

# A Blog-based Reading Program for Korean Undergraduates in Technical Fields

*Mi Gyu Kang, University of Oregon*

Undergraduates in technical fields in Korea struggle to deal with materials written in English since the students do not have a wide variety of reading skills and strategies. In most cases, mainstream academic content courses are conducted in L1, so the opportunities and needs for using the L2 are limited. Furthermore, different universities vary in their approaches to teaching English for Academic Purposes (EAP) reading.

In some universities instructors in English-related fields teach EAP reading where the focus is on English skills, not content, whereas in other universities instructors teach content courses but not English skills. In the former case instructors have difficulty explaining specific content, while in the latter case they tend to ignore specific English language-related components that need to be explained. Few universities try team teaching EAP reading for specific content learning.

Students learning English as a foreign language tend to have an extrinsic motivation for enhancing their skills in English. They usually want to improve their English proficiency in order to obtain high scores on exams, regardless of what the exams are for. They do not tend to care much about the procedure or process of language learning. Rather, they are likely to be just eager for good exam results. Moreover, English language pedagogy preferred by instructors is in many cases rooted in ESL contexts, which may not be directly relevant to situations where the medium of instruction is the mother tongue of the students.

In the academic arena, reading skills and strategies for using English are especially important since undergraduates in Korea usually begin to learn

specific content beginning in their first year with textbooks written in English. As many writers have pointed out (Turner, 2004; Todd, 2003; Kirschner & Wexler, 2002; Brown, 2001; Jordan, 1997), if learners are not ready to read unsimplified materials for specific content learning, their success in academic life can be hindered. Turner asserts that language proficiency is “as important as content knowledge” (2004: 104).

EAP, therefore, is seen as “a necessary adjunct to the academic success of individual students” to continue their study, to get a job after graduation, to go abroad for study or business, and so on (p. 95). In the EAP environment, however, students’ use of specific reading skills and strategies is limited. Students tend to employ intensive reading skills and, according to Ko’s (2005) study, they tend to use reading strategies such as wild guessing (the most preferred technique); skipping difficult words; monitoring comprehension; questioning content; deriving word meanings from context; and using syntactic clues (least preferred technique) when they meet unknown words and unknown content without any type of gloss, either L1 or L2.

## **Skills and Strategies**

In the EAP environment, proficiency in reading academic text is considered one of the most important skills that university students need to acquire (Levine, Ferenz, & Reves, 2000). This study is primarily concerned with what Coffey (1984) calls “subject-specific” EAP. By this he means, “the students’ needs may be the quick and economical use of the English language to pursue a course of academic study, in which case we have English for Academic Purposes” (p. 3). Subject-specific English is the language needed

for a particular academic subject, together with its disciplinary culture, including the language structure, vocabulary, the particular skills needed for the subject, and the appropriate academic conventions (Jordan, 1997, p. 5).

In teaching reading skills and strategies in the EAP environment, a useful distinction is what skills and strategies are covered in textbooks: “strategy” as a technique that readers control in order to comprehend and “skill” as something that can be automatically done after the strategy has become automatic (Duffy, 2003; Allen, 2002). In a previous study, Weir, Huizhong, and Yan (2000) divide reading skills and strategies for EAP reading into four broad categories: expeditious reading at the global/local level and careful reading at the global/local level (pp. 23-25).

Jordan (1997) suggests asking questions, team-teaching, discipline-specific topics/texts, and individualization/self-access, while Todd (2003) proposes six key approaches in contrast to macro-level of method: focusing on inductive learning, using process syllabuses, promoting learner autonomy, using authentic materials and tasks, integrating technology in teaching, and using team teaching (pp. 150-152). In teaching EAP, Turner (2004) insists that teaching with specific content and tasks should be beyond skills (genre-based skills which cover “study skills” as a whole): “students need to be able to manipulate language in order to show their understanding of, and be able to negotiate with or argue over, content” (p. 104). Harwood (2005) contends that research findings should be carried out in textbooks as EAP teaching materials: EAP textbooks must incorporate research findings.

