

Corpora and Emerging Technology for ELT

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The use of corpora can contribute to language learning in both implicit and explicit ways. Corpora have been introduced in language teaching as another approach to teaching language. Data-driven learning views language learning as a kind of research process in which students are expected to discover the knowledge themselves. In Thailand, though corpora are not widely used in ELT, in many universities corpus-based research, such as move analysis on academic writing, experiments on the use of concordance and corpora in ELT, the creation of Thai learner English corpora, errors and performance analysis of Thai learners on prepositions and collocations is now active.

The use of concordance and corpora is an example of how current technology can be applied to ELT. Other innovations, such as Blogs, Youtube, Facebook, Skype, and smart phones, have also been studied to explore their use in ELT. With the rapid growth of technology, language learning is no longer restricted to the same old learning environment. It is our duty as teachers to help strengthen students' linguistic ability by seeking and adapting new innovations for language learning.

Keywords: Corpora, ELT, emerging technology

คลังข้อมูลภาษาและเทคโนโลยีใหม่ในการสอนภาษาอังกฤษ

คลังข้อมูลภาษาสามารถนำมาใช้ช่วยในการเรียนรู้ภาษาไทยทั้งทางตรงและทางอ้อม การใช้ข้อมูลภาษาถูกมองว่าเป็นอีกแนวทางหนึ่งในการสอนภาษาที่เรียกว่า การเรียนรู้จากข้อมูล โดยมองการเรียนภาษาเป็นลักษณะคล้ายกับการวิจัยทางภาษาที่ผู้เรียนแสวงหาความรู้ด้วยตนเองเป็นสำคัญในประเทศไทย แม้ว่าการใช้ประโยชน์จากคลังข้อมูลภาษาจะยังไม่แพร่หลายนัก แต่ก็มียงานวิจัยที่เกี่ยวข้องกับคลังข้อมูลภาษาจำนวนหนึ่งเกิดขึ้นในหลายมหาวิทยาลัย เช่น การศึกษาอัตถภาควิเคราะห์ในงานเขียนวิชาการ การทดลองใช้คลังข้อมูลและโปรแกรมคอนคอร์เด็นซ์ในการสอนภาษา การสร้างคลังข้อมูลภาษาอังกฤษของผู้เรียนชาวไทย การวิเคราะห์เปรียบเทียบการใช้ภาษาของผู้เรียนกับเจ้าของภาษาในประเด็นต่างๆ เช่น การใช้คำปรากฏร่วม การใช้คำบุพบท เป็นต้น

การใช้โปรแกรมคอนคอร์เด็นซ์และคลังข้อมูลภาษาเป็นตัวอย่างหนึ่งของการใช้เทคโนโลยีเพื่อการเรียนการสอนภาษา ยังมีเทคโนโลยีอื่นๆ เช่น เว็บล็อก ยูทูป เฟสบุ๊ก สไกป์ สมาร์ทโฟน ฯลฯ ที่มีผู้ทดลองนำมาใช้ประโยชน์ในการเรียนการสอนภาษาอังกฤษ ด้วยเหตุที่เทคโนโลยีมีการพัฒนาแบบก้าวกระโดด ทำให้การเรียนการสอนภาษา ณ ปัจจุบันไม่ได้ถูกจำกัดด้วยเงื่อนไขเดิมๆอีก จึง

เป็นหน้าที่ของอาจารย์ผู้สอนที่จะเสริมสร้างความสามารถทางภาษาของนักเรียนโดยรู้จักปรับใช้
ประโยชน์จากเทคโนโลยีใหม่ๆ เพื่อการเรียนการสอนภาษา
คำสำคัญ : คลังข้อมูลภาษา การเรียนการสอนภาษาอังกฤษ เทคโนโลยีใหม่

1. Introduction

Teaching English is an important job in this time of globalization. But despite many efforts and many years in English language learning, a lot of Thai students still do not feel that they are competent enough in English. This is the basic problem of ELT that has been talked about publicly in Thailand. There is as yet no best solution to this problem. This paper is an attempt to understand the problem and explore what could be an option for improving the teaching of English in Thailand.

