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## Computer-Assisted Reading Materials Related to Coursebooks

TANIMURA Midori

*National Institute of Information and Communications Technology*

UTIYAMA Masao

*National Institute of Information and Communications Technology*

*This paper reports on a computer-assisted reading program for EFL (English as a foreign language) college learners, which is integrated directly into the curriculum. The program was designed to offer learners reading opportunities by providing more information about and background to the coursebook through the reading of related texts as self-study. This paper begins with how the reading packages were created and distributed through the internet. It then goes on to explain how the amount of articles read was counted and displayed through the internet in order to encourage the learners to keep up with each other. Section 3 describes how the program was organized throughout a semester, using the reading packages. To investigate the effects of the reading packages, section 4 examines which material (texts related to the coursebook or random texts) is more effective in promoting reading amount. The result confirms that related texts promote maximum reading more than do random texts. The five-scale questionnaire also indicates that the learners who read the related texts had a more positive attitude toward the materials than did the learners who read the random texts. This paper indicates what kind of reading texts teachers should choose and in what way.*

### 1 Introduction

The prototypical reading materials for self-study offer choices from a huge variety of graded texts to match every level of learners from beginner to advanced, and ensure a successful, enjoyable reading experience (e.g. OUP-READERS. JP, Penguin Readers, Cambridge English Readers and others). Many successful extensive reading projects also have been designed (Bell, 1998; Davis, 1995; Hill, 1992; Hill, 1997). The Edinburgh Project on Extensive Reading (see Hill, 1992), for example, has successfully developed programs to promote the systematic use of graded readers; what is more, it created Extensive Reading Course Packages in 2003. This material development is of course supported by the growing amount of research demonstrating the improvement in general English proficiency (Nuttall, 1982; Carter & McCarthy, 1988; Robb & Susser, 1989; Mason & Krashen, 1997; Nation, 1997; Rott, 1999). For instance Nuttall (1982) says "an extensive reading program ... is the single most effective way of improving both vocabulary and reading skills in general" (p. 65).

In a practical sense, however, not many schools are able to introduce such packages, because of lack of budget, lack of space or lack of library managers. Instead, teachers, like librarians, select, classify,

and manage books, and carry them to the classroom where lessons are held. Teachers who are not able to prepare books or magazines select a piece from a newspaper article, an essay or stories as extra reading material. However, no matter how much time teachers devote to organizing material, the amount they can provide on their own is still limited.

The recent development of computer technology has made it possible for teachers and learners to access vast amounts of text on the internet. News articles are also available and can be accessed very easily (Schmidt, 1999); for instance, CNN Interactive Learning Resources, BBC World Service Learning English and VOA Special English. Indeed, Chun & Plass (2000) point out the benefits of using the internet for reasons such as the accessibility of authentic materials, the communication capabilities of a website, multimedia capabilities, and the hypermedia structure of information. It is assumed that extensive reading courses using the internet are a promising way of learning language. Nevertheless, many obstacles remain that teachers must overcome. Most extensive reading studies report that participants normally read for pleasure and are not required to do extra work, but teachers do not have any means of assessing their learners when necessary at the end of the semester. It is also problematic that no measurement is provided on the internet as regards information quality and accuracy (Brandl, 2002). Indeed, there have been few studies concerning online reading to exploit the large quantity of texts based on statistical analysis. Furthermore, selecting materials is a problem. Learners' needs and preferences differ and there is no single way to satisfy every one. However learners often feel uncomfortable if the teacher leaves the choice of materials up to them, and if there is no obligation on the learners' part. For example, Day & Bamford (2000) point out in their article that learners often find themselves uninterested in reading English apart from their assignments. According to this article, learners do not study subjects that do not seem to fit their immediate needs, and they are rather reluctant to make the additional effort. This situation is common to many classroom settings; these researchers propose several ways of including extensive reading in the EFL curriculum. Although they address the issue of learners' reading habits and offer suggestions to readers, much empirical research remains to be done to determine whether extensive reading in the EFL curriculum is an effective learning tool.

Taking the above issues into consideration, it is assumed that learners would be able to acquire more background knowledge toward understanding what is said in the textbook, if we could offer them extended opportunities to read further pages of the related texts as a part of the course work. In order for learners to read appropriate materials from the large quantity of material, we set up computer-based reading packages. These packages are like a supplementary web library, attached to a college English course. In this supplementary package, learners are allowed to read materials related to the coursebook at their own level and their own speed; thus the materials enable learners to understand the content more thoroughly. To examine whether related texts are actually effective in enhancing learners' reading amount,

random texts were also prepared for comparison. Here random texts are regarded as a set of conventional materials that often have no consistent standard for selection. That is, material selected from different resources and put together by teachers and text editors for convenience and/or material whose selection is entirely up to the learner. On the other hand, related texts have a definition opposite to that of random texts. They represent fully data-driven materials that have consistent standards for their selection and that enable learners to read texts from a limited amount of a specific corpus.

The main purpose of the following paper is twofold: 1) to introduce the computer-based reading program which is integrated directly into the curriculum and 2) to examine whether or not the computer-based reading texts (related texts or random texts) were effective in promoting maximum reading by investigating the number of texts read and analyzing questionnaire results.

The following research questions guided the study:

- (1) Does the related text group read more texts than the random text group?
- (2) Does the related text group show a more positive attitude toward reading than the random text group?

## **2 Computer-assisted reading packages**

### **2.1 How were reading packages created?**

These packages were created as an aid in increasing the amount of learners' reading at home. Articles from the New York Times, on a wide variety of topics, such as genetic defects, maternity leave, cloning, obesity, and AIDS, were used as a resource corpus. One reason for using newspaper articles is that they tend to include short passages that are normally easier to read quickly.

