whole sentences. Only write down the important information or the **KEY WORDS**.

Based on an idea from *The Never Too Late Show* (NSW TAFE Commission 1999)
Worksheet 2: Questions for Australia - A model text

Questions for Australia - A model text

Read the questions and underline the key words. Then read the text and answer the questions.

1. Where might you find a text like this?
   - □ A travel article
   - □ A school text book
   - □ A tourist brochure
   - □ A student magazine

2. The aim of the text is to:
   - □ encourage tourists to visit Australia
   - □ give general information about Australia
   - □ give information about Australia's population

3. Where is Australia?

4. In what way is Australia different from other countries?

5. How many states are there in Australia?

6. What are the two territories in Australia?

7. What is the capital city?

8. How many people live in Australia?

9. Who were the first people to live in Australia?

10. Where do the majority of the current inhabitants come from?

11. In which part of the country do most people live?

12. Which are the two largest cities?

13. When is Australia Day celebrated?

14. What does it commemorate?
Worksheet 3: Australia - A model text

Australia - A model text

LOCATION
Australia is an island which is located in Oceania, in the southern hemisphere. It is unique because it is a single country but also a continent.

STATES AND TERRITORIES
Australia is divided into six states: New South Wales, Victoria, South Australia, Queensland, Western Australia and Tasmania. There are also two territories, the Northern Territory and the Australian Capital Territory where the country's capital, Canberra, is situated.

POPULATION
The population of Australia is about 20 million. Although Aboriginals and Torres Straits Islanders are the original inhabitants of Australia, they now make up less than 3% of the population. Migrants or the descendants of migrants from all over the world form the rest of the population.

WHERE AUSTRALIANS LIVE
The majority of Australians live in the south-eastern corner of the country and Sydney and Melbourne's inhabitants make up one-third of Australia's total population.

FESTIVALS
There are many public holidays and festivals in Australia which celebrate a variety of things - for example historical events and the arts and culture. One of the most important is Australia Day which is celebrated on 26th January each year and commemorates the beginning of European settlement on 26th January 1788.
Overview of lesson procedure

Lesson 2

Aim of lesson: To teach and practise webpage navigation skills

To find information about Adelaide to use in a written information report

Prior to the computing session learners had:
• Read a variety of model texts
• Reduced the texts to notes
• Reproduced the texts in groups from the notes
• Used staged reports to write an information report from notes about different Australian states

Materials

Worksheet for Lonely Planet Adelaide website at www.lonelyplanet.com/destinations/australasia/adelaide/

Lesson overview

In the classroom
• An OHT of the website’s homepage was displayed on the board.
• The answers to questions about how to move around the site were elicited in order to gauge learners’ previous knowledge and teach learners who had none. Emphasis was placed on scrolling, clicking in various places, using the back, forward and go icons.
• The layout of the page was highlighted with the focus on the banner across the top, which shows who the site was written by, and the three columns beneath this, which shows headings, factual information and links.
• The meanings of the headings were then discussed and any necessary vocabulary was taught.
• Learners were then given the worksheet and encouraged to answer as many of the questions in Part A as possible.
• Answers were discussed in pairs then as a class.
• Focus then switched to the information the learners were required to find and the questions in Part B were read, key words chosen and predictions made about where the relevant information would be found.
• Again, answers were discussed in pairs then as a class.

In the computer room
• Learners were encouraged to work as independently as possible to navigate the website in order to answer the questions in Part B.
• Help was given on a needs basis with an emphasis on eliciting answers and scaffolding the client’s knowledge.

After the computing session
• The answers to the questions on the worksheet were discussed in small groups and then as a whole class.
• The information was used as a basis for writing an information report on Adelaide.
**ADELAIDE**

**Part A**

**Look at the webpage and answer the following questions.**

1. What is the address of the website?
2. How do you move up and down the page?
3. How do you move to another part of the site?
4. How do you go back to the page you were on before?

**The page is divided into different parts.**

5. Which part shows the different subjects that you can find on the site?
6. Which part shows the important factual information?
7. Who is the site written for?

---

**Look at the headings. What do they mean?**

- Match the heading with the information you might find on that page.

<table>
<thead>
<tr>
<th>Heading</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Introduction</td>
<td>□ Places to visit</td>
</tr>
<tr>
<td>b. Orientation</td>
<td>□ What is happening in Adelaide</td>
</tr>
<tr>
<td>c. When to go</td>
<td>□ Travelling around Adelaide</td>
</tr>
<tr>
<td>d. Events</td>
<td>□ General information about Adelaide</td>
</tr>
<tr>
<td>e. Attractions</td>
<td>□ Things to do</td>
</tr>
<tr>
<td>f. Off the Beaten Track</td>
<td>□ Places to visit outside Adelaide</td>
</tr>
<tr>
<td>g. Activities</td>
<td>□ Adelaide's past</td>
</tr>
<tr>
<td>h. History</td>
<td>□ Where Adelaide is</td>
</tr>
<tr>
<td>i. Getting There &amp; Away</td>
<td>□ Where you can find more information</td>
</tr>
<tr>
<td>j. Getting Around</td>
<td>□ The best time to visit Adelaide</td>
</tr>
<tr>
<td>k. Further Reading</td>
<td>□ Travelling to Adelaide</td>
</tr>
</tbody>
</table>

continued on page 57
Part B

- First read the following questions and underline the **KEY WORDS**.
- Then write in the box the letter that matches the heading under which you think you will find the answer to the questions.
- Finally, look at the website on the computer and answer the questions using the headings to help you find the answer.

<table>
<thead>
<tr>
<th>Heading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is the name of the hills around Adelaide?</td>
</tr>
<tr>
<td>2. What is the population of Adelaide?</td>
</tr>
<tr>
<td>3. Where in South Australia is Adelaide?</td>
</tr>
<tr>
<td>4. What is the name of the river which flows through Adelaide?</td>
</tr>
<tr>
<td>5. How far is the airport from the city centre?</td>
</tr>
<tr>
<td>6. Which suburb is the interstate train terminal in?</td>
</tr>
<tr>
<td>7. When does the Adelaide Festival of Arts take place?</td>
</tr>
<tr>
<td>8. What can you see at the festival?</td>
</tr>
<tr>
<td>9. What happens at the same time as the festival?</td>
</tr>
<tr>
<td>10. Which museum is near the South Australian Museum?</td>
</tr>
<tr>
<td>11. Do you have to pay to enter the Art Gallery?</td>
</tr>
<tr>
<td>12. Write down three places listed that you can see in Glenelg</td>
</tr>
<tr>
<td>a. ____________________________</td>
</tr>
<tr>
<td>b. ____________________________</td>
</tr>
<tr>
<td>c. ____________________________</td>
</tr>
<tr>
<td>13. How far is Hahndorf from Adelaide?</td>
</tr>
<tr>
<td>14. Write down the name of two German-style buildings in Hahndorf.</td>
</tr>
<tr>
<td>a. ____________________________</td>
</tr>
<tr>
<td>b. ____________________________</td>
</tr>
<tr>
<td>15. What is McLaren Vale famous for?</td>
</tr>
<tr>
<td>16. How far is McLaren Vale from Adelaide?</td>
</tr>
<tr>
<td>17. How far is Victor Harbor from Adelaide?</td>
</tr>
<tr>
<td>18. What can visitors do in Victor Harbor?</td>
</tr>
<tr>
<td>a. ____________________________</td>
</tr>
<tr>
<td>b. ____________________________</td>
</tr>
<tr>
<td>c. ____________________________</td>
</tr>
</tbody>
</table>

If you have time, find out about another state capital in Australia using the Lonely Planet website.
Chapter 5

Reading strategies for finding web information efficiently

Shirley Haak – Central TAFE, Perth

Context

I gathered data for this project over four terms, conducting the major part of the research over the two middle terms, and consolidating and authenticating the findings in the final term. The learners’ English language level was high intermediate with some being familiar with computer literacies, while others had no experience of computer literacies prior to joining the AMEP program at Central TAFE.

The learners studied English for 15 hours per week including two hours instruction in the computer lab. Initially, I observed and recorded results for the whole class, then in the two middle terms I chose six learners in each term whose individual progress I could follow more fully and accurately. I grouped these 12 learners in pairs each term, and rated their computer literacy skills on a scale of high, medium and low.

Learner profiles

At course entry all the learners had been classified as fast-paced learners with ISLPR scores ranging from 1+ to 3. Most were planning to do further English study. I chose the 12 learners listed in Table 2 for more detailed observation because they were a representative cross section in computer skills, age, gender and country of origin. When conducting teacher assessment and self-assessments of computer literacy skills, learners with the lowest computer skills self-rated their skills more highly than the teacher assessment. Of all the learners in the sample, it was these learners I was most interested in observing.

Course goals

The learners were working towards completion of Certificate III in Spoken and Written English. One of the learning outcomes of this course is to prepare and deliver a five-minute oral presentation. In my research, my focus was on reading strategies that the learners could use to help them independently search for useful information on the Internet in order to do this oral presentation. Sifting through information on the Internet can be a daunting and frustrating task. My intention was to show learners some well-constructed useful sites and highlight some reading strategies that might enable them to judge the usefulness of sites themselves when independently searching. I planned to help the learners become more independent by scaffolding, so that each week they were able to build on previous knowledge. For this reason I planned, at the beginning of each session in the computer lab, to revise strategies already learnt through eliciting them from the learners.
Table 2: Student profile (Teacher: S Haak)

<table>
<thead>
<tr>
<th>Teacher assessment of computer literacy</th>
<th>Self assessment of computer literacy</th>
<th>Previous Internet experience</th>
<th>Level of education</th>
<th>Gender</th>
<th>Age</th>
<th>Country of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>33</td>
<td>Brazil</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>33</td>
<td>Spain</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>29</td>
<td>Vietnam</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>27</td>
<td>Thailand</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>43</td>
<td>Burma</td>
</tr>
<tr>
<td>Medium</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>25</td>
<td>Iraq</td>
</tr>
<tr>
<td>Medium</td>
<td>Low</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>40</td>
<td>Yugoslavia</td>
</tr>
<tr>
<td>Medium</td>
<td>Medium</td>
<td>Yes</td>
<td>Secondary</td>
<td>M</td>
<td>24</td>
<td>Yugoslavia</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>Yes 3mths</td>
<td>Tertiary</td>
<td>M</td>
<td>46</td>
<td>Ethiopia</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>27</td>
<td>Ethiopia</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>No</td>
<td>Secondary</td>
<td>M</td>
<td>48</td>
<td>Sudan</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>Yes</td>
<td>Secondary</td>
<td>M</td>
<td>24</td>
<td>Sudan</td>
</tr>
</tbody>
</table>

**Stages of teaching**

These are the steps I followed to teach oral presentations using the Internet. This procedure was done twice over the period of the research so is presented as a lesson plan. Obviously, each time there were some variations in delivery.

- First I talked about web addresses. We discussed terms like edu, net, com, org and how to use these terms to identify reliable URL addresses. We discussed the absolute necessity of accurate spelling and punctuation to facilitate a search. We discussed various search engines (Google, Yahoo and Mamma) and techniques for narrowing searches. For example: Putting ‘...’ around two or more words will ensure that the search engine looks for those words together; and fewer, more relevant results will be found when search words are considered carefully and articles and prepositions are not used. To illustrate these techniques, I asked learners to find a photo of their country by typing in the name of their country +photo or another combination of their choice. When learners had unsatisfactory results, we examined their choice of search words and spellings. The final step was for them to show their picture to the rest of the class, no mean feat if they have to transfer an accurate web address to a data projector, and great fun for them too!

- In the next lesson, we looked at skimming and scanning strategies in order to prepare for independent searching. Usually, most learners say that it is easy for them to read a computer screen compared to paper – although those with low computer skills clearly had great difficulty reading from the screen. I used an Internet site: www.42explore.com/skim.htm to outline strategies for both skimming and scanning with practice exercises for each. Learners can do these interactive exercises at their own pace. Some easily got 100% after one reading while others required three or four readings and achieved scores...
as low as 60%. The end result was that the learners were aware of strategies for looking for key words, looking at headings to determine usefulness and scanning first lines of paragraphs to determine density of vocabulary.