Teaching English or any language is different from teaching other subjects like linguistics, physics, or mathematics. For other subjects, teaching is about conveying the information in that subject. Teachers can go on with their lectures or discussions without worrying whether students pay much attention in class, as long as those students have sufficient knowledge to pass the final exam or can conduct their own research. Teaching English cannot be done in the same way as teaching physics or linguistics because learning a language is not solely about acquiring knowledge. Language is about communication. Whether someone is good in English can be determined from his or her performance, or language proficiency.

That may be the reason why we can see a lot of teaching techniques being used to encourage students to participate in class. That is why we can see a lot of research focusing on the different effects of techniques or methods for teaching English and a lot of research focusing on task-based language teaching to improve students' language skills by creating tasks that facilitate collaborative interaction. That is what many English language teachers are doing here in Thailand. But with different cultural backgrounds, teachers have to be aware that some techniques or methods may not suit Thai learners. So, it is not as easy as adopting any techniques or methods that work well in the West and expecting the same result here. Getting Thai learners to participate in communicative tasks might be difficult because Thai learners are not as articulate as Western learners. Moreover, Thai learners at the present time may behave differently from students in the past. That is why each teacher has to find a way of teaching effectively.

Nevertheless, we cannot deny that learning a language is also learning linguistic knowledge of the language. Some researchers have been talking about the correlation between language proficiency and metalinguistic knowledge, which is described in Roehr (2008, p. 174) as “learners’ ability to correct, describe, and explain L2 errors.” So, teaching English is not entirely about getting students involved in reading, writing, speaking, and listening. We have to be certain that they can use the language properly and that they have metalinguistic knowledge and are able to correct and explain errors.

The question is how we are going to provide them with the metalinguistic knowledge. We can tell them explicitly what the knowledge is. But it does not guarantee that we can teach them all the linguistic knowledge and that they would be able to learn it all. What we should do is to teach them how to acquire or understand language on their own. One way to do that is to use corpora and computer technology in language teaching.

2. Corpora in ELT

Corpora have been extensively used in language teaching. In fact, corpora are widely used in other fields of study. In natural language processing, they are primarily used in training a computer to understand certain phenomena of a language via a statistical model and process the language based on that statistical information. In lexicography, corpora are certainly the source of knowledge for extracting words and meanings. In linguistics, corpora are like evidence of language uses that linguists examine to answer linguistic research questions. In translation studies, parallel corpora are used for studying characteristics of translated languages, which are regarded as translational norms (Baker, 1993, p.246). In language teaching, both native corpora and learner corpora are very useful resources for language teaching.

The corpus is defined as “a collection of pieces of language text in electronic form, selected according to external criteria to represent, as far as possible, a language or language variety as a source of data for linguistic research” (Sinclair, 2005, p. 23). Since a corpus is a large collection of language data, we need some tools in exploring the data. Basic information that we can get from any corpus is the frequency of usages, samples of authentic uses, and the tendency that certain words will co-occur

with certain words, or what we call collocation. There are a number of tools that we can use to explore a corpus. The basic tool is concordance software such as AntConc, MonoConc, WordSmith. Some tools, such as ConcGram (Greaves, 2009), Word Sketch (Kilgarrieff et al., 2004), are more delicate and designed for more advanced users.

Figure 1 is an example of a screen from the concordance software AntConc. We can see the list of files in the corpus we are using, the total tokens of words and word types, the list of words and their frequency, which can be sorted by frequency or by word form. Figure 2 displays concordance in the form of keyword in context, where we can sort the list of occurrences by the right or left context. Usually, concordance software also has a function to display collocates of the keyword, which are determined by some statistical methods.