To select related texts from the New York Times, it was necessary to examine what kind of words were used in the coursebook. Thus an electronic version of the coursebook had first to be prepared, so the passages were typed and stored as text files. Two corpora from the coursebook and the New York Times (computerized database) were then prepared. Using information retrieval techniques, texts that shared the same words as the coursebook were extracted from the New York Times articles as related texts (more details about information retrieval techniques are available in Robertson & Walker, 2000). Aside from this, texts were extracted randomly from the New York Times; these were called random texts. For each unit of the coursebook, 100 related texts were sequenced in terms of how many words were shared between the coursebook and related texts, and were presented on the Internet, whereas 100 random texts were just sequenced in random order, and were presented on the Internet. One point should be added that related texts were defined as texts sharing the same words in the coursebook. As described later, not every text is related in the same way to the coursebook, even though they share the same words. This is because the computer automatically selected the supplementary material by relying on the shared words, rather than

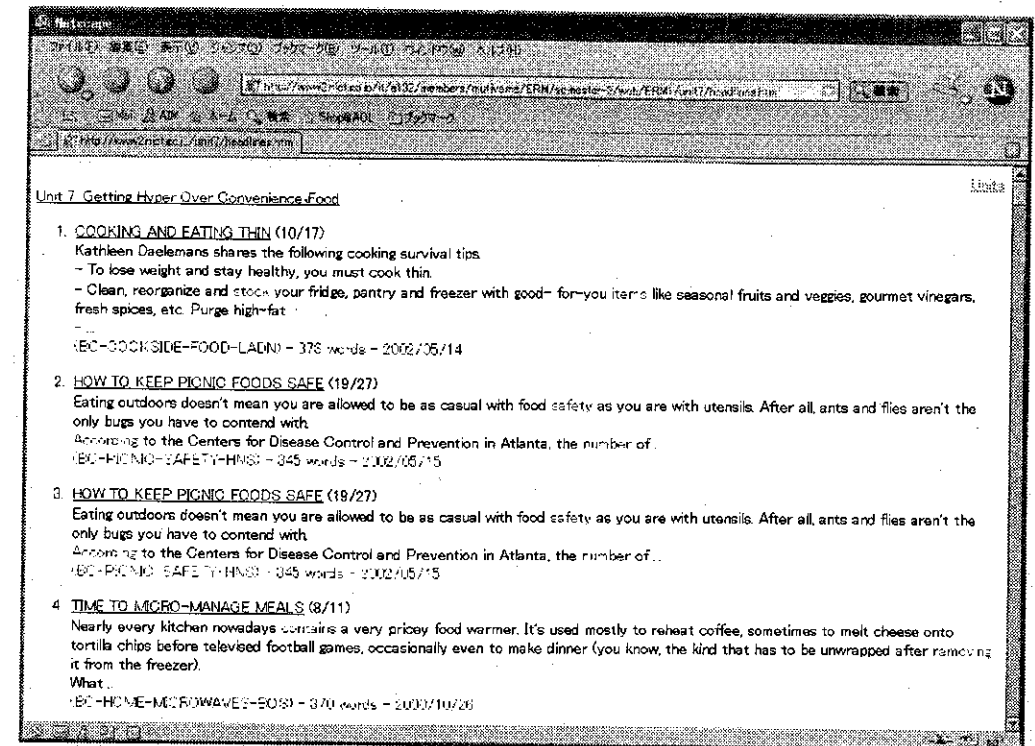
on understanding the content.

Material length and content were adjusted on the basis of the result of a pilot study, in which learners were told to read the texts on the web, write summaries, and e-mail them to the teacher. It was found that some learners felt it unfair that their summaries were assessed in the same way as the learners who intentionally chose shorter texts. Some also showed less interest in reading texts that contained outdated information. Others requested highlighting of important words, because they thought they could learn not only reading but also vocabulary at the same time.

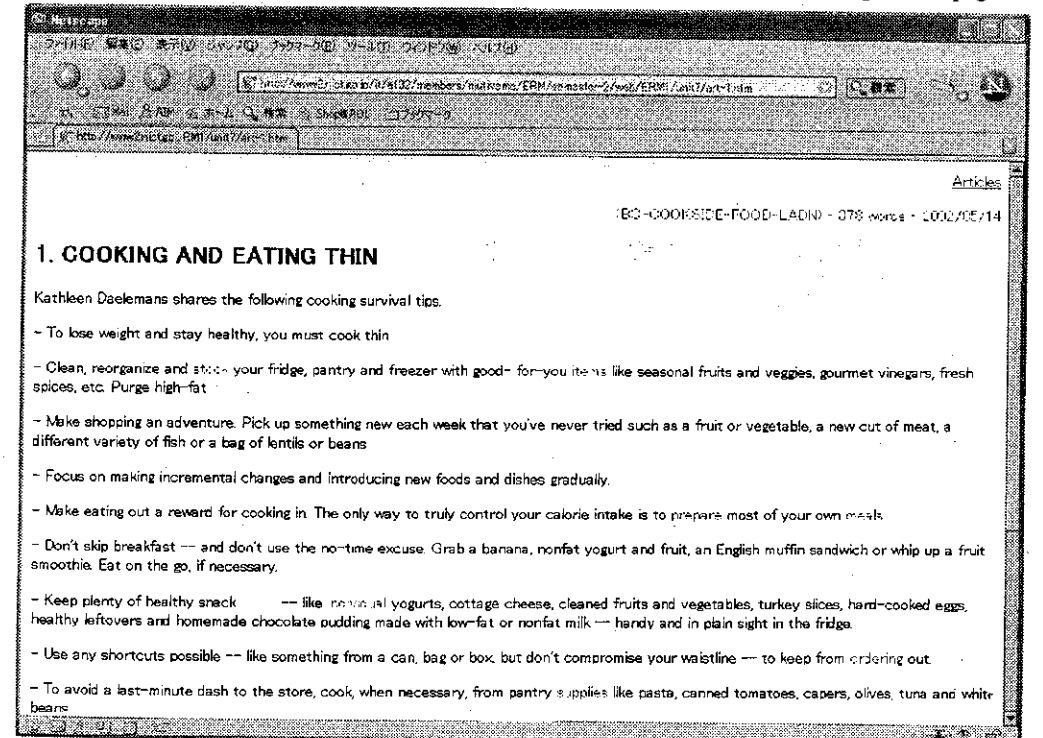
In response to these comments and requests, texts ranging from 300 to 400 words were targeted for selection from the New York Times 2000 - 2002 corpus, the latest news corpus we had at that time. Then when it was found that 14758 articles met the criteria for related texts, 100 most-related texts and randomly-selected texts for each unit were selected. As it was difficult to decide how important words should be defined, we used specialized vocabulary from the Test of English for International Communication (TOEIC), compiled by Chujo (2003) and Chujo et al. (2004), which learners were keen on studying for their future careers.

