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Designing Online Reading Courses and Tasks to Maximize Second Language Learning

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<Abstract>

When designing language learning websites, three major parameters of subjective enjoyment and objective effectiveness as well as technological efficiency should all be considered. Teaching approaches using communicative and interactive tasks as the central units for the planning and delivery of instruction are known to provide an effective basis for language learning. Non-English majors are often given authentic tasks and texts to do in their study which relate to their major fields but are beyond their L2 proficiency levels. Therefore teachers need to use a reading approach that helps to foster more comprehensible foreign language learning input and output, which such demanding EAP/ESP/ETP (English for academic/specific/ technical purposes) print or online texts require. Otherwise such technical, academic tasks will be too cognitively demanding and lexically dense for many language learners to result in any amount of pleasure, much less effective learning. The writer designed a Task-Based online approach (defined in text) to reading such materials, which helps to maximize the accessibility, comprehensibility, productive use and elaboration of new target language terms and structures. This approach to reading can help students learn more L2 vocabulary and improve understanding, since any text uploaded by teachers or students can be viewed on their computers with translation and listening support, to make it easy to access and comprehend any online text.

Keywords : Online reading course design and website development ; intensive and extensive reading strategies ; English for Academic/Specific/Technical Purposes ; Depth of Lexical Processing Scale

Introduction

Since there are now so many language learning websites proliferating, it becomes more important to help define what makes a good online course for reading in a foreign language in particular. Also needed are practical demonstrations of how to use well-constructed sites effectively in what is being called “blended learning,” learning that blends communicative, well-integrated language study

with CALL technology. This article reviews the design and execution of an Online Reading Course developed for graduate Japanese engineering students during one semester of instruction from October, 2004-March 2005. Comparing intensive and extensive aspects of the course, it proposes and demonstrates a model course for balanced reading online. Extensive reading was encouraged by making hundreds of interesting cross-cultural stories available to students, after modeling and

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spacing their use in three full 1½ hour class sessions. Rather than forcing learners to read academic articles assigned by other engineering professors on their own in a traditional intensive reading style, articles were put online, then put through a bilingual glossing engine and blended into an integrated four-skills language learning approach that was socially interactive with other learners.

Although foreign language learners should always be encouraged to read a wide variety of materials at levels comprehensible to them and compatible with their L2 proficiency level, not all L2 reading can be “pleasure reading.” Much reading for students in more technical fields may require reading for information, and skills typically associated with an intensive approach to reading instruction. Just as we must always consider both text-based and reader-based factors, so too academic needs of students must be carefully and appropriately addressed, which non-academic readings alone usually cannot fulfill.

The development of this reading course for graduate engineering students required a blending of both of these approaches to reading, as well as an integration of both

CALL programs and websites with other communication skill practice. Intensive and extensive approaches to reading each have their advantages for foreign language education as shown in Table 1. Both comprehensible input and output opportunities are clearly needed for well-balanced language development. Likewise receptive and productive tasks are each needed to develop these different kinds of language skills. As defined by the Task-based Language Teaching and Learning association’s website itself:

Task Based Language Teaching (TBLT) is an approach which offers students material which they have to actively engage in the processing of in order to achieve a goal or complete a task. . . TBLT seeks to develop students’ interlanguage through providing a task and then using language to solve it . . . tasks focus on form . . . In short, TBLT is an approach which seeks to allow students to work somewhat at their own pace and within their own level and area of interest to process and restructure their interlanguage. It moves away from a prescribed developmental sequence and

Table 1: Combining Advantages of Intensive & Extensive Reading

INTENSIVE READING SKILLS versus	EXTENSIVE READING SKILLS
Stresses Development of Specific Reading Skills:	A. Self-Chosen Materials often more interesting
A. Word-Recognition (Basic Elementary Phonics)	B. Broader Cross-Cultural Content Encouraged
B. Meaning Comprehension Skills Stressed	
C. Focused Development of Vocabulary, Grammar, Study Skills, Inferring	C. Faster Reading to Increase Speed
D. Comprehending Details vs. Main Ideas	D. Analytical Reading
E. Understanding Literal vs. Inferential Data	
F. Understanding Patterns of Organization	E. Synthetic Comparative Reading (Topical)
G. Transitional vs. Relational Words	
H. Understanding Author’s Bias & Purpose	F. Improved Motivation for L2 Reading
I. Reading to Increase Comprehension Speed	
1) Scanning to Locate Specific Information	G. Greater Entertainment & Enjoyment
2) Skimming for Main, General Ideas	(Lower Anxiety & Better Affective Factors)
J. Encourages Repeated Encounters (shown to be needed for acquisition of new vocabulary)	H. Wider Range Reading for Pleasure
K. Often uses Simplified Texts & Exercises	K. Stress on using Authentic Readings