- After this I showed learners an Internet site that looks at how to do an oral presentation (see Worksheet 1: ‘How can I do a terrific oral presentation?’, and webpage: ‘Giving an Oral Presentation’ at www.canberra.edu.au/studyskills/learning/oralpres.html). The address is long and complicated and I emphasised the need for accuracy when keying it in. At this stage of the program, the learners were becoming more self-aware and generally managed to key in the address accurately - eventually! When they had trouble with the address, I encouraged them to check with a peer. Sometimes this is less daunting than asking the teacher. If they still had difficulties I asked them to check it letter by letter against the one I had given them. In pairs, the learners skimmed the article for key words, and then scanned it to choose subheadings to take notes on. Their task was to pick two points each that they thought would be helpful in preparing an oral presentation. I asked learners to do this in pairs to encourage them to monitor each other and to talk to each other about the reading processes they were going through. Finally, I asked them to evaluate the site for ease of navigation, clarity of information and use of pictures and colour.

- The next teaching stage was to get learners to do a practice oral presentation (see Worksheet 2: ‘Two minute practice oral presentation’, and webpage from West Australian tourism at www.westernaustralia.com). For this stage, I needed a topic that would be relatively easy to research on the Internet and interesting for the learners, so their task was to research information about a town in Western Australia. As the ten-week term progressed, I expected increasing independence and better reading skill levels from the learners and for this reason chose a webpage that was more complicated than previous websites I had used and with many more internal links. The learners told me it was easy to find their way around this site but my observations were that they had difficulty navigating the site and got lost quite often. In their evaluations, learners commented favourably on the site’s use of colour and images, and less favourably on the small print and large number of advertisements.

- Now we come to the most important stage of the procedure - the search for information for their individual presentations. At this point, we did an initial search of the Internet for information on a topic of their choice. I suggested using Google or Yahoo! - although learners could use other, favourite, search engines. We discussed the reading strategies they had used in previous searches and the ways they helped them. Together we developed a checklist of procedures to aid their search for information (see Figure 1).
Chapter 5
Reading strategies for finding web information efficiently

Figure 1: Checklist for oral presentation Internet searches

<table>
<thead>
<tr>
<th>Checklist for Oral Presentation Internet Searches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic</strong> ____________________________</td>
</tr>
<tr>
<td><strong>Key words for the 3 points in the body of your presentation</strong></td>
</tr>
<tr>
<td>• __________________________________________________</td>
</tr>
<tr>
<td>• __________________________________________________</td>
</tr>
<tr>
<td>• __________________________________________________</td>
</tr>
<tr>
<td>• First check the spelling of the key words in your topic and three points</td>
</tr>
<tr>
<td>• Then put in the topic and some of the key words in the Google (or other search engine) search box</td>
</tr>
<tr>
<td>• When the results page comes up, check the addresses to see if they look reliable</td>
</tr>
<tr>
<td>• Scan the results pages for useful key words</td>
</tr>
<tr>
<td>• Scan the webpages for key words, bolded words and headings</td>
</tr>
<tr>
<td>• Skim information to check if it is worth reading more carefully</td>
</tr>
<tr>
<td>• Look further than the first page of results</td>
</tr>
<tr>
<td>• Avoid webpages with vocabulary that you find hard to understand</td>
</tr>
</tbody>
</table>

Learner achievements

Over the course of the research, there were many learner achievements, both formal and informal. Formally, all learners in my sample completed their oral presentation. First, they successfully found information for their two-minute practice presentation and delivered it to the class. Next, they managed to search independently for material for their chosen five-minute presentation. Topics included Soccer, Honey, Aeroplanes, Diamonds and the Olympic Games. All except one used information from the Internet, most using something from their initial searches. The one learner who did not use information from the Internet for his oral presentation was one who had never touched a computer until three weeks before he joined my class. He preferred books from his local library. However, he successfully read and presented information from the Internet on a town in Western Australia.

Informally, learners said they had learnt useful techniques to search for information more accurately and with less frustration. They became more discerning in their assessment of material on the Internet and more able to judge its usefulness. This was
evident in their oral presentations which were informative and interesting.

In addition, all learners said they felt more confident and competent when using the Internet. My observation of them supported this. In a final reading exercise, I gave them a simple Internet site with several questions to answer. I deliberately refrained from giving any help whatsoever except that my initial instructions were comprehensive and as clear as I could make them. All learners completed the exercise successfully, although those with lower computer skills took much longer to complete it.

Finally, all the learners in the sample were demonstrably more independent in their searching.

Rationale for content and methodology

Content

In my choice of Internet sites to access, I was keenly aware that learners are often bewildered by complicated sites and have great difficulty in negotiating them. In a questionnaire I gave them at the beginning of the research, only the very computer-literate learners said they could find information on the Internet easily. Half said it took a lot of effort and the learners who were less computer literate said they didn't use the Internet unless they had to for their English classes. Most learners identified the chief problem on the Net as too much information to wade through. A slightly smaller number said that English skills were the chief problem and two said that their computer skills hampered them. Most learners recognised the variable quality of the information on the Net but the learners with lower computer skills tended to think that the information was always good quality. Because of this, I chose sites that I felt were useful, with vocabulary and layout that were not too dense.

Methodology

My two main goals were to lessen the frustration in Internet searches and to encourage learners to be more independent when searching. Therefore, I revised already learned strategies to fine tune their searches at the beginning of each lesson, and used 'scaffolding' techniques with them. At the beginning of each session, I put great emphasis on giving clear and explicit instructions, both verbally and on an overhead.

If learners were having difficulty, I questioned them about the strategies they were using and how these strategies could help them navigate to where they needed to go.

Issues

In the course of the research I made several observations.

Learners didn't always assess their own computer skills accurately. This impacted on the less able learners who rated their skills as better than they really were, as these learners tended to work too quickly, making mistakes in spelling and missing links and information. As a result, the computer itself was often blamed as being faulty.

Learners may have known what best practice was, but they didn't always follow through.

Learners often couldn't discriminate between poor and good information. The more reading strategies they mastered and the more they practised them, the better they became at discriminating.

Most learners knew it was a good idea to ask for help from the teacher but not all
did. In such cases I found it a successful strategy to encourage learners to seek help from a more competent peer.

Constant revision and recapping made a difference and the learners managed the tasks better. The teacher has an enormous responsibility to give clear accurate instructions to the learner. In the course of the research I was keenly aware that even the computer literate learners were reliant on the teacher.

Learners with low literacy in English often became frustrated in their searching because they had a greater tendency to make mistakes in spelling. They also had weaker reading skills, which made it difficult for them to evaluate the information they found. These learners were more likely to say that all information on the Internet is good quality.

Given time, patience and careful instruction, all learners improve.

Strategies

When I asked learners to rank what was most important for successful searching when using the Internet, the clear first priority for them was clear instruction from the teacher. They also ranked accurate spelling and ability to recognise whether a webpage was useful or not as very important.

Search and reading strategies that I believe are useful for learners negotiating webpages are:

• Check and double check spelling.
• Think carefully about the words used in your search to reduce the number of results.
• Look carefully at the addresses in the search results to see if there are any clues to the reliability of the webpage.
• Look for key words in the search results.
• Don’t expect that the best result will always be on the first page.
• When going to a webpage scan the page quickly to see if key words are there.
• Skim the webpage by reading first and last paragraphs, first lines of each paragraph and headings.
• Don’t waste time on a piece of text if the vocabulary is too difficult.

At the beginning of each term, many learners confessed that the Internet was a frustrating and complicated tool for them. At the end of the term, with reading strategies to aid them and a successfully delivered oral presentation behind them, they were much happier to embrace its many possibilities.
Sample materials

Worksheet 1: How can I do a terrific oral presentation?

How can I do a terrific oral presentation?

First find a partner. Then click on Internet Explorer and carefully type in www.canberra.edu.au/studyskills/learning/oralpres.html. Remember that one extra space or mistyped word will stop you getting to the webpage. What is your first impression of the webpage? Does it look interesting or boring? Why?___________________________________________

Next, scan the main headings, which are bigger in size than the rest of the information. How many headings are there? Look at the different coloured headings, the italics and the different sized fonts. • Notice key words and transition signals. • Notice the layout of the webpage with its single column of information. These features make the information easier to read and understand. Do you think that this information will be useful for your oral presentation? Yes/No

Then skim the information to identify the main ideas. You can do this by reading each sub-heading or reading the first and last point in each main heading. Remember that skimming is done at three to four times the speed of normal reading and that your aim is to find information that is useful for you.

Next, with your partner, choose one of the main headings to read more carefully. For example, you and your partner may be interested in Dealing with Nervousness. Choose two points each that you think will help in making a good presentation.

Make some notes on these four points and we will have a class discussion to share what you have found.
Worksheet 2: Two-minute practice oral presentation

Two-minute practice oral presentation

This two-minute oral presentation will give you the chance to practise speaking publicly before you give the five-minute presentation. In order to do this you will have to read information on the Internet.

You need to choose a town in Western Australia and find out about:
• climate and location
• history
• places of interest

When you do your talk, you need to give:
• an introduction
• body
• conclusion

For example, if you decide to talk about Carnarvon, you could say:

Hello everyone. Today I am going to talk about a town in Western Australia called Carnarvon. I will tell you something about its location, climate, history and some places of interest.

First let me tell you about climate and location. Carnarvon is located 904 km north of Perth and has a moderate tropical climate.

Secondly, I would like to tell you about its history. It was first settled in 1876 and had several floods in its early years. The port of Carnarvon was built in 1897 and today you can see the one mile jetty, the lighthouse and the tramway that were part of the old port.

Finally, I would like to tell you something about the attractions of Carnarvon. Everyone knows about Carnarvon bananas. There are hundreds of plantations there with high quality bananas. Carnarvon is also famous for its mangoes, papayas, grapes and melons. In addition, the coastline at Carnarvon is spectacular and worth visiting. Another attraction is the fantastic snorkelling and swimming.

In conclusion, I am sure you will agree with me that Carnarvon is a place that every tourist should see. (185 words)

(This is shorter than 2 mins but will give you an idea).

Now it is your turn. Remember that if you make a mistake, simply use the back button to get back to the homepage. Look for Home at the top of each page. An underlined word shows a link that you can click on to find further information.

• Go to www.westernaustralia.com.
• Click on the interactive map and see the five regions of Western Australia. Go back to the homepage by clicking click here to return to westernaustralia.com.

continued on page 66
Then click to Destinations and choose one of the five regions – Perth, Coral Coast, Golden Outback, South West or North West.
Click on Towns on the right of your screen.
Scroll down until you find a town with an asterisk (*) that you are interested in.
Click on that town and search for information under the headings above.
You can also click on Attractions on the right, or the map or the distance chart to get additional information.

Have fun. I hope you enjoy finding out about your town.

webpage from Tourism Western Australia website (www.westernaustralia.com).

Giving an oral presentation

Preparing your oral presentation

First of all, think it through...

Then about your audience:
Do you think they will understand everything you say? Be sure to consider their background, interest and the purpose of your presentation.

Then about your presentation:
What does your audience need to know? What are you trying to make them think about in your presentation?

Then about your visual aids:
Are they interesting and relevant to your message? Have you practiced using them?

Are you familiar with your material? Do you remember all the details of your presentation?

Are your notes clear and concise? Have you included all the necessary information?

Aim to make your presentation as engaging and informative as possible.
Chapter 6

Navigating the Internet with the lights on

Louise Kqiku - Central TAFE, Perth

Context

This research was based on information I gathered over four terms of an advanced computing class for newly arrived non-English speaking background (NESB) migrants, held every week for two and a half hours over eight weeks (28 hours in total). Learners in this class were studying either intermediate or upper intermediate levels of English, and had basic computer literacy skills. I observed the whole class each term and chose a number of learners whose progress I charted in more detail. A profile of these learners is provided in Table 3.

The aim of this research was to explicitly teach Internet skills to the learners and then to observe strategies they used to conduct searches on the Internet, looking at the efficiency and effectiveness of their searches. I observed learners’ progress and asked them to assess what they had learnt and how it helped them navigate the Internet. From this feedback I gained information about what teaching strategies helped learners most in accessing and using the Internet.