## 2.2 How were the reading packages displayed on the internet?

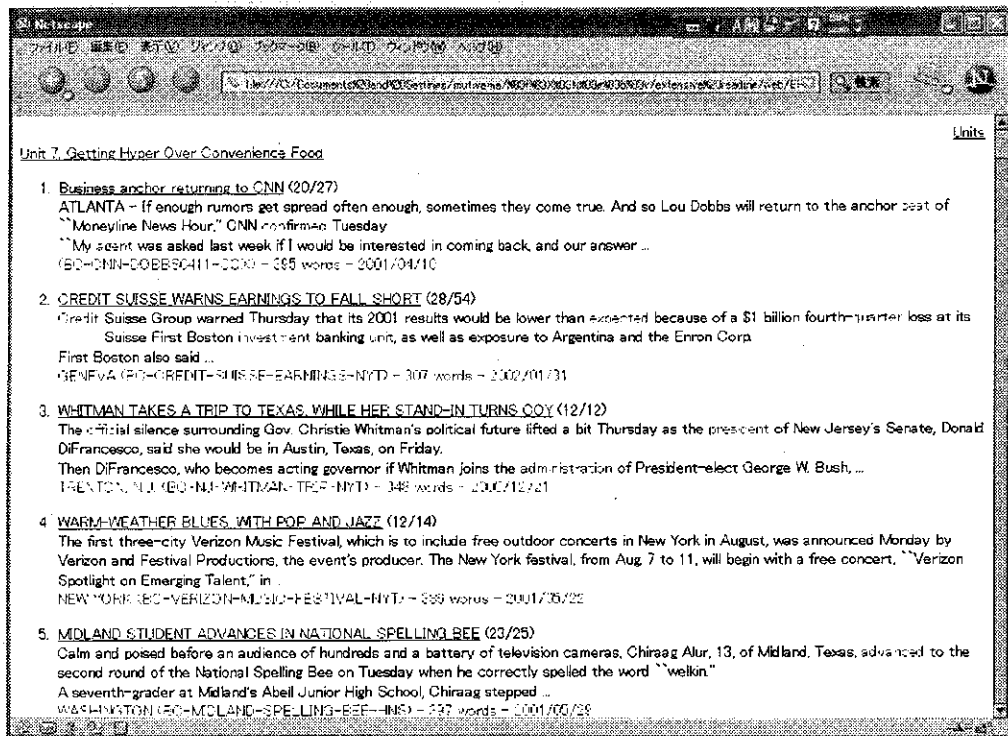
The following are sample reading texts for unit 7 for the related text group. At the top of the screen is the title Unit 7 Getting Hyper Over Convenience Food, which allows the learners to read an electric version of the coursebook articles. Each unit is followed by 100 articles. The first line in each article heading shows titles and the numbers of types and tokens of the important words. Taking 1 as an example, COOKING AND EATING THIN is a title, 10 means the number of types and 17 means the number of tokens. This heading is followed by the first few sentences of the passage, which give the learner an idea of what the content looks like. The last line in each block shows word count (e.g. 378 words) and the article publication date (e.g. 2002/05/14). Because the original corpus data sometimes included the same articles, our reading materials also included the same articles as it was very difficult to remove them mechanically.



Clicking COOKING AND EATING for example, takes the learner to the following content page.

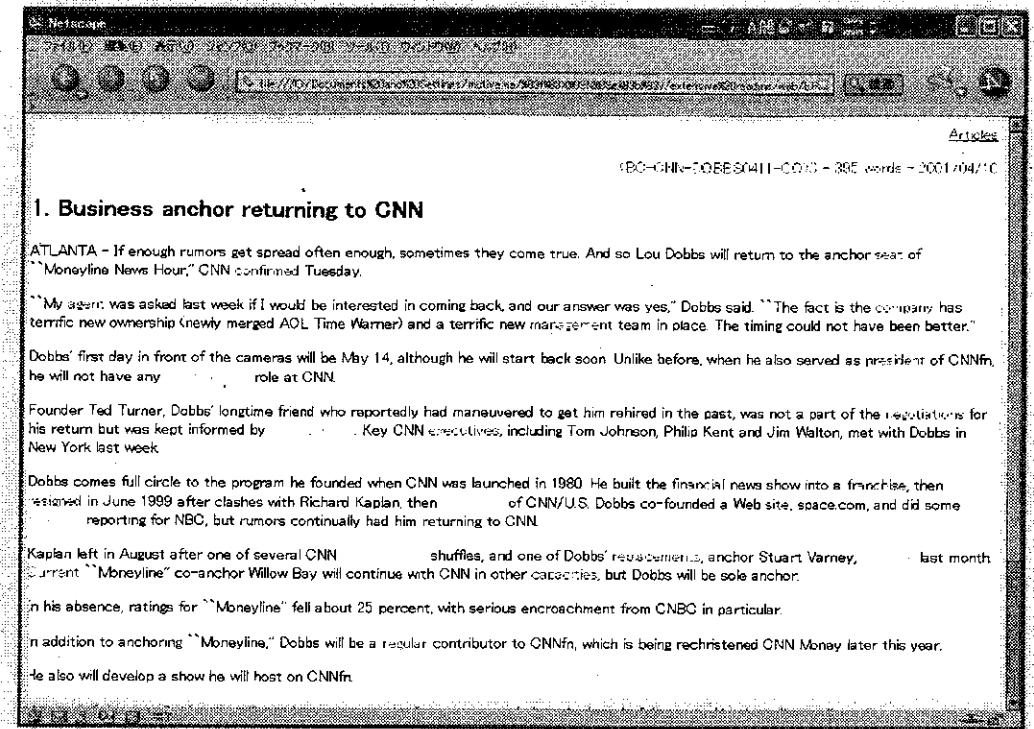


Reading the articles in this page allows the learners to obtain more information and background about the coursebook. On the original screen, the learners find the important words are highlighted. The words first mentioned are highlighted in red, and the words recycled are highlighted in yellow in order for learners to pay attention to particular words. One of the good points of using the internet is that learners can easily access the online dictionary, if they encounter words which they do not know. When they click on words which they do not know, Goo, online dictionary lookup, appears and it shows several meanings of the word. It also offers the pronunciation of the words. The following are sample reading texts for unit 7 for the random text group.



The page format is the same as that of related texts, but the texts are not related to food but different subjects such as business, banking, and music. The content page of other units are shown in the appendix which shows the titles of the top 15 articles in both related and random texts in each unit. It gives an idea of what kinds of reading texts were included.

Clicking [Business anchor returning to CNN](#) takes you to the content page as follows.