Table 2: Combining Benefits of both Intensive and Extensive Reading

A. Techniques and Strategies to Improve Comprehension

Reading Types:	Component Techniques:	Strategies: (Vary from basic to optional with type)
1) SURVEY READING	Determining Purpose	Estimate Time/Difficulty
2) SPEED READING	Overview & Data-Gathering	Skimming or Scanning
3) PHRASE READING	Phrase Reading	Structure by Sense Units
4) CLOSE READING (with Annotations; Do I read ahead, re-read, ask for help?)	Monitoring Comprehension (Do I get meaning? Understand & Repair Break-downs?)	Solve/Fix Reading Problems Summarizing Story Line or Text's Rhetorical Structure
5) INQUIRY READING	Questioning; Data-Gathering	Making Inferences
6) CRITICAL READING (Judgments/Insights/Notes)	Comparison & Synthesis Asking/Commenting about Text	Connecting/Personal Relating Use Graphic Organizers
7) ESTHETIC READING	Visualizing Scene/Characters Evaluating Clues & Guessing Summarizing/Dramatizing	Picturing Action Predicting Outcomes Retelling/Re-enacting

B. Vocabulary Development Strategies

Vocabulary Learning Strategies:	Lexical Processing Phase/Goal/Focus:
1) Assess – Check	Evaluate degree of word knowledge
2) Access – Connect	Ascertain or ask meaning in context
3) Archive – Keep (Save & Sort)	Record new word meanings somehow
4) Analyze – Divide & Conquer	Divide by Grammar/Origins/Meanings
5) Anchor – Fix in ST Memory (Avoid Interference of “false friends”)	Use Visual/Auditory Mnemonic Devices as ST Cues/Links/Triggers
6) Associate – Relate to Simple Topical Keywords Conceptually & Network them	Organize into Semantic Field Categories; by Collocations/Common Expressions
7) Activate – Use Productively	Actively use expressively ASAP Recall new words from Memory Links; Reproduce/Retell/Re-enact Stories, etc
8) Anticipate – Expect & Predict Meaning in text by looking ahead	Build up one’s “predictive Anticipatory Set” skills
9) Reassess Learning – Recheck/Improve	Post-test any TL vocabulary or VKS
10) Relearn/Recycle–Review words missed again in new contexts often	A. Re-meet TL words again in repeated encounters often; B. Build up Automaticity and Long-Term Retention Skills

introduces learner freedom and autonomy into the learning process. The teacher’s role is also modified to that of helper. (<http://www.tblt.net/>)

Table 2 suggests ways to combine the benefits of both intensive and extensive reading techniques and strategies to help learners improve their vocabulary and comprehension. Since many language arts or foreign language training programs lack time for an extensive vocabulary development program, (e.g. in countries where students have only one college English class), a more workable approach may be one that combines the teaching of major comprehension and vocabulary learning strategies (Mountain, 2003; Author, 1996;

2005a), like those overviewed in Table 2, rather than try to cover all essential individual words.

Literature Review

Despite several decades of research about L2 strategy use research, there are still many unanswered questions, and even more when we focus on trying to assess online reading, which we can justifiably consider as a new species of reading altogether, one which has not been very deeply researched at all. When doing reading and vocabulary strategy research, Anderson (2003) is correct in recommending that researchers and classroom teachers should work together to respond to these complex,

interrelated issues. Because metacognitive online reading strategies play such an important role for both EFL and ESL readers, teaching and researching about such reading strategies must continue to play a vital role in language education, whether it is being done in more traditional classrooms or in state-of-the-art multimedia CALL labs.

All four skills in the target language (TL) should be encouraged to be integrated with learners' online CALL use. By doing so, students' TL vocabulary, reading, writing, oral and listening strategies can all be better developed together much more enjoyably and effectively. Stronger language learning skills will be the result when these new online literacies are better understood and the strategy training needs of language learners are better provided for. Three kinds of online reading were delineated by Coiro (2003): linear, multimedia and interactive

texts, each presenting "new challenges for readers, especially second language readers," as Anderson (2003) found in his early study of online reading strategies. He noted that for CALL or Internet reading tasks to be successful, "teachers need to be more aware of the online reading strategies that L2 learners use. We cannot assume a simple transfer of L2 reading skills and strategies from the hardcopy environment to the online environment." (p. 5) Indeed, language and reading teachers must focus more attention on how new technologies and online literacy requirements, technological functions and support functions are changing reading and its potential to enhance language learning.

Consistent use of taxonomies of language learning strategies, such as those proposed by Schmitt (1997) and Author (2005a, 2006a), and systems that encourage both greater a) depth of lexical processing (shown in Table 3), b) a

Table 3: Depth of Lexical Processing Scale

A. Bilingual 8-Fold VLS Taxonomy
(Showing How to Use this Taxonomy of Vocabulary Learning Steps, Skills and Strategies)

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Assess: * Make Chances to Learn TW	Access: Always Look up, Ask/Guess	Archive Keep Records Clearly	Analyze Separate by Root & Parts	Associate Group under a Keyword	Activate Always Practice Using	Anchor Fix with Memory Tricks	Reassess Review (Study!) Recycle (Re-use)
Attend to and Check How Well Its Known	Connect to its Form, Meaning, and Use	Record it *TW= Target Words	Divide it	OrganizeNew Target Words	Produce Express	Fix/Hook by Audio- Visual Cues/Hints	Repeat, Re-meet, Recheck Regularly