Learner profiles

Table 3: Student profile (Teacher: L. Kqiku)

<table>
<thead>
<tr>
<th>Teacher assessment of computer literacy</th>
<th>Self assessment of computer literacy</th>
<th>Previous Internet experience</th>
<th>Level of education</th>
<th>Gender</th>
<th>Age</th>
<th>Country of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Medium</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>33</td>
<td>Spain</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>33</td>
<td>Brazil</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>M</td>
<td>36</td>
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<tr>
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<td>Primary</td>
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</tr>
<tr>
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<tr>
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<td>Tertiary</td>
<td>M</td>
<td>41</td>
<td>China</td>
</tr>
<tr>
<td>Low</td>
<td>Poor</td>
<td>Yes</td>
<td>Tertiary</td>
<td>F</td>
<td>46</td>
<td>Bosnia</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>Yes</td>
<td>Secondary</td>
<td>F</td>
<td>29</td>
<td>Sierra Leone</td>
</tr>
</tbody>
</table>

I focused my research on the nine learners profiled in Table 3, as I felt they represented a wide cross-section of learners in the class. Years of education, gender, age, country of origin, and self-assessments of computer skills in this group were in proportions similar to the whole class. Students were asked to complete Worksheet 1: ‘Information sheet’ from which I compiled Table 3.
Course goals
The goals of this course are outlined in Worksheet 2: ‘Course outline’ at the end of this chapter.
Although the learning outcomes in this class were based on the use of a computer, they were also linked to language learning outcomes. For example, for the PowerPoint session in this course, learners used the knowledge gained both from Internet searches they conducted and the use of PowerPoint, to enhance oral presentations in their English class. The sequencing of this course was very important so that learners could build on their knowledge each week.

Based on this course outline, I focused on the following learning outcomes, related to Internet searching:

- Understanding the different domain names and levels within a URL
- Demonstrating knowledge of Internet terminology and meta-language
- Developing strategies to search the Internet using Google, more efficiently and effectively
- Demonstrating ability to assess situation and retrace steps, correcting inaccuracies where necessary
- Demonstrating ability to discern webpages on basis of URL
- Understanding and demonstrating the concept of searching on Google.

Stages of teaching
Over the eight-week advanced computing course, I taught the following computer and Internet skills:

- Firstly, learners revised their text formatting skills (changing text size, style and colour) in Microsoft Word. I also taught the generic terms used in Microsoft Word and Windows, which is an important base for using all Microsoft programs as the basic templates are always the same.

- I then demonstrated to the learners how to do some advanced processes using tables and clipart. Some time was spent showing them how to manipulate toolbars, again a process that is important for all Microsoft programs.

- The learners were then introduced to the Paint program and encouraged to make a ‘work of art’ that they showed to others in the class. I gave them an example equivalent to that of a five-year old so they didn’t feel intimidated. An important learning outcome from using Paint is mouse skills, which are crucial for working efficiently on Microsoft programs. I taught learners more than one way of doing things - such as the use of the right mouse button, which results in many Windows programs being more efficiently operated.

- We then sent these pictures to each other via email as attachments. Learners often equate the Internet with the use of email so I was careful to point out the distinctions here.
• I introduced the learners to PowerPoint and taught them how to create slides, enter information, change format, style and colour and add images and animation. I encouraged them to use these in a mini-presentation on their country for the class.

• I then taught the learners about URLs and the importance of accuracy, using a simple demonstration to show how misplaced letters or incorrect spelling or terms affect the outcome:

  - First, I attempted to elicit the term ‘URL’ from the learners. Using a data projector which enabled them to view my screen, I keyed the URL (www.geocities.com/floralouisa/) which was a website holding their course outline (Worksheet 2). This was also to demonstrate to learners what they would be able to do later when they learnt about FrontPage and made their own webpage. After it loaded, I briefly went through the outline then asked learners to open Internet Explorer and find the webpage on their own computers. I explained that if there was a problem it could be because they had made a mistake or (an unlikely event) that their particular computer had lost its connection. I encouraged learners having difficulties to seek help from their neighbour. Mistakes were generally caused by incorrect punctuation and spelling (which is a wonderful lesson to learn!)

  - At that point I defined URL (uniform resource locator) and then showed a Microsoft Word page with different examples of URLs and elicited from learners the differences between them, and their meanings (see Worksheet 3: ‘Examples of URLs’). We discussed differences between domain levels, domain names and types. We also discussed country of origin, noting that not all countries, especially the United States, have a tag. I then demonstrated examples of Google searches, discussing domain names and other features of the URLs with particular attention to differences between .edu, .gov, and .org/com sites.

• I then asked the learners if they were able to do a search on the Internet, to which they replied a very confident ‘Yes!’ I gave them an example of a search, saying I wanted to go to the cinema that night and asked them to find a site with movie times for me. Again, I encouraged them to help each other. At this stage only the Google site was on the data projector.

  I went around the class and noted some of the search items the learners were using. I entered these in the search bar on the teacher’s computer attached to the data projector (in the future, things will be easier when all computers can be attached). Some examples of search items users keyed in were:

  - What movies are on tonight?
  - Movies tonight Perth
  - Kinema Perth
  - Movies Perth
I elicited responses regarding the appropriateness of these search terms. Then, realising from these responses that they may not actually know how to search, we wrote up a list of rules (in Microsoft Word) for searching (see Figure 2). This list became a checklist which we used throughout the course when there were problems with searching. Soon, learners referred each other to the list!

When entering searches:
- Don’t use prepositions.
- Be concise and accurate.
- Spell correctly!
- Don’t use punctuation.
- Keep it simple!

Figure 2: Checklist for efficient searches

To diagrammatically explain how searches work, I showed learners Worksheet 4: ‘How searches work’. On the map different search options are represented by a series of books, each having its own number. Whichever is chosen will take you to a website, which I describe as being like a book with a number of different pages. Using this very basic but useful reference to a familiar item helps learners understand the relationships between websites and webpages. The links between different sites can also be shown diagrammatically. Feedback from learners (based on facial expressions, sounds and comments!) is always extremely positive about this simple diagram.

Next, I entered a search term into Google and asked learners to identify key terms on the Google search return page. Many of these terms are used in other Microsoft Programs so they are useful to learn. As learners identified them, I listed them on the board, or in a Word document.

The learners were then asked to open up a prepared Word document (saved onto the shared drive of the networked computers) and to drag the text boxes to the appropriate place to label items on the Search return page (see Worksheet 5: ‘Web language’). I encouraged them to add more text boxes (a skill they had learnt previously) for other terms they had learnt, and to check each other’s answers to this quiz.

With this information, learners could then do some ‘free-searching’, coming up with examples of good and shocking sites. Of particular interest were the Yahoo! personal pages, which individuals have made themselves. These provided excellent examples of some really well designed sites and some really terrible ones. And they are generally updated regularly. Later in the course, the learners were able to refer to these when designing their own pages in FrontPage.
Chapter 6
Navigating the Internet with the lights on

• Once the learners were familiar with the Internet and the language related to it, they were introduced to FrontPage, a program used to create webpages. Initially, learners keyed in the basic information for their homepage and learnt how to change the style and insert pictures and sound. Prior knowledge of other Microsoft Programs is essential for doing this.

When the learners had inserted appropriate hyperlinks, they were then shown how to upload their pages to Geocities (a free Internet provider through Yahoo!) and view them over the Internet. Their knowledge of URLs and other Internet terms was crucial here.

• Finally, I showed the learners how to use Publisher to make cards for family members and their own certificates showing their level of knowledge. By this stage, the learners were able to assess their own progress. They were impressed at how well they could work in Publisher without being taught, using what they had learnt about other Microsoft Programs.

Rationale for content and methodology

I have been conducting computing classes for NESB learners for a number of years now, so the course goals are based on feedback I have been receiving and also from observations I have made regarding their needs. They have consistently requested help in the following:

• Understanding Internet language
• How to do effective searches
• What to do when a list of search results appears - where to go?
• What to do when pop-ups appear
• What to do when there is an error or the page doesn't work or the computer is broken
• What does it all mean?

These classes have arisen because of the need to teach learners actual computing as a separate literacy to English. Technology, and computers in particular, is becoming an increasingly important tool in teaching English. In the classroom there are two major ways computers are utilised. One is using CALL (computer-assisted language learning) programs whereby specifically designed programs can be used to practise grammar exercises (eg Interactive Picture Dictionary, WIDA, Issues in English). Another popular method is where Microsoft programs such as Word are used as a tool for learners to practise their English.

When learners are exposed to programs such as these, their keyboard skills may improve and they may learn a little about computers, but the emphasis, appropriately, is on learning English. Based on observations and learner feedback, there is a strong need to teach learners how to actually use a computer – which is another literacy altogether. Things like the meta-language related to computers and the ability to use a variety of programs is very important for new migrants who may go on to further study, to seek employment, or to communicate with their homeland. Computer literacy
is important. I teach all this through the use of English so it will further enhance their English skills as well.

As mentioned before, I often feel that teachers neglect to actually teach learners about computers. Using computers to teach is one thing, but it is also important for learners to learn about computers. It is important to remind ourselves as teachers that, as well as being a tool to enhance the literacy being taught through English classes, computers are a separate literacy to English.

I also believe in doing everything practically. The aim of the class is to use computers, so the majority of exercises I give learners are on the computer. There is very little paper-based work – cutting and pasting can be done effectively (and colourfully!) using Microsoft Word, as can matching exercises. PowerPoint is wonderful for presentations (if used efficiently which is rare at presentations these days where too much text is presented detracting from the actual presentation); note taking can be done directly into Word so that not only are Word skills improved but very importantly learners become practised in keyboard skills (especially important for learners using different scripts).

All presentations are done via a data projector, which is permanently fixed in the classroom (and is an essential tool when using technology now). Learners are therefore able to watch a demonstration of how something is done before they try it themselves. I also encouraged learners to demonstrate to other learners using the data projector.

I collected data regarding learners’ progress throughout the course through a number of questionnaires (see for example, Worksheet 1 and 6), observations and quizzes. I noted comments learners made and the final questionnaire encouraged learners to make notes regarding what they considered their own progress to be.

Learner achievements

There were clear improvements over the eight-week course, and learners were aware of these improvements to the point where they were willing and confident enough to help others. Because I structured the course so that learners built on previous knowledge each week, achievements were obvious and learners were aware of the progress they were making, which was very rewarding for them.

I believed it important for the learners to have a good grasp of Microsoft Word before familiarising themselves with the Internet. Although they still made errors, the learners were better equipped to deal with them. In fact, part of their achievement in this course, was that learners made errors, and then learnt how to deal with them (rather than changing computers). Linguistically, learners learnt new terminology and were encouraged to use it appropriately. They will be exposed to different types of language on the Internet and hopefully have learnt how to discern credible sites from not so credible ones.

In an evaluation of the course, learners responded to the question ‘Some things I learnt about Internet searching that I didn’t know before:’ (see Worksheet 6). Some of their responses were:

1. I learnt how to make things happen faster.
2. I learnt some Internet words I didn’t know before.
3. I learnt about Google.
I learnt how to search properly.
I learnt about hyperlinks.
I learnt how to use the right expression for searching.
I learnt what .com and .de means.

The following comments are responses to the question ‘Good things about the class were:’ on Worksheet 6:
Easy, fast and fun
Realistic timetable
Simple and practical
Understandable
Explained everything and show us some things again and again
Useful examples
Makes sure every learner understands
Repeating things if we don’t understand
Teacher was available when we needed her
Details on how to search
Clear, slow, repetition
Introduced new techniques
Gave us detailed information

Issues
Self-assessment of computer literacy
Learners are often unable to assess their own levels of computer knowledge. Just as in English, a learner may have reasonably good oracy skills but may lack literacy skills, a computer learner may be proficient with Microsoft Word, but have extremely limited knowledge of the Internet. I found that self-assessment was not necessarily a reliable tool in this class. Just as some learners tended to overrate their skills, under-rating was also an issue in this class.

Learners talked about using the Internet, but actually meant they could reply to an email sent to them. Learners needed to learn the difference between the Internet and email.

I believe there is a positive correlation between teachers’ attitudes to the computer and how learners enjoy their time in the computer room.

‘My computer’s broken!’
The learners were very quick to blame the computer for their errors. I often had to say ‘There is nothing wrong with the computer or the Internet’. I believe it is important for
the computer operator to take responsibility and this is where accuracy has to be emphasised.

‘I can use the Internet’ (but I’ve never been taught how)

The Internet has been introduced so rapidly that many people have used it without actually learning ‘how’. Therefore, the inherent frustrations that the Internet can cause are often due to the unknown. I often heard ‘my computer is broken’ or ‘the Internet isn't working’ or ‘there is a virus’ and checked to find out that the URL had been entered incorrectly, they had faced a pop-up and not known what to do, the Internet site had shutdown or, less often, the server was actually down. Once I gave learners clear instructions and reasons for doing things, everything became much clearer to them. When problems occurred, learners were then often able to work out why they occurred and what to do.

