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Modern English Education, Vol. 13, No. 4, Winter 2012 Effective Concordance Workshop for Corpus Learners, Sooin Chun Ajou University Chun, Sooin. (2012). Effective Concordance Workshop for Corpus Learners. Modern English Education, 13(4), 67-88. This study proposes effective methods of concordance training for university students. It provides concordance materials and tools for corpus learners and instruction guidelines for corpus trainers. In spite of the importance of tool training for successful corpus investigation, there have been few studies to focus on how to train learner corpus users. The current research developed a concordance workshop in order to help undergraduate students learn concordancing. A total of 27 students participated in the training, and 22 undertook three independent corpus investigations successfully. After training, all 27 students were surveyed and interviewed, 20 of them responded that the online tools would be effective for vocabulary learning. Fourteen, in particular, responded they would be helpful to learn in-depth knowledge of a word, such as register or collocation.

[DDL / corpus / concordance / inductive learning / English learning / BYU-BNC p<sup>3</sup>tÇON"í`YÖµÂ/ TÏ|ÓµÂ/ XÏTÏX<sup>3</sup>µÂ/ À-° rÈ YÖµÂ/ rÆ'Å YÖµÂ/ B Y U - B N C ] I . I N T R O D U C T I O N The development of language learning with corpus data has been noted over the past several decades. New tools—diverse concordancers/online corpora—and learning methods have been introduced and implemented into the classroom. Advanced computer technology has helped language learners direct access to electronic resources of text, usage of authentic language data, and control of their own learning process. Hands-on concordancing has received considerable attention from some researchers (Boulton, 2009a, 2009b; Cobb, 1997; Cresswell, 2007; Johns & King, 1991) because it provides benefits to corpus users in inductive language learning. However, even though the popularity of corpus-driven learning supporters is growing, the numbers of learners who actively do corpus consultation in their learning have not been growing much. As some studies (Bernardini, 2002; Boulton, 2009a, 2009b; Chambers, 2007; Farr, 2008) comment, difficulty of corpus use by language learners seems to be related to their knowledge of tools and applications of concordances. Therefore, antecedent tool training for hands-on concordancing is essential for successful corpus use. The training also should offer appropriate exercises for learners to practice functions of concordancers and applications of corpus data. For this purpose, the researcher has designed concordance tool training to help college students undertake their own corpus research. The process of training included feasible online corpora such as BYU-BNC, JustTheWord, VLC Web concordancer, and concordancing exercises and tasks. The concordance workshop comprised two sections: tool training, and application of concordancing. The tools used in training were chosen for ease of use in student corpus investigation. Each corpus is large enough to retrieve sufficient concordance outputs; their functional features are easily learned, and they are free to use. Concordance

exercises and tasks were used for practicing hands-on concordancing. The research also developed a concordance game and tasks for students to learn both the functions of concordancers and applications of concordancing for vocabulary learning. These materials were then selected for improving learners' concordancing skills. In the first part, students intensively learned the functions of tools by practicing the exercises. In the second, they undertook their own corpus investigations using the tasks given. This paper proposes an effective concordance workshop for beginner corpus learners and their instructors. It introduces the methods and the procedures that the learners learned concordancing skills for their independent corpus investigation. It also guides how instructors can help them improve concordancing skills and strategies for corpus research through hands-on concordancing. In sum, it suggests effective teaching instructions to help corpus research beginners to become experts.

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B a c k g r o u n d 1 .

Difficulties of DDL (Data-Driven Learning) as a Language Learning Method Despite the essential role of hands-on concordancing, only a few studies (Boulton, 2009a, 2009b; Cobb, 1997; Cresswell, 2007; Johns & King, 1991) have focused on this as a vocabulary learning tool. Some studies (Bernardini, 2002; Chambers, 2007; Farr, 2008) point out the problems that learners or teachers may face in their concordance research. One example may result from the lack of learners' cognitive ability and handling skills of tools such as corpora and concordancers. Therefore, some researchers (Boulton, 2009a; Cheng, Warren & Xun-feng, 2003; Miceli & Kennedy, 2002) have suggested several pre-conditions before learners do hands-on concordancing, including sufficient training for utilizing tools. According to Boulton (2009b), the essential conditions for Data-Driven Learning (DDL) to be successful are an appropriate language proficiency level of learners and extensive learner-training on tools. He also notes it is likely to be difficult to prove the benefits of DDL because "teachers tend to accept or reject particular tools, materials and techniques not on the basis of research evidence but on their own pragmatic experience whether it works for them in their particular situation" (p. 6). In addition to the conditions above, Miceli and Kennedy (2002) focus on learners' data-managing ability to observe data and draw conclusions. Cheng et al. (2003) identify three categories of challenges that students experience. First, learners encounter problems identifying research areas; they have difficulty what to choose search targets, including single lexical items or pairs of words, as well as language elements related to form or meaning. Second, they have difficulty handling tools, including understanding the characteristics of a corpus and the use of functions in a concordancer. Third, they encounter problems working with corpus data. It might take too long for language learners to obtain and analyze data from the corpus. They could feel that concordancing is laborious and tedious works, especially since DDL requires learners to look through huge text data using cognitive skills. Considering the above issues on learners' difficulties in DDL, this workshop focused on the design of a training program that gives students sufficient practice for concordancing tools and opportunities for their applications in language learning. It included exercises and activities that were developed for practicing corpus search and for

concordancing. 2. Concordancing Activities Concordancing, particularly hands-on concordancing, is known as an effective learning tool for lexico-grammatical chunks/units (Cobb, 1997; O'Keeffe & Farr, 2003; O'Sullivan, 2007; Stevens, 1995). Corpus consultation helps learners understand the restrictions of syntactic patterns of word chunks (e.g. colligation) as well as single words, and semantic restrictions on connotative meaning or register (e.g. semantic prosody) as well as denotative meaning. Concordancing helps learners acquire this sophisticated word knowledge using a corpus. In this sense, appropriate concordancing exercises help learners undertake independent corpus investigation successfully. Different types of concordancing activities, both deductive and inductive, can be used by different proficiency levels of learners.