B. Lexical Processing Phases in Japanese

評価	接近	記録	分離	整える	活動的に使う	定着する	再評価復習
A Mark Unknown Words B Make Chances to Learn C Do VKS	A BBD** B CBD C MBD D CMD (CBD-CMD Combo exists)					A Draw Picture B Think of similar sounding word C Act out verbs	A Alone using Cards B With Partner C Class Archives Files/Lists

*VLS=Vocabulary Learning Strategies; **BBD=Bilingual Book Dictionary; CBD=Computerized Bilingual Dictionary; MBD=Monolingual; Book Dictionary; CMD=Computerized Monolingual Dictionary
VKS=Vocabulary Knowledge Scale

wider breadth of syntactic complexity, and c) repeated encounters with new TL forms and meanings in as many different contexts as possible should be encouraged, and can often be greatly facilitated by the rapid access provided by CALL dictionaries, translation software and websites (Author, 2005b; and 2005c). Helping students to develop consistent computer-assisted habits of systematically organizing strategies they use in processing of new language can greatly help them to maximize their TL development (Author, 2006a). Making reading courses designed for academic purposes corpus based, centered around meeting and mastering terms most essential within their major fields, can make classroom practices more effective and learning experiences more relevant to students' target needs, as Kirkgoz's (2006) study has shown.

Both vocabulary and comprehension components of reading should be evaluated, as well as chances given for more integrated language skill development. Well-balanced and holistic language development can be encouraged either by giving students more individual computerized interaction in multimedia formats, or else by providing social language learning experiences in which students are asked to apply new learning more productively. Joe (1994) showed that one of the types of learning behaviors strongly helping to promote L2 vocabulary acquisition undoubtedly is generation, even when required of students by a "pushed output production" condition, as recommended by Swain (1985; 1995) and de la Fuente's (2002) studies as well. Vocabulary learning activities that promote attention (such as using Vocabulary Knowledge Scale assessment), recall or retrieval, and also generative use in original, creative ways by students can surely help to foster more rapid second language acquisition (SLA).

As Chen (2004: 51) stated, many

CALL researchers worldwide are interested in developing and using reading

materials/environments to enhance second language learners' language competence. . . in the effect of multimedia annotation modes on reading comprehension and vocabulary acquisition (e.g. Chun & Plass, 1997; Seghayer, 2001). . . in screening and arranging of authentic texts by controlling vocabulary items (Ghardirian, 2002). . . in the use of electronic dictionaries or online glossing in reading processes (e.g. Lomicka, 1997; Roby, 1998; Laufer & Hill, 1999)

But few CALL reading specialists like Chen have concentrated on the practical task of providing a more supportive reading environment for both language teachers and learners.

While many CALL-related articles have mainly focused on technological issues, "Pedagogical and intercultural aspects of usability are often overlooked, and as a result, the contribution that content providers [teachers, researchers and web designers] could make towards the evaluation of their own websites is not even considered," write Shield and Kukulska-Hume (2004). This article does consider these factors, especially for language learning, since it is well known that higher levels of enjoyment and engagement on the part of students improve their learning motivation and results. Although language course websites did not "play a significant part in either the study pattern of students or the workload of tutors" there at Open University in London, they clearly were the major part of this graduate ESP reading course. This is because the course was intentionally designed to combine online readings assigned by twelve other engineering professors with written homework and oral/aural interviews based upon them done during class. As such, this course proved to be enjoyable, effective and both very well-received and appreciated by these graduate engineering students, as surveys and homework report comments

showed.

Well-designed language learning websites, as this one sought to be, should incorporate both sound pedagogical principles and also powerful natural language processing technologies. Putting ESP article readings online and showing learners how to use a bilingual glossing engine providing them with instant access to meanings proved to be an extremely efficient way to use limited class time of just 1½ hours per week. Expectations were clear and learners could always go back and refer to articles at home or in any computer lab when doing their homework reports.

Educational researchers have defined several different types of reading interest and reading purpose, ranging from reading for fun, pleasure or entertainment to reading for education or information. Extensive reading approaches tend to stress the former and in intensive reading approaches the latter purpose is more prevalent. Advantages of each approach need to be combined in a well-balanced approach using their complementary benefits, comprehension and vocabulary strategies of each, as recently described by Author (2005a; 2006a). This is because many teachers are not free to only teach free, extensive reading for pleasure, but are also required to develop vocabulary needed for particular majors of their students. At times teachers are given even assigned readings or word lists by their colleagues to incorporate into their reading class curriculum, as was the case in this study. On these occasions a model for a more balanced approach to reading--such as that developed for this EAP/ESP/ETP course for graduate engineering students--can be helpful for achieving both goals, while giving students the experience of learning to read higher level academic articles for both enjoyment and information.

