Chapter XIII
A Lexical Study Based on Parallel Corpora, DDL, and Moodle

Yasunori Nishina
University of Birmingham, UK

ABSTRACT

This chapter suggests an effective method for lexical studies using Moodle within the framework of data-driven learning based on parallel concordances, and particularly shows how teachers can prepare and compile materials of a specific keyword for Japanese learners of English. It is often the case that knowledge of L1 possessed by EFL learners affects that of L2 when they do L2 writing. The author shows this using the case of the English abstract noun condition, because it differs in its usage (e.g., implied meaning and context) by English native speakers and by Japanese EFL learners. Errors of this kind can be overcome by presenting parallel concordances concerning translation equivalents and their synonyms of the English noun in question. Thus, the several steps in the compilation of classroom materials based on parallel concordances with Moodle are presented here.

INTRODUCTION

A survey conducted by Ryan (1996) shows that, out of 572 Japanese English language learners, learning grammar is their least favorite task in English classes, and that English conversation classes with native speakers are more popular with them because they do not need to learn grammar and can learn practical English. This stream is still seen in the current English language classroom in Japan, as the communicative-centered teaching with assistant language teachers (that is, English native speakers) is much more encouraged than the grammatical-centered teaching by Japanese teachers. The main reason that students dislike grammar would be a reputation for being

complex, mechanical, and troublesome in its learning. Perhaps with an innovative method to inspire their interest, the current situation might be changed, as students will learn grammar not passively but actively.

Corpus linguistics revealed that lexis and grammar are closely interconnected, further suggesting that the acquisition of lexical information leads to the acquisition of grammatical information (cf. Sinclair, 1991; Nattinger & DeCarrico, 1992; Lewis, 1993, 1997, 2000; Hunston & Francis, 1999). That is to say, it is primarily important for non-native learners to acquire the lexical information to receive and produce L2 language task grammatically. There is a possibility that this can be effectively achieved for EFL learners by using parallel corpora, concordances, and data-driven learning (DDL) in a computer-assisted language learning (CALL) environment.

In particular, one of the advantages of adopting concordance lines in the language classrooms would be the visualization of the lexical patterns from the huge amounts of data (Stevens, 1993; Sinclair, 1986, 1991; Danielsson & Mahlberg, 2003). From these perspectives, the combination of corpora and concordances has much potential for language learning, especially lexical studies as demonstrated by the data-driven learning approach, pioneered by Tim Johns at the University of Birmingham (1991a, 1991b). The application of corpora and concordances into CALL has been regarded as an idea with high potential, and it is suggested that concordancer is particularly the most powerful tool and the preeminent software in language learning (Leech & Candlin, 1986; Tribble, 1990; Higgins, 1991; Hanson-Smith, 1993; Barlow, 2000; Chujo, Utiyama, & Nishigaki, 2005; Chujo, Utiyama, & Miura, 2006).

Among all, Chujo et al. (2006) still see the application of corpora and concordances into CALL as valid methodology for bilingual classrooms, by focusing more on bilingual corpora and a user-friendly environment. Following this suggestion, the author presents a case study on a specific keyword for Japanese EFL learners and seeks methodology on the use of DDL in the online environment for bilingual classrooms, by adopting Moodle and parallel corpora in this chapter.

DATA-DRIVEN LEARNING

The Product Approach and the Process Approach

Teaching grammar is divided into two approaches: the product approach and the process approach. Hadley (2002) generalized, "Product approaches are those that carefully present specific aspects of the language for the students. Process approaches encourage creativity and self-discovery by students as they experiment with the language" (p. 3). Lewis (1993) indicated that the disadvantage of the product approach to pedagogic grammar is that "much of the grammar rules that are taught are inaccurate or plain wrong" (p. 133). On the other hand, Nunan (1995) suggested that grammar tasks using the process approach invite learners "to use the examples and modules in the material to recognize language patterns, and work out the language rules for themselves" (p. xxiii), without making them memorize the grammar rules. The main advantage given by process approaches is the learning responsibility that it imposes on the learners. In this case, the teacher plays the role of "facilitator" (Widdowson, 1989). Process approaches are fundamentally similar to the DDL approach. DDL is an approach to pedagogic grammar; it encourages learners' learning to move from a product to a process approach by looking at the language patterns given by concordance lines of a language taken from electronic corpora and concordance software.

Data-Driven Learning

In the DDL approach, learners first examine the concordance lines created using a concordancer

and a corpus; hopefully then they will be able to discover the theory contained in the evidence. Indeed, Tribble (1990) states, "What the concordancer does is make the invisible visible" (p. 11). This is because collocations of a word show learners the clear lexical rules in a keyword-in-context (KWIC) format. Leech's (1994) term "organic" is well suited as a descriptor of this DDL approach; he suggested that this term could be applied to those pedagogical techniques, increasing the learner's consciousness of grammar. Rutherford and Smith (1988) also mention raising consciousness as "the deliberate attempt to draw the learner's attention specifically to the formal properties of the target language" (p. 107). In addition, in DDL, teachers never give learners the information about language patterns beforehand; instead, they try to encourage the discovery of language properties by the learners on their own (see also Chalker, 1994; Johns, 1991a, 1991b). Many researchers have supported the DDL approach in the classroom for the past decade (cf. Kettemann, 1995; Johns, 1991b; Tribble & Johns, 1990; Barlow, 2000; Chujo et al., 2006).