Concordancing can be used as an activity or a task for a particular goal of vocabulary learning. Some studies (Aston, 2002; Cresswell, 2007; Gardner & Davies, 2007; Johns & King, 1991) suggest that there can be two different classifications. First, concordancing activities can be classified into two themes: deductive and inductive, regarding how learners are involved in concordancing activities. An inductive task is one in which learners search words they are looking for and examine the findings; a deductive task is one in which learners search the target word given by the instructor. Second, based on the findings from these tasks, they are classified into three types: 1) A form-focused search that identifies syntactic elements, 2) a meaning-focused search which identifies semantic elements, or 3) both. They can be explained in details as below: 1) Forms-focused and meaning-focused concordance searches Gardner and Davies (2007) state in their research that their data analyses were done in both ways "to avoid oversimplification found in many corpus-based vocabulary studies" (p. 346), and valued their work in language education to help "language learners to be exposed to the structures in multiple and varied contexts" (p. 353). Their research examined the frequencies of phrasal verbs (PVs), and they emphasized the frequencies of forms as well as semantics in corpus-based language learning. They produced not only the list of PVs that are frequently shown in the BNC (British National Corpus) but also the semantic frequency list of each PV. They indicated the need for constructing semantically tagged corpora for language learning. Finally, they insisted that learners should have ample exposure not only to high-frequency PVs but also to the multiple meaning senses of them. Their research guides us regarding where and what beginner corpus researchers search. Alternatively, Aston (2002) suggests different types of learner activities to develop concordance skill and cognitive skills, rather than a dichotomy of search styles. These activities are classified below: |" Form-focused activity aiming to establish and practice the use of particular linguistic features !! data-driven learning |" Meaning-focused activity, aiming either to establish meaning(s) in a particular corpus text or to understand the concepts referred to and the functions realized in a particular text-type !! data-driven cultural learning; |" Skill-focused activity, aiming to develop particular reading skills and strategies,

particularly of a bottom-up variety; |" Reference activity, in which corpora are used for support in tasks involving other texts, in particular to such aids as reading, writing and translation; |" Browsing activity, whereby learners alternate between the previous types of activity in serendipitous explorations of the corpus. ( p. 10) While meaning-focused activities are for acquiring the related global knowledge from the concordance texts, skill-based are focused on lexical information in the texts. They can provide focused practice for identifying frequently used lexicogrammatical patterns. According to Brodine (2001), reading concordances can be a bottom-up procedure since concordances focus attention on local meaning. He also states that it can provide opportunities to learn strategies to deal with lexis: how "to reduce lexical ambiguity, guess the meaning of unknown items, and identify the boundaries of chunks" (p. 147). 2) Deductive and inductive concordance activities DDL is classified into two types: deductive and inductive DDL (Cresswell, 2007; Johns & King, 1991). Cresswell (2007) describes deductive DDL as one way teachers can help reluctant learners with teacher-mediated paper-based materials to check rules, and inductive DDL as one in which learners do "full-blown autonomous, hands-on concordancing" (Boulton, 2009b, p. 7). A deductive concordance search can be understood as a way the teacher leads concordance exercises/activities. That is, the teacher offers learners ready-made exercises/ activities or suggests a target word or word chunks for concordancing. This means the teacher has set up what the learners will find in corpus texts, and can draw out conclusions from the searches the teacher has controlled. It seems mostly to happen in the training stage for beginners of corpus-based learning. In contrast, inductive DDL means that learners choose a target word or word chunks to do concordancing, and then draw conclusions from the concordance lines by themselves. This independent hands-on concordancing work can be viewed as genuine inductive learning, since learners carry out their own language research by directly accessing corpus data, undertaking search, and formulating hypotheses on language rules (Johns, 1991a, 1991b). The learning techniques used in deductive DDL can be concordance exercises/activities, while those in inductive DDL can be viewed as concordance tasks since they have typical characteristics of tasks in language education: goal-oriented, outcome-focused, and communicative. Examples for deductive exercises/activities obtained from H. Kim and S. Chun's (2008) research are shown below. Examples of deductive exercises:

- |" Concordancing exercises: -
- Finding affixes of a key word using wildcards (e.g. \*)
  - Finding compound words of a key word using wildcards
  - Finding the fitting word to a key word given using tags
  - Finding missing words in a work chunk or a sentence using tags
  - Filling a common word filling in the blanks in concordance lines given
- |" Concordancing tasks: -
- Making a list of possible collocations using a key word
  - Unscrambling collocations or phrasal expressions