Method

With these examples and principles in mind, we developed two websites with thousands of links for reading, vocabulary, online dictionary tools and general language learning at all levels. In this graduate course, mainly two sections of the site were used: Twelve online EAP/ESP articles assigned by various engineering teachers, and a full online reading lab. This was designed by a friend, W. M. Balsamo, whose "Online Reading Lab: America Today and Tomorrow" is linked from topic L at the author's site to his at <http://www.geocities.com/yamataro670/readinglab.htm>. This Online Reading Lab has about 70 articles in these three major areas about American life--past, present and future. Students were encouraged to do 5-10 of these readings, all of which are timed to be read in just five minutes, followed by online comprehension questions. In a sense this course combined both an intensive and extensive reading component, with assigned readings from various engineering teachers being given first with CALL and integrated English activities added by the instructor. Online Reading Lab articles were freely chosen by learners, following common practice and principles of extensive reading.

Participants

Students taking this course were 38 males and one female graduate engineering student. All were Master's candidates in the new Department of Applied Science for Integrated Systems Engineering at a national university in Kyushu. Students' vocabulary and comprehension grade level and total estimated reading level were computed at the start of this semester course relative to American norms. A 'Course Survey' and a 'Website Evaluation' also were given at the end of this one-semester course. All students were Masters' candidates

in the new Department of Applied Science for Integrated Systems Engineering at a national university in Kyushu, Japan.

Procedures

This graduate level English reading course was designed around the requests and required ESP readings of twelve engineering professors in the graduate school, each of whom submitted an academic article for students to read. These were uploaded from Word text files to two of the <http://ww7.tiki.ne.jp/~call4all/> 's websites (www.CALL4All.us and (<http://ww7.tiki.ne.jp/~call4all/>) to make them more accessible for in- and out-of-class use by students at any time. Besides making all these articles accessible, our instructional plan included the following basic steps.

First students were taught how to read through each article more quickly after being put through a bilingual glossing engine (Rikai.com). By using this single word translation engine, students were then shown how to:

- 1) Test and confirm or correct guessed meanings of new words in context,
- 2) Automatically record these words and review their meanings online, and then
- 3) Print out new words for Homework review,
- 4) Orally read one article per week in class,
- 5) Write a four-part "Reaction Paper" for each article. These four aspects were to include these specific tasks using the target language for communication: a) a Summary paragraph, b) Impressions Paragraph, c) 5 free comprehension questions and answers of their own, and d) Construct complete sentences for each new word they had listed.
- 6) Students could hand in their assignments either by Email attachments or by hand, by printing and bringing them to class.
- 7) The instructor focused on correcting any important errors in learners' grammar construction of self-generated comprehension

questions, five of which they wrote based on each article.

8) After returning these corrected papers at the start of each new class, students were given time and asked to orally interview each other about last week's reading, using corrected forms of their own questions. Partners had to learn to listen more carefully to be able to respond quickly and appropriately. These interviews gave students practice with authentic, comprehensible input since both learners had read these articles before, so could anticipate possible questions and understand common content. Such interviews gave learners more opportunities to better assimilate new terms by active in-class use.

In these ways, learners were given many opportunities to meet, interact with new word meanings. They could also recycle and re-encounter new word forms and meanings, while practicing authentic written and later oral use of them. Frequent re-encounters and activation opportunities are known to be crucial techniques in vocabulary acquisition, as Nation (2001) has shown. Waring (2000) has pointed out the benefits of spaced review.

Materials

This researcher's CALL website was used for this ESP/ETP course, especially the following sections. There were 12 articles given by other professors and put online at <http://ww7.tiki.ne.jp/~call4all/art-other.htm>. These articles were each run through the Rikai.com (at <http://www.rikai.com/perl/HomePage.pl?Language=Ja>) glossing engine, giving students many possible translations for each word. They then were shown how to guess the appropriate meaning in each context by doing an oral reading with the teacher in class in which unclear phrases or terms were clarified bilingually. The website and 12 technical articles chosen by various

engineering teachers are found under “English for Advanced/Specific/Technical Purposes for Engineering Students” at this URL:

http://www.call4all.us/home/_all.php?fi=g.

In addition to these 12 technical readings, students were later encouraged to use the Online Reading Lab (Balsamo's) to improve their reading speed and comprehension. A link is provided to it from this teacher's website. They were encouraged to do five timed readings, recording their comprehension scores and reporting them to the instructor along with their impressions. These results are given below. Besides an objective reading post-test, an Approach to Vocabulary Learning Questionnaire, based on Lessard-Clouston (2000) was given, as well as both a general course survey, and a short website design survey. Beyond these sections of the site used in this course, students were shown how to use several of its free bilingual or monolingual Web Dictionaries, as well as its Semantic Field Keyword online course.

Results

The three major parameters of subjective enjoyment and objective effectiveness as well as technological efficiency were all considered when designing this language learning website. To continue doing so, students' objective improvement during this one semester course was assessed by two measures: a) average performance and participation in written reports about twelve online articles, and b) overall performance during three sessions reading Online Reading Lab articles. Their performance when reading these articles was assessed three ways: 1) by the average number of stories read, 2) by their average speed when doing these timed readings, and 3) their average percentage of comprehension for all stories read during each session.

