READING STRATEGY AWARENESS TRAINING TO EMPOWER ONLINE READING

Liaw Meng Lai

SMK Seri Tanjong, Melaka

ABSTRACT

This article discusses the new characteristics of online texts which demand new literacy in comprehending the different types of online texts. Using Anderson's Online Survey of Reading Strategies (OSORS) inventory, the writer initiates strategy awareness training to facilitate and scaffold learners' online reading tasks. Analysis of the learners' activities and responses after the strategy awareness training reveals that learners are more aware of selecting more strategies that fulfil their desired learning outcomes. In addition, learners also conceived new strategies unlisted in the OSORS inventory. Results indicate that strategy awareness training could help in highlighting pertinent strategies and empower learners to read online.

Introduction

The Internet boom in the 90s has contributed to the change in media where a vast amount of information is delivered via the World Wide Web (WWW or the Web). As a result there is an information explosion and the Web is saturated with a vast amount of information. It is also common knowledge that, presently, many students are very much attracted to computers and they are deeply absorbed in the world of the Internet. Going by testimony, many students are reading or engaging with others online to chat, multitask and even write their own Blogs. Ironically, most of them are denied these online opportunities in class and we, as teachers, could lose them if we do not capture their interest.

As educationists, we know it is important for our teaching and learning to evolve and adapt to meet the needs of our students. Moreover, a basis of improving in any language is through reading and the Internet could be a good reading tool. The advent of the Internet also allows us quick access to a variety of worldwide literature. Hence, considering the wealth of texts of different genres on the Web, it can be a rich source of input especially for L2 readers. The founder of the Internet Protocols (IP), Dr Vinton Cerf ("V. Cerf on Surfing", 2008) also claims that more and more people are turning to the Net for information and answers. Therefore, the Web

could be a useful tool if incorporated into the school curriculum. This underlines the importance of reading information and texts displayed online on the Internet.

Modern literature has also shown that literacy practices have moved off the page and onto the screen as more and more people are reading, writing and communicating online instead of offline (Warschauer, 1999). This shows the infiltration of online texts which has a tremendous effect on 21st century literacy practices in education. Another concern is, when it comes to sourcing information from the Web for research or academic purposes, students merely surf randomly and do not know how to 'crawl out' of the Web when they are stuck with 'dead' or 'broken' links. The reason is, unlike printed texts offline, hypertexts online comprise new characteristics which demand good strategies to 'fish out' appropriate information with a click of the mouse. What are the characteristics of hypertexts online?

Different Types of Hypertexts Online

Marcus (1993) (cited in Pennington, 2003) states that hypertext refers to electronic-texts (e-texts) that are linked to a mosaic of information in a variety of textual, visual or auditory forms and genres. Coiro (2003) outlines the three types of online texts as non-linear hypertexts, multiple-media texts, and interactive texts.

Non-linear Hypertexts

Information in conventional printed texts is shaped by the author and readers have to follow the author's intended plot or expository structure. In contrast, in online texts, there are many hyperlinks embedded within short passages. Coiro (2003) explains that these hyperlinks allow readers to navigate their own path that is different from the intended path of the author. It is also worth noting that non-linear hypertexts allow the readers to have ultimate control of the direction in which the text progresses. This also means that the reader requires new skills and strategies in navigating hyperlinks in order to comprehend the online reading texts (ibid). All in all, this points to the importance of a new literacy with the ability to do inferential reasoning, to anticipate differences and to decide whether or not to click the hyperlinks (ibid). Without this new literacy, surfing blindly and randomly could be daunting and fruitless. But, it could be otherwise if the learners are armed with this new online reading literacy. Thus, reading in the on-line environment has become a critical literacy skill.

Multiple-Media Texts

Unlike traditional print equivalents, online texts integrate a diverse range of symbols and multimedia formats such as icons, animated symbols, photographs, cartoons,

and advertisements, audio and video clips (Brunner & Tally, 1999). Furthermore images and sounds are combined with written texts to create new ways of conveying meanings, explaining procedures, and communicating effectively (Downes & Fatouros, 1995, cited in Coiro, 2003). As we can see, the video clips on urban air pollution (see http://edugreen.teri.res.in/explore/air/air.htm) allow students to see and experience the authentic effects of urban air pollution. Additionally, animations on the virtual harvesting process of alternative energy resources such as solar and nuclear energy (see http://www.darvill.clara.net/altenerg/index.htm) are better than any books can deliver. These are some examples of the new supporting learning tools available in the Web that can help to deepen the understanding of some concepts and abstract explanations in the learning of the sciences.