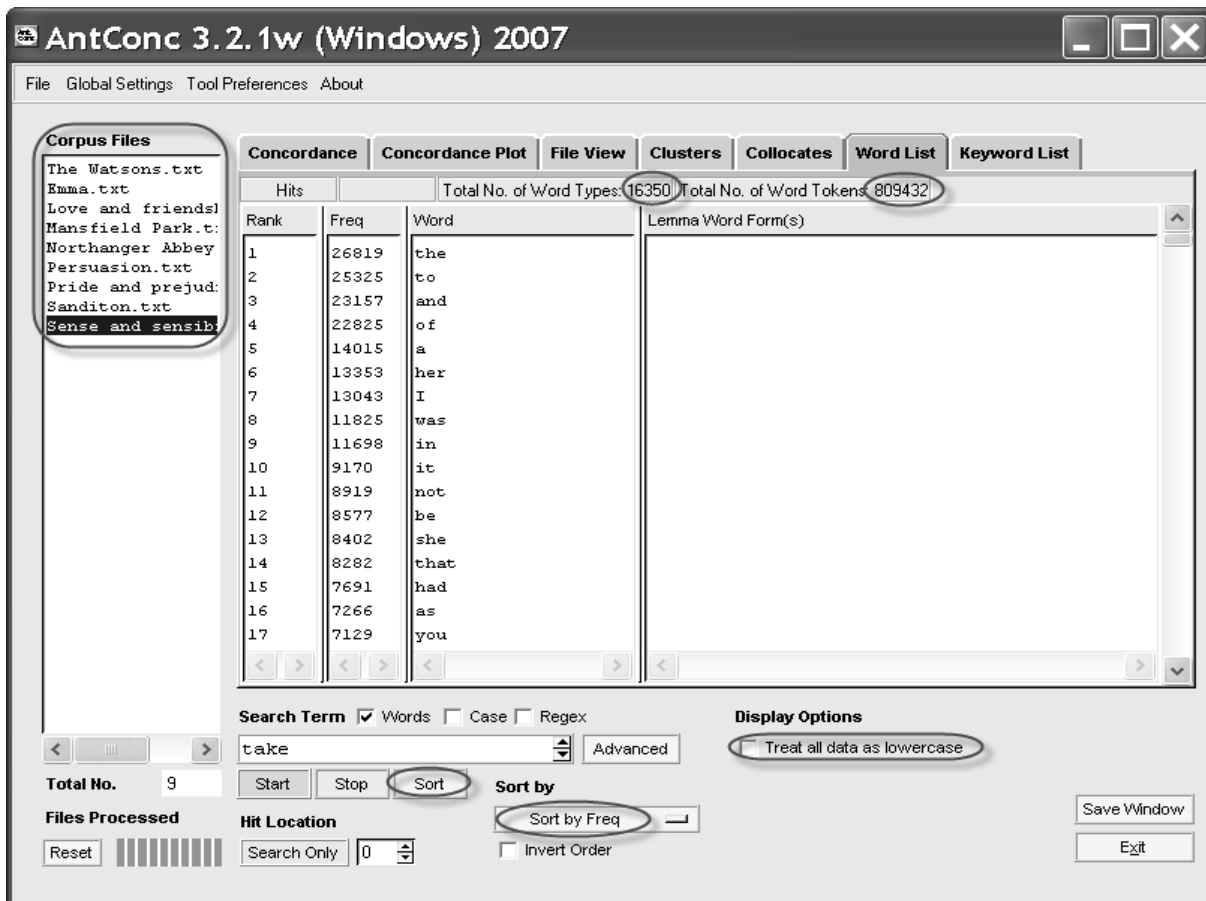


Figure 1: AntConc displaying word frequency list

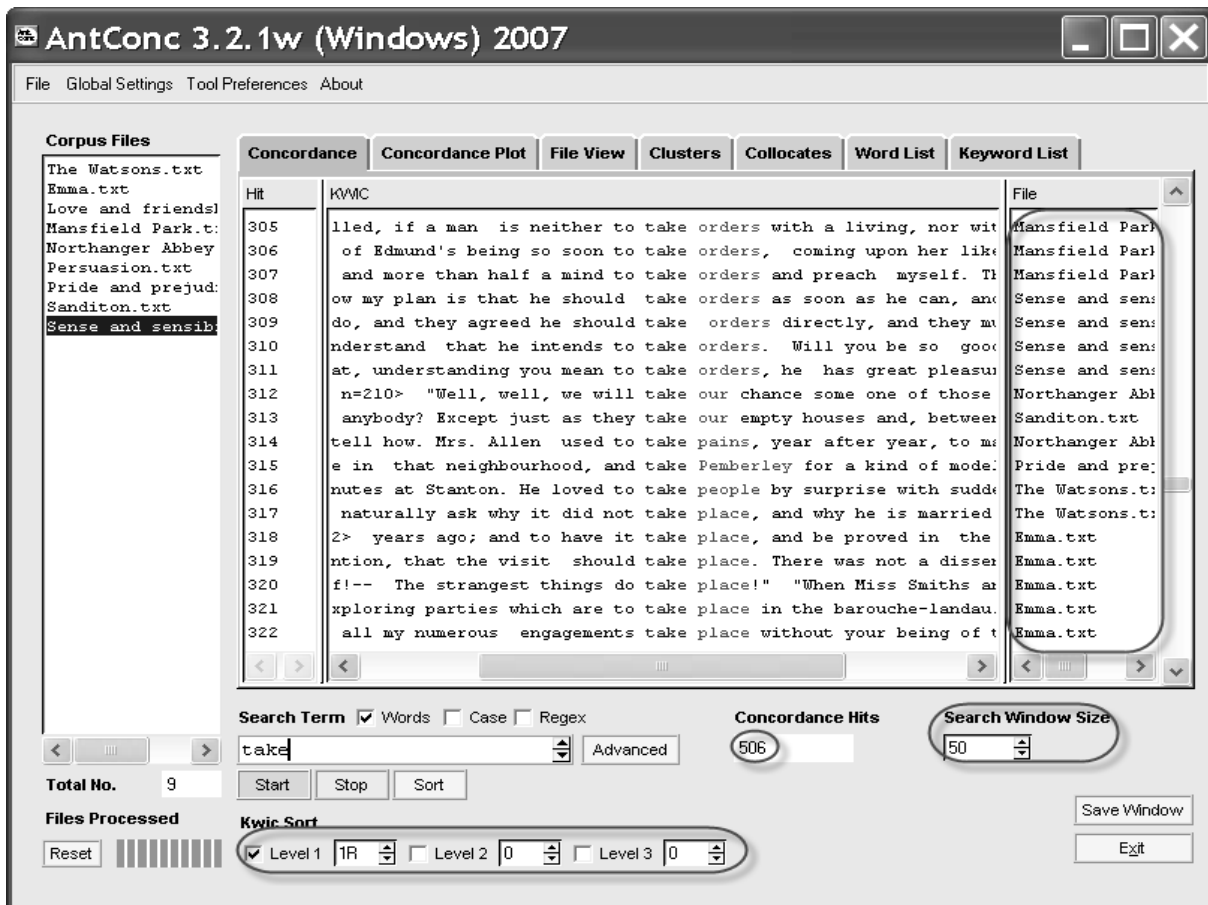


Figure 2: AntConc displaying concordance output

In ELT, some think that the use of corpora leads to a new approach for language learning called data-driven learning (Johns 1991, 2002), or what some people call a “corpus-informed” approach, which is a kind of discovery learning. In this approach, students are encouraged to explore corpora or authentic language data, and generalize knowledge from the corpus. They will act like a researcher seeking to know more about the language they learn on their own. This is a change to inductive learning. To explore the corpus, a basic computational tool like concordance is required. Students can search for samples of usage of a keyword or phrase. The software will extract the data and display them in the form of the keyword in contexts (KWIC) so that the users can easily manage the data by sorting contexts on the right or the left side of the keyword. Presenting language in this way will make the learners easily see patterns of usage. They can see which words are likely to collocate with the keyword.