A web-based program can integrate technology in teaching and use authentic materials and tasks to improve reading as suggested in the literature. A web-based program can also easily access updated and unsimplified materials and offer a variety of learning tools.

## CALL Tools and Methods

Many aspects of CALL have proven to be valuable in the teaching of EAP reading. First, students can integrate meaningful and authentic

communication into all aspects of the language learning curriculum through computer-mediated communication and the internet (Dudeney, 2000). With technology, learners can communicate with others in different places and time zones to fulfill their education or training needs (Boyer, 2003; Garrison, 2003; Jung, 2003). Learners now have widespread access to “user-friendly browsers, sophisticated search engines, user-friendly software for web page creation, and increasingly cheaper computers and network” (Stapleton, 2003, p. 230).

Second, via the World Wide Web, students can search through millions of files from around the world within minutes to locate and access authentic materials exactly tailored to their personal interests (Asaolu, 2006; Lee & Baylor, 2006; Snyder et al., 2005; Busch, 2003). Third, learners can solve language-enriched learning tasks by accessing and exploring authentic real-world databases via hyperlinks and by annotating the materials or reading the annotations of others without interruption (Busch, 2003; Martinez-Lage & Herren, 1998; Cobb & Stevens, 1996) so that they can increase reading comprehension and vocabulary retention.

Indeed, one could argue that “reading on screen” has become so pervasive in university life that it constitutes a literacy unto itself and that it is difficult to conceive of an EAP training program which does not take advantage of the computer’s role in teaching and learning. The more learners are accustomed to dealing with computer-related work, the more effective an online program can be as a learning tool. In this respect, undergraduates in technical fields are considered one of those groups most likely to be good at computer-related work or activities, and who are effective users of online learning tools.

Previous research on computer-based second or foreign language learning demonstrates that online language learning tools have advantages of glosses/ annotations, non-interruption of the process, and a combination of modalities. These advantages support reasons for developing a blog-based EAP reading program.

*“reading on screen” has become so pervasive in university life that it constitutes a literacy unto itself*

## Blog-based Materials Development

From an online survey of 110 participants, we collected answers to questions about which EAP reading skills and strategies should be developed for target learners. As a result, reading strategies for “understanding main ideas” were developed with implications for a resource blog in EAP reading. The blog provides student-centered tasks and builds a student-driven community by actively involving them in learning tasks. Also, the blog provides diverse, relevant, accessible, and authentic materials for practicing reading strategies and for accessing specific content-related information. The materials are updated on a regular basis and arranged in reverse chronological order so that the most recent information is listed first. The blog also provides language-enriched learning using tools such as concordancing, annotating, glossing, and the like. Finally, users can freely communicate with each other through the Discussion Board and the Frequently Asked Questions (FAQ) blog links.

## Content Development

The reading content in the blog is from texts of a technical nature under four common topics, which are available to most target students. Links to technical readings (such as blogs or websites) are also provided for detailed information, where we attempt to give users some strategies for understanding the blog, help them explore an idea of interest, and encourage them to provide feedback on the blog and its usefulness. See Table 1 below for selected topics.

In order for users to be able to access well-organized, high-quality content with both academic stimuli and interest, materials under each topic were selected from a variety of blogs/websites on the Internet according to five criteria. Some of the ideas for the criteria are from the evaluative considerations of Internet resources by Stapleton (2003).

Topic One	Artificial Intelligence
Topic Two	Embedded System
Topic Three	Ubiquitous Computing
Topic Four	Wireless Networks

## Criteria for Selection

- The blogs or websites should be produced by recognized experts and recognized by others as a quality source with a preferred domain such as .edu, .gov, .org, and .net.
- The authors should be clearly identified.
- The blogs or websites should consist of current items in which users have much interest.
- The blogs or websites should contain academic content which can be understood by users.
- The blogs or websites should, preferably, provide background knowledge for content.

The materials, chosen because they were innovative and targeted at the needs of undergraduate students, were validated by a professor in computer science in Korea. Each topic in Table 1 consists of four unsimplified readings and additional external links. Materials for background knowledge were also selected and developed. These materials are more basic in content knowledge, focusing on fundamental information in each topic. The materials were developed to reinforce and generate the positive transfer of effective reading strategies, such as guessing meanings of unknown words from context, taking notes, and discerning main ideas, as in Nation (2001).