### 2.3 How was the number of reading texts read counted and presented on the internet?

In the case of EFL situations, learners have difficulty finding a reason to read just for pleasure. Thus it is the teachers' role to provide learners with the motivation. Day & Bamford (1998) state that "higher grades or extra credit can be offered to a learner for reading over and above the minimum required to pass the class" (p. 86). According to their idea, it would be fine to assign the reading of a certain number of books or pages in order for learners to pass the class or to receive a grade. In making use of their idea, credit was used to promote maximum reading. It was also assumed that learners would find it difficult to compete only against themselves. We used display competition in which each learner put up a cumulative display, to encourage maximum reading. The number of articles read by each learner was automatically counted and the display showed which articles had been read by the class; readers encouraged others to keep up with them. It also enabled teachers to check learners by letting them do self-selected reading and write brief summaries on what they had read.

The following is a sample display of how many summaries were submitted by each learner. From the left column to the right are presented, the ranking of how many articles are read, the number of summaries and the contents of summaries.

NetScape

更新時刻: Mon Jan 24 12:04:11 JST 2005

検索された総記事数 = 500

順位	記事数	レポート
1	33	レポート
2	27	レポート
3	26	レポート
4	25	レポート
5	24	レポート
6	23	レポート
6	23	レポート
8	22	レポート
9	21	レポート
10	20	レポート
11	19	レポート
12	17	レポート
13	16	レポート
13	16	レポート
15	15	レポート
15	15	レポート
17	14	レポート

Clicking on the summaries, the learners can view each learner's summary of the articles.

NetScape

順位=2. 記事数=27

- 2004/12/30  
Unit12. 25. アメリカ環境保護機関は、環境問題についての情報を掲載しているホームページを一時的に閉鎖する(shut down)ことを決めた。セキュリティ(security)面を強化するためだ。EPAは、数日間の閉鎖は問題ないだろうとしているが、このホームページは環境グループ、ジャーナリストや政治活動など様々な方面で利用されているため閉鎖反対の声もあがっている。ホームページが提供している情報は、新聞や出版(cress)物でも見ることができるが、インターネットでのほうがより早く集めることができ、評価も見ることができる。
- 2004/12/30  
Unit12. 22. ある環境グループの発表によると、アメリカ北西部において殺虫剤(pesticide)によるサーモンの汚染が深刻になっている。これまで16種類の殺虫剤が汚染原因になるとわかってきた。さらに、アメリカ環境保護機関(agency)によると、新たに36種類の合法的殺虫剤が水中動物(aquatic)へ悪影響を及ぼすことがわかった。最近では、致死性のない(non-lethal)殺虫剤でもサーモンなどに悪影響を及ぼすことがわかった。それらの化学物質は動物の嗅覚に害を与える。EPAは756種類すべての殺虫剤のテストを行っている。現在、EPAはできるだけ多くのデータと証拠(proof)の収集に力を入れている。
- 2004/12/28  
Unit12. 24. 今、ニューヨークではネズミの急激な増加が問題となっている。運搬に置かれたビニール製のゴミ袋の中に入った残飯は、ネズミたちにとって絶好の食事である。ネズミが増えた原因は、ここ数年気候が穏やかであったため、彼らの多くが冬を乗り越えることができたことと、ネズミ捕り用の毒(poison)を使用するにあたって、健康被害に配慮して規定(restriction)が厳しくなったことなどがあげられる。このことに対して対策は講じられていないが、ニューヨークのゴミの分別(sorting)方法を見直すべきだという指摘もある。まずはゴミをふた(kids)のついた入れ物に入れるのが効果的なアプローチである。
- 2004/12/16  
Unit11. 17. 1920年代に中国で流行した歴史小説の作家Makom Bosseが食道(oesophageal)癌のため亡くなった。彼の作品の中でも"The Warlord"は最もよく知られており、アメリカの宣教師(missionary)が中国でギャングになる話で、登場人物は毛沢東、將軍(warlord)たち、中国の支配者と戦う市民らである。高校卒業後、商人としてアジアを航海した経験が彼の作品の背景(backdrop)になっている。学士号(bachelor's degree)を取ったBosseはアメリカ海軍で働き、その後修士号(master's degree)、博士号(doctrate degree)を取得した後、若者向けの小説を書き始めた。
- 2004/12/10  
Unit10. 62. 今まで、50歳以上の男性は毎年前列腺癌(prostate cancer)の検査を受けたほうがよいとされてきた。しかし新しい研究結果から、検査の結果PSAレベルの低かった男性はその後5年間はヘルシイままだったということがわかった。この考え方に基づくと、アメリカの健

This screen shows the summaries done by a learner who read the second most texts (27 articles). 2004/12/30 in the first line shows the date the summaries were submitted. Some learners were not comfortable with the idea that other learners could know who wrote which summary, so writers' names were not presented in the display.

### 3 Procedure

#### 3.1 Participants

Participants comprising 79 Japanese English learners, aged between 18 and 21 years old, were divided into two groups according to their class. The participants were third year learners majoring in English at a university in the Kansai area. To examine their reading ability, reading comprehension tests were conducted, which followed the TOEIC format consisted of 40 multiple choice questions. The mean scores of both groups were 20.6 (SD 4.3) and 20.5 (SD 4.3) and the t-test for the scores showed that the differences in the two groups were not significant, ( $t = 0.35, df = 77, p = 0.97$ ).

#### 3.2 Treatment

The treatment in this study was carried out during a semester (September 2004 to January 2005), with 39 participants receiving related texts, and 40 participants receiving random texts. The same lessons and instructions were provided to the learners in both classes throughout the semester excepting the difference in reading materials (related or random).

#### 3.3 Program design

This program was designed to create a link between classroom reading and further reading at home. Lessons went in two-week blocks. In the first week, learners were required to read a unit in the coursebook with the teacher in the classroom. At home they were required to read the reading materials on the internet and write summaries. Details are as follows.

##### First week:

In class, the learners read one unit of the coursebook and performed some tasks (answering questions, discussing topics etc). At home, both classes accessed each website as their self-study. Many learners had access to internet at home, but the learners who had no access studied at the computer room which was freely available to them.

##### At home:

The learners were required to read more than one text every two weeks, write a short summary

(about 200 words in Japanese with some key words in English) and send it to a mailing list. They needed to submit at least 5 summaries.

**Second week:**

In group, the learners were required to give oral presentations with their peers on the articles they had read at home, and discuss their thoughts. Lessons sometimes involved debating in Japanese, such as when texts included controversial issues, e.g., whether smoking in bars should be banned or not. In such case, the class was divided into two teams, "pro" and "con." The two teams were asked to review the article and analyze it. Then they were asked to work on presentation strategy by predicting what the other side would say. The two teams then stood facing each other and debated the issue with the chair learner who was acting as moderator. Finally, the chair learner gave a comment on what he/she had observed or heard during the debate.