A majority of students reported that using

the teacher's website (www.CALL4all.us) made the course very enjoyable and efficient for them. Students always did the reports unless absent, often even then making up written reports with much diligence, resulting in an overall class average of 76.75% on these homework reports, which were graded based on their grammatical accuracy, completeness of reporting and word study indicated. Objective test results--59% average online comprehension despite this EFL class averaging just 3.5 in their total reading grade level--also showed a good level of improvement in learners' average vocabulary and grammar use levels, clearly supporting the effectiveness of such a blended online course. Thirty-five students completed an average of 18 online readings in a mean time of 6.78 minutes per reading. Since these readings were designed to be read in just five minutes, it became apparent that these graduate engineering students need more work on gaining more of the essential core vocabulary required to read at a higher level with greater speed.

These were their average comprehension scores for all readings done on each of three days, as well as students' total overall average. As one would expect, from an initial average score of 54.19%, their comprehension scores went up to 63% and 60.5% on two subsequent days. Each time they were encouraged to try to read ten online articles on topics in areas of their choice. Students' total overall “Online Reading Averages” when doing timed online extensive readings on topics of their choice were as follows:

- 1) Average *Comprehension, for Day 1: 54.19;
- 2) Average Comprehension, for Day 2: 63;
- 3) Average Comprehension, for Day 3: 60.5;

Total Average Comprehension was 59.39% over three days using this online reading lab (*Comprehension=% of online reading comprehension questions whose answers were guessed correctly).

In sum, both objective and subjective assessments showed that a large majority of

these students improved markedly, and enjoyed this course, which blended assigned online readings with integrated four-skills English language development activities (written reports and paired interviews based on online readings) as described above. The course was not long enough (just one semester) to measure reading gains by grade level.

Average class reading levels for all 39 students relative to native reader norms in America were as follows, assessed at the start of the fall semester. Average vocabulary level was grade 3.93, or about the start of fourth grade level. Average reading comprehension level was 3.02, hindered apparently by this low vocabulary level. Average expected reading grade level was the middle of third grade, or 3.51 (*Gates C*).

Students' wrote brief reports on each reading including a) a Summary paragraph, b) Impressions Paragraph, c) 5 free comprehension questions and answers of their own, and d) Construct complete sentences for each new word they had listed. These were each printed or emailed in, corrected by the teacher and returned for oral interviews, emphasizing oral and written correction of grammar errors. All reports received a grade, and were a major part of the semester grade, so assignments were taken seriously and done regularly by almost all students. Final class grade average for ten of these reports required was 78%. This five-month semester course emphasized developing online reading skills using bilingual glosses and regular, blended and balanced integration of CALL with all four communication skill areas as described above. It was necessary to try to balance an intensive reading approach to cover higher level technical articles assigned by other engineering teachers, with an extensive approach using an online reading lab. The students' general surveys (N=38) showed an appreciation for both approaches, and improvement in their speed and comprehension

during second and third sessions using the online reading lab as follows. They averaged reading 18 stories over three weeks, at an average speed of 6.78 minutes. While average comprehension scores were close to just half (54.18) during the first week, they improved to 63 and 60.5% during weeks 2-3.

As Chapelle (2001) suggests, any proposed CALL program or web-enhanced course needs to be evaluated for its 1) language learning potential, 2) learner fit, 3) meaning focus, 4) authenticity, 5) impact, and 6) practicality. The online reading labs used in this study proved to have these beneficial characteristics for learners involved:

1) *Broad language learning potential* by presenting learners with plentiful chances to focus on using new language forms during both intensive academic/technical readings and extensive cross-cultural free-readings. Abundant evidence that learners focused on form and acquired new forms and meanings exists in all their written feedback reports in Word, in auto-archived and printed vocabulary lists for which they made up their own sentence examples, and in their high homework average (78%).

2) *Learner fit*, since the difficulty level of targeted linguistic forms was brought down to their level by the addition of WordChamp.com or Rikai.com's glossing engines being made available when articles uploaded to this instructor's website were run through them. Also the level of extensive readings was appropriate for these learners to increase their language ability, since most could comprehend articles at an average of about 60% comprehension, within 5-6 minutes as they were being paced by Balsamo's Reading Lab that was added to our site.

Evidence that learning tasks and word forms were appropriate for these learners is also plentiful, as all texts were written for adults, intensive technical articles for engineers and other extensive readings for adult learners interested in American cultural

issues. Average reading levels were 3.93 vocabulary, 3.02 comprehension and estimated reading level of grade 3.51 (as assessed by use of Gates-McGinite Reading Test). Extensive reading texts were run through Vocabulary Profiler showing they mainly consisted of words in the 1-2,000 range, though some academic words also appeared infrequently. For harder, technical readings these learners had access to bilingual glossing. For easier, extensive readings they did not seem to require it, and having it would only have slowed down their reading speed, which the Online Reading Lab pacer sought to increase successfully.