## Reading Strategy Development

Over the last twenty years, researchers and textbook authors have given crucial perspectives to a new approach to reading strategies. Holschuh and Kelley (1988) implement cognitive science research in their activities. They contend that good readers use their previous knowledge about a topic and the organization of a selection to help them understand new material more efficiently. Schmitt (1990) created comprehension tasks that actively involve learners in the comprehension process. See also Gregory and Nikas (2005), Nation (2001), and Pressley and Afflerbach (1995). Learners should select and use appropriate strategies and monitor their comprehension as they read to help them understand and remember information.

Strategies for reading technical materials were developed in the resource blog based on these perspectives and on reading strategies developed in Gregory and Nikas (2005), Nation (2001), an EAP website <<http://www.uefap.com/materials/matfram.htm>>, Richards (2001), Brown (2001), Weir,

et al. (2000), Jordan (1997), and Pressley and Afflerbach (1995). The strategies were also refined with reference to the selected technical materials under each topic.

Reading strategies developed for the target learners encourage them to be actively involved in understanding main ideas using background knowledge and specific clues such as formats, terminologies, figures, tables, and graphs. Accessing background knowledge of each topic is considered crucial since undergraduates often lack background knowledge of specific content in the EAP environment due to both proficiency of English and difficulty of content. A sample of reading strategies is shown in Table 2.

<b>Table 2 Reading Strategies</b>
Step 1: Get background knowledge.
Step 2: Check to see if there is a summary or abstract.
Step 3: Check vocabulary through skimming.
Step 4: Check figures, tables, graphs, calculating equations, and the like.
Step 5: Compare new information with what you already know.
Step 6: Identify understanding of text.
Step 7: Summarize main ideas.

In order to be good readers, learners need to identify some specific factors in technical materials. Since there are so many different ways of presenting technical information, learners will understand main ideas better if they have knowledge about how specific components are used in context. Accordingly, blog users are encouraged to follow the overall steps in Table 2 (and also illustrated in Figure 1) with different opportunities to demonstrate their comprehension.

First, generating sufficient background knowledge will create in learners much interest in a topic and help them understand a text better. Therefore, accessing background knowledge is considered first for reading about a chosen topic. Second, learners need to check if there is a summary/abstract given in the text. If so, they can get some of the main ideas of the text through skimming that part. Third, learners should check frequently used vocabulary while skimming through the text. By using concordances such as The Virtual Language Centre at <[www.edict.com.hk/concordance](http://www.edict.com.hk/concordance)> and The

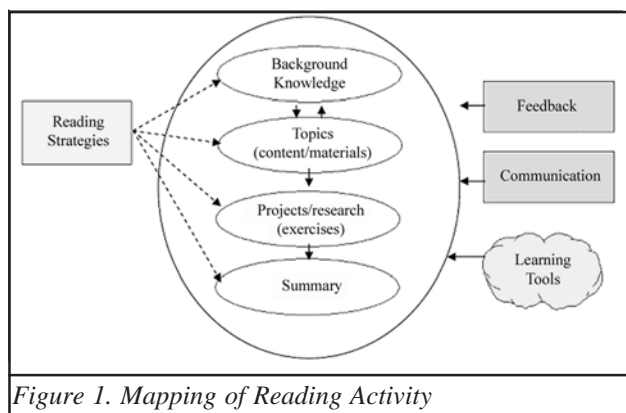


Figure 1. Mapping of Reading Activity

Compleat Lexical Tutor at <[www.lextutor.ca](http://www.lextutor.ca)> linked to the blog, users can meet technical terms in multiple contexts where rich information is provided on “a variety of aspects of knowing a word including collocates, grammatical patterns, word family members, related meanings and homonyms” (Nation, 2001, p. 111).