Interactive texts

Coiro (2003) also highlights that, unlike the static words on a printed page, online texts are interactive. Computer-mediated Communication (CMC) tools such as synchronous and asynchronous electronic discussion boards provide a rich tapestry of interactive chat environments for the learner to participate in. To illustrate, the Blog on YEARN (Youth for Ethical Action and Respect for Nature) found on http://edugreen.teri.res.in/index.asp provides a platform for networking and sharing of ideas, views and opinions such as 'Ask an expert, Frequently Asked Questions (FAQ), Questions and Answers (Q&A)' among others. In turn, it also provides multiple and diverse perspectives on a topic discussed online. In addition, there are also some ready-made interactive online assessment tools such as crosswords, puzzles, memory games and entertaining cartoons and jokes for enrichment and enhancement activities.

But, Coiro (2003) stresses, "electronic texts (e-texts) introduce new supports as well as new challenges that can have a great impact on an individual's ability to comprehend what he or she reads". Once again, in order to navigate the chunks of information and to interact with the dizzying arrays of possibilities in online texts requires new literacy skills. Unlike the print equivalents, online texts are provided with "new formats, new purposes of reading, and new ways to interact with the information that can confuse and overwhelm the readers" (ibid). Therefore, the question is, how are L2 learners going to collect and glean information from the different types of online reading texts?

The intricate nature of the various types of online texts and multi-media on the website suggests new methods of processing and decoding online texts. In addition, it is argued that informational hypertext is different from printed informational text which prompts readers to employ unique cognitive processes and strategies

(Landow 1994; Reinking, 1997; Snyder, 1996 in Coiro & Dobler, 2006). In short, reading online demands new literacy skills in comprehending the different types of online texts available on the Web. As such, let us have a look at some studies on the comprehension of printed texts offline as compared with the hypertexts online.

Comprehension (Printed Texts Offline and Hypertexts Online)

RAND Reading Study Group (2002) warns that "we live in a society that is experiencing an explosion of alternative texts and these e-texts incorporate hyperlinks and hypermedia that requires skills and abilities beyond those required for the comprehension of conventional linear print" (pp. 14). In hypertexts online, textual materials and ideas are linked to one another in multiple ways (Burbules & Callister 2000, p. 43, cited in Coiro & Dobler, 2006). Therefore, users are free to create their own paths to negotiate information from one part of the screen to another or from one screen to another (Pennington, 2003). In other words, the readers can decide their own reading path by clicking any links embedded in order to move through the text (Rouet & Levonen, 1996 cited in Coiro & Dobler, 2006).

In contrast, printed texts are permanently static while the non-linear properties of hypertexts are dynamic and manipulable (Pennington, 2003). Hence, hypertexts require readers to take on a much more active role in determining the quality and coherence of texts they read (Burbules & Callister 2000, in Coiro & Dobler, 2006, p. 219).

Although both printed texts and hypertexts provide supportive navigational features like tables of contents or network maps, the actual content is hidden beneath multiple layers of information not viewable like traditional leafing through the pages of a book (Coiro & Dobler, 2006). Furthermore, hypertexts often have links with less semantic clarity and fewer surrounding context cues to guide the reader's anticipation about where a certain hyperlink may lead to (Foltz, 1996; Otter & Johnson, 2000, cited in Coiro & Dobler, 2006).

Additionally, "hyperlinked icons" such as navigation buttons and dynamic image maps give a visual representation of a hyperlink, rather than a textual one. Therefore, hypertext readers are expected to integrate processes for decoding and interpreting images and pictures with their repertoire of effective comprehension strategies (Kinzer & Leander, 2003, in Coiro & Dobler, 2006, p. 220).