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a p p r o a c h   a   c o r p u s   w i t h o u t   b a c k g r o u n d   k n o w l e d g e   o f   t h e   l a n g u a g e .   T h e y   t h e n   m i g h t  
f i n d   s o m e   r e s u l t s   f r o m   c o n c o r d a n c e   l i n e s   b y   c h a n c e   w h i l e   e x p l o r i n g   t h e   c o r p u s ,  
w i t h o u t   a n y   t a r g e t   f o r   t h e i r   s e a r c h .   J o h n s   ( 1 9 8 8 )   c a l l s   t h i s   d i s c o v e r y   p r o c e s s  
" s e r e n d i p i t y   l e a r n i n g "   ( p .   2 1 ) .   A   s e r e n d i p i t y   s e a r c h   i s   a n   i n d u c t i v e  
a c t i v i t y / t a s k   f o r   c o n c o r d a n c i n g .   I t   s e e m s   t o   b e   a   t r e a s u r e - h u n t   f o r   l e a r n e r s ,   w h o  
s t a r t   s e a r c h i n g   w i t h o u t   k n o w i n g   w h a t   t o   f i n d   o r   e v e n   k n o w i n g   w h a t   m a y   b e   t h e r e .  
W h i l e   i t   i s   a n   e s s e n t i a l   p a r t   o f   t h e   p r o c e s s   o f   i n d u c t i v e   l e a r n i n g ,   i t   c a n   b e  
d i f f i c u l t   f o r   b e g i n n e r s   o r   r e l u c t a n t   l e a r n e r s   t o   s u c c e e d   w h e n   i n i t i a l l y  
u n d e r t a k i n g   i n d u c t i v e   c o n c o r d a n c e   a c t i v i t i e s / t a s k s .   W i t h o u t   f u l l y   u n d e r s t a n d i n g  
c o n c o r d a n c i n g   t o o l s   a n d   t h e i r   a p p l i c a t i o n   i n   l a n g u a g e   l e a r n i n g ,   i t   m i g h t   t a k e  
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p e r f o r m   s u c c e s s f u l   c o n c o r d a n c e   i n v e s t i g a t i o n .   W h e n   d o i n g   s o ,   t h e i r   c o n c o r d a n c e  
s e a r c h   i s   m o r e   l i k e l y   t o   b e   p u r p o s e f u l   a n d   s u c c e s s f u l ,   s o   t h e   l e a r n e r   m a y   f e e l  
l e s s   f r u s t r a t e d   a n d   t i m e - c o n s t r a i n e d   w h e n   c o n c o r d a n c i n g .   F i g u r e s   1   a n d   2   c a n   b e  
a   g u i d e   f o r   i n d u c t i v e   D D L ,   a n d   F i g u r e   2   s h o w s   w h a t   t o   s e a r c h   a n d   l e a r n   w h e n  
d o i n g   c o n c o r d a n c i n g .   T h e   w o r k s h o p   f o c u s e d   o n   b e g i n n e r   c o r p u s   r e s e a r c h e r s   w h o  
w i l l   b e c o m e   a u t o n o m o u s   u s e r s   o f   c o r p u s   f o r   t h e i r   o w n   l a n g u a g e   l e a r n i n g   a n d   w i l l  
l a t e r   b e c o m e   e x p e r t s   i n   c o r p u s   i n v e s t i g a t i o n .   T h e   t r a i n i n g   p r o g r a m   w a s   t h e r e f o r e  
d e s i g n e d   w i t h   a c t i v i t i e s   t h a t   w e r e   d e v e l o p e d   b y   l e v e l   o f   d i f f i c u l t y ,   f r o m  
d e d u c t i v e   e x e r c i s e s   t o   i n d u c t i v e   a c t i v i t i e s .   D i v e r s e   a c t i v i t i e s   a n d   e x e r c i s e s  
w e r e   g r a d u a l l y   a r r a n g e d   w i t h i n   t h e   p r o g r a m   f o r   l e a r n e r s   t o   m a s t e r   f u n c t i o n s   i n  
c o n c o r d a n c e s   a n d   a p p l i c a t i o n s   o f   c o n c o r d a n c i n g   i n   l a n g u a g e   l e a r n i n g .   A l t h o u g h  
t h i s   w a s   a   s p e c i a l i z e d ,   t a r g e t e d   w o r k s h o p ,   t h e   i n f o r m a t i o n   g a i n e d   i s   a p p l i c a b l e  
t o   l a n g u a g e   t e a c h e r s   i n   d i v e r s e   c o n t e x t s   a n d   f o r   d i f f e r e n t   l e v e l s   o f   l e a r n e r s .