Fourth, sometimes readers can get key ideas just by understanding key figures, tables, graphs, calculating equations, and the like. Fifth, learners are required to compare new information with what they already know. This will help clarify what they understand and lead them to build new content knowledge. Sixth, learners will need some tasks or exercises to identify their understanding of text. In the resource blog, therefore, eight different exercises of ranking, classifying, mapping, and so on, are provided in Project/Research: Cause and Effect, Concept Mapping, Hierarchy Chart, Main Ideas, Making Connections, Problem/Solution, Time-Order Chart, and Word Chart. (See Figure 2.)

Finally, learners are encouraged to summarize main ideas in their own words. This will increase clarity in their understanding of main ideas.

The developed reading strategies can be effective in improving reading comprehension especially in the area of tasks, materials, selection, feedback, and interaction. Users’ tasks and activities regarding these strategies are mapped as shown in Figure 1.

## The Resource Blog Design

A resource blog was developed at <http://www.truedu.com/~esap/> with the following components or subsections: reading skills, reading strategy,

background knowledge, topics, project/research, summary, FAQ, and glossary. The parameters were designed to build a student-driven community in order to compensate for social and pedagogical perspectives in Korea. Target learners' learning strategies tend to be passive and teacher-dependent in class, since relationships between instructors and students still tend to follow "Confucian ethical principles" (Lee, 1999). Relations between teachers and students are not equal, so teacher-centered classroom situations are more natural and common under Confucianism. With this EAP reading program using advanced technology, however, learners are encouraged to build a student-centered community with their own autonomy of leading the tasks in the program. The blog has the parameters or components shown in Table 3 and Figure 3.

The blog was designed with a transparent global navigation scheme. Users can see what options are available. When clicking a section, they can access a list where the most recent information comes first. By making choices about which node or link to select next, users can understand the text and browse through the space selectively for their purposes (Bolter, 2001). Learners participate in choosing the text, tasks, and subtasks through a visual and interactive interface. Learners can build their own steps toward meeting academic requirements and perform-

ing tasks through the abundance of rich learning resources and through the integration of ideas and information from the materials. Figure 4 (along with Table 1 and 2 and Figure 1) highlights important elements in the blog.

## Discussion

In the past, proficiency in English for general purposes was a great advantage in getting good jobs in Korea. However, proficiency in EAP reading is now becoming more and more important in technical fields. Learners need to keep up with newly updated information in order not to lag behind with current technologies. Both specific content knowledge and language proficiency are necessary for Koreans to compete with each other and with other countries around the world. From that perspective, the resource blog will help learners to be successful readers, and hopefully successful in their careers.

The resource blog can be effective for teaching reading. First, tasks are student-centered (for example, users will select an unsimplified text and as many exercises as they need) and reading-centric (that is, the blog is focused on reading). While reading, users will apply skills and strategies. Repeated practice will improve their comprehension and fluency in reading, as Nation (2001) points out. Second, while working on diverse exercises, users