Learner differences

I have found a number of differences between different levels of language learners in the attitude with which they approach the Internet and the way they approach it. For example, learners with high English oracy but not necessarily high literacy, got easily frustrated with the accuracy required for keying in URLs. They sometimes got to where they wanted on the Internet but usually through sheer perseverance rather than skilled searching. They often changed computers as well, giving up on a machine that displayed an error message or other problem. On the other hand, learners with high literacy rates, tended to have fewer problems weaving their way through the www.

There is always more than one solution (especially with Windows!)

I found that it is important for learners to be aware that there is more than one way to get somewhere on the Internet and that no one way is correct. Learners became frustrated if they observed a classmate doing something different related to the same task. Learners tended to relax more once they were aware of flexibility within the Internet.

Consistent errors

For some reason, learners found it very difficult to leave out prepositions when doing Internet searching. On observing a not-so-good search I conducted using the data projector, they were often able to point out why, but then made the same mistake themselves.

Once learners knew how to backtrack on the Internet (using that wonderful back arrow) there was less tendency to dive deeper into mayhem, and more to surf back to sense.

Exposure

I also thought it important to expose learners to different types of Internet sites. It seemed pointless to only expose them to factual, well-designed sites, as it is highly unlikely that when they are doing their own searches they will end up on these pages. Rather, I believe that allowing learners to free-search and then to analyse them was useful. Free-searching also gave learners experience dealing with pop-ups and error messages.
This reflects my beliefs about the use of realia and ‘real conversations’ in the classroom. Is it better for a learner to learn from a traditional course book where the conversations are certainly not natural but very predictable with strict grammar guidelines? Or is it better for a learner to be exposed to natural dialogues, which contain broken sentences, interruptions, back channels, overlapping speech etc? Or is there a need for both? Obviously there are factors here, such as learner differences and backgrounds, that teachers need to take into account.

Once I had taught learners the basics in regards to searching the Internet, the language involved and basic troubleshooting, they found it extremely empowering to do free-searches where they could discover pages with different and creative layouts, interesting images and sounds, information they may not usually come across, and new and motivating language. Obviously, they will also discover not so desirable pages, but they are adults and that is reality.

Strategies

Based on learner feedback and observations over the four terms, there are clear strategies that can be encouraged to enable NESB learners to search for information on the Internet more effectively and efficiently. Learning about the language of the Internet and what things actually mean was important, as was having an image of how the Internet worked. Concepts needed to be explained clearly and slowly with a lot of time for practice and a lot of repetition when needed. I noted that learners certainly used knowledge from previous classes and that sequencing of skills was important. Skills learnt from a lesson on Microsoft Word for example, provided tools useful for learners using the Internet. A lot of this is thanks to the generic Microsoft Windows model. Fortunately for the learners, this model is now widely used.

Some examples of important strategies teachers can use to encourage NESB learners to use the Internet more effectively and efficiently are summarised below:

- Provide clear instructions.
- Provide lots of repetition.
- Provide good examples.
- Give useful rules.
- Provide ongoing troubleshooting tips.
- Expose learners to a wide variety of sites.
- Encourage learner autonomy.
- Take advantage of scaffolding and sequencing of learning.
- Practise, practise, practise!

The Internet is an extremely popular tool for gaining information and enhancing language skills, so it should be used to its full advantage. NESB learners should therefore be encouraged to develop these skills with competent and well-planned instruction by knowledgeable and well-trained instructors.
Worksheet 1: Information sheet

Computer Information Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Country of birth</td>
<td></td>
</tr>
<tr>
<td>Languages spoken</td>
<td></td>
</tr>
<tr>
<td>Date of birth</td>
<td></td>
</tr>
<tr>
<td>Primary and high school</td>
<td>(How many years?)</td>
</tr>
<tr>
<td>Qualifications</td>
<td></td>
</tr>
<tr>
<td>Date of arrival</td>
<td></td>
</tr>
<tr>
<td>Profession</td>
<td></td>
</tr>
</tbody>
</table>

Computer experience

<table>
<thead>
<tr>
<th>Do you own a computer?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have Internet access?</td>
<td></td>
</tr>
<tr>
<td>Do you use email regularly (How often)?</td>
<td></td>
</tr>
<tr>
<td>What do you use your computer for?</td>
<td></td>
</tr>
<tr>
<td>How many years have you been using computers?</td>
<td></td>
</tr>
<tr>
<td>If you worked previously, did you use computers?</td>
<td></td>
</tr>
</tbody>
</table>

How would you rate your computer skills?

Poor  Fair  Good  Very good  Excellent
Welcome to Week 1 of the Level 3 Computing Course for AMEP. My name’s Louisa Kqiku and I am your teacher. We are going to learn lots of things in the next eight weeks, but we will also be reviewing some things you might know already. We will focus on four main Microsoft Programs: Microsoft Word, PowerPoint, Publisher and FrontPage (to make your own webpage!). In this class it is important to help each other, as this is a really good way of learning. Sometimes I will have worksheets for you, but it is also important for you to take notes. Please remember that as part of this course you will be learning and practising English – this is important for you! Following is an outline of what we will do in the next eight weeks (but this may change depending on your levels/interests). If you can think of anything else you would like to learn, then please tell me and we can fit it in. So, please enjoy the course, be patient and, most importantly, please help and respect each other.

<table>
<thead>
<tr>
<th>Week</th>
<th>Program</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Microsoft Word</td>
<td>• Manipulating tables (adding/deleting rows, changing size, etc)&lt;br&gt;• Formatting (fonts, style, colours, etc)&lt;br&gt;• Using Clipart, Word Art and bullets</td>
</tr>
<tr>
<td>2</td>
<td>Scanner, Paint, Internet</td>
<td>• Cutting and Pasting within/between documents&lt;br&gt;• Creating watermarks&lt;br&gt;• Using the spell/grammar checker effectively!&lt;br&gt;• Creating/manipulating text boxes&lt;br&gt;• Using Toolbars&lt;br&gt;• Making your documents look beautiful!</td>
</tr>
<tr>
<td>3</td>
<td>PowerPoint</td>
<td>• Creating slides and changing format and style&lt;br&gt;• Animating&lt;br&gt;• Adding colours and sounds&lt;br&gt;• Viewing slides and demonstrating to class</td>
</tr>
<tr>
<td>4</td>
<td>FrontPage</td>
<td>• Designing webpages – good and bad examples&lt;br&gt;• Adding text, scanned photos and pictures&lt;br&gt;• Animating&lt;br&gt;• Changing format and adding sounds&lt;br&gt;• Adding hyperlinks and bookmarks&lt;br&gt;• Viewing work and html (hypertext mark-up language)&lt;br&gt;• Editing, etc…</td>
</tr>
<tr>
<td>5</td>
<td>FrontPage - Geocities Web Page</td>
<td>• Uploading to geocities (not as easy as it sounds!)&lt;br&gt;• Editing webpages and uploading again and again and again….&lt;br&gt;• Using File Manager in Geocities&lt;br&gt;• Information on ongoing maintenance of webpage&lt;br&gt;• Sending the URL to friends and family so they can view your page</td>
</tr>
<tr>
<td>6</td>
<td>And finally… Publisher</td>
<td>• Using the Wizard to make certificates&lt;br&gt;• Making cards and calendars&lt;br&gt;• Changing text format, size, colour&lt;br&gt;• Changing layout&lt;br&gt;• Using clipart, photos, word art&lt;br&gt;• Using Wizard for anything!&lt;br&gt;• Overall review and questions….</td>
</tr>
</tbody>
</table>
### Worksheet 3: Examples of URLs

<table>
<thead>
<tr>
<th>SOME URLs</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="http://www.yahoo.com">www.yahoo.com</a></td>
</tr>
<tr>
<td><a href="http://www.central.wa.edu.au">www.central.wa.edu.au</a></td>
</tr>
<tr>
<td><a href="http://www.google.com.au">www.google.com.au</a></td>
</tr>
<tr>
<td><a href="http://www.immi.gov.au">www.immi.gov.au</a></td>
</tr>
<tr>
<td><a href="http://www.centrelink.gov.au">www.centrelink.gov.au</a></td>
</tr>
<tr>
<td><a href="http://www.un.org">www.un.org</a></td>
</tr>
<tr>
<td><a href="http://www.sbs.com.au">www.sbs.com.au</a></td>
</tr>
<tr>
<td><a href="http://www.bbc.co.uk">www.bbc.co.uk</a></td>
</tr>
<tr>
<td><a href="http://www.guardian.co.uk">www.guardian.co.uk</a></td>
</tr>
<tr>
<td><a href="http://www.coca-cola.com">www.coca-cola.com</a></td>
</tr>
<tr>
<td><a href="http://disneyland.disney.go.com/">http://disneyland.disney.go.com/</a></td>
</tr>
</tbody>
</table>
Worksheet 4: How searches work
Worksheet 5: Web language
Worksheet 6: Student feedback

Course feedback

Some things I learnt about Internet searching that I didn’t know before:

Good things about the class were:
Chapter 7
Skills for reading webpages in L2

Robyn Lang - Moreton Institute of TAFE, Queensland

Context
The following information is the result of action research over a ten-week term with 20 learner participants. These learners were enrolled at Moreton Institute of TAFE, Mt Gravatt Campus, in Certificate of Spoken and Written English Level 3. They attended classes for 15 hours per week, of which one hour per week was spent in the computer room. The majority of learners in this class have come to Australia as business migrants.

Learner profiles

Table 4: Student profile (Teacher: R Lang)

<table>
<thead>
<tr>
<th>Learner</th>
<th>Teacher assessment of computer literacy</th>
<th>Self assessment of computer literacy</th>
<th>Previous Internet experience</th>
<th>Level of education</th>
<th>Gender</th>
<th>Age</th>
<th>Country of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High</td>
<td>High</td>
<td>Yes</td>
<td>Tertiary</td>
<td>M</td>
<td>52</td>
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</tr>
<tr>
<td>2</td>
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<td>Yes</td>
<td>Secondary</td>
<td>F</td>
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</tr>
<tr>
<td>3</td>
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<td>46</td>
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</tr>
<tr>
<td>4</td>
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<td>Yes</td>
<td>Tertiary</td>
<td>M</td>
<td>31</td>
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<tr>
<td>6</td>
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<tr>
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<td>Secondary</td>
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<td>25</td>
<td>Fiji</td>
</tr>
</tbody>
</table>
As can be seen from Table 4, self-assessment and teacher assessment indicated that learners had medium to high levels of computer literacy in either their first language or English. All learners had some experience using the Internet in either their first language or English and all owned a home computer. The focus for this study was to determine what skills they required in relation to searching for and reading webpages, and to develop these.

Course goals
The general aims of classes to develop skills for reading webpages were to teach learners to locate information from the Internet and apply this information to a range of activities leading to a number of course learning outcomes. The classes focused primarily on:

• familiarising learners with a range of social, commercial, recreational and business activities to be used by themselves and their families in the wider Brisbane metropolitan area

• teaching learners a range of skills in order to locate and read suitable websites containing this information

• introducing learners to websites providing online language tuition for them to access off-campus.

Observation of learners in class, feedback in writing and in spoken discussion about their experiences would lead to identification of the skills they required.

Stages of teaching
Stage 1
Two, one-hour sessions: one in the general classroom and one in the computer classroom. Learning materials are included for the computer session.

• The site (URL: www.brisbanelivingheritage.org) was selected to precede participation in a special workshop conducted by Queensland Parliament Education Services for adult migrants in intermediate and advanced courses. The workshop was to:
  - introduce the Queensland parliamentary system including participation in the debate for a mock Parliamentary bill
  - describe optional preferential voting including a mock election.

• The time allocated for a tour through Parliament House was limited; therefore, this Internet lesson aimed to introduce learners to Queensland Parliament House prior to the workshop and guide them through activities relating to the history, purpose and use of the building and the institution of Parliament.

• In the general classroom, the reason for using this website was explained and copies of the worksheet, in which learners get to the webpage and through the links (including a virtual tour), were distributed (see Worksheet 1).
Teaching in Action 2

- Elements of the website were explained, including access to details of places of historical significance in and around Brisbane, virtual tours, maps, opening times, admission costs etc. Class discussion included places in the Brisbane region learners might visit with their family and/or friends.
- Students then completed the worksheet in the computer class working individually but helping each other when needed.