At the end of the class, the learners were also asked to choose a text they had brought from home, and write a summary and their comments about it in English. As is claimed by Bamford & Day (1997), extensive reading could be the main focus of a reading course, in combination with a class reader follow-up activity, such as a learner's oral book reports and homework reading.

**3.4 Instruction**

Instruction sheets were delivered to each learner detailing how to access the reading materials, how to join the mailing list, how to submit summaries of the articles they had read and how to check the number of summaries they had written. First, learners were supplied with a username and password to access the reading materials. They were advised to obtain a new e-mail address by using a free e-mail service, such as Yahoo, to register for the mailing list, because all the summaries done by classmates were delivered to each learner's e-mail account. It took several weeks to get the situation organized and manage the classroom activity. For the first several weeks, some learners had difficulties sending and receiving summaries. Some of them forgot their passwords when logging in and did not know how to solve the problem. Others shared computers with family members. One learner reported that a family member had deleted all the data necessary for accessing the URL and sending summaries to the mailing list. One of the learners used her father's e-mail account and her father was troubled by receiving massive amounts of e-mail.

**3.5 Evaluation**

Exposure to English texts has no value if the learners do not understand them. Thus the summaries done by both groups had to be carefully monitored by checking on homework assignments. It was hoped

that comprehension would also improve. Indeed, previous studies have shown that the writing of summaries improves comprehension (Smith, 1988). The pilot study revealed that some summaries were inappropriate: some consisted of the translation of only the first and last sentences; some had only opinions and impressions on a topic; and some listed information in trying to guess the content of the text. Thus some check points were developed to clarify whether the summaries were written in an appropriate way, in terms of content length and accuracy. If the summaries were not appropriate, the learners were asked to rewrite them.

**4 Results**

**4.1 Number of Summaries**

**Research question (1): Does the related text group read more texts than the random text group?**

Table 1 presents means and standard deviation for the number of summaries in a semester according to the text type group.

Table 1 Number of summaries by related text group and random text group

		Related	>	Random
No. of summaries in semester	Mean	14.4		9.3
	SD	6.2		5.5
	Highest	33		30
	Lowest	5		5

The t-test showed that the number of texts differed significantly between the related and random text groups ( $t = 3.33, df = 77, p = 0.001$ ). Thus the results of Table 1 indicate that related texts from similar resources would be more effective in promoting maximum reading. Research question (1) was supported by this result. Because related texts shared many words with the coursebook, learners automatically received necessary recycling of words. That is, through repetition a new word was retained and made available for related new texts. It can be said that related texts offer the potential for reinforcing and consolidating words learned in the classroom, and enable learners to read texts more easily.

It should be added that although a summary writing of both groups was evaluated in terms of accuracy of content, content length and comprehensiveness, no difference was found between the groups.

#### 4.2 Results of Questionnaire

**Research question: (2) Does the related text group show a more positive attitude toward reading than the random text group?**

A questionnaire was administered in the last regular class. Some items had 5 point scales (see Table 2); others were open-ended items inviting comments and opinions, in which we hoped possible issues might be raised. In the open-ended questions, the learners were asked to list what they thought was good in the materials and what they thought was bad, or how they thought the materials could be improved. Because the learners might have had difficulty reading English questionnaires and answering them in English, the questionnaire was in Japanese. When pilot-testing questionnaires on a group of learners, some of them made an interesting comparison between use of these reading packages and previous homework assignments. Thus several questions were newly added, in order to clarify how learners evaluated these packages in comparison with other materials.

Table 2 Results of scaling in questionnaire about New York Times

Questions	Score 5	- 1	Related	Random
(1) How was the volume of articles (Did you read many or few)?	a lot	- a few	2.8	2.7
(2) How was the passage level (e.g. vocabulary, grammar etc.) ?	difficult	- easy	3.4	3.8
(3) How was the content?	very interesting	- not very interesting	3.4	3.1
(4) How was the readability?	very readable	- not very readable	2.8	2.4
(5) How was this reading material compared to previous homework assignments?	good	- bad	3.8	3.6
(6) Do you want to use this kind of material next year?	yes very much	- not very much	3.9	3.7

Table 2 shows the results of rating scores in questionnaire; the numbers in the two left columns indicate average rating scores. The result only shows a tendency, but overall the related text group indicated a more positive attitude than the random text group toward the reading packages. Question (1) asks for self-evaluation as to how much the learners thought they read. Although the statistics (Table 1) empirically proved that the related text group read more than the random text group, the questionnaire did not reveal much difference between the groups. What one thinks does not often match what one actually does, but possibly the learners were more likely to feel that their reading amount was not much, in comparison to the amount of L1 reading in their normal life.

The result of question (2) shows that the related text group found it easier to understand the passages than did the random text group. The result of question (3) also shows that the related text group

felt that the content was more interesting than did the random text group. These results were compatible with the results to question (4), which was that the related text group found the texts more readable than the random group, though both groups rated low. In addition, these observations support the claim in section 4.1; thus research question (2) was supported by these results.

An interesting point is that, whereas the results of (5) and (6) show that both groups were quite positive toward these computer-assisted packages, open-ended questions (Table 3) showed that the learners actually faced many difficulties using computers and the internet as well as computer-assisted materials. Some learners felt it difficult to use them either because they were not accustomed to using them or because they did not have them in their homes. Learners seemed to have an interest in new materials but at the same time they have difficulties in a practical sense.

Table 3 is selection of learners' comments. The comments from both groups were combined, since they were basically the same in both groups.