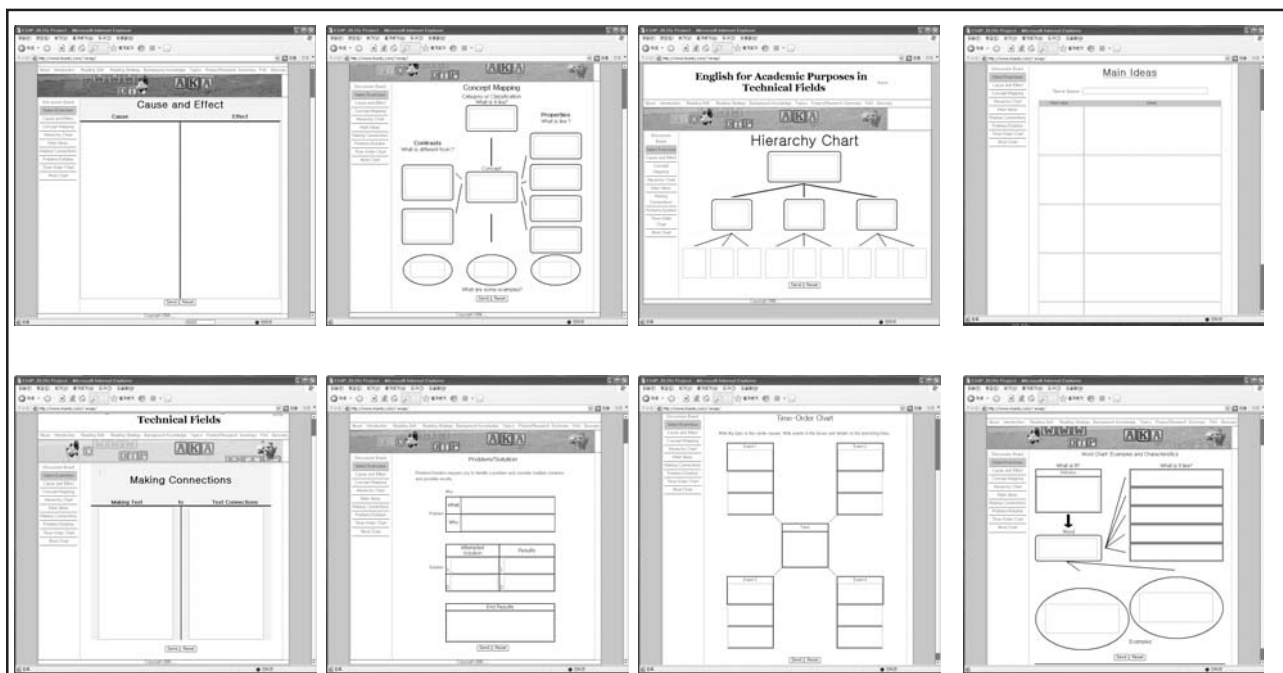


Figure 2. Exercises in Project/Research

can freely share their needs, interests, content knowledge, and exercise results. Interacting with each other will help learners scaffold their reading strategies and content knowledge. Third, the blog can influence vocabulary retention through learning tools and dynamic pictures and graphics.

According to Ko's (2005) study, undergraduates in Korea tend to stick to one definition without paying much attention to a given context. Students tend not to care about the fact that words can be translated in different ways depending on the context. As a result, they skip unknown words without putting much effort into using contextual clues. In this content-based online program, however, repeated reading of different texts will lead learners to be actively involved in recognizing many different contexts of a word. For example, they could use learning tools like concordancers in which a list of examples demonstrate the usage of a word or word family. Realistic and dynamic graphics

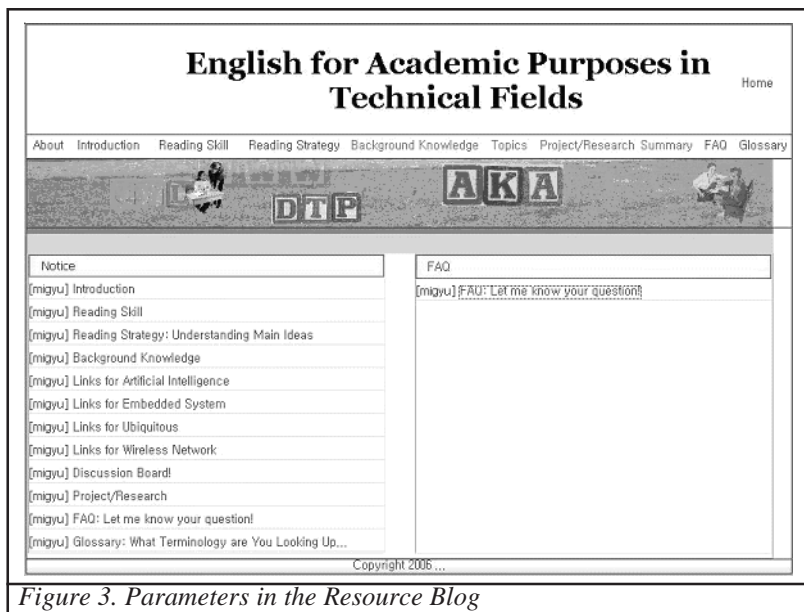


Figure 3. Parameters in the Resource Blog

online will also facilitate vocabulary retention, as shown in Al-Seghayer (2001).

The resource blog is web-accessible, without limits of time and space, and uses authentic, relevant, and appropriate materials to target specific learning levels. The program moves beyond a skill-based approach by developing macro-level comprehension exercises. Through a variety of increasingly more complex comprehension tasks, users will be able to demonstrate their understanding in ways which lead to better retention and study habits.