Another difference is author's intertextual connections are more obvious and immediately accessible in hypertext (Caney, 1999, cited in Coiro & Dobler, 2006, p. 220). This instant prompting of intertextuality creates more complex texts for readers to navigate, both in their head and physically on the screen (Coiro & Dobler, 2006, p. 220).

Even though the Internet has entered into classrooms, little is known about the reading patterns and cognitive processes readers use for nonlinear digital texts (Balcytiene, 1999, in Coiro & Dobler, 2006). Leu (2002) (cited in Farstrup & Samuel, p. 219) suggests that in this digital age, it is important to identify the information-seeking strategies that we used while reading on the Internet. This draws us to the role of new literacies that encompass skills and strategies in harnessing the rapidly changing information online (ibid).

Traditionally, we assumed that online reading comprehension is isomorphic with offline reading comprehension (Coiro, 2003) but, data are appearing and showing that reading online requires additional skills and strategies. However, one study exploring the online reading comprehension strategies used among sixth-grade students by Corio (Coiro, 2003) found that online reading, despite its complex and sophisticated nature, shared a number of similarities with offline reading comprehension (Dobler, 2006). Thus, online texts possess new characteristics but they also demand basic reading comprehension skills and strategies especially at the micro-level of Web search.

Basic Reading Comprehension Skills and Strategies

According to reading researcher, Delores (1990), comprehension is the essence of reading. Coiro (no date) also emphasizes that, the reader must employ reading strategies to unlock the meanings behind the texts. In order to further enhance comprehension, Coiro (ibid) maps out five building blocks for effective reading comprehension:

Predicting	Glance over the text and predict about what you are going to read. Look out for familiar words or topics to trigger thoughts from your own background knowledge. Establish a purpose for reading.
Monitoring	Actively self-monitor your understanding of the text. Continue if everything makes sense. Stop and self correct if you do not understand. Problem solve 'on the spot' drawing from a pool of strategies.
Confirming	Be aware of the goal of the reading and stop to confirm if your earlier predictions were correct.
Reflecting	Reflect on your understanding of what you have read. Recall what you have read through organized retellings and or summarizations.
Elaborating	Analyze, integrate and elaborate on your reflections. Apply what you have read to other readings and situations.

Therefore, before embarking on any online reading, it is important for the instructor to 'scaffold' the learning by modelling some basic reading comprehension skills and strategies as students need to move from Krashen's comprehensible input (*i+1*).

Critical Web Evaluation

In the realm of the Web, readers may enter and get entangled with broken links, encounter distracting advertisements, encounter inconsistent text structures or access infinite unrelated information (Nielsen, 2002, cited in Coiro & Dobler, 2006, p. 220). Moreover, multimodal Internet texts are often mingled with hidden social, economic and political agenda not incorporated with hypertext learning systems (Leu & Kinzer, 2000, cited in Coiro & Dobler, 2006). Consequently, these result in new complexities for readers trying to synthesize the dizzying array of possibilities for intertextual and multimodal connections (Caney, 1999, in Coiro & Dobler, 2006).

According to Harris (1997), online information exists on a continuum of reliability and quality including every shade in between. Therefore, the diverse and multiple perspectives available on the Internet demand that readers adopt a more critical stance or risk being biased or being unknowingly tricked or persuaded (Coiro, 2003). Thus, reading with a critical eye involving how to navigate, skim and scan and making judgments as to source, validity, reliability and accuracy before deciding whether to continue reading, go to other links or going back and forth from the home page is equally important. This means that online reading strategies require critical web evaluation skills too.

Beck (1997) provides evaluation criteria on authority, accuracy, objectivity, currency and coverage of Web sources. Schrock (1998) also designed a series of evaluation surveys for the elementary, middle, and secondary school levels. The tips and guidelines are to enable learners to critically evaluate a Web page for authenticity, applicability, authorship, bias, and usability. She emphasizes the three basic areas that need to be considered during surfing as:

1. Navigational and Usability where the site offers hypertext links and a site map for the users to jump around.
2. Authorship where the user can find out about the credentials of the author and there must be contacts like e-mails or other Frequently Asked Questions (FAQ) for the users to enquire more about the topic covered.
3. Content Validity, the most important aspect, where users should be able to distinguish between commercial, opinion or strictly information pages.