Table 3 Good points and bad points of the reading packages

	Good points	Bad points
Computer & Internet	<ul style="list-style-type: none"> <li>I learned how to use computers through the program.</li> </ul>	<ul style="list-style-type: none"> <li>People with internet access at home may have had an advantage over those who don't in doing this assignment.</li> <li>It was difficult to do the assignment when my computer was broken.</li> <li>It was a pain to have to use the internet.</li> </ul>
Computer-assisted material	<ul style="list-style-type: none"> <li>I have never used this kind of material and it is new to me.</li> </ul>	<ul style="list-style-type: none"> <li>Printed material was better than that on the computer.</li> <li>It was visually difficult to read the passages because some words were highlighted.</li> </ul>
Assessment	<ul style="list-style-type: none"> <li>The number of summaries was fair to use for evaluation, because it is very objective.</li> </ul>	<ul style="list-style-type: none"> <li>There might be a learner who submitted many summaries without reading carefully, but still got a high score.</li> </ul>
Content	<ul style="list-style-type: none"> <li>The content of the passages was interesting.</li> <li>It was fun to read about various topics.</li> <li>I could learn about people and cultures around the world.</li> </ul>	<ul style="list-style-type: none"> <li>I wanted to read recent articles.</li> <li>The articles were not interesting.</li> <li>The articles needed more variety.</li> </ul>
Autonomy	<ul style="list-style-type: none"> <li>The materials helped me to develop autonomy.</li> </ul>	<ul style="list-style-type: none"> <li>It was difficult to find time to do the reading packages because I wanted to study other subjects.</li> </ul>
Choice	<ul style="list-style-type: none"> <li>I could choose articles I wanted to read.</li> <li>There were many choices.</li> </ul>	
World Knowledge	<ul style="list-style-type: none"> <li>I could develop not only my English proficiency but also learn about situations in the international community.</li> <li>It was a good opportunity to read current English/ newspaper articles.</li> </ul>	



Some comments were found only in the random text group. Some learners using random texts wanted to read only the latest newspapers. Presumably they thought of old news as expendable and with little additional value, unlike the related text group. In contrast, the related text group may have found the content more important than the date of publication. It was also found that only learners in the random text group said that the texts were boring and difficult, and that they wanted to have a greater variety of texts.

The open-ended questionnaire also revealed some side-effects of experiencing the reading program. It came as a surprise that many learners enjoyed having discussion in class regardless of which articles they were reading. Indeed, several learners commented that "I enjoyed debating very much," and "I like this style of learning." Oral summaries gave learners an opportunity to demonstrate that they were in fact doing their reading. Japanese learners tend to be considered shy and quiet but once they found they were allowed to speak out in class, they were willing to do it. Unexpectedly, some learners reported that they seemed to improve their linguistic knowledge in areas such as vocabulary and grammar which this program originally did not set out to do.

## 5 Limitations

There were some problems that the teacher faced. One problem was assessment. While some learners felt that the number of summaries they had submitted was sufficient for assessing their efforts, others felt that the content of the summaries was not sufficiently considered. Of course, the teacher looked at all the summaries one by one and the learners who submitted problematic summaries were asked to rewrite them. However, because the summaries were counted automatically by computers, some learners felt that they were not fully evaluated. It is also an undeniable fact that learners could have copy from each other, but teacher had no choice but to trust the learners.

Another issue involved equating shared vocabulary with relatedness. Related texts were selected according to how many words were shared between the coursebook and related texts, but they were selected automatically by computer, so for example there might be a story that shares many vocabulary with the coursebook text but not a discourse structure. Care should be taken when dealing with vast amounts of corpus data processed by computers, as computer use could be a trade-off of cost against teacher and learner benefits.

This study did not measure learner reading improvement. The learners were English majors and were taking other English subjects concurrently with this reading class. Therefore it cannot be assumed that any improvement was attributable only to this treatment. Particularly so because the materials and instructors of their other subjects were not identical. One approach to this aspect might be to track the activities of individual learners and to compare the progress of those with similar exposure to English

outside the classroom to those with varied exposure to English outside the classroom. We will leave this for further study.

## 6 Conclusion

This paper reported on a computer-assisted reading program for EFL college learners, accompanied by curriculum integration with a coursebook so as to aid teachers in building links between classroom reading and further reading at home, and to assess the learners in a reliable way. Also discussed were how reading materials were created and displayed on the internet, and how the number of reading texts read was counted and presented on the internet, to encourage the learners to keep up with each other.

This study examined whether or not computer-based reading texts (related texts or random texts) assisted learners in becoming more successful and motivated. The results showed that related texts did encourage learners to read more than did random texts. The questionnaire results also suggested that the related text group showed a more positive attitude toward reading materials than did the random text group. Lastly, the issue of the assessment and computer-based reading materials were addressed. In consequence, this study revealed that related texts, which represent fully data-driven materials and have a consistent standard for their selection, are more effective at increasing learners' reading volume than do random texts, which model a set of conventional materials and often have no consistent standard for selection. Further research would have to include the studies of the effect on individual learners, in terms of reading volume and level of comprehension.

## References

- Bamford, J., & Day, R. R. (1997). Extensive reading: What is it? Why bother? *The Language Teacher Online* 21, 5. Retrieved November 9, 2004, from <http://www.jalt-publications.org/tlt/files/97/may/extensive.html>
- Bell, T. (1998). Extensive reading Why? How? *The Internet TESL Journal*, IV (12). Retrieved November 9, 2004, from <http://iteslj.org/Articles/Bell-Reading.html>
- Brandl, K. (2002). Integrating internet-based reading materials into the foreign language curriculum: From teacher- to student- centered approaches. *Language Learning & Technology*, 6, 87-107.
- Carter, R., & McCarthy, M. (1988). *Vocabulary and language teaching*. London: Longman.
- Chujo, K. (2003). Eigo shokyuushamuke TOEIC goi 1 & 2 no sentei to sono kouka [Selecting TOEIC vocabulary 1 & 2 for beginning level students and measuring its effect on a sample TOEIC test]. *Journal of the College of Industrial Technology, Nihon University*, 36, 27-42.
- Chujo, K., Ushida, A., Yamazaki, M., Genung, A., Uchibori, A., & Nishigaki, C. (2004). Bijuaru beishikku niyoru TOEIC-yoo goiryoku yoosei sofutowuea no shisaku (3) [The development of