The Problem Posed by DDL in the Bilingual Classroom

However, some have suggested that the disadvantage of the DDL approach is that it is "too difficult for most students" (Wills, Shortall, & Johns, 1995, p. 67), and this comment is still valid today, as can be seen in Hadley (2002). According to a survey conducted by Hadley (2002), Japanese students of English confess the defects of DDL—for example, "The sentences are incomplete, so they are incoherent"; "There are so many English sentences…it's overwhelming"; and "It's a little difficult to do because it is so new. Also you need to understand the meaning of the words before you can really do this." We might highlight these as the three main problems with DDL in the bilingual classroom: (1) incomplete sentences, (2) difficult words and phrases (authentic data), and

(3) no information to help students in advance. The reason why these problems occurred in the bilingual classroom is that DDL is basically regarded as a monolingual corpus platform.

The Potential of Parallel Corpora in the Bilingual Classroom

As opposed to the situation a couple of decades ago, various multilingual corpora are now available (e.g., English-Japanese or Japanese-English parallel corpora emerged after 2000), thanks to the development of alignment programs across languages and to multilingual concordance programs, such as King and Woolls (1996), Akasegawa (2001), and Barlow (2002). Although a concordancer invented a decade ago by King and Woolls (1996) can only give each paragraph of alignment data between two or more languages, Barlow (2002) enables it to show parallel concordance lines at word, phrase, and sentence level on the computer screen. Akasegawa (2001) also enables it to handle corpora compiled in XML (Extensive Markup Language) format. Frankenberg-Garcia (2005) pointed out that parallel corpora make it possible to answer the question, "How do you say…in English?" but monolingual corpora "Is it okay to say…in English?" Thus, the application of monolingual corpora in language learning would be the next step for non-native learners after learning from parallel corpora, because "How do you say…in English?" focuses on the fundamental knowledge for the communication in L2, but "It is okay to say…in English?" concentrates on the appropriateness of the language use in the situation and context. Thus, in the bilingual classroom, it could be said that the use of parallel corpora for DDL should come before monolingual. If such a bilingual DDL approach can be conducted in a CALL environment, this could be a very effective tool for the bilingual classroom. This can be achieved by making use of a virtual learning environment such as Moodle (http://moodle.org/).

MOODLE, DDL, AND PARALLEL CORPORA

The Collaborative Use of Moodle, DDL, and Parallel Corpora

The ease of adopting DDL in the classroom has been commented on by some supporters. For example, Johns (1991b) mentions, "The concordance printout offers a unique way of stimulating inductive learning strategies—in particular the strategies of perceiving similarities and differences of hypothesis formation and testing" (p. 30). For instance, Stevens (1991) conducted experimental tasks with learners which involved filling a gap in a text with a known word in a gapped sentence or a set of gapped concordance lines for a word. The results showed that learners could predict and discover the answer by gaining the information from concordance lines irrespective of their incomplete nature. Thus, concordance lines can have a use within the learner's process of language learning. This offline approach can also be applied to the online environment by using a virtual learning environment such as Moodle.

Moodle is a popular open source, free software package for course management systems, enabling contributors to create online learning Web sites for pedagogical purposes. It is currently the most notable tool for CALL, and has more than 150,000 registered users, speaking over 75 languages in more than 160 countries. The application of this high-quality system to language education has just started, and there is great potential for using it in many different ways. Thus, as one of the methodologies for an ideal online lexical learning, the author suggests the collaborative use of Moodle, data-driven learning, and parallel corpora for bilingual lexical studies.

Possible Two-Conventional DDL Approaches

Conventionally, there have been two applications for parallel concordances in the bilingual classroom; the first is the off-line method of paper-based handouts, and the second is the online method, which makes use of parallel concordance software. Where the paper-based style is used, teachers normally provide material on which parallel concordances are listed. The weakness of this method is that it is not very flexible with regard to time and material constraints. Teachers can only provide the materials at class time, and the size of the handout (normally A4) and the number of sheets of each handout given are both limited.

On the other hand, with the online method, students should be in an environment where they are allowed to use a parallel concordancer such as ParaConc invented by Barlow (2002) (purchasable at *http://www.athel.com/para.html*). In this case, they will examine a specific word or a phrase in parallel corpora using the parallel concordancer by themselves. Thus, students firstly need to be instructed by teachers in the use of the parallel concordancer. In this case, it would be better for the instructor to be a bilingual or a person who can communicate in Japanese because it is sometimes harder for non-native students to be instructed in

Figure 1.
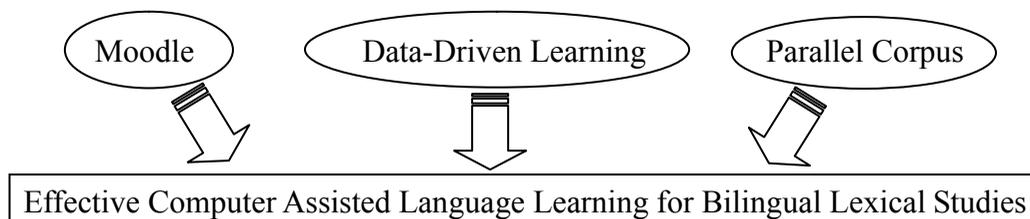
English. Thus, this may be a separate challenge for students.