3) *Meaning focus was primary*, as learners' attention was continually being directed to comprehending the meaning of the target language and texts by the use of Rikai.com to choose from a list of possible L1 translations based on context to clarify or correct readers' own hypotheses immediately. Since they could not use these functions during extensive online readings, more rapid comprehension of shorter texts in limited time-frames encouraged a focus on meaning as well, while questions guided them to better understand main ideas or re-read for them. Readers had to interact with technical texts after in-class readings by creating their own summary of main ideas, comprehension questions and new vocabulary sentence examples. Thus they had to construct and interpret new meanings and forms, all of which appears to have aided their retention.

4) *Authenticity* – Learners could easily see connections between this course's CALL tasks and language tasks outside class. This is because up to now, despite ten years of language learning, they have usually had to read technical journals without any help of glossing, summary paraphrasing, interview questioning interaction with text or classmates, or guided vocabulary development. Tasks required during this online reading course were likewise most relevant to students because technical

articles had been chosen and submitted by their own engineering professors, who best knew the kind of content and skills students needed to do their own academic research in engineering as Master's candidates outside of this language class. It is most reasonable to assume that once these students have learned how to navigate online texts using the help of this teacher's website articles, abundant links to web dictionaries and glossing engines (we used Rikai.com, WordChamp.com is also possible), they will have developed the independent skills and strategies needed for dealing with other technical texts in their own professional lives.

5) *Impact* – Almost all students mentioned in their survey responses how these integrated language learning tasks and online focus on vocabulary development using online glossing and Web Dictionaries were most helpful (with 1,000 available to them at the course site). Sound pedagogical language learning practices were followed in this course for both reading and vocabulary development, as well as for integrated, communicative language building through interactive use in social settings. Learners were not engaged solely with work on their own computers; rather they had interactive language task components as well. Learners gained practice in using many language learning strategies, both when working personally online, as well as when using socially interactive communication strategies with language partners. Their surveys reflected very high motivation and enjoyment of the many positive learning experiences they had using CALL technology for doing each of these online course components.

6) *Practicality* – CALL resources were quite sufficient for all language learning tasks to succeed. Only problems encountered were only being able to use LINUX OS rather than Windows, the need to teach students how to reset Page Setup for Japanese size paper

rather than US, teaching them how to use Rikai.com for glossing and auto-archiving of new words, and how to use English Yahoo.com to communicate emails and attachments to the teacher, rather than the Japanese version.

Twenty three out of thirty-six or 72.2% of the students in this study did not have or use a computerized dictionary of their own. This shows us that rather a high percentage of these graduate engineering students in Kyushu, Japan have not yet discovered the advantages of having and using rapid access, portable electronic lexicons. Reasons seem to be lack of training or exposure in their schools by former English teachers, satisfaction with book dictionaries, failure to use any kind of dictionary or some have already gotten used to using free web dictionaries and translation engines online. Only 1/40 mentioned using these though. Only 10 or 27.78% said they have and use electronic dictionaries regularly. These CBD users had more confidence in their English vocabulary abilities, estimating themselves to be at an average 3,037.5 word level. On the other hand, non-CBD users estimated themselves to be at an average 1,300 word level. However, 12 students not using electronic dictionaries did not even have the confidence to guess their vocabulary level at all. This shows us two measures of lower confidence in word knowledge possessed by non-CBD users. Those having and using them, by contrast, had more confidence in their vocabulary ability, estimating themselves to be more than twice the level averaged by non-users (3,037.5 versus just 1,300 word level). Actual averages of these students based on objective standardized reading test results (Gates McGinite, Form C) gave these results, showing little difference yet between the groups:

CBD users' average vocabulary level was grade 3.56.

Non-CBD users' average vocabulary level was grade 3.99.

Average for all of these graduate students was grade 3.89 vocabulary level.

Discussion

We have been able to develop a multi-purpose language learning site including an Online Reading Lab (ORL) and succeeded in fully integrating practice in all four communication skills with it in this graduate level course. Since the learners' average vocabulary level (grade 4.0) is comparable to that of undergraduate freshmen engineering students at the same university, such a course using only the Online Reading Lab's easier articles could also be successful in the future. Technical articles would be skipped and simpler Rikai.com articles used instead, ones having instant online bilingual glossing available.

The following resources and services were provided by this course and website:

- 1) Interesting, authentic online reading materials (copyright free);
- 2) Comprehensible input, facilitated by instant bilingual glossing and other web dictionaries;
- 3) Comprehension questions on each article were available for each timed, online Reading Lab article. Learners wrote their own questions and answers for ETP articles, to enhance and ensure their mental and linguistic interaction with each text. These were followed up with oral/aural practice using these same questions after being checked for grammatical accuracy by the teacher.
- 4) Feedback was offline and done personally with the teacher, orally or in writing. An online tracking mechanism was not built into this website, as learners printed or emailed their written reactions directly.

While adult L2 readers can often read beyond their limited TL speaking level, to teach them effectively we need to be better able to test both individual learners' reading levels, as well as the approximate reading level of any online or offline text. To do so

this writer has assembled several sites that show teachers how to do proper text leveling analysis prior to teaching any text to students (where this study's online Reading Lab is also located, at http://www.call4all.us/home/_all.php?fi=r).