For this approach to work, students have to be trained and have some experience in interpreting concordance output. Whether this is possible for students in general is still a question. But some people, such as Bernardini (2004), believe that it works well at least from her experience in teaching English for advanced learners at the undergraduate level. She found the results to be positive. Her students were shown how to use the British National Corpus and other corpora. Then they were asked to carry out a project initiated by themselves. At the end, the results and strategies used in their search were brought into discussion in class. The students were also able to come up with suggestions for further studies as a result from exploring the corpora. Besides Bernardini (2004), others such as Cobb (1997) and Gavioli (2005) also support this corpus-driven method.

However, others do not believe that this new approach is going to happen any time soon because it requires dramatic changes for both teachers and students. Teachers will no longer be the source of knowledge. They will become like a coach while students will have to do more work on their own. Some students may prefer spoon-feeding in the same old way. Some teachers may not feel comfortable because they do not know all the answers in advance. They will have to accept the fact that by exploring real data, students may encounter some usages that the teacher may not be able to explain immediately in class.

Therefore, another group of people think that corpora should not be employed directly in ELT, but they should be used as a resource for language teaching. A corpus can provide us with useful information about the language that we can use in teaching as a source of knowledge. We can use the corpus to help answer specific questions about certain words, phrases, or structures. We can use the corpus to spot the problems of learners by doing error analysis on a learner corpus. We can know better what should be the priority in teaching when we compare the learners' performances and the natives' performances.

Corpora have been used for producing better references in ELT. English dictionaries nowadays are mainly based on corpora larger than hundreds of millions of words. Many grammar and course books are also constructed on a corpus basis.

When we explore both native and learner corpora, we can come up with ideas of what the syllabus should be. One idea is to emphasize top frequency words, which is known as lexical syllabus. The idea was introduced in 1950 and the General Service List (West, 1953) is produced on the basis of this idea. In addition, corpora can be used for preparing materials that suit a task or assignment. Examples of exercises created from concordance outputs are shown in Figures 3-4.

Exercise 1 Use the context clues to identify the missing keyword in the following list.

*t several times, and yet, when I ask you to a trip with me, to act ballast-
 *the wireless operator on the grounds would any message that came to him.
 *t that his craft was working well, let Ned charge and devoted him to seein
 *d with a smile, "I think I should prefer to my first ride in your larger sh
 *ds could form a notion of what was about to place, Tom had sent his craft t
 *have a plan partly thought out, but it will some time to finish it.
 *eedy, and leaving Tom and Captain Weston to the first watch, the others wen
 *who naturally acted as guide, "as it would too long to put together and be

The missing keyword is

Figure 3: A gap-filling exercise (Mallikamas, 1999, p.8)

Exercise 2 According to the data given below, how many parts of speech can the word *round* be? Also identify the contexts in which *round* in different part of speech occurs.

1 have turned him off, he coolly turned round and said that my father was a ge
 2 outh where the sun shone all the year round and he could ride half the day w
 3 lue sky; smooth and dimpled slopes as round as cones, bare but for the green
 4 in a brown hat and blue dress, with a round face and snub nose went and bo..
 5 t the neighborhood and Jo was looking round for help when Laurie, who had he
 6 , I rather like it, for she winds one round her finger as softly and prettil
 7 electrified him by throwing her arms round his neck, and crying out, with a
 8 ch untied the shoes which he had hung round his neck gave way, and both fell
 9 ade with a very full skirt and little round jacket, but embroidered by her o
 10 Then they would select a long, round stick --which must be also perfe
 11 s had an ingenious way of fastening a round stone to the end of a long handl
 12 I can't induce him to give me a good, round sum of account--fifty thousand,
 13 pestle another stone was a smooth and round surface at the bottom was used.
 14 quickly, he saw Micky Maguire running round the corner of the street which t
 15 me spread the table, set the children round the fire and fed them like so ma
 16 h her broom she soon swept a path all round the garden, for Beth to walk in
 17 descended from his throne, and coming round to the side opened the door and
 18 y met with a troop of women collected round the well, talking and laughing.
 19 self tossing on the ocean in a voyage round the world, when the sound of voi
 20 l be crying so hard that the tick fog round you will obscure the prospect.
 21 to last till the silver wedding came round , and invented three different k
 22 we pass," said Jo, as the plate went round , and the ice began to melt out
 23 is year the summer floods brought the round , brown, fruitful cones to my v