However, pilot research conducted by Chujo et al. (2006) gave the following results: (1) Japanese college students learned to handle ParaConc quickly, and (2) the mixed use of ParaConc and parallel corpus can be useful for lexical studies. However, as the emphasis in the online method is on students finding answers themselves, using parallel corpora, and as they have to be in an environment where they have access to a parallel concordancer and a parallel corpus, this method would be time consuming, and cost and labor intensive. If the first aim is not researching but learning vocabulary, students do not need to learn how to use a concordancer. Moreover, the cost of such concordancers is normally quite expensive. Therefore, both the conventional styles of the DDL method have weak points. However, Moodle enables teachers to overcome the problems associated with both conventional methods.

Adapting Moodle for Parallel DDL

The use of Moodle in language teaching is a user-friendly method for managing online learning. The key point is to explore how we can arrange and manage parallel language data using this tool. Moodle plays various important roles: Moodle is the empty box where linguistic data (of course, any data you want!!) can be stored. Moodle is not only the independent study desk, but also the reciprocal online space where students can make use of various functions such as reading materials, taking short quiz and tests, sending study reports, automatic records of attendance, managing time schedules, giving feedback, private messaging, blogging, wikis, surveys, questionnaires, glossaries, and journals. More importantly, Moodle can be used for parallel DDL in the mixed use of these benefits (e.g., presenting parallel concordances, giving a cloze test, and so forth). All of these can be used in a less drill-and-kill way—in ways that are more open ended for student learning and collaboration.

If we seek to use Moodle for language education, all functions mentioned in the above are of primary importance. If students have access to an environment allowing them free access to the Internet, they can go to the Moodle Web site created by their teachers at any time and at any place, from their house, from the library, and even from the Internet cafe. Students could simply study from parallel concordances, with questions or hints pre-listed in Moodle. Thus, it becomes unnecessary for teachers and students to think of things like time constraints, physical material restrictions, and handling the parallel concordancer. The use of Moodle enables learners to conduct a more user-friendly online language learning of bilingual matters, and has the potential to play a very flexible role in language studies.

However, perhaps the most significant pedagogical question is, what sort of topic should be selected or what sort of language aspects should be learned by students using parallel concordances? The following sections show suggested steps for the compilation of materials and procedures for the purpose of the parallel concordance teaching in the bilingual classroom.

A CASE STUDY OF THE ENGLISH WORD *CONDITION* IN THE JAPANESE EFL CLASSROOM

Suggested Procedures for the Compilation of Parallel Concordance Materials

It is quite often the case that knowledge of L1 possessed by EFL learners affects that of L2 when they do L2 writing. For example, Groom (2006) points out that the English abstract noun phrase *my condition,* used by English native speakers and by Japanese EFL learners, differs in its implied meaning and its context where it occurs. The author believes that this kind of error can be overcome by presenting parallel concordances to students

effectively. The author suggests the following steps for the compilation of classroom parallel concordance materials: (1) error analysis made by non-native speaker, through the examination of a learner's corpus and a large monolingual English corpus; (2) preparatory study in the parallel corpus from a translation aspect; and (3) compiling effective course material.

The First Step: Error Analysis from Learner's and Native Speaker's Corpora

Intuition might suggest to us that we know, to some extent, that a sort of common denominator exists at the word level across languages, particularly the noun (phrase). However, it can be also known that the meaning of a noun in language A and its translation in language B quite often does not match properly. For example, the English abstract noun *heart* has 28 Japanese translation equivalents in the English-Japanese dictionary *Genius 3rd Edition.* If Japanese had a translation equivalent properly matched to the meaning of the English *heart,* it would not be necessary for the bilingual dictionary to give 28 senses. However, students tend to believe that one English word has only one meaning and only one Japanese transla-

tion equivalent, which leads to the idea that one Japanese sentence can be literally translated into only one English sentence, without recognizing the difference of the implied meaning of words, phrases, and discourses given by English and Japanese.

For example, Groom (2006) found that Japanese EFL learners sometimes show an influence from L1 (here, Japanese) in English writing. Specifically, he investigated how Japanese students use the English abstract noun phrase *my condition* in its context; he gives an example from an e-mail that he received from one of his Japanese students. His student wrote to him, "I am very sorry, I could not come to class today because *my condition is not good*" (p. 25). Then, he investigated the semantic error in a five-million-word corpus of Japanese EFL learners writing; he found that *my condition* created by Japanese EFL learners was used with an implied meaning, "statement assessing the speaker or writer's general levels of physical, mental or emotional well-being, or the external circumstances in which speakers or writers find themselves" (p. 26). On the other hand, Groom's examination of *my condition* in the Bank of English shows that *my condition* used by English native speakers usually "expresses a previously mentioned chronic illness or permanent

Table 1.

ks. Urr. For my body	condition	and my health. Uhmm.
? I usually use my body	condition	for excuse. I yeah I and yes m
no so so. So so. Yeah. Er. My	condition	is mm not good because
today is mm little cold but mm my	condition	is not not so bad. Mm Ur
ke sk spring mm but mm my	condition	is very bad. Hm. Ahm. I
uh er ago ah-huh er my	condition	was too bad err to take
But uhm rece recently my my	condition	not bad. But today uhm special on
will go home at er six o'clock. Because my	condition	is er bad. No no no.
in fact uum yester yesterday my	condition	is not so good. So I I l
it show it shows my	condition	.Um. So um I umm
y garden is no good	condition	Wow . Uhm
time erm yeah my	condition	was very bad .

disability" (p. 26), as in the example "I have just been diagnosed as having *Parkinson's disease* and am concerned about how quickly *my condition* will deteriorate" (p. 26).