## Limitations

The program is useful as a teaching aid, but there are some issues to consider. First, as noted earlier, there are few universities which try team teaching for EAP reading for specific content learning. If an instructor for specific content manages users' work in the blog for a specific class on campus, then he or she may not deal with language pedagogy or language-related feedback. Second, even if the target group begins to learn specific content with textbooks written in English, they tend to depend on materials translated into their L1. Their enthusiasm about enhancing their English proficiency and their learning strategies do not always match. In this respect, it is different to predict how much they might prefer doing tasks in the blog.

Third, the target group's English proficiency level is mixed even in one class in terms of both reading fluency and vocabulary knowledge. As a

**Table 3. Resource Blog Parameters**

<p><i>Introduction:</i> Users (both instructors and students) will see how to use the resource blog. This academic blog aims at learners' practicing reading and getting updated information.</p> <p><i>Reading Skill:</i> Users are encouraged to skim to understand main ideas.</p> <p><i>Reading Strategy:</i> Reading strategies focus on understanding main ideas.</p> <p><i>Background Knowledge:</i> Before reading under each topic, users can get some background knowledge.</p> <p><i>Topics:</i> Each topic has diverse reading materials and external links.</p> <p><i>Project/Research:</i> Users will demonstrate macro level comprehension of a text through information transfer activities (for example, dynamic outlines, classifying exercises, and tree diagrams), which will both show comprehension and then provide a building block for further study skills work. Users will also communicate with each other through Discussion Board.</p> <p><i>Summary:</i> Users will summarize main ideas of text.</p> <p><i>Frequently Asked Questions:</i> Users can ask questions either in English or in Korean about topics, their needs, their interest, and so on. A webmaster, a professor in Korea, will answer them.</p> <p><i>Glossary:</i> Users will be able to look up terminology.</p>
---

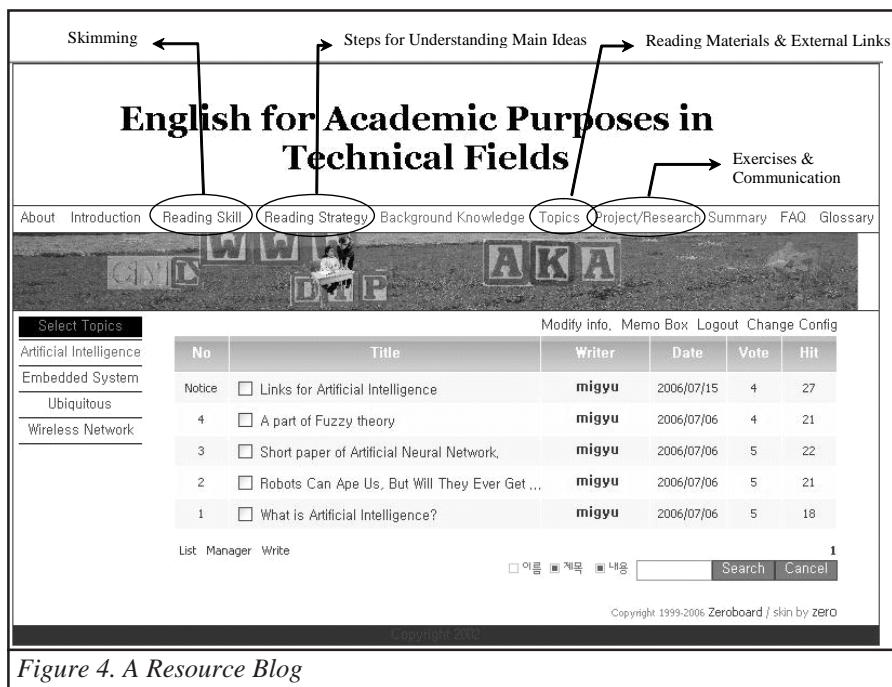


Figure 4. A Resource Blog

result, learners' English proficiency can be a variable that affects the effective use of the blog in class. Although the blog is designed for first- and second-year students at college, materials can be difficult to understand, depending on individuals' reading skills, strategies, and vocabulary knowledge. Therefore, it is not apparent how much the program can be effective for improving reading without different levels of simplified and unsimplified academic texts. Meaningful alternatives may be required for learners who are below the appropriate proficiency for reading the materials in the blog.