3. Tools for Concordancing: Types of Online Corpus/Concordance 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 .•iaspora continues which their activities to ease the curbs on travel at home and services, to firm leadership at home and some examples of good practice at home and which attracts adults from Ireland and well-managed forests in both the UK and deal route for visitors from the UK and in West Germany, 60 % of whose sales are companies (about 70% of its sales are new of the murder, although he had been some for the day. The younger son being asking place. The flows of Japanese cash our responsibility to our own citizens direct investment by Canadian companies say. He also wore a bored, Englishman- y can get around the rules is to expand in spent at home to arise incomes flowed weathshops. Even designs are coming from .•abroad.. abroad. abroad; abroad. abroad abroad. abroad abroad, abroad) abroad abroad, abroad, abroad, abroad. abroad abroad abroad abroad .•In the relatively low-tech car i If the reforms really take hold to conditions in which business Local Authority Involvement to course in Donegal on Irish 1 FSC-certified charcoal is so It is easily accessible by rail has no foreigner on board. Elec , makes all its Walkmans in Japa when it had taken place. The I sent him the news with a litt mainly across the Pacific, are is not an easy questions. We can An example of the first was the look that suggested he might rat rather than at home. Industriali instead. Japan's government, - from 'cheap' fashion centres 1 .••••••••••FIGURE 1 Random Sample of 60 Concordance Lines for "Abroad", Based on Five Million Words of Mixed Written Texts (Cambridge International Corpus) (O'Keefe, McCarthy & Carter, 2007, p. 16) 1. Collocates of three or more occurrences: be, been, go, trip, travel, work 2. Chunks/idioms: home and abroad occurs three times. 3. Syntax: abroad only seems to be used adverbially; no preposition after verbs of motion (flow, go, shift, travel); no preposition after trip/holiday' only one preposition occurs (from). It can be used as a post-nominal modifier (trip abroad, holidays abroad). 4. Semantics: abroad can be used with static or dynamic verbs; it is never premodified (for example, \*very abroad, \*far abroad do not occur). Its most frequent meaning is geographical or political, but there are also examples where it simply means 'in the public domain/out in the open' (lines 30, 33, 39). 5. Prosody: abroad is anywhere, not the writer's country or the country in question, often in contrast to the UK or 'home', a place to which people travel for leisure and work and where trade and investment are seen as important; no particular connotations of negativity, but sometimes a prosody of 'difference' or 'exoticness' (lines 15, 22, 25, 48, 49).••FIGURE 2 Sample for Concordance Analysis Based on Lexico-Grammatical Profiles for "Abroad" (O'Keefe, McCarthy & Carter, 2007, p. 15) Corpora are classified into two types based on their size: small and large. According to O'Keefe and Farr (2003), a large corpus consists of over one million words of spoken text and five millions of written text. Referring to O'Keefe, McCarthy, and Carter (2007), large corpora include American National Corpus (ANC), Corpus of Contemporary American English (COCA), British National Corpus (BNC), Collins Wordbanks Online English Corpus, Michigan Corpus of Academic Spoken English (MICASE), etc. Small corpora are Brown Corpus, International Corpus of Learner English (ICLE), Lancaster-Oslo/Bergen corpus (LOB), etc. Usage of these corpora is different according to educational purpose. Some researchers (Aston, 1997a, 1997b; Ma, 1993; Miceli & Kennedy, 2002; O'Keefe & Farr, 2002; Tribble & Johnes, 1997) claim that a small corpus is effective when undertaking a purposeful search. Alternatively, some researchers (Bernardini, 2002; Cheng et al., 2003; Davies, 2007) agree that a large corpus

is more useful for a serendipity search. However, according to H. Kim and S. Chun's (2009) research on DDL, empirical studies used small corpora more than large ones. The software to run a corpus search is called a concordancer. It is classified into two types according to where it is run: PC-based or Web-based. A PC-based concordancer is used in personal computers after its installation. Concordance, KWIC Concordance, Microconcord, MonoConc, Wordsmith Tools, etc. are pc-based concordancers. A web-based or online-based concordancer runs the corpus data online, so it is also called an online corpus. The terms corpus and concordancer are alternatively used when the corpus data are processed online. Corpus Concordance English<sub>1</sub>, JustTheWord<sub>1</sub>, BYU-BNC<sub>1</sub>, Corpus of Contemporary American English (COCA)<sub>1</sub>, WebCorpLive<sub>1</sub>, VLC Web concordance<sub>1</sub>, and MICASE<sub>1</sub> are web-based corpora/concordancers commonly used. Boulton (2006) suggests the following factors that should be required so that DDL becomes more popular as a research area. First, the tools should be free; second, the software should be easy to use, and third, the techniques should be flexible and transferable. With regard to these three guidelines, this current study used some web-based concordancers for the students' concordance tasks. Those selected were free, and easy to access and utilize. The students easily accessed the corpus wherever the computer was online, and they did not need to install software or obtain corpus separately for their own use. Given the above criteria, this study used five online corpora for students' corpus investigation. They differ in some degrees (see Table 1), but they all have benefits in use. Corpus Concordance English and VLC Web comprise diverse corpora with different sizes. Learners can choose a corpus by search purpose. MICASE, JustTheWord, and BNC-BYU are a single corpus, but larger than the ones of Corpus Concordance English and VLC Web. MICASE is a spoken corpus, and JustTheWord and BNC-BYU comprise both spoken and written. All of the five consist of diverse genres; all have benefits of free subscription and easy-to-use. These varieties of online corpora can provide opportunities for learners to choose the tools for their own purposes.

TABLE 1 Online Corpora

Number of selection of corpus	Size of corpus (numbers of token)	Genre/mode of corpus	Subscription
Corpus Concordance English	23	From 3,000 to 3 millions	Diverse/Written
VLC Web Concordancer	22	From 99,000 to 1.4 millions	Diverse/Written
MICASE	1	1.8 millions	Diverse/Spoken
JustTheWord	1	80 millions	Diverse/ Spoken & written
BYU-BNC	1	100 millions	Diverse/ Spoken & written

Based on the above references related to concordance tools and concordancing, the researcher designed a workshop employing both deductive and inductive activities, and feasible, self-access online corpora. It provides ways of concordancing to help learners successful independent corpus research.