Now, the author shows that Groom's indication is correct by giving the examples of the different use of *condition* between Japanese EFL learners and English native speakers. Let us consider the concordance lines of (*my*) *condition* extracted from NICT JLE corpus (the two million Japanese learner spoken corpus available at *http://www.alc.co.jp/edusys/t-sst/english.html*) (Table 1).

As can be seen in the above concordance lines, Japanese EFL learners use *my condition* also in spoken English in the same sense found by Groom (2006). Let us also consider three examples of *his condition* used by English native speakers, extracted from the British National Corpus as follows:

- Edmunds, aged 19, has undergone emergency surgery for chest injuries at Leicester's Groby Hospital where ***his condition*** was described as ***serious*** but stable.
- Pneumonia had followed pneumonia. Despite his crippling disease, he had still managed to practice psychiatry with some success; but finally, the progressive nature of ***his condition*** meant that ***he needed treatment in an intensive care unit with 24-hour-a-day supervision,*** breathing only with the aid of a respirator.
- Here, the patient, though chronically dependent on the ventilator is a conscious, sentient person. Although ***his condition*** is in one sense ***hopeless,*** in that he will not recover, it is not hopeless in the sense that he is in imminent danger of dying.

As can be seen in the above three examples of *his condition, possessive + condition* used by English native speakers gives the meaning "physically serious disease" and "not temporal but permanent disease" as the default lexical information (e.g., collocates such as *serious, he needed treatment in an intensive care unit with 24-hour-a-day supervision, hopeless* in the above examples), as opposed to the examples used by Japanese EFL learners.

The Second Step: Translation Analysis from a Parallel Corpus

Japanese Loan Word from English Condition: コンディション (Kondision)

The previous section attempted an error analysis from a general reference English corpus and learner's corpus. This section goes on to the second step: the translation analysis from a parallel corpus. Japanese コンディション (*kondision*), a Japanese loan word from the English noun *condition* (pronunciation is the same), connotes a different meaning from the English *condition*. The form of *possessive* + コンディション *(kondision)* is quite often also used in Japanese as "昨夜雨が降ったので、今日は、芝のコンディション *(the lawn's condition)* が良くないですね (＝As it rained last night, *the lawn is still wet*)", "今日は、中田選手のコンディション *(Nakata's condition)* は良くないですね (＝Today, *Nakata's performance* is not good)", or "今日は、身体のコンディション *(physical condition)* があまり良くないので休ませて下さい(＝ Today, *I feel sick,* so I want to leave work before finishing time)" (Japanese examples and their English back-translations are made by the author). Thus, it is found that Japanese コンディション *(kondision)* is used in a temporal sense, and in both physical and non-physical situations concerning people, objects, or situation, as opposed to the English *condition*. As the implied sense of *possessive + condition* in English and in Japanese does not match properly at all, when Japanese EFL learners create English sentences with *possessive + condition* by translating it literally from L1 (Japanese) into L2 (English), misinterpretation will have a high possibility of

occurring. While the English *my condition* has a semantic component [+chronic], [+permanent], and [+serious], Japanese *my condition* rather includes the inverted semantic components.

How can this linguistic fact be taught using parallel concordances? This answer has two steps. First we can present parallel concordance lines of the English word *condition* and their Japanese translations. This is because, by reading the real Japanese translation of the English word *condition,* Japanese EFL learners will find the real sense of it from the English context. The second is to present the parallel concordances of the Japanese synonyms of コンディション *(kondision)* and their English translations. As Japanese コンディション *(kondision)* is a loan word from English *condition,* Japanese people sometimes does not use their intuition in the use of this word without recognizing the difference in each implied meaning, and it may be clearer to show other real Japanese words giving a similar notion of the English, *condition*. By following these two steps, they will learn how they can say what they want to say in English, and how to find the translation difference between Japanese synonyms in English.

From English into Japanese

Now, let us consider randomly selected parallel concordances of the two most obvious Japanese translation equivalents of English *condition:* 状態 *(jyo-tai)* and 容体 *(yo-tai),* extracted from Japanese-English Newspaper Articles Alignment Data (Japanese-English newspaper parallel corpus) with ParaConc (multilingual concordancer) as shown in Box 1.

The two sets of concordances above for the Japanese translation equivalents 状態 *(jyo-tai)* and 容体 *(yo-tai)* show that both are used in the sense of critical and permanent disease. In addition, when we translate the English word *condition* into Japanese, we should choose 状態 *(jyo-tai)* or 容体 *(yo-tai)* depending on the context. For example, 状態 *(jyo-tai)* is used in a sense of

physical state, but 容体 *(yo-tai)* in a sense of the change of physical state into a more serious one in several/many of the examples.

From Japanese into English

Ruigo-Jitsuyo-Jiten, a Japanese thesaurus dictionary published in 2005, shows that the synonyms of コンディション *(kondision)* are 具合 *(guai),* 状態 *(jyo-tai),* 体調 *(taichou),* 容体 *(yo-tai),* and various others. Among them, as can be seen in the previous section, we find that 状態 *(jyo-tai)* and 容体 *(yo-tai)* tend to be used for serious and long-term physical conditions, giving the similar meaning but the different appropriateness of Japanese コンディション *(kondision)* as the translation equivalents of the English *condition*. Therefore, other synonyms such as 具合 *(guai)* and 体調 *(taichou)* have the possibility to give the similar meaning of the Japanese コンディション *(kondision)*. Now, let us consider the following 10 parallel concordances of 具合 *(guai)* and their English translations extracted from Kansai-Gaidai Parallel Corpus B (Japanese-English parallel corpus compiled from texts of Japanese literature and its English translation) with Parallel Scan version1.0 (bilingual concordancer invented by Akasegawa, 2002) as shown in Box 2.