More importantly, the user should know whether the page is appropriate for his/her purpose or task.

Again, this emphasizes the importance of equipping learners with the new literacy to locate, identify, and interpret the myriad types of online texts available on the Web. All in all, the complexities of reading online spurred the researcher to use strategy Awareness Training to empower the learners to read online.

Context of the Study

This research is directed towards the use of strategy awareness training to facilitate and scaffold learners' online reading tasks. It was conducted at an urban secondary school in Melaka. Eight Form Four students were required to read online to locate information in answering some English for Science and Technology (EST) questions based on the theme Environment. The students' profiles show that they were armed with some basic computer literacy skills such as typing, saving documents in WORD and doing simple Power Point presentations. This study aimed to find out what existing and non-existing online reading strategies were used and what online reading strategies they adapted and adopted after the strategy awareness training.

Research Instruments

The principal means of data collection was Anderson's (2003) OSORS questionnaire (Appendix A). Using a Likert-scale of 1 to 5, the subjects were required to respond according to their frequency of use of online reading strategies varying from '**never or almost never'** to **'always or almost always'**. The reliability of the OSORS was validated in a study by Anderson (ibid) and the Cronbach's alpha reported for the overall OSORS was 0.92.

Secondly, e-portfolios, an archive for the learners to compile their journal entries of strategies used and also to record their answers to the comprehension questions assigned were used. This gave the subjects an opportunity to give a wider range of answers and often give unexpected responses (Victori, 2004). The comprehension questions were also designed in such a way that the subjects are required to navigate and filter the vast non-linear hypertexts embedded in the Web.

Lastly, retrospective interviews were also carried out in order to triangulate the findings of the study.

Data Collection and Analysis

Samples of the subjects' e-portfolios were studied to determine any manifestations of strategies adopted using Anderson's OSORS inventory. First, the subjects' responses in Anderson's OSORS inventory were identified and tabulated in order to identify the existence of 'always used' and non-existing 'never used' strategies. This led to the requirement to fill in the gaps of 'missing' online reading strategies utilizing strategy awareness training. Then, this was followed by the online reading tasks where the subjects had to locate information from the Web in order to answer the comprehension questions assigned.

At the end of the study, the subjects' journal entries and answers in their e-portfolios were also analyzed based on the OSORS inventory in order to determine any manifestation of strategies adopted. Besides, how the subjects answered the assigned comprehension questions would also provide additional insights on any online reading strategies executed. Subsequently, the findings were checked and verified using responses to the retrospective interviews.

Findings and Discussion

An analysis of the Post-Test findings reveals a list of strategies adopted in the learners' journal entries as shown in Table 1.

The subjects' entries in their e-portfolios demonstrate some remarkable strategies used which empowered them to complete the online reading tasks assigned.

A striking feature observed is strategy item 23 (using typographical features), mostly performed together with strategy item 6 (taking an overall view of the text) and strategy item 32(scanning). Some anecdotal evidence found are:

Evidence found in task 1:

Subject B

Q2:   "I read from top to bottom and scan 'the effects of smog on human health'.
Scroll down and I got Ground level ozone."

Q4 :   "I try 'Flyash' but nothing can be found. I page up and down to check if there is any words on VOC. I try 'indoor."

Subject D

Q3:   "Go back to homepage, because home has all the keywords, something like the contents in the text book. Click 'acid rain'. Scan and read."

Thus, offline pre-reading skills such as skimming and scanning were widely utilized by the subjects when they read online too. These enabled them to maximize the search time allocated and reduce the risk of reading irrelevant materials.

Besides this, the subjects also adopted strategy item 15 (using reference materials) to find out the meaning of some terminologies. They employed supporting learning tools such as the Glossary and online dictionary.