1. PARTICIPANTS

2. CONCORDANCE WORKSHOP

1. Participants

A total of 27 enrolled in English Education department in a Korean university participated in the workshop as a part of a required course. They comprised 24 females and three males. Nineteen were seniors and eight were juniors. According to students' answers to a survey after the workshop, none had prior DDL experience. According to their self-description, their proficiency levels were intermediate and higher, with official TOEIC scores between 750 and 950. Students reported the scores to the researcher by private memos. The researcher was a training instructor and had designed the necessary training on concordancing, including diverse tools, applications and tasks.

Workshop The concordance workshop was undertaken during regular class hours in a computer lab, in two sequential steps: concordance training, and independent concordance work. In the first step, the researcher gave a weeklong lesson on tool training. Students practiced using online corpora/concordancers and undertook concordancing exercises—deductive activities—for learning their functions. In the second step, she gave them a sequential week-long lesson concerning hands-on concordancing. After the workshop, three independent concordance tasks—inductive activities—were given as homework over the following three weeks. After completing each one, students wrote reports using worksheets given out during lessons. The worksheets comprised two parts: examples of concordance outputs, and findings/conclusions (see Appendix 1). Details of the procedures are shown in Table 2 below.

TABLE 2 Procedures of Students' Works for Concordancing Procedures

Contents	Techniques
Week 1 (2 Lessons, 3 class hours)	• Tool training • Corpora & Online concordancers • Exercises for technical functions (individual practice)
Week 2 (2 Lessons, 3 class hours)	• Application of concordancing • Hands-on Concordancing • Concordance exercises/games (individual/group work) • Deductive activities
Week 3 - Week 8 (each task in two weeks)	• Student independent concordance investigation • Concordance tasks • semi-controlled & free searches • Inductive activities

1) Tool training using online corpora/concordancers In the two sessions of training in the first week, the students explored five online corpora/concordancers: Corpus Concordance English, JustTheWord, MICASE (Michigan Corpus of Academic Spoken English), and VLC Web Concordancer, BYU-BNC (Brigham Young University-British National Corpus), and their technical functions. After exploration, they were trained intensively regarding how to use them. Training focused on a word search using wildcard (asterisk mark \*) and POS (part of speech) in a concordancer/corpus. In addition, it helped them understand what numbers next to concordance lines signify (word frequency in the whole corpus). Exploring these different tools raised their awareness of DDL and advanced their understanding of the technical functions of each tool.

2) Application of concordancing using controlled exercises: Deductive activities In the other two training sessions during the second week, students conducted online DDL exercises and responded to exercises obtained from websites. In the first session, they practiced fill-in-the-blank exercises for appropriate articles or for prepositions in sentences while using Virtual DDL Library, they found matching word to complete collocation in Collocation Quiz, and they addressed grammar questions in UGRU Concordance. In particular, the questions in UGRU Concordance had them infer language rules showing relevant concordance lines. They did a classroom game in the second session of the second week, Vocabulary Bees, which contains concordance exercises developed as tool training materials, and also had been used in previous research (S. Chun, 2011; H. Kim & S. Chun, 2008). Vocabulary Bees consists of nine stages of corpus consultation by difficulty levels, and includes concordance search exercises for affixes, collocations, and grammatical patterns. It also contains both individual and group activities. Those exercises are developed in sequence by difficulty level: from utilizing functions such as Asterisk mark (\*) or POS (Part of Speech) in a corpus, to applying them for error correction. Example exercises are shown below (see also the full version in Appendix 2):

Example exercises from Vocabulary Bees:

Stage 1: Prefixes ex) What is the prefix of the word, "-used", meaning 'a thing is no longer used'? Stage 3: Part of Speech (POS) Fill in the blank with an appropriate POS (tag). ex) a p\_\_\_m\_\_\_ course Stage 4: Part of Speech (POS) ex) What kind of breakfast means "big, full, good meal"? The descriptive

word has 6 letters. Stage 6: Concordancing Do a concordance search with the key word below and find different collocations of it. List five collocations for each category below, referring to the order of frequency. Keyword: life. Clue: V+ life/Aj+life/N+life/N-of+life Stage 7: Words in contexts Add the missing words in the blanks. Sometimes the first letter is given. ex) I think a friend is destroying himself with drugs. I feel a \_\_\_\_\_ of responsibility f\_\_\_\_\_ loyal to me in good and bad times, which is a wonderful a \_\_\_\_\_ of his personality.

Stage 8: Collocations Make nine collocations out of the words in the box below. Use each of the words once only. Stage 9: Collocation errors Find the miscollocations in the sentences. ex) We live on a busy road, but we're lucky because we have off-road park. 3) Students' independent concordance investigation: Inductive activities During the next six weeks, students undertook three corpus investigations independently, each followed by a two week interval. The tasks were assigned in sequence from controlled to free corpus investigation. The first task was semi-controlled: searching three synonymous words: rumor, scandal, and gossip. Students discussed and then chose the target words in class. The second task was also semi-controlled: search a word chunk. The researcher asked students to do a concordance search on intensifiers and their collocated words. The third task was a free concordance search, without target controls or search guidelines. They chose their own search targets, drew conclusions and wrote reports, including concordance lines and findings. These three tasks were homework assignments. They were assigned one every other week. After each task, students submitted a written report on their findings. In sum, while the purpose of diverse exercises during the training sessions was to have students learn the functions of concordancing tools thoroughly, different concordance tasks were developed in sequence in order for them to understand diverse concordance searches and applications of concordancing in language learning. They were also intended to encourage student to become successful corpus researchers.