Stage 2

Four one-hour sessions in the computer classroom using URL: www.google.com.

- The computer classes were part of a series of lessons relating to living in Brisbane and included:
  - the role and functions of Brisbane City Council
  - their services and facilities for residents
  - reasons and methods for contacting the Council
  - annual events, such as the River Festival and the Brisbane Exhibition (or Ekka)
  - newspaper articles and TV interviews dealing with fire, storms and burglary and the need for insurance against these events.

These lessons were planned to meet the learning outcomes of a number of course learning outcomes such as understanding a spoken information text or reading a procedural text.

- Since learners identified a number of problems reading the Brisbane Living Heritage website, this lesson was also used to distinguish problems related to the general skills of reading websites and those related to English language skills.
- Before the computer class, learners were given an explanation about using a search engine (Google) to find specific information on a topic.
- Before each computer class, worksheets were distributed, read and discussed. Activities included:
  - selecting and using keywords to search for a specific webpage via Google; for example, brisbane council / brisbane river festival / brisbane ekka / home insurance
  - selecting buttons for whole of Web or Australia
  - reading resulting list and identifying the most appropriate website
  - reading homepage and identifying the most appropriate links
  - using each site as a source of information about locations, activities, community information, prices, dates etc.

- The Brisbane City Council website is comprehensive and is constantly
Chapter 7
Skills for reading webpages in L2

upgraded. Important information has been translated into a number of languages other than English. In this computer class, learners searched for translations of information into their first language, if available.

Follow-up activities for Brisbane City Council were (a) writing a formal letter and (b) participating in a transactional telephone conversation.

• The River Festival and the Ekka are two major public annual events in Brisbane attended by large numbers of local residents. Learners searched for information about dates, times, costs, locations, parking, transport etc.

Follow up activities for Ekka were a discussion of the positive and negative qualities of (a) the website and (b) the event.

Follow-up activities for River Festival were (a) reading advertisements for the event, (b) reading news articles about the event, and (c) spoken explanation from learners who went to the River Fire or other events.

• Storms, theft and bushfire are often in newspaper articles or on TV news. Learners were unfamiliar with processes and costs for insuring property.

Follow-up activities for home insurance included role-play telephone enquiries regarding home and contents insurance against storm damage and making a claim.

Stage 3
Three, one-hour sessions in the computer classroom (see Worksheet 2 with screen printouts at the end of the chapter).

• Before switching on the computers learners were given whole-of-screen printouts of the homepages of two webpages: www.brisbane.qld.gov.au and www.ourbrisbane.com. The focus was to identify details within the screen and webpage layouts.

• Using the printout of the whole screen, earners wrote on the first printout (www.brisbane.qld.gov.au) the names for various elements of the screen.

• Pairs of learners then compared the screen in the first printout with the second (www.ourbrisbane.com) and checked that the location and function of these elements did not change from one screen to the next when reading webpages.

• Learners wrote on the second picture the names of the parts of the webpage.

• They then completed Worksheet 2.

• Discussion: Learners worked in pairs or groups to compare the two webpages. What elements were the same and what were different? What words and phrases were problematic?

• Follow-up activities were: Brisbane City Council - writing a formal letter; and www.ourbrisbane.com: - participating in a transactional telephone conversation.
These sessions highlighted the issues of frequent changes of website layout and content, prepared learners for these changes and gave them skills to use when they encountered them. Feedback indicated that they had fewer problems reading a webpage and using links afterwards.

Stage 4
Two, one-hour sessions in the computer classroom using URLs: www.bbc.co.uk/worldservice/learningenglish; www.bbc.co.uk/skillswise; and www.bbcenglish.com/learn

The aim of these sessions was to provide learners with a range of English language tuition websites to use on campus, at home, in the library or when out of Australia (eg on trips to their country of origin).

- The same process was followed in the lesson leading up to the computer class as for Stage 3 to familiarise learners with the appearance and layout of the screen and webpage.
- Learners were given printed copies of the whole screen for the websites.
- Learners were shown how to download a free copy of Realone Player from the Web to use at home.
- These websites are designed for self-directed learning. Learners were given worksheets to guide them through procedures leading to specific tasks and activities. These activities included listening, reading, skimming and scanning.
- Worksheets were distributed before the computer class and content and aims discussed beforehand.

Rationale for content and methodology

In discussions about the benefits and disadvantages of Brisbane as the place to settle in Australia, most learners stated fresh clean air, warm climate, good housing and safe environment for their children as the main benefits. The disadvantages were generally distance from other family members and language difficulties.

The majority of learners live in close proximity to the suburb of Sunnybank, which has developed in the past ten to fifteen years into a residential, retail and commercial area specialising in shopping facilities, restaurants and other services for the local Asian community, especially for people from Taiwan, Hong Kong and South Korea. Consequently, many learners have limited experience of other parts of the metropolitan area beyond that defined by Sunnybank, their home, their children's schools and the Mt Gravatt campus.

Before the computer lesson, learners were given copies of the two procedures: (a) for logging onto the institute computers for the first time, and (b) for subsequent log on. In their first computer class, learners were taken through the Institute procedures for setting up passwords and logging on to the education network. The first computer session was used to informally assess each learner’s general computing skills. I assessed all learners to have medium to high levels of computer literacy.

Stage 1 of the teaching cycle identified a number of difficulties learners encountered using the website for Brisbane Living Heritage. Some were design-related but there
were a number of language-specific issues. Stage 2 confirmed what language skills learners required in order to read webpages. Stage 3 addressed these specific skills and introduced the reading skills necessary to navigate through an English language webpage. Stage 4 provided learners with a range of language tuition options in the context of reading a webpage. In particular, skimming and scanning were identified as skills for which learners required much practice.

Learner achievement
Following identification of the reading skills learners required in order to navigate through English language webpages and specific teaching of these skills, learners were able to:

- find search boxes
- find A–Z fast links
- read underlined words (hyperlinks) before clicking the mouse
- check drop downs
- use nouns or noun groups for key words in both Google and Search boxes in websites
- distinguish advertisements from legitimate information
- check the URL for accuracy (e.g., case, punctuation, spelling etc).

Issues
The following issues relating to the websites used in these lessons included those learners identified:

Stage 1

(www.brisbanelivingheritage.org)

- Once in the Parliament House section, the information and layout is easy to follow.
- Virtual tour is interesting and easy to navigate.
- The activity was useful before the visit to Parliament because it covered a lot of information not covered on the visit.
- Main map is uncluttered and easy to use.
- Difficult to read typescript on homepage – small and poorly coloured.
- From the language used (e.g., Heritage Locations, Image Gallery, Getting Around etc) it is not evident what information is in the link.
- Brisbane Living Heritage Locations list is long with very small and difficult to read typescript, so finding a specific place (e.g., Parliament House) is difficult.
- Some links are not evident.
- Technical problems caused by Microsoft viruses created many delays and frustrations during the first few attempts at using this website.
• Observations during lesson and feedback from learners indicated that prior teaching of the layout and language in webpages is necessary to avoid difficulties such as getting lost and not understanding links.

Stage 2
(www.google.com)
• Fast, quick information.
• Only a few words to read on the homepage.
• Easier to use than first language search engines, for example Yahoo!
• Gives you some help when you do not know the address.
• Easy to use.
• Gets a lot of information.
• Can use Yahoo! in first language but it is very confusing in English since it contains too much information.
• Subsequent to this lesson, many learners continued using Google regularly to find websites and other information.
• Problems choosing key words – if key words are not accurate, site selection can be confusing and not appropriate.
• Easy to get lost.
• Can end up far from where you wanted to go or even get lost.

Stage 3
(www.brisbane.qld.gov.au and www.ourbrisbane.com)
• If the URL is wrong then you end up at the wrong place.
• Fast Links A–Z is very helpful for finding information (eg parks, libraries).
• Search box is very useful (eg type in name of suburb M t Gravatt or service – buses).
• Provides some other languages when you get stuck.
• Too much information on the page.
• Advertisements look like other information.
• When using for the first time, a lot of time is spent finding information.
• Middle section of homepage changes frequently and can be confusing as well as problematic when preparing class work in advance.
• The webpage layout and design changed between preparation and the computer session so that some of the activities could not be completed.
• Learners need practice in skimming and scanning for information.
Stage 4

(www.bbc.co.uk/worldservice/learningenglish; www.bbc.co.uk/skillswise; and www.bbcenglish.com/learn)

- Many learners continued to use these sites. Sites are useful for learners who want to do self-paced extra English language activities at home or in their spare time, for example at the library.
- Listening activities are current, updated regularly, easy to use and interesting.
- Grammar and vocabulary – very useful and many kinds of activities.
- Links are clearly defined.
- Activities are very useful.
- Language used is unambiguous and easy to understand.
- Difficulties experienced with Realone Player from BBC site – some other listening activities in the website do not require Realone Player.
- Changing middle section created some difficulties when activities are prepared in advance.
- BBC Skillswise webpage has a variety of self-paced activities which learners found easy to follow and could practise at their leisure.
Sample materials

Overview of lesson procedure: Stage 1

**Topic:** Queensland Parliament House

**Lesson plan:** Navigating through a webpage for information (at www.brisbanelivingheritage.com)

**Aims:**
- To introduce learners to a local website to obtain information via a virtual tour of a place of significance.
- To familiarise learners with the Parliament House website in advance of a special Queensland Parliament and Elections Workshop for ESL learners conducted by Parliament Education Services.
- To assess learners’ skills in reading and navigating through a website.

**Plan**

1. In class discuss the nature of the website.
2. Explain the purpose of using this particular website.
   - Initial information from participants indicated a high level of familiarity with computers and Internet.
   - This activity was part of a series of lessons in preparation for the Parliament House visit and the mock parliamentary debate. These sessions included vocabulary and terms to be used; the roles and responsibilities of participants; the systems of Parliament and Government; the legislative process; etc.
3. Distribute the worksheets to be used in the computer class (see Worksheet 1).
4. Read together to identify any areas of difficulty and clarify points of vocabulary and procedure.
   - In previous computer classes, learners had been shown the procedure for launching Internet Explorer.
   - Learners were reminded of this procedure and for going to this website.
5. Learners work individually at computers but are encouraged to share problems, successes and issues.
   - One consistent problem area identified by learners was the small print used in the first stages of the website. With 50 heritage locations to read through, finding ‘Parliament House’ was difficult to find.
6. After completing the worksheet, pairs of learners explain to each other the images they selected during the virtual tour.
7. In class discussion, learners share experiences and problems such as use of vocabulary, print, links, benefits of the virtual tour etc.

**Course learning outcomes**

Module A Learning Outcome 1 Can demonstrate understanding of a spoken information text.

Module A Learning Outcome 2 Can provide a spoken explanation.

Module A Learning Outcome 3 Can participate in a discussion.

Module B Learning Outcome 1 Can read a procedural text.
Worksheet 1: Navigating a webpage

Queensland Parliament House

1. Follow the procedures for logging into the institute education network
2. Launch Internet Explorer Browser
3. Go to www.brisbanelivingheritage.com

4. Carefully read the homepage and answer the following questions:
   Who are the sponsors of this website?
   ________________________________________________________________
   How many logos appear at the bottom of the page?
   ________________________________________________________________
   What organisation does each of the logos represent?
   ________________________________________________________________

5. You are going to visit Parliament House. Which link on the homepage do you use to get there?
   ________________________________________________________________

6. Select Parliament House
   Read the Overview of Parliament House.
   There are some words which you might not have seen before. Write the words that are new to you and find their meanings:
   ________________________________________________________________
   What times can you visit Parliament House on Sundays?
   ________________________________________________________________
   What is the cost for entry to Parliament House?
   ________________________________________________________________

continued on page 92
What is the location of the building?  
Street address: _________________________________________________  
Map reference: _________________________________________________

7 Go to the Image Gallery.

As you go through the Image Gallery, what are the sixteen images?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
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Choose two of the Images.  
Read them carefully. Make some notes. You will explain these to the rest of the class in our next lesson.  
Write down any new or unfamiliar words. Find their meanings.
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________


How do you get from the Image Gallery back to the Parliament House Overview page?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

9 What is the website address for more information about Parliament House?
__________________________________________________________________
continued on page 93
10 Return to Brisbane Living Heritage Homepage.