As can be seen in the above parallel concordance lines of 具合 *(guai)* and its English translations, *condition* is not used in any of the English translations. Instead, *well, wrong, sick, health,* or *be in good shape* are used to give the same proposition implied by 具合 *(guai)*. Thus, Japanese EFL learners, at first, come up with the idea 具合 *(guai)* **=** コンディション *(kondision)* as synonyms in Japanese, and then they end up interpreting コンディション *(kondision)* **=** *condition,* triggering the incorrect English sentences with *condition*. Thus, students should write "I'm not well" or "I'm sick" as the same proposition of the incorrect example given by Japanese EFL learners, "my condition is not good."

Box 1.

< condition - 状態 (jyo-tai) >

suffered a brain hemorrhage and her [[condition]] became critical around 2 p.m. on July 19
ir villages under armed threat. As a [[condition]] for halting treatment to prolong life,
his real name. He fell into critical [[condition]] on the 10th night after being hospitali
han 1 percent end up in a brain-dead [[condition.]] Tokyo now faces the substantial danger
rming stage. Falling into a critical [[condition]] with the lower half of the body having
platelet. After being in a critical [[condition]] for a month, she died. A total of 181
o encourage the economy. The woman's [[condition]] gradually worsened, and she died of org
…、 翌 十九 日 午後 から 危険 な [[状態]] に 陥った 後 は 、 小康 状態…
… 医学 的 に 見て 回復 不能 の [[状態]] に 陥って いる こと 」 を 挙げ…
… 入院 十 日 目 の 夜 、 危篤 [[状態]] に 陥った 。 警視庁 で この 口座…
…り組む べき だ 。 そのうち 脳死 の [[状態]] に なる のは 一 % 以下 と…
…心臓 ショック を 起こし 危機 的 な [[状態]] に… …。 ◇…国際 ルール…
… かかり 、 約 一 か月 間 の 危篤 [[状態]] の あと 、 八月 十六 日 に 死亡…
…て くる 。 その後 、 女性 患者 の [[状態]] は 徐々に 悪化 し 、 今月 十 日…

< condition - 容体 (yo-tai) >
rsonnel said they noticed the girl's [[condition]] was deteriorating shortly before 7 p.m.
orarily recovered consciousness, his [[condition]] took a sudden turn for the worse on May 10
t Germany. About a minute later, her [[condition]] worsened. Doctors did not notice the er
in blood samples from patients whose [[conditions]] were known to have worsened after Mori
Sendai, the number of patients whose [[condition]] suddenly deteriorated after they receiv
as with her at the time, the woman's [[condition]] took a sudden turn for the worse two or
be moderate this year. The patient's [[condition]] became worse because the concentration
oing an operation last year, but her [[condition]] suddenly worsened a few days ago. But
bacteria. Two days later, the boy's [[condition]] deteriorated and he stopped breathing,
… で 逮捕) の 点滴 で 女児 の [[容体]] が 急変 した のに 気づいた…
… 戻った が 、 五月 十 日 に [[容体]] が 急変 、 十四 日 に 死亡 し…
… 。 約 一 分 後 、 女性 の [[容体]] が 悪化 した ため 、 付き添い の…
… 者 の 点滴 を 受けた 後 に[[容体]] が 急変 し 、 別 の 病院 に…
… 、同 クリニック での 点滴 後 、 [[容体]] が 急変 した 患者 は 判明 分…
… 楽観 的 な 予測 を 語った 。 [[容体]] が 急変 した のは 二 、…
…中 の アルコール 濃度 が 高まって[[容体]] が 悪く なった が 、 看護 婦…
… いた が 、 数 日 前 から [[容体]] が 急変 した 。 だが 、 世界…
…十七 日 に 突然 呼吸 が 止まる など [[容体]] が 悪化 した ため 、 人工 呼吸…

In addition, let us consider the parallel concordances of 体調 *(tai-cho)* as follows:

• その 約 一 か月 半 後 、 急 に 食欲 が 落ちる など 体調 を 崩した ため 、 都内 の 病院 で 検査 を 受けた 。

About six weeks later, after ***her physical condition*** deteriorated and she lost her appetite, she visited another hospital in Tokyo, where she was diagnosed as suffering from acute hepatitis C.

• 最高裁 判決 も 、 元 社員 の 体調 の 異変 に 気づき ながら 口頭 の 指 導 に 終わり 、 具体 的 措置 を 伴っ て いなかった と 指摘 した 。

The ruling by the top court pointed out that the Dentsu employee's bosses noticed that ***his physical condition*** had deteriorated, but took no specific measures to address the situation other than to tell the employee to take care of himself.

Box 2.