Table 1 A hierarchical list of strategies adopted by the subjects

Frequency Count	Statement item	Adopted Strategies
68	23	I use typographical features like bold face and italics to identify key information.
41	32	I scan the online text to get a basic idea of whether it will serve my purposes before choosing to read it.
26	5	I think about what I know to help me understand what I read online
18	15	I use reference materials (e.g. an online dictionary) to help me understand what I read online.
10	1	I have a purpose in mind when I read online
8	9	I read slowly and carefully to make sure I understand what I am reading online.
7	18	I use tables, figures, and pictures in the online text to increase my understanding
6	27	I try to guess what the content of the online text is about when I read.
6	14	When reading online, I decide what to read closely and what to ignore
5	1	I have a purpose in mind when I read online.
4	12	I print out a hard copy of the online text then underline or circle information to help me remember it.
3	22	I try to picture or visualize information to help remember what I read online.
2	2	I participate in live chat with other learners of English.
3	6	I take an overall view of the online text to see what it is about before reading it.
3	29	I ask myself questions I like to have answered in the online text.

Evidence found in Task 1:

Subject B

Q5:   Glossary. I click "G" to find out more about greenhouse effect."

Subject C

Q5:   "I go to YAHOO and type Online Dictionary. Then I type greenhouse effect in the search box and I found this."

Subject D

Q4:   "Try Glossary. Click letter 'V' like finding it in the dictionary."

The different paths (using glossary, online dictionary and search engine YAHOO) taken by the subjects to look out for the meanings of greenhouse effect and VOC demonstrates that the non-linear features of the online texts allow them to 'jump about' and explore independently.

A glimpse of the subjects' portfolios also show a constellation of visualizations used (strategy item 22). For instance, Subject B visualized the sources and pollutants, condensations and acidification in the clouds leading to the acid rain .Another example is Subject C creatively depicts the effects of acid rain on buildings, forests, river system, and aquatic life. This is in line with Jasvir and Sharmeen's findings (2004), that graphic organisers allow students to gain an overview of the text and are good visual representations of thoughts, facts and ideas.

Additionally, strategy item 5 (I think about what I know to help me understand what I read online) is also exhibited by all the subjects. An overview of their entries demonstrate that all the subjects made use of their schemata in scanning and navigating as they search for information. Some anecdotal evidence found are:

Evidence found in Task 1

Subject G

Q1:   "Click 'air pollution' on the left side of the page because smog causes air pollution."

Evidence found in task 2

Subject B

Q3:   "Click 'Solar' because sunlight is under solar energy."

Subject D

Q2:   "Click nuclear because uranium is radioactive."

Retrospective interviews revealed that, the subjects did not take notes while reading long, intimidating and difficult texts. Instead, they retrieved and saved in WORD documents before printing them out to read. As evident in this scenario, they seemed to use a "snatch and grab philosophy … not apparent in (the) printed text environment" (Sutherland-Smith, 2002). However, the subjects explained that when they did not understand, they were more meticulous in their reading while skimming for answers. Essentially, they highlighted, underlined, circled, numbered, ticked, used brackets and used arrows, in extracting the main ideas from the texts (strategy item 12). The solicited feedback is, they read slowly and carefully to understand (strategy item 9). Likewise, these L2 learners adjust their reading speed which s helped them in reading difficult texts as reported by Anderson (2003).

It was also unearthed that, in their attempt to understand certain difficult vocabulary, some subjects used their L1 to comprehend their readings. For example Subject A (in task 1) tried translating the word 'volatile' into his L1 (native language) as *cepat berubah* and subject C translated the word 'smog' into his L1 as *kabus tebal*. In task 2, it was also found that Subject H translated 'Irrigation' as *saluran keluar masuk pengairan*. Therefore, strategy item 37 (I translate from English into my native language) is also adopted and manifested in some of the subjects' online reading tasks. A point to note here is, they used their L1 (mother tongue) as a means to 'negotiate' meanings of the L2 knowledge (Samuel, 2004 cited in Samuel, 2005). Thus it seems that a small dose of thinking and translating in L1 can also be a vehicle to better understanding but not an 'overdose'. This is supported by Nation (2003) who states that "a small dose of L1 can help to overcome some of the learning obstacles".

Interestingly, there are instances where some of the subjects seemed to utilise strategies not listed in the OSORS inventory. Some seemed to have attempted using the 'Back' arrow on the Toolbar whenever they go back and forth in their search (strategy item 25). For instance

Evidence found in Task 2:

Subject D

Q4:   "Ctrl+Home".

Subject E

Q3:   "Back to homepage and open 'Solar'."