c!. R E S U L T S 1 . R E S U L T S o f S u r v e y A t t h e e n d o f t h e c o u r s e ( t h r e e w e e k s a f t e r c o m p l e t i n g t h e l a s t t a s k ) , a l l 2 7 s t u d e n t s w e r e s u r v e y e d u s i n g a q u e s t i o n n a i r e c o m p r i s i n g 1 2 g e n e r a l i z e d q u e s t i o n s o n c o u r s e r e f l e c t i o n . S i x q u e s t i o n s w e r e r e l a t e d t o r e f l e c t i o n s o n t h e c o r p u s i n v e s t i g a t i o n s a n d t h e t o o l s u s e d ; f o u r q u e s t i o n s w e r e c l o s e d u s i n g a 5 - p o i n t L i k e r t s c a l e a n d t w o w e r e o p e n - e n d e d ( s e e T a b l e 3 ) . T h e i r a n s w e r s w e r e g e n e r a l l y p o s i t i v e , a n d o n l y a f e w c h e c k e d i n " S t r o n g l y d i s a g r e e " o r " D i s a g r e e " . N o o n e r e s p o n d e d n e g a t i v e l y i n Q . 1 ( b e l o w ) , w h e r e a s f i v e r e s p o n d e d " D i s a g r e e " t o Q . 2 . I n Q . 3 , 1 2 c o m m e n t e d t h a t t h e y f r e q u e n t l y u s e d t h e t o o l s w h e n t h e y m a d e v o c a b u l a r y n o t e b o o k s a s a c o u r s e a s s i g n m e n t . I n Q . 4 , 2 0 r e s p o n d e d p o s i t i v e l y t o t h e e f f e c t i v e n e s s o f c o r p u s u s e i n t h e i r v o c a b u l a r y l e a r n i n g . I n a n o p e n - e n d e d q u e s t i o n , " H o w d o y o u l i k e c o n c o r d a n c e / c o n c o d a n c i n g ? " , 1 4 s t u d e n t s c o m m e n t e d t h a t c o r p u s / c o n c o r d a n c e i n v e s t i g a t i o n w a s h e l p f u l f o r l e a r n i n g d i v e r s e m e a n i n g s o f a w o r d i n m u l t i p l e c o n t e x t s . T h r e e s t a t e d i t s u s e f u l n e s s f o r c o l l o c a t i o n l e a r n i n g , a n d a n o t h e r t h r e e m e n t i o n e d i t s p o s s i b l e b e n e f i t s f o r w r i t i n g i m p r o v e m e n t . I n a n o t h e r o p e n - e n d e d q u e s t i o n r e g a r d i n g t o o l s t h e y u s e d f o r c o n c o r d a n c e w o r k s , 1 2 r e p l i e d t h e y h a d u s e d m o r e t h a n o n e c o r p u s , i n c l u d i n g B N C ,

JustTheWord, Collins COBUILD, and Google, when searching target words, while the others had used only one. Only two of the 27 who completed three tasks used sources other than those learned in training sessions, which were the Daum search engine and Expression Statistic.

TABLE 3 Descriptive Statistics of Student Responses in Survey

Q	N	Min	Max	M	SD
Q.1	27	3	5	3.78	0.698
Q.2	27	2	4	3.00	0.679
Q.3	27	2	5	4.37	0.742
Q.4	27	1	5	3.78	1.013

Min= Lowest point given on Likert Score; Max= Highest point given on Likert Score; M= Means of total points for each question; SD= standard deviation for each question

2. Results of Focus Group Interviews In the week following the survey, all 27 students were divided into three groups of seven to ten and interviewed, each group for 40 minutes. They were grouped based on their similar answers to the questions on the survey, which had requested attitudes toward concordance tools and activities. The first group of 10 students comprised those with positive attitudes; the second group of 10 with essentially neutral ones; the last group of seven with negative attitudes. Interviews were semi-structured, concentrating on three issues: 1) Whether online concordance tools were helpful for individual vocabulary learning, 2) what difficulties students encountered when using online concordancers, and 3) whether corpus consultation would be helpful for their writing. Placement within the three groups was designed to help them elaborate on the above issues. Students conversed in Korean within a casual conversational environment, and interviews were recorded using audiotape.

The researcher's signaling questions are below: - "How did you like the online concordancing tools?.....Did you have any difficulty using them?" - "Have you used them a lot in your vocabulary learning?.....Which corpus/ concordance did you use the most ?" - "What about your writing? Have you ever used the corpus when writing?....If so, was it helpful?" Data from the group interviews also supported their positive attitudes toward tool usage. Two of three interview groups briskly discussed their experiences while using the tools, as well as plans how to use them in the future. They also asked the researcher details concerning specific functions of the online corpus/ concordance that were not mentioned during the workshop. The last group comprised seven students who held negative attitude toward concordancing. It included five students who did not submit the written reports sequentially or made any at all; they missed submission of reports once, twice or all three times. They expressed the difficulty and failure in concordancing when using the tools. Reasons for their problems were various; three had faced internet connection problem during lab lessons; two had missed part of the training. Given that they did not participate fully in the tool training, they did not have a full understanding of tool usage. The remaining two in the last group stated that they did not use the training tools because they were not as convenient as what they had used earlier, such as online dictionaries.