Readers' own needs, purposes and interests should guide in the selection of reading texts for or by them. Some courses may make requirements on the type of materials appropriate for their majors or even give them assigned readings, as was the case in half of the readings given by other engineering teachers to this English teacher to use. While these readings were often at a more challenging level, this researcher enabled learners to gain more rapid access, assimilation and retention of the meaning of difficult, technical vocabulary in these various ways: 1) by providing a range of possible native language meanings via Rikai.com's glosses engine, and 2) reading these articles with students orally in class, noting many of these new words together, 3) showing them how to auto-archive the words on their screens, 4) printing new vocabulary lists for written productive use, and 5) having students practice using these new concepts and terms in the next class in oral interviews.

The most likely explanation for there not being much difference or any clear advantage yet to those students using electronic dictionaries would be that most of them probably started using one only recently in college. Also they have only had a Freshman English class and no other English course was required until this graduate course four years later. Clearly many Japanese college students seem to be in need of much earlier training in the use of all kinds of lexicon tools, both online, portable electronic devices as well as both monolingual and bilingual book dictionaries, and how best to employ them to build up their L2 vocabulary and language skills.

Most of these engineering students have had little or no chance to really use English expressively since that Freshman English

course. As a result, their English has either fossilized or plateaued. More studies like this should be done seeking to correlate EFL learners' actual reading levels with their degree of vocabulary learning strategy (VLS) and dictionary use, of whatever kind(s), to better see how these impact on their rate of TL vocabulary learning.

Pedagogical Implications

We do need to teach students how to specifically assess and read online materials.

Why isn't much Web-based Extensive Reading yet being done? Mainly because most websites are written for native readers. Thus it is unrealistic, unreasonable or unhelpful to ask or expect students to read native level materials in a fluent and extensive way if it is too difficult for them. Many language learners cannot yet read native materials (especially when unglossed) smoothly and without frustration. Native materials are useful for more advanced learners whose ability is good enough for dealing with them. But a central problem for CALL to address is how to help the majority of language learners whose vocabulary and reading levels are not yet adequate for native texts to be able to "read them smoothly and fluently and with enjoyment," a common definition of Extensive Reading. Since so many non-Western language learners cannot adequately handle online, authentic readings designed for natives, few language teachers are yet getting excited about doing web-ER. Waring (2005) offers some of his reasons for not doing Web-based reading within ER:

- a) To the vast majority of students the web is just noise. Until they reach a very high level of competence they will not be able to read it well unless they live in a dictionary. Even my most advanced students have great troubles--as do their teachers! Web-texts can

of course be read intensively, but that is not ER . . .

b) Most material on the web is for natives and there is relatively little that is for L2. And the material that is there, is not graded in any useful or parallel way to the grading schemes in graded readers. All sites that do grade materials grade their materials differently. This makes finding suitable materials a chore. Not only that, but there is little sense of linguistic scaffolding or progression as one reads through a site.

c) Most teachers don't know where to look for suitable materials to teach reading.

d) Most teachers do not know what skills or strategies need to be learnt (or how to teach them) [as they] are quite different. First, people read about 25% slower on a screen than on paper--L1 or L2. Second, there is far more skimming and scanning. There is far more to distract the eye (graphics, videos etc), and people tend not to read whole texts from beginning to end. People need to move their eye off the page to scroll, etc. In fact we don't have much of a clear idea of HOW people read web pages, let alone have a suitable teaching methodology to teach strategies yet.

e) Most computer classes (if a school is lucky to have access to computers) would be restricted to computer class... and access for language classes may be limited.

(Waring, 2005, Online posting to Yahoo ER Group, 1/05/05)

Indeed, these are some of the many reasons why people are not yet flocking to the web to teach reading. Taking Waring's suggestion for making a reading level grading scheme for web pages likely to be read by L2 learners, a scale similar to standardized reading tests providing us with approximate grade levels of texts is indeed needed for English learners or teachers to assess the level of any online text before assigning or attempting it. Levels could be indicated on

Web pages by some sort of icon, but one can already use the Vocabulary Profilers available online (at <http://132.208.224.131/vp/>) to do this. It can analyze the text electronically and give a 'reading level analysis' that categorizes all words in any inputted text by word levels, as well as producing an instant color-coded output text, by which learners or teachers can easily identify and focus on the level of words they need to work on. Such modern-day linguistic miracles based on corpus and computational linguistics have yet to be tapped for their full positive, powerful lexical and language acquisition potential. Online reading and vocabulary development needs to be researched in much more detail, and sites having Course Management Systems such as www.WordChamp.com (teaching 138 languages already) and ReadingEnglish.net deserve to be used much more widely.