Subject G

Q1:   There is nothing then I click BACK, and click 'fossil' at the left side of the homepage."

It was also found that Subject D's response to Question 3 (in task 2) also displayed unique knowledge about the capacity of the computer. He wrote "There is insufficient memory or disk space. So I delete the pictures before I copy". Therefore, it is interpreted that given the 'strategy awareness training, the range and potential of strategy use can be 'stre….tched'. In essence, online reading strategy awareness training has spawned more opportunities for the students to exercise more strategies in empowering them to read online.

Conclusion and Implications

The various strategies employed by the learners demonstrate that strategy awareness training not only equips learners with more pertinent strategies, it also allows them to use different paths available on the Web. Furthermore, learners can develop knowledge on the computer, the Internet and conceive new strategies that suit their learning styles. This is in line with the new paradigm shift in fostering autonomous learners who are independent and responsible for their own learning. Therefore, it is evident that by activating and expanding their repertoire of strategy use, learners adapt and adopt more strategies and this improves their online reading ability. It shows the importance of reading information and texts displayed online and it can open up many other language learning activities. Apart from using strategies to locate information from the Internet, classroom practice can explore other aspects of language learning. For example, teachers could download animations, audio, music and video clips to enhance their teaching materials. Students will be mesmerized by the constellations of multimedia and this can enable them to understand and grasp better in their learning. Assigning students to design a blog is also another effective approach to attract and encourage students to write and share their thoughts online. Instead of staring at books, students could also log on to do the various interactive exercises and tutorials on grammar, quizzes, language games and puzzles available online.

With the government's pragmatic policy to strengthen the teaching of English, educators can also be linguistically active by signing up in Special-Interest-Group (SIG) forums to post their comments and share their teaching experiences online. In addition to reading and writing online, learners also can improve their oral skills by logging on to any website that teaches pronunciation and the IPA (International Phonetics Alphabet) by native speakers. In conclusion, English teachers need to keep up with the Internet tempo and be more aware of the contemporary use of the Internet among their young charges in the cyber landscape. Ultimately, literacy in online reading can empower any educators and learners to log on, surf and harness the treasure of information and learning materials found online.

References

Anderson, N. J. (2003). Scrolling, clicking, and reading English: Online reading strategies in a second/foreign language. *The Reading Matrix, 3* (3). Retrieved May 18, 2007, from http://www.google.com/search?hl=en&q=online+reading +strategies+&btnG =Search

Beck, S. (1997). *Evaluation Criteria. The good, the bad & the ugly: Or, why it's a good idea to evaluate web sources.* Retrieved June 8, 2007, from http://lib. nmsu.edu/instruction/evalcrit.html

Brunner, C. B., & Tally, W. (1999). *The new media literacy handbook: An educator's guide to bringing new media into the classroom.* New York: Anchor Books.

Coiro, J. (2003). Reading comprehension on the Internet: Expanding our understanding of reading comprehension to encompass new literacies. *The Reading Teacher, 56*, 458-464. Retrieved June 7, 2007, from http://www. readingonline.org/electronic/ elec_index.asp?HREF=/ electronic/rt/2-03_ Column/index.html

Coiro, J., & Dobler, E. (2006). Exploring the online reading comprehension strategies used by sixth-grade skilled readers to search for and locate information on the Internet. *Reading Research Quarterly Journal, 42* (2), 214-250.

Coiro, J. (n.d.). *Literacy skills and strategies.* Retrieved July 16, 2007, from http:// www.lite.iwarp.com/ sklstrat.htm

Delores, D. (1990). Delores Durkin speaks on instructions. *The Reading Teacher, 43* (7).

Harris, R. (1997). *Virtual Salt: Evaluating Internet Research Sources.* Retrieved June 8, 2007, from http://www.virtualsalt.com/evalu8it.htm

Jasvir, K., & Shameem R. G. (2004). A strategic tool for summary writing. In M. Jayakaran, Z. A. Dzeelfa & R. S. Dulip Singh (Eds.), *ELT matters 2: Development in English language learning and teaching* (pp. 271-281). Serdang: UPM Press.