How many other heritage places are listed?

11 Go to Getting Around.

What information is given to you on this page?

Where can visitors get more information?

12 Go to the Main Map.
What information is given on the Main Map?

__________________________________________________________________
__________________________________________________________________

What can you do using the Main Map?

__________________________________________________________________
__________________________________________________________________

13 Three links are shown at the beginning of the Tours and Trips page.

What are the names of these links?

__________________________________________________________________
__________________________________________________________________

__________________________________________________________________
Overview of lesson procedure: Stage 3

**Topic:** Brisbane

**Lesson plan:** Specific English skills for navigating through and between two linked websites.

**Aims**
- Learners can identify details within the screen and webpage layouts.
- Learners are familiar with the process of reading a webpage in order to navigate to find specific information.
- Learners use navigation tools and general features of webpages to obtain information.

**Materials**
1. Before switching on the computers learners are given whole of screen printouts showing two webpages (URLs: www.brisbane.qld.gov.au and www.ourbrisbane.com). The process for making these copies is as follows:
   - Go to webpage.
   - Press Print Screen on keyboard.
   - Open new Word document.
   - Select Paste on Tool Bar.
2. Worksheet 2: ‘Comparing two Internet sites’.

**Plan**
1. Each learner is given printed copies of the two screens. An OHT copy is shown for each. After locating the sites on the Internet, learners write on first picture (www.brisbane.qld.gov.au) the names for various parts of screen; for example, starting at the top of the picture: name of document/item on the screen; buttons to minimise; restore down/maximise; close the screen; tool bars; back and forward buttons; Address box showing URL (Unique Results Location); Go button; scroll bar; Start button; documents currently open; click.
2. Learners then compare the first picture with the second (www.ourbrisbane.com) and check that location and function of these elements does not change from one screen to the next when reading webpages. Learners write on the second picture the names of the parts of the webpage; for example, starting at the top: banner; search box and button for activating search button; tabs; hyperlinks; items that may change (eg Competitions, This Week, advertisements, sponsors, links to other websites).
3. Learners complete Worksheet 2 using the Internet.
4. Discussion: Learners work in pairs or groups to compare the two webpages. What elements are the same and what are different? What do the words on each of the tabs mean?

**Course learning outcomes:**
- Module A Learning Outcome 1 Can demonstrate understanding of a spoken information text.
- Module A Learning Outcome 3 Can participate in a discussion.
- Module B Learning Outcome 1 Can read a procedural text.
Worksheet 2: Comparing two Internet sites

Brisbane

1. Switch on computers. Log on.
2. Launch Internet Explorer.

continued on page 97
3 Type www.brisbane.qld.gov.au in the address box to go to the Brisbane City Council webpage. Look at the main picture below the banner and tabs. What does it show?

__________________________________________________________________

4 Next, go to www.ourbrisbane.com. You will get to another useful webpage for Brisbane. Look at the information between the tabs and the pictures. What is the weather forecast for today?

__________________________________________________________________

5 Look at the advertisement on the right next to the scroll bar. What does it advertise?

__________________________________________________________________

6 Use back button to go to www.brisbane.qld.gov.au. Has the main picture changed? If yes, what is in the picture? (To help you describe it, move the mouse to the picture and a short description will appear.)

__________________________________________________________________

7 Using the back and forward buttons to move between www.brisbane.qld.gov.au and www.ourbrisbane.com. How many different main pictures for the Brisbane City Council webpage can you find? ______ Compare your number with the people sitting beside you.

8 Press the close button at the top of the screen. This will close your Internet connection. You will need to launch Internet Explorer again.

9 Type www.ourbrisbane.com in the address box. Select the tab for What’s On. Move the mouse onto the orange-coloured strip below the words so that the drop-down menu appears. What links are in the drop-down menu?

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

10 Select the tab for Getting Around. Move the mouse onto the orange-coloured strip below the words so that the drop-down menu appears. What links are in the drop-down menu?

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

continued on page 98
11 Read the sections below the pictures: What’s On, Active and Healthy, Living In, Getting Around and Visitors Guide. There are two hyperlinks (shown by underlined word/s) for view and print maps. One is in Getting Around. Where is the other one? ____________________

12 Read the information under 🌱 Competitions. What are two things you could win? __________________________________________________________

13 Read the information under 📆 This Week. Name one of the activities. __________________________________________________________

14 Select the icon to visit Brisbane City Council:  

15 What is the URL (Unique Results Location) in the address box? 

Do you have a different picture again? ______________

If yes, what does it show? 

16 Click on the tab for Residential Services. How many lists of services appear on the new page? __________ How many services are in each list? __________

17 Go back to the homepage for Brisbane City Council.

18 Click on the tab for Library and Learning. How many lists of items appear on the new page? __________ How many items are in each list? __________

19 Go to Select a Council Facility. How many links are there in the drop-down list of facilities? 

20 Go to Other Council Sites. How many links are there in the drop-down list of sites? 

21 Go to Services maps: Suburb list of services. Does your suburb appear in the Suburb listing? If yes, are you in the northern, southern, eastern or western suburbs? If no, what is your nearest suburb in the list? 

Chapter 8

Online without a rope

Philippa Lipscomb – Tropical North Queensland TAFE

Can the explicit, in-class, pre-teaching of reading and navigation skills improve the understanding and use of the Internet by computer novices?

Context

In previous research, I found that learners with good reading ability but no prior Internet experience had great difficulty reading Internet-specific texts such as homepages, even as print texts (Lipscomb 2002). I was therefore interested to explore whether explicit pre-teaching in a familiar classroom environment would reduce this problem and improve learner performance in ESL/computing classes.

I investigated this question in the classroom and the computer laboratory over four terms – with 8 hours being spent in the classroom and 9.5 hours in the laboratory. The learners had low computer literacy, no Internet experience and elementary reading skills. I collected data on their ability to use five different types of websites:

- entertainment/information
- government services
- online shopping
- online travel
- games.

This data was collected in one of three different learning environments:

- heavily supported with pre-teaching
- guided
- unsupported.

Class observation, learner feedback, anecdotal records and archival records suggest that the explicit, pre-teaching of requisite knowledge and skills significantly improved the understanding and use of the Internet by these computer novices.

Client profiles

The class contained a range of learners, but the research focused only on those with no or very limited computer literacy and Internet experience as assessed by the teacher. As Table 5 shows, they were both European and Asian, primarily female and 25–64 years of age. Their education ranged from nil to degree level.
As settlement is the primary goal at this level, the course concentrated on the local environment, local facilities and services, shopping, and travel.

The specific language learning outcomes were for the learners to:

- demonstrate capacity for independent learning
- use a range of resources for learning English
- demonstrate understanding of a spoken information text
- read a procedural text
- complete a formatted text
- write a recount
- read a short information text
- write a short information text
- write a short opinion text
- demonstrate understanding of the mapping of space.

**Stages of teaching**

The six websites I chose all supported the settlement and language goals of the course. I integrated them into the teaching cycle to provide learners with an opportunity to:
• learn independently
• use another language learning resource
• read instructions
• complete forms
• read information, charts and maps
• complete charts
• write short opinion texts
• write recounts.

The sites chosen to meet these goals were:

• Great Barrier Reef: an interactive site providing entertainment and information on our local marine environment which is central to Cairns’ economy. The address is www.nationalgeographic.com/earthpulse/reef. Sample materials are included at the end of this chapter.

• Cairns Library Service: an information site with a membership application form, a simple search facility and maps showing the location of branches. The address is www.cairnslibrary.com.au.

• Healthy Habitat: an online shopping site with product images, prices and information; simple instructions and a delivery form. The address is www.healthyhabitat.com.au. Sample materials are included at the end of this chapter.

• Virgin Airlines (Australia): an online booking facility with destinations, flight options, and advertisements. The address is www.virginblue.com.au. Sample materials are included at the end of this chapter.

• Puzzlemaker: an educational games site to make word, spatial and number puzzles. The address is www.puzzlemaker.com.

• Birch Carroll and Coyle: a cinema site. The address is www.greaterunion.com.au. This was only used as a reading assessment at the end of the research project.

I followed a five-stage teaching/learning cycle, or components thereof, for each site. Table 6 illustrates how the web cycle varied with different sites.

Stage 1 Classroom

With learners, I established the context through discussion of the theme and their prior experiences. I elicited or provided basic facts with all sites except Birch Carroll and Coyle. I explained the planned learning cycle to the learners, especially the proposal to use the Internet to source information and to start their computer classes in the classroom.
Table 6: Overview of teaching and activities undertaken for different websites

<table>
<thead>
<tr>
<th>Site</th>
<th>Teaching Classroom</th>
<th>Computer Lab</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study guide</td>
<td>Workbook</td>
<td>Activity book</td>
</tr>
<tr>
<td>Great Barrier Reef</td>
<td>✓ 1.5 hrs</td>
<td>✓ 1 hr</td>
<td>✓ 2.5 hrs</td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Cairns Library</td>
<td>✓ 2 hrs</td>
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<tr>
<td>Healthy Habitat</td>
<td>✓ 1.5 hrs</td>
<td>✓ 1 hr</td>
<td>✓ 2 hrs</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Virgin</td>
<td>✓ 1 hr</td>
<td></td>
<td>✓ 1 hr</td>
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<tr>
<td>Puzzle-maker</td>
<td></td>
<td></td>
<td>✓ 2 hrs</td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Stage 2: Classroom

With the learners I undertook a ‘virtual tour’ of the website (or parts of it) using a printed study guide. The guide contained a contents page (eg Worksheets 1A & 2B), an introductory site map (eg Worksheet 1B); printouts of each screen (at high resolution) with an orientation box, simple comments and instructions to draw their attention to the reading and navigation requirements of the site (eg Worksheet 1C); and a final site map. I used this to add to their content knowledge of the theme and to introduce them to the key reading and navigation requirements of the site. Other examples of study guide pages appear at the end of this chapter.

Stage 3: Classroom

The learners completed a workbook to assess and consolidate their understanding of the study guide and to introduce or revise computer, web and site words or skills (eg Worksheets 1E–1F and 2F–2G)

Stage 4 Computer laboratory

The learners completed an activity book. It required them to interact with the site to retrieve information using the knowledge and skills acquired in Stages 1 to 3 (eg Worksheets 1G–11).
Learners were encouraged to consult their study guide rather than seek teacher
support. I observed and recorded their behaviour and level of achievement.

For students who had not undertaken Stages 2 and 3, I gave oral or blackboard
instructions to complete an activity related to the site.

Stage 5: Classroom

This involved review and extension. The learners completed individual feedback sheets
regarding their computing and Internet skills, task completion, opinion of the site and
their achievement. Learners discussed the site and their achievements. I encouraged
them to use their study guide and workbook to refine their skills further.

Assessment

The sixth site – Birch Carroll and Coyle at www.greaterunion.com.au – was used for assessment, to determine if exposure could assist learners with only elementary reading ability to:

- identify context and purpose
- read headers
- distinguish main items and advertisements
- identify stable and changing features
- understand the use of navigation symbols
- show accuracy.

Rationale for content and methodology

Content

I needed to choose websites which could support the course goals and be accessible to
learners with elementary English, low or no computer literacy, and no prior Internet
experience. The ones I chose were all relatively self-contained and user-friendly. I struc-
tured the study guides, workbooks and activity books to limit or support the language
demands of the sites and to facilitate exposure to the desired genres and learning out-
comes. In addition, the variety of topics and text types, site hierarchies, page structures
and navigation tools provided an opportunity to develop a range of computing and
Internet skills.

Methodology

I varied the teaching cycle with each site to assess the value of, and reaction to, in-
class, pre-teaching (see Table 6).

With the Great Barrier Reef and Healthy Habitat sites, I gave learners maximum
help to find their way around the Web and read the information they found. However,
I also required they do more independent work in the computer laboratory.

The Cairns Library component offered a top-down approach. The absence of a
workbook or activity book limited the learners’ interaction with the actual site and
opportunity to demonstrate a transfer of knowledge or skills. They appeared disap-
pointed and a little lost without a specific task. However, they did use the study guide
to explore the site, download the application form and read the maps. It also provided a valuable introduction to our subsequent visit to the library.

I used the Virgin Airlines site as a supplement to the Healthy Habitat site, by providing another example of online shopping. In this case, the focus of instruction was on predicting site structure and content prior to entry.