Conclusions: Developing Integrated Online Courses for Enjoyable Reading and Effective Skill Development

The high levels of learner enjoyment and clear effectiveness of this type of CALL-based ESP online reading course suggest that many more courses should strive to have a web presence, especially reading and writing courses. This study also shows the benefits of giving end-user surveys and interviews, as well as objective post-tests and ongoing monitoring and assessment of students' learning, in order to improve such courses with such added feedback. This online ESP course blended with interactive, communicative language learning activities both in-class and out has certainly shown that making parts of an online reading course available at all times on the Web and demonstrating it in class can ensure that students do use it effectively. Not only do language learners use such a website when it is intentionally and effectively integrated into regular class use, but they also seem to

greatly enjoy and benefit from using it, as they reported on their surveys and demonstrated on their reports and post-tests.

Among the aspects of online learning course material design to take into consideration in future online course development are these issues: 1) Teachers employing CALL should work to ensure that the website's purposes and learning objectives are clear to both students and teachers using them; 2) Teachers must consider the implications of CALL use for learners' workload (how can blended in-class use help increase actual communication, learning and motivation while decreasing time they must spend working alone); 3) They must consider the implications for their own workloads (How can CALL help to decrease teachers' "take-home work," or enable them to even communicate or give feedback by email or instant messaging from home or office between infrequent classes?); and as a final consideration, 4) CALL teachers should try to ensure that end-users' online learning experiences are "of a seamless whole that incorporates all aspects of the online experience (conferencing, library, student and tutor homepage, etc.)," as stated by Shield and Kukulska-Hume (2004, p. 32), so as to better blend these together with other aspects of in-class or take-home integrated four-skills communicative language learning.

Seven major aspects that need to be integrated to design a well-blended CALL-based reading and language program are these language learning factors:

1) Student's prior background knowledge, interest and goals with teacher's instructional goals; 2) CALL-based lessons with in-class practice; 3) balancing intensive reading skill development with extensive or free-reading opportunities; 4) integrating vocabulary and reading practice with other communication skill development; 5) using CALL advantages to maximize student's learning and teacher's workload, increasing efficiency of both

wherever possible via computerized functions; 6) using CALL to improve rates of learning and retention by the use of rapid-access hypermedia references, multi-media input, auto-archiving, printing and review functions; and finally 7) promoting more interactive, social use of language in blended classroom and distance learning exchanges, rather than only online via single-user, private virtual realities.

In addition, of course Chapelle's (2001) six guiding criteria and their related judgmental and empirical questions need to be considered during any online course design, instruction and course evaluation stages with greater rigor to produce better learning effectiveness, enjoyment and efficiency. We must more rigorously evaluate any proposed CALL program or web-enhanced course for its 1) language learning potential, 2) learner fit, 3) meaning focus, 4) authenticity, 5) impact, and 6) practicality.

Because any CALL program (or text materials too for that matter) may work better for some learners in particular situations than others, learning context-specific studies such as these may not be broadly generalizable. On the other hand, they help to provide what Stake (1994, p. 242) called a 'vicarious experience' from which other researchers can draw their own conclusions, since it is these contextual factors shown in case studies that may contribute most to the success or failure of a CALL course or program. Future studies of this sort – both individual online course and program case studies as well as multiple case-studies--also need to try to link evidence of course effectiveness through both judgmental and empirical analysis of language learning variables, criteria, principles and their respective operationalizations.

The online reading course and website described here is one such workable program. It also suggests a model of how language education websites can be designed for integrated or blended in-class use so enjoyable and effective learning can take place,

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オンラインリーディングコース設計と 第二言語学習を最大化するタスク

ジョン・P・ラオキ

<要 旨>

語学学習をウェブサイトで考案する時、3つの主なパラメーター：主観的楽しみ客観的、技術的に効果的であるかを考慮すべきである。コミュニケーションとインタラクティブタスクを中心ユニットに用いながら計画し、指導していくアプローチは効果的な学習の基礎として知られている。英語科専攻でない学生たちはしばしば本格的な課題が与えられ、彼らの専門分野に関するテキストの学びをさせられるが、それは彼らのL2熟達レベルを超えたものである。それ故、教師はより分かりやすい語学学習のインプット、アウトプットを育成するリーディングアプローチを用いる必要がある。例えば、EAP/ESP/ETP（特定、専門的目的、アカデミックな英語等）プリント又はオンラインテキストなどが要求される。さもなければ、このような専門的でアカデミックな課題は学習者にとってあまりにも理解が困難で多くの難しい語彙があるため語学を学ぶ楽しさもなく効果的にまなぶこともできない。この著者はタスクベースオンラインアプローチ（テキストに定義されている）を考案し、アクセシビリティ（利用しやすさ）、コンプリヘンシビリティ（総合力）を最大化し有意義な使い方ができるように新しいターゲット語表現と構成などを詳述している。このようなリーディングアプローチは学生がもっとL2語彙を学ぶことを助け理解力を高めることができる。何故なら、学生や教師によってアップロードされたテキストは翻訳とリスニングサポート付でどんなオンラインテキストでも自分たちのコンピューターでみることができ、アクセスしやすく理解することができるからである。

キーワード：オンラインリーディングコース設計とウェブサイトの開発；インテンシブ、エクステンシブリーディングの戦略；特定、専門的目的のためのアカデミックな英語；語彙プロセススケール；タスクベース教授法