## Future Research

In an EFL situation, an alternative to team teaching in EAP reading may be challenging since learners may need preparation time to be familiar with the new approach. Individuals will react differently. Things may become worse when instructors from different generations have different opinions regarding teaching strategies. Making matters more complicated, the Korean educational system is still in a transitional stage due to both different value systems and educational perspectives among different generations. However, online education is at its peak, and technologies are so advanced that we can assume some positive effects of technology-based learning tools on learner performance.

According to an online survey, undergraduates in technical fields depend on textbooks for content

learning. Many are struggling to acquire content knowledge for their academic goals due to their lack of proficiency in English. As a future plan, therefore, it is important to continue to develop reading materials based on users' needs. New exercises will also be needed for the enhanced material.

## Conclusion

This blog-based EAP reading program for undergraduates in technical fields in Korea was developed to improve reading strategies for understanding main ideas in technical materials. The goal

was to connect EAP reading for specific content learning to CALL for enhancing both language proficiency and content knowledge. Several pedagogical and theoretical implications can be drawn from this experience.

In terms of pedagogical implications, learners could use the exercises to brainstorm and think creatively as active participants in their own learning. By doing so, learners may get out of the rote learning mode and focus more on demonstrating their comprehension than on just memorizing content. Their learning behaviors may be much improved, changing from habits entailing little discussion and little presentation to habits that are more active, building a different academic community with technology. Users are exposed to an environment in the resource blog in which they can freely participate in discussions among themselves through FAQs and the Discussion Board. Project/Research tasks allow students to demonstrate their understanding of main ideas in reading.

As to theoretical implications, this experience demonstrated the possible effectiveness of CALL in specific content learning as an alternative to classroom-driven team teaching or as a self-directed learning tool. Although it may be challenging to use the resource blog for EAP reading, the program should involve learners more actively in learning. Specifically, users' communication online is supposed

to increase group discussion and cooperative participation in class. Besides, users can get specific content-related knowledge through regularly updated research findings or technology-based materials. Students can compare and contrast what they learned in class and what they gained from the blog. Therefore, the blog can be an efficient way for learners to improve both academic content knowledge and language proficiency.