With Puzzlemaker, I gave the learners even less support but a significant challenge - to read the instructions online and make a crossword on a topic covered in the class (Anzac Day). The learners had written information about the topic and a model crossword but they had no prior exposure to this website - a scenario similar to that often offered in computing classes.

An ad hoc reading curriculum emerged during the project. The macro-skills were to:

• interpret the basic components of a web page
• demonstrate understanding of web terminology
• use web terminology
• access a complete page, with subsumed items, using reading and navigation skills
• read and use navigation tools to access required information on other pages
• understand and identify the common structures in different sites; for example, site hierarchies, page structures, characteristic features, stable and changing items and probable pathways
• identify the genres characteristic of different types of sites: context, purpose, text types, language features.

I used these outcomes to monitor the coverage of knowledge and skills in the course material and learning outcomes.

**Learner achievement**

**Language**

I introduced the learning outcomes listed in Table 7, although not all were fully exploited or achieved according to curriculum guidelines.
Table 7: Learning outcomes focused on during research period

<table>
<thead>
<tr>
<th>CSWE 2 learning outcomes</th>
<th>Assessment method - using Internet texts</th>
<th>Learning outcomes achieved (✓ = achieved)</th>
</tr>
</thead>
</table>
| Demonstrate capacity for independent learning | • Use a study guide to complete tasks in an activity book without teacher supervision  
• Follow teacher instructions to complete required tasks in a workbook  
• Evaluate own progress and use self assessment strategies in the feedback sheets | ✓80%  
✓  
✓ |
| Use a range of resources for learning English | • Uses 2 resources in a formal learning environment – print and Internet | ✓ |
| Read a procedural text | • Read the study guide  
• Read the activity book  
• Read Internet instruction for searching and shopping  
• Read Internet instructions for Puzzlemaker | ✓70%  
✓  
✓70%  
✓10% |
| Complete a formatted text | • Complete a biodata form: personal particulars and computing experience  
• Complete the library application form  
• Complete the Healthy Habitat delivery form | ✓  
✓70%  
✓80% |
| Read a short information text | • Read Great Barrier Reef homepage  
• Read product descriptions in Healthy Habitat | ✓  
✓50% |
| Write a short information text | • Write a report about the Great Barrier Reef using information from the site and class texts | ✓50% |
| Write a short opinion text | • Outline opinion of the site or the teaching approach | ✓70% |
| Demonstrate understanding of mapping of space | • Locate the branches in the maps in the Cairns library site | ✓70% |
| Write a recount | • Describe their experience learning to use the Internet | ✓50% |

Note:
% are approximate. They represent achievement according to CSWE 2 curriculum guidelines

Internet use

From a zero base, the learners made a significant improvement in the very short time of 9.5 hours. I measured their improvement by their ability to negotiate the sites with minimal help and to complete the tasks prescribed. Their achievement was noticeably higher in sites where there was explicit pre-teaching of the structure and genre of the site; for example, Great Barrier Reef, Healthy Habitat and the Cairns library. It was lowest with Puzzlemaker, although they enjoyed it.

Skills

Within the constraints of the site and with the support of the study guides and workbooks, all of the macro-skills mentioned under ‘Methodology’ were achieved.
Learners were learning to understand, predict and identify the common structures in different sites; for example site hierarchies, page structures, characteristic features, stable and changing items and probable pathways. At the end of the project, nine participants read the Birch Carroll and Coyle homepage as an unknown print text with 82% success, demonstrating that specific, targeted instruction can develop web reading skills. They performed less well on two questions, but on further investigation, I discovered this was due to poor task design or inadequate instruction. Only limited work was done on explicitly teaching them to identify or predict the genre characteristic of different types of sites (eg text types, language features).

Attitudes
The learners enjoyed the classroom component and commented positively in their feedback sheets and recount. Two comments were:

Our teacher teach us step by step how to get in to the Internet.
Yes, I like to learn that way. Because easy for me to understand.

Their approach to the projects in the laboratory was purposeful and determined.
The tutor who observed their first exposure (the Great Barrier Reef site) wrote:

All of the learners approached the task confidently.

Their perception of their ability was high, as evidenced in their feedback and comments. The tutor commented:

At the end of the class all learners expressed a sense of accomplishment.

There was a noticeable change in their reliance on me. Where the learners had a study guide, they were far more independent in the laboratory. The tutor noted:

The majority of the learners followed the instructions in the task and needed little or no help to complete the task ... Having done the theory class, the learners were familiar with the make-up of a web page so they were more willing to scan a page seeking a solution rather than putting their hand up for help. This was in stark contrast to Puzzlemaker where I was troubleshooting for two hours and the learners had to wait for attention. When asked to complete the Great Barrier Reef activity book, a control group of computer literate intermediate learners asked for more support than had the target group of post-beginner learners. Whenever they had a problem, they called for the teacher. What else were they to do?

There was also a change in attitude. Where they had the support of the study guide, their attitude was more positive; in other situations, for example with Puzzlemaker, some became frustrated, agitated and demanding as they waited for help. The tutor wrote of the Great Barrier Reef session:

One learner who had not attended the theory class became frustrated as she continually had menus popping up. The rest of the learners showed no stress or frustration, just serious concentration.
**Issues**

Issues of acceptance, reliability, systems, gender and time arose.

A computer class without computers?

The principal issue was that the planned teaching approach was contrary to standard practice for computer classes - a computer class in a classroom!

Luke (1997: 7) has commented that we ‘need to formulate pedagogies that will help all learners ... with the skills ... context ... and consequences of technologies’. But would the learners accept this approach? All the other ESL classes went to the computer lab. There were some strong-willed people in the class - would there be a riot? Would the approach work - for whom and in what ways? Would some find the ‘virtual tour’ tedious? Would the teacher’s role in the laboratory change?

Computing skills have been integrated into ESL programs for many years but this integration has usually involved what is regarded as ‘best practice’ (ie teaching learners in a computer laboratory where they learn by ‘doing’). While this is necessary at some stage, it bypasses the question of what learners have to read in order to do.

Language teachers often spend a great deal of time in computer classes running from one novice to another helping them not only to use the equipment but also to decode the screen. Could pre-teaching in the classroom reduce this problem? Being in the classroom would remove the distraction of the computer as a plaything, focus attention on the texts themselves and, in the case of nervous learners, allow for a gradual, scaffolded introduction to the images, terminology and mechanics of computing and the Internet before they faced the machines. The latter was particularly significant for a large part of the learner group - fearful, older women with limited computing and no Internet experience. It should also mean that their first interaction with the Internet would be successful instead of frustrating. And so the research project evolved.

**Guaranteeing reliability of research observations**

The second issue was to maximise the reliability of the results and conclusions. This was hopefully achieved by using a variety of sites and methods, using an independent observer, gathering a lot of archival data and feedback from learners and making detailed observations against performance and affective criteria.

**Technical problems**

There were some technical problems with passwords and computer failure but the learners were goodwilled and worked collaboratively in these situations. This required careful monitoring to ensure they were all actively participating.

**Gender considerations**

It was suggested that this passive approach may not work with men who prefer hands-on instruction. There was one male in the sample considered and he was positive and successful.

**Teacher preparation time**

One critical issue from a teacher’s point of view is time. Who has the time to make such detailed, elaborate materials for one class? Such an approach should not be neces-
sary for classes who are Internet-literate, although an entirely new site can still cause confusion - even amongst experts, especially if it is less standard in format and is not user-friendly.

Computer time wasted?

It could be argued that more time was spent on some sites than others. Also, had the equivalent time been spent in the computer laboratory alone, the results would have been the same. This seems doubtful as these computer novices made significant progress in a short time. If simply confronted with machines and written instructions, many would have lost confidence or become frustrated while they waited for teacher support.

Conclusion

Curriculum guidelines and language specialists in Australia stress the need for a gradual, explicit and structured approach to the teaching of new language genres via discussion, modelling, collaborative and, finally, independent work using appropriate texts. This approach should be extended to ESL computing classes, especially for novices. Choosing sites with conventional structures and ones that are user-friendly, preparing the learners with models accessible at their language level and assessing their understanding prior to working in the computer laboratory will not only reduce the physical and psychological demands on the teacher, it will also increase the learners' rate of achievement, confidence and feelings of control. They will be 'online with a rope'.

Reference


Sample materials

Great Barrier Reef: www.nationalgeographic.com/earthpulse/reef

Worksheet 1A: Study guide - contents page

<table>
<thead>
<tr>
<th>Reading and Navigation Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overview of WWW</td>
</tr>
<tr>
<td>- links in the Web</td>
</tr>
<tr>
<td>- a site overview</td>
</tr>
<tr>
<td>2. Looking at the whole page</td>
</tr>
<tr>
<td>(vertical scrolling)</td>
</tr>
<tr>
<td>3. Opening a new page</td>
</tr>
<tr>
<td>4. Waiting</td>
</tr>
<tr>
<td>5. Moving sideways</td>
</tr>
<tr>
<td>(horizontal scrolling)</td>
</tr>
<tr>
<td>6. Getting more information</td>
</tr>
<tr>
<td>- doing a mouse over</td>
</tr>
<tr>
<td>- using the ‘hand’</td>
</tr>
<tr>
<td>7. Getting a pop-up window</td>
</tr>
<tr>
<td>8. Looking at the different layers</td>
</tr>
<tr>
<td>9. Closing a window</td>
</tr>
<tr>
<td>10. Getting back to the Home Page</td>
</tr>
<tr>
<td>11. Moving to another part of the site</td>
</tr>
<tr>
<td>12. Understanding light &amp; dark print</td>
</tr>
<tr>
<td>13. Changing pages</td>
</tr>
<tr>
<td>14. Getting more information</td>
</tr>
<tr>
<td>15. Getting Home</td>
</tr>
<tr>
<td>16. Looking at the Web site</td>
</tr>
</tbody>
</table>
b. The Great Barrier Reef - Web Site

The National Geographic has a lot of information about the Great Barrier Reef on the ‘web’. We are going to look at some of it. We will start in the ‘earthpulse’ site.
2. Looking at the whole page

This is the Great Barrier Reef - Home Page

Top of the page

Rising off northeastern Australia, the Great Barrier Reef is actually more than 2,500 coral reefs. Thriving in clear, shallow, coastal waters of tropical seas, coral reefs boast a diversity of species rivaled only by that of tropical rain forests. And like rain forests, reefs have declined drastically due to human actions—a fact that makes the relative purity of the well-protected Great Barrier Reef all the more vivid.

Experience this underwater Eden...

DIVE NOW>>

bottom of the page

1. Put the arrow on the slide.

2. Click on the left ‘ear’ of the mouse.

3. Move the slide to see the bottom of the page.
8. Looking at the different layers

You can now see many different ‘windows’. They open on top of each other.

Screen 1
Great Barrier Reef (home page)

Screen 2
DIVE NOW

Screen 3
DIVE NOW:
more information on hard corals

Screen 4 Pop up
FULL STORY AND PHOTO: hard corals

Screen 2 Pop up
FULL STORY AND PHOTO: more information on hard corals
Worksheet 1E: Workbook

Part 2 Moving the mouse

Correct these sentence

1. I put my (thumb/finger) on the left side of the mouse
2. I put my (first/middle) finger on the right side of the mouse
3. I (must/must not) keep it flat on the mouse pad
4. I (must/must not) move it slowly
5. I (must/must not) look at the screen at the same time
Worksheet 1F: Workbook

Part 5: Navigating — Moving About

1. How do I move the page down to the bottom?

2. How do I go to DIVE NOW?

3. How do I go back to another page?
Worksheet 1G: Activity book

1. The Map

What can you see on the map?

____________________________________________________________

____________________________________________________________

____________________________________________________________

____________________________________________________________
Worksheet 1H: Activity book

You have dived! Look around.......... 

Mouse Over to find out the names of these corals, fish and animals.

Do not click (clicking will open a new window)

___________________________
(name)

___________________________

___________________________

___________________________
Worksheet 1I: Activity book

Pop-up windows

Get the Full story and photo for three animals or coral.
Write down the name of each one.