具合が悪ければ休むといいよ，信夫はそう言おうとしたが黙っていた。	Nobuo wanted to say, "*If you're not well,* go to bed," but he kept silent.
具合が悪いのであったら、兄さんに薬を合わしてもうたら、ぴたりと直りますがや。	*If something is wrong,* you should let your brother make a potion for you. His medicine always works.
「具合が悪いんですか？」	*Is he sick?*
「具合はとう?」　暖い陽の射す芝生に椅子を出してまどろんでいる祐子の方へ歩み寄って、美樹が訊いた。	*How are you feeling?* Miki asked, walking over to the garden chair where Yuko was dozing in the sun.
「具合はどうなの?」	*And his health?*
具合は悪かないさ。ぴんぴんしてるさ。毎日何時間かはそとに出して運動もさせているし、食欲だって立派なもんさ。	*No, not sick.* Healthy as can be. It has a couple of hours exercise every day. Healthy appetite, ha ha.
「どうしたんですか、反省するなんて?体の具合がわるいんじゃないですか?」	"So what's with this repentance? *You sick or something?*"
「何だ?　からだの具合が悪いようだな」貞行は片ひざをついて、信夫のひたいに手を当てた。	"I say. *You're not looking very well.*" Masayuki knelt on one knee and placed his hand on Nobuo's forehead.
そのうち三沢が帰って来た。近頃は身体の具合が好いと見えて、髪を刈って湯に入った後の彼の血色は、ことにつやつやしかった。	Finally Misawa came back home. Lately *he seemed to be in good shape,* and he looked exceptionally slick after a haircut and a bath.
体の具合はとくに悪くはなさそうだが、どことなく動作がぎこちなく、目もとには不機嫌そうなしわが浮かんでいる。	*He is still physically well,* but his movements seem wrong. Ill-humored folds brew about his eyes.

• 宮本 氏 は 今 大会 を 「 高齢 と 体調 の 状況 から 無理 を し ない 方 が いい 」 と の 理由 で 欠席 し て いる 。

Miyamoto has been absent from the JCP convention because of his age and deteriorating *health.*

• 所有 権 移転 について 、 鄭 元 理事 長 の 妻 は 「 夫 は 体調 が 悪く 、 答え られ ない 」 と し 、 申 前 理事 長 は 「 コメント し ない 」 と 話し た 。

Asked about the transfers, Chong's wife said, "My husband is now ***in poor health,*** so he cannot answer."

The above examples show that 体調 *(tai-cho)* is translated into *condition* or *health,* and is used in not critical but serious physical situations. Thus, the semantic degree of seriousness of physical condition among the synonyms of コンディション *(kondision)* would be 状態 *(jyo-tai)·* 容体 *(yo-tai),* 体調 *(tai-cho),* and具合 *(guai)* in order. The author believes that the parallel concordances including such semantic synonyms should be listed in the materials to let students recognize

the semantic differences among Japanese synonyms and their translations. Then they would automatically know the fact that translation is less fixed than they imagine; rather it is a flexible output. It is often said like a proverb in Japan that the fastest method for improving your English is to improve your Japanese first. This seems to be quite correct.

The Third Step: Creating the Material of Lexical Studies

In the conventional monolingual (that is, English) DDL approach, it was usual to present only one type of English concordance line per topic, which finds its limit for language teaching in the bilingual classroom, because it can only treat grammatical aspects which do not go beyond the monolingual world. Therefore, in the case of the English *condition,* it is impossible for monolingual examples to effectively teach the difference between more complex bilingual matters. In this sense, parallel concordances play an important role in the bilingual classroom.

Now, the author would like to suggest three kinds of information that should be included in the material: (1) the parallel concordances of English *(possessive)* + *condition* sentences and their most common Japanese translations, (2) the parallel concordances of Japanese synonyms of a topic word such as 具合 *(guai)* and 体調 *(taicho)* sentences and their English translations, and (3) a simple test of mixed (or separated) parallel concordance lines created by hiding the keyword in English or in Japanese, or both (that is, cloze test). The advantage of this application of parallel concordance materials is that students can learn both English and Japanese. An example of the first proposed test is shown in Box 3.

In this material, the keywords in both English and Japanese are hidden. It can be found that the hidden keywords are sometimes collocates of the node word. In this case, students first try to answer questions in the Japanese part. Then they can answer the English part according to the translations. Thus, if they cannot answer the Japanese questions correctly, they cannot reach the answers of the English questions. This test is based on the idea that improving Japanese knowledge is improving English knowledge.

We can also create materials at not only the word level but also at the phrase or quasi-fixed expression level, as can be seen in the second suggested test as follows:

Box 3.

> Put the appropriate word in each English line, and 状態 or 容体 in each Japanese line
>
> 01 suffered a brain hemorrhage and her condition became ( ) around 2 p.m. on July 19
> 02 ir villages under armed threat. As a condition for halting treatment to prolong life,
> 03 rsonnel said they noticed the girl's ( ) was ( ) shortly before 7 p.m.
> 04 orarily recovered consciousness, his condition took a sudden turn for the worse on May 10
> 05 t Germany. About a minute later, her condition ( ). Doctors did not notice the er
> 06 in blood samples from patients whose condition were known to have ( ) after Mori
> 07 Sendai, the number of patients whose condition suddenly ( ) after they receiv
> 01… 、 翌 十九 日 午後 から 危険 な （ ） に 陥った 後 は 、 小康 状態…
> 02… 医学 的 に 見 て 回復 不能 の （ ） に 陥って いる こと 」 を 挙げ…
> 03… で 逮捕 ） の 点滴 で 女児 の （ ） が 急変 した のに 気づい た…
> 04… 戻った が 、 五月 十 日 に （ ） が 急変 、 十四 日 に 死亡 し…
> 05… 。 約 一 分後 、 女性 の （ ） が 悪化 した ため 、 付き添い の…
> 06… 者 の 点滴 を 受け た 後 に （ ） が 急変 し 、 別 の 病院 に…
> 07… 、 同 クリニック で の 点滴 後 、 （ ） が 急変 した 患者 は 判明 分…

1. 「からだの具合が悪いようだな」　貞行は片ひざをついて、信夫のひたいに手を当てた。

    '( ).' Masayuki knelt on one knee and placed his hand on Nobuo's forehead.