## References

### Books, Papers, and Articles

- Allen, J. (2002). *On the same page: Shared reading beyond the primary grades*. Portland, ME: Stenhouse.
- Al-Seghayer, Khalid. (2001). The effect of multimedia annotation modes on L2 vocabulary acquisition: A comparative study. *Language Learning & Technology*, 5(1), 202-232.
- Asaolu, O. S. (2006). On the emergence of new computer technologies. *Educational Technology & Society*, 9(1), 335-343.
- Bolter, J. (2001). *Writing space: Computers, hypertext, and the remediation of print*. New Jersey: Lawrence Erlbaum.
- Boyer, Naomi R. (2003). The learning contract process scaffolds for building social, self-directed learning. *The Quarterly Review of Distance Education*, 4(4), 369-383.
- Brown, H. D. (2001). *Teaching by principles* (2<sup>nd</sup> ed.). New York: Longman.
- Busch, H-J. (2003). Computer based readers for intermediate foreign-language students. *Educational Media International*, 40 (3/4), pp. 277-285.
- Cobb, T. & Stevens, V. (1996). A principled consideration of computers and reading in a second language. In M.C. Pennington (Ed.), *The power of CALL* (pp. 115-136). Houston: Athelstan.
- Coffey, B. (1984). ESP: English for specific purposes. *Language Teaching*, 22(2), 23-86.
- Dudeney, G. (2000). *The Internet and the language classroom*. New York: Cambridge University Press.
- Duffy, G. (2003). *Explaining reading: A resource for teaching concepts, skills, and strategies*. New York: Guildford Press.
- Fotos, S. (Ed.), *Multimedia Language Teaching* (pp. 3-20). Tokyo: Logos International.
- Garrison, D. R. (2003). Self-directed learning and distance education. In M.G. Moore & W.G. Anderson (Eds.), *Handbook of distance education*. New Jersey: Lawrence Erlbaum Associates.
- Gregory, V. H. & Nikas, J. R. (2005). *The learning communities guide to improving reading instruction*. Thousand Oaks: Corwin Press.
- Harwood, N. (2005). What do we want EAP teaching materials for? *Journal of English for Academic Purposes*, 4, 149-161.
- Holschuh, L. W. & Kelley, J. P. (1988). *Academic reading: A content-based approach*. New York: St. Martin's Press.
- Jordan, R. R. (1997). *English for academic purposes*. New York: Cambridge University Press.
- Jung, I-S. (2003). Cost-effectiveness of online education. In M.G. Moore & W.G. Anderson (Eds.), *Handbook of distance education*. New Jersey: Lawrence Erlbaum Associates.
- Kirschner, M. & Wexler, C. (2002). Caravaggio: A design for an interdisciplinary content-based EAP/ESP unit. *Journal of English for Academic Purposes*, 1, 163-183.
- Ko, M. H. (2005). Glosses, comprehension, and strategy use. *Reading in a Foreign Language*, 17(2).
- Lee, J. K. (1999). Historic factors affecting educational administration in Korean higher education. *Higher Education Review*, 32(1), 7-23.
- Lee, M. & Baylor, A. L. (2006). Designing metacognitive maps for web-based learning. *Educational Technology & Society*, 9(1), 344-348.
- Levine, A., Ferenz, O., & Reves, T. (2000). EFL academic reading and modern technology: How can we turn our students into independent critical readers? *TESL-EJ*, 4, 1-9.
- Martinez-Lage, A., & Herren, D. (1998). Challenges and opportunities: Curriculum pressures in the technological present. In J. Harper, M. Lively, & M. Williams (Eds.), *The coming of age of the profession: Issues and emerging ideas for teaching of foreign languages*. Boston: Heinle & Heinle Publishers.
- Nation, I.S.P. (2001). *Learning vocabulary in another language*. New York: Cambridge University Press.
- Pressley, M. & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. Mahwah, NJ: Lawrence Erlbaum Associates.

- Richards, J. C. (2001). *Curriculum development in language teaching*. New York: Cambridge University Press.
- Schmitt, C. (1990). A questionnaire to measure children's awareness of strategic reading processes. *The Reading Teacher*, 43(6-9), 454-461.
- Snyder, L., Caccamise, D., & Wise B. (2005). The assessment of reading comprehension. *Top Language Disorders*, 25(1), 33-50.
- Stapleton, P. (2003). Assessing the quality and bias of web-based sources: Implications for academic writing. *Journal of English for Academic Purposes*, 2, 229-245.
- Todd, R. W. (2003). EAP or TEAP? *Journal of English for Academic Purposes*, 2, 147-156.
- Turner, J. (2004). Language as academic purpose. *Journal of English for Academic Purposes*, 3, 95-109.
- Weir, C. J., Huizhong, Y., & Yan, J. (2000). *Studies in language testing 12: An empirical investigation of the componentiality of L2 reading in English for academic purposes*. New York: Cambridge University Press.

## List of Online Sources for References

- English for Academic Purposes:  
<http://www.uefap.com/>
- Exercise Development:  
<http://www.educationoasis.com/>
- Exercise Development: <http://www.sdcoe.k12.ca.us/score/actbank/tprobsol.htm>
- Online Survey Administration:  
<http://babel.uoregon.edu/surveys/>
- The Virtual Language Centre:  
<http://www.edict.com.hk/concordance/>
- The Compleat Lexical Tutor: <http://www.lextutor.ca/>

*Mi Gyu Kang completed her Ph.D. in English linguistics and TESOL certificate at Hanyang University in Korea and an MA in Linguistics at the University of Oregon. She taught extensively in Korea before coming to the US in 2005. She has taught reading, grammar, and writing of English to learners of 5<sup>th</sup>-12<sup>th</sup> grade and to undergraduates.*