Pop-up window 1: ________________________________
Pop-up window 2: ________________________________
Pop-up window 3: ________________________________
Worksheet 2A: Study Guide - Thinking about pathways

Healthy Habitat: www.healthyhabitat.com.au
Worksheet 2B: Study Guide - Contents page

### Online Shopping

Shopping: in your town & on the Net 1

Healthy Habitat: the shop & web site 3
1. Enter the shop 5
2. Look around 6
3. Move about 7
4. Start shopping 9
5. Narrow your search 12
6. Choose an item 14
7. Check your purchase 16
8. Keep shopping 17
9. Browse 18
10. Choose another item 21
11. Check your purchase 22
12. Do more shopping 23
13. Make changes (Quantity) 25
14. Make changes (Remove) 27
15. Checkout 29
   - A new customer 30
   - Customer details 31
   - Delivery 33
   - Order details 35
16. Search 36
17. Get the search results 37
18. Look back 39
Worksheet 2C: Study Guide - Introducing site terms and navigation instructions

2. Look around

You are in the shop………look around. This is the first page.

We call it the Home Page.

This is the top menu

1. look at the items for sale
2. buy things
3. pay for things

In this shop, you can...........

[Diagram showing website interface with highlighted sections]

in Australia we say shopping trolley
Worksheet 2D: Study Guide - Shopping

7. Check your purchase

The book *1001 Natural Remedies* is in your shopping cart. This page shows your purchase in 2 places: in the middle and on the top right.

Check 2 things:
- the quantity
- the price
Worksheet 2E: Study Guide - Exploring options

13. Make Changes (1)

**Change the quantity**

You have ordered 1 Chamomile Tea but you want 2.

Do 2 things:

1. **Change the quantity**

   - Change the quantity
   - Press You will get the new price.

2. Press Recalculate You will get the new price.
Worksheet 2F Workbook - Revising terms and processes

Web Crossword 1

Across
2. We use an ________ (→) to point.
4. _________ is often used by government organizations in web addresses.
5. The ________ of a business or company is often the second part of a web address after www.
8. We usually click on the ________ ear of the mouse to move and type.
9. When we move slowly down a page on the screen, we ________.
10. _________ is often used in education web addresses.
11. Small windows which open in other windows are called ____-up windows.

Down
1. The _____________ is the last part of a web address except for USA.
3. Advertisements are often on the ___________ side of the screen.
4. It is a good idea to __________ what a site will look like before we use it.
6. A _________ gives a list of items or the contents of a web site.
7. A menu which looks like this is called a ______-down menu.
Worksheet 2G Workbook - Completing forms

### Ordering Goods
Imagine you are shopping. Fill in the form with your details.

<table>
<thead>
<tr>
<th>Customer Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Last Name</td>
</tr>
<tr>
<td>Company</td>
</tr>
<tr>
<td>Phone</td>
</tr>
<tr>
<td>Email</td>
</tr>
<tr>
<td>Password</td>
</tr>
<tr>
<td>Confirm your password</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Billing address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
</tr>
<tr>
<td>City</td>
</tr>
<tr>
<td>State</td>
</tr>
<tr>
<td>Postcode</td>
</tr>
<tr>
<td>Country</td>
</tr>
</tbody>
</table>

**Customer Survey**
- How did you hear about us?
  - Friend
  - Internet Search
  - Advertisement
    - Brochure. If so where?
    - Referral. If so who from?

- As a customer you will automatically receive our monthly newsletter full of free healthy home advice, new product updates and specials. Please uncheck this box if you do NOT want to receive this email.

**Delivery Comments**
Please provide any special delivery requirements if you are not at home (e.g. in the garage)

Please write your card message here if you selected the card & gift wrapping option.
Section 3
Where to now?
Chapter 9

Implications for reading the Web – where to now?

Denise E Murray and Pam McPherson – Macquarie University, Sydney

This volume has provided snapshots of several different adult ESL classes where teachers effectively scaffolded ‘reading to navigate’ and ‘navigating to read’ in order to help learners both find information on the Web and develop their digital literacy – a literacy they are likely to need in their future educational, social and personal lives. As a result of this explicit instruction, learners not only gained web literacy, but also confidence in their own ability to use and evaluate the Internet and to become more autonomous learners. At the same time, teachers learned from each other’s experiences as they discussed their materials, instructional strategies and learners’ attitudes, behaviours and achievements.

Teachers reported varying gains in learners’ web literacy because of differences in the learners themselves and differences in course objectives across the five classes. Because Robyn’s class (Chapter 7) had all had previous Internet experience and, in general, higher levels of previous education and English proficiency than some of the learners that Katherine (Chapter 4), Philippa (Chapter 8) and Shirley (Chapter 5) focused on for their investigation, she was able to take learners further in their web literacy. For example, she was able to help learners critically evaluate webpages by having them compare different pages on the same theme (the city of Brisbane). Katherine focused on learners at the extremes of the web literacy continuum, while Philippa focused only on those with no previous Internet experience, and Shirley’s class had mixed previous experience. Louise’s class (Chapter 6), on the other hand, like Robyn’s class, all had previous Internet experience but the class itself was a computer literacy class, not only an English language class. Thus, the learning objectives were rather different from the other four classes, although language learning outcomes, such as oral presentation, were also included. Despite this variation across classes, all teachers noted that all learners developed web literacy to some extent, while also developing their English language proficiency.

Scaffolding web reading

Teachers explicitly taught learners how to read the Web through analysis of the language and structure of webpages; carefully structured, guided tasks that helped them read and use navigation tools and content; and finally, through opportunities to complete tasks independently.

Web literacy

Learners achieved a variety of skills related to web literacy. Some of these were functional skills, but others began learners on the path to critical literacy. Four of the teachers taught searching skills. Philippa – working with a group of learners with no previous experience of the Internet, who were mostly older and many had lower levels of previous education – chose all the websites for her learners since this was their first exposure to this new literacy and they only had nine and a half hours of instruction...
devoted to Internet learning. The other four groups of learners, however, acquired the ability to:

- choose effective search terms
- type the search words accurately
- refine the search by choosing search words appropriately
- read the results of their search
- choose appropriate websites:
  - based on heuristics such as choosing .gov or .edu rather than .com
  - by scanning search results.

Learners in all classes also learned to navigate around webpages themselves, learning to:

- locate elements of webpages
- use different webpage icons, for example back button
- distinguish advertisements from other information
- distinguish reliable from less reliable information
- identify the purpose of different sites
- predict the content of different sites
- move between pages purposefully
- judge the usefulness of different sites.

Teachers did note, however, that not all learners developed at the same pace, with some taking more time and some requiring repeated scaffolding and practice. In some classes (Robyn's and Louise's) learners also learned to compare and contrast different sites on the same topic.

As well as learning the meta-knowledge of 'how knowledge, ideas and information “bits” are structured in different media and genres ... [and] the technical and analytical skills with which to negotiate' (Luke 1997: 10) these media and genres, teachers also introduced learners, mostly through their own empowerment, to the notion of how these media and genres operate to empower or disempower different groups. Of course, these learners' English proficiency didn't allow for in-depth critical literacy development. However, the path towards such a goal has been laid through this explicit instruction.

Language learning

As well as developing web literacy, learners also achieved language learning outcomes, since all but Louise's class were focused on language learning. Since Louise's class was a computer literacy class, she paid less attention to text types, but focused on web literacy and vocabulary. In the other four classes, language learning outcomes included reading information texts (Katherine, Philippa, Robyn, Shirley), reading a procedural text (Katherine, Philippa), completing a formatted text (Philippa), writing a short opinion text (Philippa), writing a recount (Philippa), writing an information report
(Katherine), responding to spoken instructions (Katherine), understanding Internet language (for example pop-ups), preparing and presenting an oral presentation (Shirley), writing a formal letter (Robyn) and participating in a transactional conversation (Robyn).

Content learning

Since this is both a language and settlement program, content about settling in Australia is vital for these learners’ success. The Internet provided many opportunities for learners to access and learn about information important for their lives. Such information included information about their city (Adelaide, Brisbane and Perth), other towns in their state (Shirley), locally important information (Philippa’s choice of the Great Barrier Reef site) and shopping online (Philippa).

Change of attitude to using the Internet

All teachers reported the increased level of confidence their learners felt as a result of successful experiences with web-based tasks. They were successful in these tasks because of the way teachers carefully scaffolded instruction, often initially outside the computer classroom. Their confidence was increased because their first experience with the computers was successful and therefore highly motivating. Shirley describes one learner who did not use information from the Internet for his oral presentation because he preferred the library as a source of information, having never touched a computer until three weeks before she met him. However, having gained confidence through her scaffolded instruction, he did later read and present information from the Internet on another topic.

Teacher time

An issue that was raised, especially by Philippa, was the amount of time needed to provide the extensive, scaffolded materials for learners, as evidenced by her supporting materials. However, this needs to be weighed against the less stressful in-computer classroom time she and her tutor experienced. It is clear from other research, that teaching using information and communication technology (ICT) is more demanding of teachers’ time, which is often overlooked by administrators who see ICT as a way of reducing staffing costs. One estimate (Palloff and Pratt 1999) is that face-to-face instruction takes around 6 to 7 hours per week of preparation, while online instruction takes around 18 to 19 hours per week. In our earlier research, a teacher who had been building his own webpages for more than a decade indicated that it takes him eight to ten hours to design and build a lesson page, while building the original site takes several weeks (Murray 2003).

Becoming autonomous learners

Teachers noted that students relied on the teacher less once they had received explicit instruction on how to read to navigate and navigate to read. Philippa, for example, noted that she and the tutor who took her class in the computer laboratory were not having to run from learner to learner to provide help. Other teachers included instruction in using language-learning websites so learners could become more autonomous. Shirley, for example, had her learners use a study-skills website to learn about oral presentations, while Robyn had the class explore three different language learning sites.
Teacher learning

An outcome of using a collaborative action research model (Burns 1999) is that, in addition to the teacher learning that occurs through teachers experimenting with new methods and materials, observing their effects, and making changes to instruction based on these observations, teachers also learn from discussions with each other and the university-based researchers. During the course of this study, teachers met together several times to report on their materials and observations and also their plans for the next term. Teachers then discussed and commented on each other’s work supportively, and collaboratively, resulting in teachers adopting strategies from each other, experimenting with them in their classes and observing their effects. Through this teacher interaction, we believe that knowledge transfer and therefore teacher learning was more sustainable.

As others have noted (for example, Bartels 2005), exposure to new knowledge about language and pedagogy does not automatically lead to teacher learning and transfer to practice. However, when teachers work together to share experiences and solve specific problems, they expand their knowledge and change their practice (Lier and Freeman 2002). Philippa demonstrated how she used print materials in class to help learners understand the structure and language of webpages and other teachers, using this idea, also experimented with print-based pre-teaching materials, finding that this helped to avoid learner-frustration in the computer laboratory. In another collaborative session, Robyn demonstrated websites she was planning to use with her class. Through discussion with teachers and the university-based researcher, Robyn found that one of the websites (www.brisbanelivingheritage.org) had some unconventional features, non-transparent vocabulary and user-interface problems that could make it difficult for learners to navigate. She therefore pre-taught some of the necessary features, but also used the site to determine learners’ ability to read webpages. Additionally, she had learners compare this website with another one that also offered information about their city.

Conclusion - where to now?

The learners in this study – while intermediate in their English language proficiency – were able, through scaffolded instruction guided by their teachers, to achieve functional skills of web literacy. They also started on the path of critical literacy. As Luke (1997) notes, critical literacy requires mastery of meta-knowledge, mastery of technical and analytical skills and understanding the power relations involved in literacy events. These learners have started to master the first two areas of knowledge and have been introduced to the last. They are on a path to critical literacy.

However, a number of issues and questions were not addressed or not answered in this study and require further exploration:

- The development of scaffolding strategies for developing critical literacy, especially in regards to power relations embedded in literacy practices (for example, critiquing online advertisements or print advertisements about technology to uncover how they position the reader)

- The exploration of cultural differences in web literacy, especially in interpreting icons (eg trash bin) and other Internet-specific elements – such explorations could also examine the cultural biases on the Internet
• A more formal study, using pre- and post-assessments of web literacy and language

• A study taking up Philippa’s suggestion that male learners may be less comfortable with such a tightly scaffolded approach; in other words, an investigation of learning styles and their effect on an explicit, scaffolded approach.

All teachers and researchers in this study would agree with Luke (1997: 32) that

... the provision for all students – regardless of social circumstances, age, geographic location, or ability – of the technological and literacy skills requisite for equitable workforce competition and meaningful participation in society, is both a social responsibility and entitlement of all Australian students in the impending Information age.

This study has demonstrated that these AMEP teachers are ensuring such participation and workforce preparedness for their adult migrant learners.

References