2. 同 病院 に よる と 、 国松 長官 が 搬送 さ れ た 時 は 、 十 人 中 九 人 は 助から ない よう な 危篤 状態 だっ た が 、 体力 が あり 、 迅速 に 手術 でき た こと など から 、 奇 跡 的 に 回復 し た という 。

    According to the hospital, Kunimatsu was ( ) when he was admitted but managed a "miraculous" recovery thanks to his physical condition and prompt medical treatment.

3. 「具合が悪いんですか?」

    ( )?

4. 約 一 分 後 、 女性 の 容体 が 悪 化 し た ため 、 付き添い の 医師 ら が 心臓 マッサージ など の 処置 を 行っ た 。

    About a minute later, her ( ) , and the doctor massaged her heart.

5. 具合が悪いのであったら、兄さんに薬を合わしてもうたら、ぴたりと直りますがや。

    ( ), you should let your brother make a potion for you. His medicine always works.

6. 具合が悪ければ休むといいよ，信夫はそう言おうとしたが黙っていた。

    Nobuo wanted to say, "( ), go to bed," but he kept silent.

Above, the questions of 具合 *(guai),* 状態 *(jyo-tai)* and 容体 *(yo-tai)* are well-mixed. In addition, all questions are asking about the fixed phrase, clause, or sentence that is used commonly. This material is based on the idea that a word is not used by itself, but a word is used with its company as a phrasal unit (cf. Sinclair, 1991; Nattinger & DeCarrico, 1992; Lewis, 1993, 1997, 2000; Hunston & Francis, 1999). This concept is actually supported by the principle of idiom suggested by Sinclair (1991). Therefore, it is also important to include phrasal units in materials.

There are often cases in which concordancers do not work for all words. For some words the database can provide very rich examples, but in others the database just does not have that content (that is, no concordances or only one or two appear when students type in the word they are interested in). This is largely because the corpus size is not enough to consult the specific word or phrase. In this sense, it is primarily important not only to use the big-sized corpora such as Bank of English and British National Corpus (unfortunately, we do not have the big-sized parallel corpora at the moment), but also to compile the original corpora according to each learner's or teacher's purpose.

CONCLUSION

The application of bilingual or multilingual corpus linguistics into language education has just begun and has much potential to create various effective methodologies for the bilingual classroom. Bilingual corpora and Moodle can be innovative devices for enlarging and improving the CALL education for EFL language learners. However, teachers' elaborative preparation and learning procedures would play a more important role for the success of effective language teaching. For this reason, giving a short test to students on the topic before they learn from parallel concordance lines would be important for ascertaining whether they have the lexical knowledge on that topic. The primary and essential idea in DDL is that learners learn and research English not only with teachers, but also by themselves. The author also believes that the concurrent use of DDL, parallel corpora, and an online virtual learning environment such as Moodle would be the best collaboration for urging learners to investigate the common and distinct semantic features of words, phrases, and discourses in the bilingual classroom.

REFERENCES

Akasegawa, S. (2002). Compilation of Kansai Gaidai Corpus-B and development of the parallel concordancer parallel scan. *English Corpus Studies, 9,* 45-56.

Barlow, M. (2000). Parallel texts in language teaching. In S.P. Botley., T. McEnery, & A. Wilson (Eds.), *Multilingual corpora in teaching and research* (pp. 106-115). Amsterdam: Rodopi.

Barlow, M. (2002). *ParaConc: Concordance software for multilingual parallel corpora.* Retrieved October 13, 2006, from http://www.athel.com/paraweb.pdf

Chalker, S. (1994). Pedagogical grammar: Principles and problems. In M. Bygate, A. Tonkyn, & E. Williams, (Eds.), *Grammar and the language teacher* (pp. 31-44). London: Prentice Hall.

Chujo, K., Utiyama, M., & Miura, S. (2006). Using a Japanese-English parallel corpus for teaching English vocabulary to beginning-level students. *English Corpus Studies, 13,* 153-172.

Chujo, K., Utiyama, M., & Nishigaki, C. (2005). Japanese-English parallel corpus application and CALL: A powerful tool for vocabulary learning. *Proceedings of the 5ᵗʰ Conference on Foreign Language Education and Teaching* (pp. 16-19).

Danielsson, P., & Mahlberg, M. (2003). There is more to knowing a language than knowing its words: Using parallel texts in the bilingual classroom. *ESP World, 3*(6). Retrieved from http://www.esp-world.info/index.html

Frankenberg-Garcia, A. (2005). Pedagogical uses of monolingual and parallel concordances. *ELT Journal, 59*(3), 189-198.

Groom, N. (2006). Phraseology, identity, community, motivation. *The Language Teacher, 30*(7), 25-27.

Hadley, G. (2002). Sensing the winds of change: An introduction to data-driven learning. *RELC Journal, 33*(2), 99-124.