- English CD-ROM material to teach vocabulary for the TOEIC test (utilizing Visual Basic): Part 3]. *Journal of the College of Industrial Technology, Nihon University*, 37, 29-43.
- Chun, D. M., & Plass, J. L. (2000). Networked multimedia environments for second language acquisition. In M. Warshauer, and R. Kern (Eds.), *Network-based language teaching: Concepts and practice* (pp. 151-170). New York: Cambridge University Press.
- Davis, C. (1995). Extensive reading: an expensive extravagance? *ELT Journal* 49, 329-336.
- Day, R. R., & Bamford, J. (1998). *Extensive reading the second language classroom*. Cambridge: Cambridge University Press.
- Day, R. R., & Bamford, J. (2000). Reaching reluctant readers. *Forum*, 38 (3). Retrieved November 9, 2004, from <http://exchanges.state.gov/forum/vols/vol38/no3/p12.html>
- Hill, D. (1992). *The EPER Guide to organizing programs of extensive reading*. Retrieved November 9, 2004, from University of Edinburgh, Institute for Applied Language Studies Web site: <http://www.ials.ed.ac.uk/eper.html>
- Hill, D. (1997). Setting up an extensive reading program: Practical tips. *The Language Teacher Online*. 21.05. Retrieved November 9, 2004, from <http://www.jalt-publications.org/tlt/files/97/may/hill.html>
- Mason, B., & Krashen, S. (1997). Extensive reading in English as a foreign language. *System*, 25, 91-102.
- Nation, P. (1997). The Language learning benefits of extensive reading. *The Language Teacher Online* 1.5. Retrieved November 9, 2004, from <http://www.jalt-publications.org/tlt/files/97/may/benefits.html>
- Nuttall, C. (1982). *Teaching reading skills in a foreign language*. London: Heinemann Educational Books.
- Robb, T. N., & Susser, B. (1989). Extensive reading vs. skills building in an EFL context. *Reading in Foreign Language*, 5. Retrieved November 9, 2004, from <http://www.kyoto-su.ac.jp/~trobb/robbsuss.html>
- Robertson, S. E., & Walker, S. (2000). Okapi / Keenbow at TREC-8. *Proceedings of TREC 8*, 151-162.
- Rott, S. (1999). The effect of exposure frequency on intermediate language learners' incidental vocabulary acquisition through reading. *Studies in Second Language Acquisition*, 21, 589-619.
- Schmidt, K. (1999). Online extensive reading opportunities for lower-level learners of EFL/ESL. *TESL-Electronic Journal*, 4 (1). Retrieved November 9, 2004, from <http://www.kyoto-su.ac.jp/information/tesl-ej/ej13/int.html>
- Smith, C. B. (1988). Does it help to write about your reading? *Journal of Reading*, 32, 276-277.

## Sources for World Wide Web

### Cambridge English Readers

<http://uk.cambridge.org/elt/readers/>

### OUP-READERS. JP

<http://www.oupjapan.co.jp/greaders/>

### Penguin Readers

<http://www.penguinreaders.com/pr/resources/index.html>

## Appendix

### Related texts

#### Unit 7. Getting Hyper Over Convenience Food

1. Cooking and Eating Thin
2. How to Keep Picnic Foods Safe
3. How to Keep Picnic Foods Safe
4. Time to Micro-Manage Meals
5. By Kitty Crider How America Eats: So 82 Percent of Us Indulge in
6. Setting the Mood
7. Supermarket Deli Sections Have Convenience Blanketed
8. Daily Toil Continues in Hunger Program
9. Memorable, Stress-Free Parties
10. Travel Agent Finds Niche in Trips For Vegetarians
11. Undated: Bleeding Ulcer.
12. U.S. Air-Dropping High-Calorie Ration to Afghans in Remote
13. Rice Salad the Perfect Mix of Flavors
14. Commentary: Feeding Tomorrow's Troops
15. Commentary: Feeding Tomorrow's Troops

#### Unit 8. Diagnosis: Super size

1. 20 Percent of English Obese, National Study Says
2. Western Ways Cause Obesity Around Globe
3. Western Ways Cause Obesity Around Globe
4. Western Ways Cause Obesity Around Globe
5. Editorial: Junk Food Jitters
6. Boulder, Colo.: Bodies Need."
7. Sugar-Coated Guidelines
8. Flabby Minds
9. Flabby Minds
10. Dr. Henry Barnett, 87, Pediatrician For Manhattan Project
11. Cooking and Eating Thin
12. Healthy Eating, Drinking Lower Blood Pressure Risk

### Random texts

#### Unit 7. Getting Hyper Over Convenience Food

1. Business Anchor Returning to CNN
2. Credit Suisse Warns Earnings to Fall Short
3. Whitman Takes a Trip to Texas, While Her Stand-in Turns Coy
4. Warm-Weather Blues, with Pop and Jazz
5. Midland Student Advances in National Spelling Bee
6. Arum Has Tough Sell With Jones Fight
7. 'Welcome to Nasty Boy!'
8. Editorial: The Overage Pitcher
9. Dark Moon dancer Takes First
10. Clinton Says American People Should Calmly Wait For Election
11. Verizing Pursues Offering Long Distance in Connecticut
12. So Glad We Had This Time Together, But Enough Already
13. CEO: Nabi Still a Work in Progress
14. Advisory: The Great Small-Arms Bazaar
15. Waves Never Doubted Themselves

#### Unit 8. Diagnosis: Super size

1. A Brother-in-Law Not Loath to Use Family Ties
2. AirTran, Northwest in Feud Over Service to Minneapolis
3. China Moves Closer to Entering Trade Group
4. Defibrillate the Masses
5. Jean Karl, 72, Publisher of Books For Children
6. Break Could Benefit Galaxy
7. Chili Dips Taste Too Good to Pass Up
8. Corkum Fall Guy For Kings Defense
9. Mighty Ducks Midseason Report Card
10. Taster's Choice: Zatarain's Leads the Spanish Rice Pack
11. There's a Pikachu in My PC!
12. Maryland Beats Georgia State, 79-60

13. New York: Warrant Reimbursement.
14. Adele Hofmann, 74, Pediatrician Who Shaped Adolescent Care
15. Success of Some Operations Linked to Number Done At a Hospital

**Unit 9. In Africa, Aids Has a Woman's Face Strategies to Help the Rural Farmer -- And Her Husband**

1. Mbeki's Blinders on Aids
2. United Nations: Medical Centers.
3. Heavy Impact Expected on Work Force in Regions Hit Most By Aids
4. Good Nutrition, Good Defense Against Aids, Young Says
5. Good Nutrition, Good Defense Against Aids, Young Says
6. Editorial: Impending Famine in Ethiopia
7. A Fund to Fight Aids
8. Breast-Feeding Best For HIV-Positive Babies, Study Suggests
9. Firms Won't Sue S. Africa Over Aids Drugs
10. Bush Announces \$500-Million Effort to Prevent Aids in Babies
11. Bush Announces \$500-Million Effort to Prevent Aids in Babies
12. Women's Meeting Can Lift Standards
13. Sadly, We Find It Too Easy to Forget About Africa
14. Sadly, We Find It Too Easy to Forget About Africa
15. A Call for Fair Access to Future Aids Vaccine

**Unit 10. Aids Is Not a Death Sentence -- Treatment Should Be the top Global Priority**

1. Undated: of Everything."
2. Undated: Of Everything."
3. Bush Announces \$500-Million Effort to Prevent Aids in Babies
4. Bush Announces \$500-Million Effort to Prevent Aids in Babies
5. Editorial: The Urgency of Cheaper Drugs
6. Undated: and Medicare.
7. Editorial: Thabo Mbeki and Aids
8. Editorial: Retreat on Fighting Global Aids
9. The End of Syphilis?
10. Mbeki's Blinders on Aids
11. A Fund to Fight Aids
12. Drug Companies Drop Suit Against Cheaper Aids Drugs for South
13. Astrazeneca Chief Says New Drugs Will Prolong Life
14. Infectious Diseases Cause More Deaths Than Natural Disasters.
15. San Francisco: Very Well."