V. CONCLUSION and suggestions The concordance workshop was designed for helping 27 college students use online corpora effectively for their language learning. The two sequential steps: concordance training and independent concordance works improved students' skills for corpus investigations. Students retained positive attitudes toward the use of online corpora by completing the program of the workshop. Some encountered difficulties when undertaking concordance tasks but also knew the effectiveness of concordancing in vocabulary learning. In addition, some who gave negative responses in the survey missed one or two training sessions and didn't complete

the three tasks. From survey and interview responses, the researcher concluded that full understanding regarding the usages of tools, as well as sufficient time to practice them, are essential for beginner corpus users. Therefore, this study suggests below: 1. More Effective Concordance Training Students need intensive training in order to achieve success in corpus research. As Boulton (2009) mentioned, if they are not well trained, they will be ignorant in tools and will fail in their research. Consequently, this gap will turn them into reluctant corpus users. For instance, in the workshop there were two students who produced inadequate reports in all concordance tasks and five who didn't undertake one or more. In the interview sessions, some of them mentioned they had not known the functions of tools correctly, so they had used other sources instead of the corpus to complete the tasks. Furthermore, some stated that the functions were too difficult to master in the short training period. For intensive training, interesting exercises and games are recommended. Simply searching a word using wildcard function and POS tags is likely to be tiring for beginners. The corpus game, which was developed by the researcher and used in this study, promoted students' interest in corpus searching. Given its apparent success, the researcher has concluded that when appropriate games and interesting exercises for corpus learners are developed, tool training will become more effective and productive for beginners. 2. Understanding Developmental Stages of Learner Corpus Investigation When observing students' progress of concordance learning throughout the workshop, different characteristics became evident at different learning stages (see Table 4). For successful corpus research, instructors need to provide appropriate instructions for students at each stage. First, if students do not know the tools or are initially uncomfortable using them, instructors should provide extensive training to help them attain full understanding. Not doing so can discourage them, so ultimately they become reluctant corpus users. More importantly, once students start corpus research, they still might not be familiar with concordancing and inductive learning. Given this potential gap, instructors should guide students by providing explicit instructions regarding how to undertake independent research, including how to write a concordance report. Second, if they are familiar with

TABLE 4 Instructional Suggestions for Learner Corpus Researcher Stages

Stages	Characteristics	Instructional guides
•Preliminary stage	•Ignorant of concordance and research tools; need r training to raise awareness regarding the use of concordance in language learning	•Provide extensive tool training
•Initial stage	•Beginning to learn concordancing, but not understanding essential concepts of inductive learning; using other sources instead of corpus; speculating on the conclusions	•Guide using controlled activities; give feedback to keep them on track
•Developmental stage	•Skillful but no undertaking in-depth searches on the target words; partial understanding of inductive learning; weak conclusions; focusing mainly on syntactic features and partly on meanings	•Give feedback to keep them on track
•Expert stage	•Skillful, and undertaking in-depth research on target words; good understanding regarding the essential concepts of inductive learning; making evidence-proved, insightful conclusions by both syntactic and semantic analysis on target words	•Expand receptive vocabulary knowledge to productive vocabulary

• corpus research but remain in the developmental stage, instructors should provide appropriate feedback on students' research reports. During the workshop described above, for example, students showed strong possibility for improvement at the expert stage. Instructors in similar situations should therefore encourage them to stay on track while concurrently not inhibiting their independent research efforts. Lastly, students at the expert stage know what a researcher is supposed to do. They know how and what to observe in a corpus, and they derive competent, adequate conclusions. They are also well motivated to learn how to use corpus data in other research areas. Given this favorable performance, instructors need to assist them to direct concordance-based word knowledge to other language skills such as writing. The workshop outlined above was designed for giving advice to both learners and instructors, as well as providing guidelines for successful corpus use. Its procedures were developed considering each step of concordancing learning, but may need to be redesigned for different participants in other learning contexts. The materials and tools used may also need to be re-considered for specific purposes. This particular workshop, however, provided an example of concordance training for beginner corpus users.

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APPENDIX 1 Concordance Task (worksheet) Vocabulary: \_\_\_\_\_ Search the words you want from the concordance. Study the concordance lines and write down your lexical or grammatical findings from them. 1 2 3 4 5 6 7 8 9 10 . . . ●●● Findings & Conclusions from the concordance lines: ●● Concordance data selected from <http://titania.cobuild.collins.co.uk> and adapted. !!

e q \ o \ a c ( E%, C ) <sup>1</sup> Sandra Haywood  
2 0 0 3 APPENDIX 2 Vocabulary Game for Concordance Practice The following game was produced in the format of PPT slideshow for classroom use. While running the slide show, the students challenge every exercise in a succession in groups or individually. The game consists of nice stages by the difficulty level of concordance search. A person/group who gets the most number of questions correctly through all the stages will win the game.