Hanson-Smith, E. (1993). Dancing with concordances. *CALL Journal, 4*(2), 40.

Higgins, J. (1991). Fuel for learning: The neglected element of textbooks and CALL. *CAELL Journal, 2*(2), 3-7.

Hunston, S., & Francis, G. (1999). *Pattern grammar: A corpus-driven approach to the lexical grammar of English.* Amsterdam: John Benjamins.

Johns, T.F. (1991a). Should you be persuaded: Two examples of data-driven learning. *English Language Research Journal, 4,* 1-13.

Johns, T.F. (1991b). From printout to handout: Grammar and vocabulary teaching in the context of data-driven learning. *English Language Research Journal, 4,* 27-45.

Kettemann, B. (1995). On the use of concordancing in ELT. *TELL & CALL, 4,* 4-15. Retrieved January 6, 2007, from http://gewi.kfunigraz.ac.at/~ketteman/conco.html

King, P., & Woolls, D. (1996). Creating and using a multilingual parallel concordancer. In B. Lewandowska-Tomaszczyk & M. Thelen (Eds.), *Translation and Meaning Part 4: Proceedings of the Lodz Session of the 2nd International Maastricht-Lodz Duo Colloquium on Translation and Meaning* (pp. 459-466). Amsterdam: John Benjamins.

Leech, G. (1994). Students' grammar, teachers' grammar, learners' grammar. In M. Bygate, A. Tonkyn, & E. Williams, (Eds.), *Grammar and the language teacher* (pp.17-30). London: Prentice Hall.

Leech, G., & Candlin, C.N. (1986). *Computers in English language teaching and research.* London: Longman.

Lewis, M. (1993). *The lexical approach*. London: Language Teaching.

Lewis, M. (1997). *Implementing the lexical approach: Putting theory into practice.* London: Language Teaching.

Lewis, M. (2000). *Teaching collocation: Further developments in the lexical approach.* Boston: Thomson.

Nattinger, J., & DeCarrico, J. (1992). *Lexical phrases and language teaching.* Oxford: Oxford University Press.

Nunan, D. (1995). *Atlas 1: Teacher's expanded edition.* Boston: Heinle and Heinle.

Rutherford, W., & Smith, M. (1988). Consciousness raising and universal grammar. In W. Rutherford & M. Smith (Eds.), *Grammar and second language teacher: A book of readings* (pp. 107-116). Boston: Heinle and Heinle.

Ryan, S. (1996). What makes a good language lesson?. In G. van Troyer, S. Cornwell, & H. Morikawa (Eds.), *On JALT 95: Curriculum and evaluation* (pp. 116-119). Tokyo: Japan Association of Language Teaching.

Sinclair, J. (1986). Basic computer processing of long texts. In G. Leech & N. Christopher (Eds.), *Computers in English language teaching and research* (pp. 185-203). Essex: Longman.

Sinclair, J. (1991). *Corpus concordance collocation.* Oxford: Oxford University Press.

Stevens, V. (1991). Concordance-based vocabulary exercises: A viable alternative to gap-fillers. *English Language Research Journal, 4,* 47-63.

Stevens, V. (1993). Concordances as enhancements to language competence. *TESOL Matters, 2*(6), 11.

Tribble, C. (1990). Concordancing and an EAP writing programme. *CAELL Journal, 1*(2), 10-15.

Tribble, C., & Johns, G. (1990). *Concordances in the classroom.* London: Longman.

Widdowson, H.G. (1989). Knowledge of language and ability for use. *Applied Linguistics, 10*(2), 128-137.

Wills, D., Shortall, T., & Johns, T.F. (1995). *Pedagogic grammar.* Birmingham: University of Birmingham Press.

KEY TERMS

Concordancer: Computer corpus concordancing programs used to search for words, collocates, groups of words (or phrases), or even styles of the contexts in corpora by displaying the outputs of a given search in KWIC (keyword in context) format. In addition, most of concordancers can calculate the occurrence of the linguistic item being searched in the corpora.

Data-Driven Learning (DDL): Approach invented by Tim Johns at the University of Birmingham. In this approach, corpus concordances are used to help students find the grammatical rules of a language. Learners first read the concordance lines of a specific grammar topic, and then they will discover the hidden pattern or theory of a language. In DDL, teachers normally give no information to learners in advance, in order for them to discover linguistic feature themselves.

Error Analysis: The study of linguistic errors made by EFL learners. The purposes of error analysis are: (1) to measure the language knowledge of an EFL leaner, (2) to study the language acquisition of an EFL learner, and (3) to gain linguistic information that should be included in language learning materials.

Learner Corpus: One type of corpora containing the spoken and written texts of individuals leaning English as a second or foreign language. The purpose of learner corpora is primarily to

research linguistic errors made by non-native speakers (or error analysis). One of the large learner corpora is called the International Corpus of Learner English (ICLE).

Parallel Corpus: Compiled from the aligned language data between texts in a source language and translated texts in a target language. Parallel corpora are used for research in contrastive analysis, translation studies, and even bilingual lexicography across languages. Multiconcordancer software (e.g., ParaConc) is needed to search for linguistic items in a parallel corpus.

Pedagogic Grammar (PG): Language grammar designed for teaching in the classroom. PG is based on attention to grammatical rules, particularly language patterns, and is primarily designed to facilitate EFL students (even English native speakers) to learn a language. Other uses of PG would be as a reference for students, for teachers, and for the compilation of language materials or textbooks.