Figure 4: An exercise on polysemy (Mallikamas, 1999, p.9)

Whether the use of corpora in ELT is corpus-driven or corpus-based, it has led language teachers to realize the importance of lexical and phraseological units in language teaching (See Meunier & Granger, 2008). Corpora are now widely used in ELT worldwide and it is now easier to work with corpora. There are many corpora that can be accessed online. For example, at the website <http://corpus.byu.edu>, we can search many English corpora, e.g. the British National Corpus and the Corpus of American English. Besides using corpora created from collecting texts that meet the criteria, some have started using the web as a corpus. WebCorp (<http://www.webcorp.org.uk/>) is a site where we can search for a keyword using search engines like Google or Alta Vista, with results being displayed in concordance format.

3. Research on Corpora in Thailand

In Thailand, although the use of corpora in ELT is not widely employed, there are a number of significant movements going on in many universities. There is research on ESP using specialized corpora like the work of Kanoksilapatham (2007) at Silapakorn University on move analysis of scientific texts, and the work of Getkham (2010) at the National Institute of Development Administration on multidimensional analysis of applied linguistics articles. Some research has explored the effects of corpora and concordance in the classroom, such as Sripicharn (2003, 2004) at Thammasart University, Sarawit (2008) at Naresuan University, and Supatranont (2005) at Rajamangala Lanna. While not all of them find the effects to be statistically significant, the use of concordance in the classroom received positive responses from their students.

At Chulalongkorn University, corpora related to ELT were created and placed online. The first one is the Thai learner English corpus, a collection of essays written by undergraduate students from two universities, Chulalongkorn and Thammasart universities. It can be accessed at the site <http://ling.arts.chula.ac.th/TLE/>. Another corpus that might be useful for ELT is the English-Thai parallel corpus, which is a collection of translations of novels from English to Thai. This can be accessed at <http://ling.arts.chula.ac.th/ParaConc/>. With the use of these corpora, research focusing on Thai learners' performances can be more easily analyzed and compared with those of native speakers. For example, Mallikamas et al. (2010) use a learner corpus to study collocation errors. Aroonmanakun

(2007) analyzes Thai learners' use of prepositions. These are only some examples of corpora research in Thailand.

Using corpora and computer tools, such as concordance, is just one example of how technology can play a part in ELT. The use of technology has been known as CALL (computer assisted language learning). The benefits of using computer-aided learning are that students can learn at their own speed; they can learn in an environment that is friendly to them; and, they will feel less embarrassed when making mistakes. But the use of technology is not independent from approaches in ELT. Many researchers have been using emerging technology in task-based language teaching (TBLT). Thomas & Reinders' *Task-based language learning and teaching with technology* (2010) is a good example of the combination of CALL and TBLT.

4. Using emerging technology for ELT

Many English language teachers have already tried using emerging technology in their teaching. Some explore YouTube (Terantino 2011), Google (Chinnery 2008), web blogs (Reagin 2004), and Facebook (Blattner & Fiori 2009; Donmus 2010). YouTube is a good source for finding video materials for teaching. Using video clips in ELT is not new. Terantino (2011) suggested that using YouTube could shift the focus from learning alone to learning with enjoyment. Students will learn without realizing that they are learning through YouTube activities. In addition, students can find a lot of videos for foreign language learning on YouTube. They can learn not only the language but cultural information. One task can be letting students publish their activities on YouTube.