Leu, D. J., Jr. (2002). The new literacies: Research on reading instruction with the Internet. In A. E. Farstrup & S. J. Samuels (Eds.), *What research has to say about reading instruction* (3rd ed.) (pp. 310-336). Newark: DE: International Reading Association.

Nation, P. (2003). *The role of first language in foreign language learning.* Retrieved August 6, 2007, from www.asian-efl-journal.com/june_2003

Pennington, M. C. (2003). The impact of the computer in second language writing. In B, Kroll (Ed.), *Exploring the dynamics of second language writing* (pp. 287-310). UK: Cambridge University Press.

RAND Reading Study Group. (2002). *Reading for understanding: Towards an R&D program in reading comprehension.* Retrieved July 13, 2007, from http://www.rand. org/multi/schievementforall/reading/readreport.html

Samuel, M. (2005). Perspectives in policy and practices in English language teaching. Petaling Jaya & Willeton (Australia). Paper presented at the SEAMEO-IDP Conference on Culture, Context and Choice in Development, Bangkok, November 2002.

Schrock, K. (1998). *Separating the wheat from the chaff: How to tell the good sites from the bad.* Retrieved June 8, 2007, from http:///discoveryschool.com/schrockguide/ chaff.html

Sutherland-Smith, W. (2002). Weaving the literacy web: Changes in reading from page to screen. *The Reading Teacher, 55*, 662-669.

V. Cerf on Surfing. (2008, May 27). *Star*, p. IT 11.

Victori, M. (2004). *Eliciting and fostering learners' metacognitive knowledge about language learning in self-directed learning programs: A review of data collection methods and procedures.* Retrieved May 3, 2007, from http://www. uvic.es/recerca/-fitxers/elicit.pdf

Warschauer, M. (1999). *Electronic literacies: Language, culture, and power in online education.* Mahwah, NJ: Lawrence Erlbaum Associates.

APPENDIX A
ONLINE SURVEY OF READING STRATEGIES (OSORS)
(Adapted from Mokhtari and Sheorey (2002) by Neil J. Anderson)

The purpose of this survey is to collect information about the various strategies you use when you read **online in ENGLISH** (e.g., surfing the Internet, doing online research, etc.). Each statement is followed by five numbers, 1, 2, 3, 4, and 5, and each number means the following:

'1' means that 'I **never or almost never** do this' when I read online.
'2' means that 'I do this **only occasionally**' when I read online.
'3' means that 'I **sometimes** do this' when I read online. (About **50%** of the time.)
'4' means that 'I **usually** do this' when I read online.
'5' means that 'I **always or almost always** do this' when I read online.

After reading each statement, *circle the number* (1, 2, 3, 4, or 5) which applies to you**.** Note that there are **no right or wrong responses** to any of the items on this survey.

Statement	**Never**			**Always**	
1. I have a purpose in mind when I read on line.	1	2	3	4	5
2. I participate in live chat with other learners of English.	1	2	3	4	5
3. I participate in live chat with native speakers of English.	1	2	3	4	5
4. I take notes while reading online to help me understand what I read	1	2	3	4	5
5. I think about what I know to help me understand what I read online	1	2	3	4	5
6. I take an overall view of the online text to see what it is about before reading it.	1	2	3	4	5
7. When online text becomes difficult, I read aloud to help me understand what I read.	1	2	3	4	5
8. I think about whether the content of the online text fits my reading purpose.	1	2	3	4	5
9. I read slowly and carefully to make sure I understand what I am reading online.	1	2	3	4	5