13. Flat-Panel Prices Likely Headed Upward
14. Timothy White, 50, Billboard Editor in Chief
15. Georgia Already on Minds of Trojans

**Unit 9. In Africa, Aids Has a Woman's Face Strategies to Help the Rural Farmer -- And Her Husband**

1. Seeking Help, He Found Oprah
2. Top Web Picks of the Week
3. Woman Shot At Game in Kauffman Stadium; Another Spectator Avoids
4. Los Angeles Job Market Healthy, Strong
5. Cox News Service Business Budget
6. Editorial: The End of Montgomery Ward
7. Sale of Stake in Russian TV Hits Snag in Kremlin
8. Shooting of Khatami Friend Unlocks Iran's 'Dungeon of Ghosts'
9. FBI Suspects Single Source in Pipe Bombs
10. Sprint and Worldcom Call Off Merger
11. Carson May Split From Lausd
12. Cone Has Enough Left in His Arm to Help Rangers
13. 7 Families Sue Bin Laden and Others For Billions
14. After Carriage Ride, a Scary Tip
15. An Uncertain Future

**Unit 10. Aids Is Not a Death Sentence -- Treatment Should Be the Top Global Priority**

1. The Hague, Netherlands: 20 Hours.
2. Korea to Use Pension Money to Bolster Its Stock Market
3. Ex-CSUN Punter Found Place in NFL
4. Chechen Horror
5. A Plot That Needs Weeding
6. The Big Shocker For Bush
7. Bush Calls Chinese Leader
8. Condit Loses House Race to Former Aide
9. More Militants Are Arrested By Pakistan
10. Speedy Wireless
11. At Least 12 Die as Car Bomber Hits Israeli Bus
12. Cox News Service Business Budget
13. NASA Tries Again to Launch Shuttle
14. Auditor Denies It Is Target of Investigation
15. Lincoln Constance, 92, Expert Who Classified Farm Products

**Unit 11. Something Seems to Be Missing in an Entrepreneur's Paradise**

1. T.C. TSAO, 99, Dies; Helped Shift Top China University to Taiwan
2. Chinese Team Bars Its Star From Entering NBA Draft
3. North Korea Leader Kicks the Tires in Shanghai
4. Citibank Wins Access to Customers in China
5. Shanghai, China: Domestic Industry.
6. F.T. Liu, 82; U.N. Official in Peace Roles
7. Buying Chinese Companies
8. Editorial: China with Food, and Freedom Too
9. Applied Materials Wins \$200 Million Deal in China
10. Hsieh Ping-Ying, 93, A Chinese Feminist Author
11. China Offers Wary Support for Attacks
12. China Says Protest Papers Are Distorted
13. Bush Calls Chinese Leader
14. Bush Calls Chinese Leader
15. Stars Make 'Shanghai Noon' a Western with Real Kick

**Unit 12. Technology's Toxic Trash Is Sent to Poor Nations**

1. Flat-Panel Prices Likely Headed Upward
2. Flat-Panel Prices Likely Headed Upward
3. Breaking Down All Those Computers: Glass Over Here, Plastic There
4. Senate Votes to Relax Rules on the Exporting of Computers
5. Undated: Other Areas.
6. Mohawk to Buy Plastic Bottles From Coke Bottler, Turn Them Into
7. Mayor Calls for Probe Into Nuclear Waste Dumping
8. Mayor Calls for Probe Into Nuclear Waste Dumping
9. On Disposing of Mercury Thermometers
10. Bay State Tops in Exports
11. New York: Natural Resources.
12. Panel Urges Tighter Border Patrol for Afghanistan's Neighbors
13. Philips Joins LG Electronics to Create Computer Monitor Behemoth
14. Editorial: Suing on Nature's Behalf
15. Texas Led Nation in Loss on High-Tech Jobs

**Unit 11. Something Seems to Be Missing in An Entrepreneur's Paradise**

1. France Telecom's News Is Good, and Early
2. Most Powerful Quake in 5 Years Hits Japan, But Damage Limited
3. Washington: Is Expected.
4. Willis J. Winn, 84, Former Wharton Dean and Fed Official
5. Fort Benning Draws Activists
6. William G. Clark, 77, Illinois Jurist and Critic of Vietnam War
7. Check It Out
8. Gore Touts Importance of 2000 Election in Florida
9. Pilot Killed in Plane Crash Near New York-Connecticut Border
10. Bc-Bkc-Uclanote-Ladn
11. Ulster Progress, Pitfalls
12. 'Fred Garbo Inflatable Theater': Lighthearted and Buoyed By Ether
13. Cox News Service Commentary Budget
14. Second Top Tech Exec Urges Taxation of Online Sales
15. Art Sellers Look to Use Coupons in Settlement

**Unit 12. Technology's Toxic Trash Is Sent to Poor Nations**

1. Putt-Putt Puts the Pedal to the Metal
2. This Thanksgiving, Toast More Than Dinner Rolls
3. For the Love of Country, Go Out and Buy An Auto
4. Aboard the R. Jan Fletcher: Map Results.
5. Donna Brazile, Al Gore's Tough Campaign Manager
6. Georgia Has Local Issues on the Line For Super Tuesday
7. Editorial: Bad Tax Cuts Inside Good Bills
8. Santiago, Anderson Question Marks as Falcons Report to Camp
9. 14-Year-Old Writes a Book to Be Thankful For
10. Cox News Service Commentary Budget
11. Bennett OK with Not Being UCLA QB
12. Pacemaker Donor Dog's Best Friend
13. Judge Criticizes Bonus Program For Customs Agents
14. Israeli Forces Roll Into Jericho and Jenin on Anniversary of Oslo
15. Lawsuit Over Fill Dirt Delays Runway Start