Chinnery (2008) wrote about GALL or Google-Assisted Language Learning. He presented various ways that Google can be used to learn a language. He talked about the different information we can get from Google. For example, for the word "coffee," we can get the correct spelling if we mistype it. We can get content information for the word from the search result. We can use the wildcard character *, e.g. "I drink * coffee," to search for possible words that can occur in the position of *. We can search for the synonyms of a word by using "~" in front of the word.¹ For example, when searching "~car ~accident," we get results like "car crash," "traffic accident," and "traffic safety." We can use Google Trend to find out how the keyword has been searched in different countries. This could

¹ This feature is called *synonym search* by Google. But the results can be related words rather than synonyms.

be useful when we want to introduce students to cultural differences. With all these facilities, Chinnery suggests that Google can be used like CALL, naming it Google-Assisted Language Learning. In fact, if we explore Google in detail, we can see that it can be used in many ways for ELT. With the advanced search option, we can limit the search to a specific region, or a specific domain. Then, we can see the number of different hits from different search settings. This is another way to look at cultural differences through language uses. Moreover, with the introduction of Google translation, although the results of translation into Thai may not be good, it is interesting to bring the results into class and learn English through this activity.

Facebook is, of course, one of the most popular social media now. With 500 million users in 2011², it is one of the biggest social networks. Facebook is used to share information among friends in the social network. Friends in the network will be notified of profile changes, new wall postings, new photos, new videos, etc. A group can be created for people who share the same interest. It can be an open or restricted group. This kind of utility would be useful for sharing class information. Thus, it is not surprising to find that many teachers are now using Facebook for their classes. Blattner and Fiori (2009) have pointed out the potential of Facebook, especially the ability to create groups, as a useful means for pedagogical practice. They suggest that we use this group feature for creating a community of learners. The teacher can create a group for a particular class. Or their students can join groups devoted to language learning. This would help them realize the possibilities of e-learning that are already there, and foster the habit of learning on their own. Using Facebook is not new for students since they are already using it to communicate and play games with their friends. What we could do is merely to direct them to academic possibilities. Blattner & Fiori (2009) also emphasize the use of Facebook to raise students' socio-pragmatic competence and promote cross-cultural communication because students can communicate with students of other languages worldwide. Thus, activities on Facebook can help raise their pragmatic awareness as well as practice genuine communication. An interesting introduction to Facebook for ELT can be found on Youtube at http://www.youtube.com/watch?v=azQbYH2_uaM.

² <http://www.facebook.com/press/info.php?statistics>

From this video introduction, we can see that besides using Facebook for sharing information, there are some applications that might be useful for education. For example, the application CiteMe could be used to search and display the bibliography of a book in different style formats. Word Challenge is a game for creating possible words from given letters. This is an example of the concept of educational games through the use of Facebook. The concept of edutainment or using games in learning is discussed in Donmus (2010). He talks about another learning environment called game-based learning environment. This refers to games designed for educational purposes. He argues that learning through a game-based environment would certainly attract students' attention and increase their motivation and their retention. Game-based education nowadays is no longer a matter of a single user playing against a computer, but it can be a collaboration of many users through the internet. Finally, he encourages more research studies to be done on the effects of educational games on foreign language learning through social networks like Facebook.

There are many possibilities of using Facebook. Besides creating a group for the class and communicating within the group, we can also introduce students to other groups related to learning English, or we can ask them to find a Facebook group that is useful for learning English. Therefore, we let them join a group and at the end they report to us their activities and what they have learnt from the group.

5. Conclusion

It can be concluded that corpora and these emerging technologies are being used more widely in ELT. Whether it is really a new approach or a new way of teaching foreign languages effectively is something English language teachers have to find out if they decide to adopt these technologies. Actually, many teachers worldwide already enjoy using these technologies in their classes. Indeed, there are some groups and websites devoted to this use of technology (See useful resources).

However, some teachers may not want to be involved because they do not feel comfortable with the use of technology. The idea of technology affecting education is not something new. Every time new technology is invented, people always expect that there will be some dramatic changes in education. Take the radio and television as examples. When they were first introduced, people thought that they would bring education directly inside our living rooms. But it did not turn out that way.