10. I review the online text first by noting its characteristics like length and organization.   1 2 3 4 5

11. I try to get back on track when I lose concentration.   1 2 3 4 5

12. I print out a hard copy of the online text then underline or circle information to help me remember it.   1 2 3 4 5

13. I adjust my reading speed according to what I am reading online.   1 2 3 4 5

14. When reading online, I decide what to read closely and what to ignore.   1 2 3 4 5

15. I use reference materials (e.g. an online dictionary) to help me understand what I read online.   1 2 3 4 5

Statement   **Never**   **Always**

16. When online text becomes difficult, I pay closer attention to what I am reading.   1 2 3 4 5

17. I read pages on the Internet for academic purposes.   1 2 3 4 5

18. I use tables, figures, and pictures in the online text to increase my understanding.   1 2 3 4 5

19. I stop from time to time and think about what I am reading online.   1 2 3 4 5

20. I use context clues to help me better understand what I am reading online.   1 2 3 4 5

21. I paraphrase (restate ideas in my own words) to better understand what I read online.   1 2 3 4 5

22. I try to picture or visualize information to help remember what I read online.   1 2 3 4 5

23. I use typographical features like bold face and italics to identify key information.   1 2 3 4 5

24. I critically analyze and evaluate the information presented in the online text.   1 2 3 4 5

25. I go back and forth in the online text to find relationships among ideas in it.   1 2 3 4 5

26. I check my understanding when I come across new information.   1 2 3 4 5

27. I try to guess what the content of the online text is about when I read.   1 2 3 4 5

28. When online text becomes difficult, I re-read it to increase my understanding.   1   2   3   4   5
29. I ask myself questions I like to have answered in the online text.   1   2   3   4   5
30. I check to see if my guesses about the online text are right or wrong.   1   2   3   4   5
31. When I read online, I guess the meaning of unknown words or phrases.   1   2   3   4   5
32. I scan the online text to get a basic idea of whether it will serve my purposes before choosing to read it.   1   2   3   4   5
33. I read pages on the Internet for fun.   1   2   3   4   5
34. I critically evaluate the online text before choosing to use information I read online.   1   2   3   4   5
35. I can distinguish between fact and opinion in online texts.   1   2   3   4   5
36. When reading online, I look for sites that cover both sides of an issue.   1   2   3   4   5
37. When reading online, I translate from English into my native language.   1   2   3   4   5
38. When reading online, I think about information in both English and my mother tongue.   1   2   3   4   5

SCORING GUIDELINES FOR THE *SURVEY OF ONLINE READING STRATEGIES*

Student Name: _____

1. Write the number you circled for each statement (i.e., 1, 2, 3, 4, or 5) in the appropriate blanks below.
2. Add up the scores under each column and place the result on the line under each column.
3. Divide the subscale score by the number of statements in each column to get the average for each subscale.
4. Calculate the average for the whole inventory by adding up the subscale scores and dividing by 30.
5. Use the interpretation guidelines below to understand your averages.

      Global Reading Strategies = (GLOB Subscale)
      Problem Solving Strategies = (PROB Subscale)
      Support Reading Strategies = (SUP Subscale)

Global Reading Strategies (GLOB Subscale)	Problem Solving Strategies (PROB Subscale)	Support Reading Strategies (SUP Subscale)	Overal Reading Strategies (ORS)
1. _____	9. _____	4. _____	GLOB _____
2. _____	11. _____	7. _____	
3. _____	13. _____	12. _____	PROB _____
5. _____	16. _____	15. _____	
6. _____	19. _____	21. _____	SUP _____
8. _____	22. _____	25. _____	
10. _____	28. _____	29. _____	
14. _____	31. _____	37. _____	
17. _____	34. _____	38. _____	
18. _____	35. _____		
20. _____	36. _____		
23. _____			
24. _____			
26. _____			
27. _____			
30. _____			
32. _____			
33. _____			

_____ GLOB Score   _____ PROB Score   _____ SUP Score   _____**Overall Score**
_____ GLOB Average _____ PROB Average _____ SUP Average ___ **Overall average**

KEY TO AVERAGES: 3.5 or higher = High 2.5 – 3.4 = Medium 2.4 or lower = Low

INTERPRETING YOUR SCORES:

The overall average indicates how often you use reading strategies when reading academic materials. The average for each subscale shows which group of strategies (i.e.,Global, Problem Solving, or support strategies) you use most often when reading. It is important to note, however, that the best possible use of these strategies depends on your reading ability in English, the type of material read, and your reading purpose. A low score on any of the subscales or parts of the inventory indicates that there may be some strategies in these parts that you might want to learn about and consider using when reading (adapted from Oxford 1990, pp. 297-300).

Adapted from Mokhtari, K.,& Sheorey, R. (2002). Measuring ESL students reading strategies. *Journal of Developmental Education*, 25 (3), pp. 2-10.