Mostly radio and television have been used for entertainment and their content is controlled and created for commercial purposes. However, with the use of the internet right now, things are quite different. It is more difficult to control the internet than radio or television. And the most important thing that we have to be aware of is that technology is changing very rapidly. As we all know, recently cutting edge technology can quickly become old and obsolete. Like it or not, new technology is going to be in our life in our education. If we are going to retire in a few years, we may not have to worry much. But if we still have ten more years in teaching, we are going to teach young students who are more familiar with technology than us. They are what Prensky (2001) called “digital natives.” They start using technology like smart phones or iPad when they are in primary school.

Some schools have started using iPad in their education. Whether its use will help children in learning, we do not yet know. But we know for sure that these kids are growing up equipped with technological abilities. Their way of life is different from ours. They will not enjoy going to classes in the same old environment we used to. A lot of teachers have been complaining that students nowadays are not like them. They do not pay attention to the class. Their attention span is quite short. They talk a lot in class. We used to silence them by keeping them busy writing down notes from slides. That no longer works. They can get all the content on a slide by taking a picture with their smart phones. Maybe we have to admit that we are going to see increasingly more students with different lifestyles. We have to understand how they grow up.

According to Prensky (2001), “Digital Natives are used to receiving information really fast. They like to parallel process and multi-task. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They function best when networked. They thrive on instant gratification and frequent rewards. They prefer games to ‘serious’ work” (p.1).

Therefore, the problem of education may not be because those kids are less intelligent than older generations, but maybe the education system itself cannot adjust to the changing environment. So, perhaps it is not about how to make them behave like students in the past. Maybe it is about how to adjust the learning environment to fit their habits. We have to follow technology not because we are crazy about it or because it attracts students, but because the world is changing very fast and we should use what the students are familiar with when teaching them. If we browse through the web, we can see

lot of information out there that we can use in teaching language. Corpora and concordance tools are one thing. But with the advances in Artificial Intelligence technology, we can easily use speech synthesis, speech recognition, or even machine translation, as well. Language teaching is no longer constrained in the small classroom. We can extend it and bring the world into our class. Teaching language should not be boring. It should be fun and enjoyable for both students and teachers. If we are not trying to understand and adapt to the changing world, maybe the problem is not that students at this time are worse than students in our time. The problem may lie in us who cannot deal with the changing world. And we may be the real problem of education.

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Useful resources

- AntConc http://www.antlab.sci.waseda.ac.jp/antconc_index.html
- Drive belonging and http://www.edumorphology.com/wp-content/uploads/2008/02/fb_classroom1.pdf
- Facebook Strategies for the Classroom Discussions.
<http://www.facebook.com/group.php?gid=28579140444&v=wall>
- Facebook for ELT
http://www.youtube.com/watch?v=azQbYH2_uaM.
- Teaching English through technology.
<http://www.wmich.edu/teachenglish/>
- Technology in English language teaching.
<http://www.facebook.com/pages/Technology-in-English-language-teaching/148739365144043>

Using YouTube for vocabulary development.

<http://eltnotebook.blogspot.com/2007/07/using-youtube-for-vocabulary.html>

YouTube in the Classroom!

<http://esl.about.com/od/listeninglessonplans/a/youtube.htm>

Biodata

Associate Professor Dr. Wirote Aroonmanakun chairs the department of Linguistics, Faculty of Arts, Chulalongkorn University. His research interest is on corpus linguistics and computational linguistics. He is now taking a major part in the Thai National Corpus development project. It is aimed to creating a large general Thai corpus which is comparable to the British national Corpus. He is also creating other corpora, such as English-Thai parallel corpus, Thai Learner English corpus. As for research on computational linguistics, he had developed basic tools for Thai language processing, such as Thai syllable segmentation, Thai word segmentation, Thai romanization, Thai grapheme-to-phoneme. He is now working on Thai named entity recognition and Thai compound noun extraction, which will be implemented as a part of tagger for Thai National Corpus project.