Vocabulary Bees Stage 1: Prefixes 1. What is the prefix of the word, "-used", meaning 'a thing is no longer used'? 2. What is the prefix of the word, '-fraud', meaning 'to dishonestly prevent someone from getting something? 3. What is the prefix of "\_moral", meaning "morally wrong or bad"? 4. What is the prefix of the word, "-apply", meaning "use something unwisely or wrongly"? 5. What is the antonym of "explicable" meaning "impossible to explain? Stage 2: Prefixes 1. What is the prefix of the word "-spoken", meaning "frank, say exactly what they think"? 2. What is the prefix of the word "-traceptive", meaning "a drug or device that prevent from pregnancy? 3. What is the prefix of the word, "-cognito", meaning "with one's identity hidden, unknown or disguised"? 4. What is the prefix of "-guish", meaning "to lose energy or vitality"? 5. What is the prefix of the word, "-zance", meaning "knowledge, understanding"? Stage 3: Part of Speech (POS) Fill in the blank with an appropriate POS (tag). p\_\_\_\_\_e a career a p\_\_\_\_\_m\_\_\_\_\_ course walk b\_\_\_\_\_s\_\_\_\_\_y fluctuate d\_\_\_\_\_t\_\_\_\_\_y o\_\_\_\_\_u\_\_\_\_\_y happy Stage 4: Part of Speech (POS) 1. What kind of breakfast means "big, full, good meal"? The descriptive word has 6 letters. 2. How do we say "extremely beautiful scenery" in another word? The descriptive word has 12 letters. 3. People have this drink when a good thing happens to them and they are happy with it. The descriptive word has 11 letters. Stage 5: Structures Are these countable or non-countable? route outburst warning service illness scenery effect view symptom cash diet luggage breakthrough progress●● Stage 6: Concordancing Do concordance search with the key word below and find different collocations of it. List each five collocations for each categories below referring to the order of frequency. Keyword: 'life' Clue: v + life/aj + life/n + life /n + of + life Stage 7: Words in context 1. Add the missing words in the blanks. Sometimes the first letter is given. I think a friend is destroying himself with drugs. I feel a\_\_\_\_\_ of responsibility

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ph ,<sup>±</sup>híðý thTA: @<sup>^</sup>pÿB\*<sub>r</sub>CJŋ OJ QJ aJŋ h□ ph ,<sup>±</sup>híðý thÜG4 @<sup>^</sup>pÿB\*<sub>r</sub>CJŋ OJ  
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h□ o(rph ,<sup>±</sup>híðý th¥ u @<sup>^</sup>pÿB\*<sub>r</sub>CJŋ OJ QJ aJŋ h□ ph /<sup>±</sup>híðý thR

^ @^pÿB\*rcJŋ OJ QJ aJŋ h▣ o(rph ,<sup>±</sup>hŋÿ T h<|| @^pÿB\*rcJŋ OJ QJ aJŋ h▣ ph  
/<sup>±</sup>hŋÿ T h<|| @^pÿB\*rcJŋ OJ QJ aJŋ h▣ o(rph /<sup>±</sup>hŋÿ T hTA: @^pÿB\*rcJŋ OJ Q  
J aJŋ h▣ o(rph ,<sup>±</sup>hŋÿ T h n<sup>L</sup>\* @^pÿB\*rcJŋ OJ QJ aJŋ h▣ ph /<sup>±</sup>hŋÿ T hç5÷ @  
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@^pÿB\*rcJ¶l OJ QJ aJ¶l h□ ph ,±híÏý thn¹\* @^pÿB\*rcJ¶l OJ QJ aJ¶l h□ ph  
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i @^pÿB\* rCJŋ OJ QJ aJŋ h▣ ph /1h1ÿÿ Th<|| @^pÿB\* rCJŋ OJ QJ aJŋ h▣ o( rph ,1h1ÿÿ Th<|| @^pÿB\* rCJŋ OJ QJ aJŋ h▣ ph /1h1ÿÿ ThŠ6š @^pÿB\* rCJŋ OJ QJ aJŋ h▣ o( rph /1h1ÿÿ ThR' @^pÿB\* rCJŋ OJ QJ aJŋ h▣ o( rph

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1hðtÅ ThðtÅ 5▣ @^pÿKH OJ PJL QJ aJŋ h▣ o( r\*1hðtÅ ThðtÅ 5▣ @^pÿKH OJ PJL QJ aJŋ h▣ 1^ n `n œn n žn ð ð ð :

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Th2#× @^pÿB\*rcɿŋ Oɿ Qɿ aɿŋ hŏ o(ɾph 8ʎj ʎhʎŏý Thnʎ\* @^pÿB\*rcɿŋ H\*ɾOɿ Qɿ

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@^pÿB\*rcɿŋ Oɿ Qɿ aɿŋ hŏ ph ,ʎhʎŏý Th~9-

@^pÿB\*rcɿŋ Oɿ Qɿ aɿŋ hŏ ph &ʎh! Thnʎ\* @^pÿCɿŋ Oɿ Qɿ aɿŋ hŏ o(ɾ &ʎh!

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ł Qł ałł hł o(łph 4<sup>±</sup>hłđý TłGoó @^pÿB\*łCłł Kłł Oł Płł Qł ałł hł ph /<sup>±</sup>hł  
łđý Tł Gł @^pÿB\*łCłł Oł Qł ałł hł o(łph ,<sup>±</sup>hłđý Tł Gł @^pÿB\*łCłł Oł Qł ałł  
hł ph ,<sup>±</sup>hłđý Tłhł\* @^pÿB\*łCłł Oł Qł ałł hł ph /<sup>±</sup>hłđý Tł2#× @^pÿB\*łCłł  
Oł Qł ałł hł o(łph ,<sup>±</sup>hłđý Tł2#× @^pÿB\*łCłł Oł Qł ałł hł ph ◀mv wv x  
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th□á @^pÿCJŋ OJ QJ \□□ aJŋ h□ o(γ&±h! th°,@ @^pÿCJŋ OJ QJ \□□ aJŋ h□ )±h!  
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thδJB @^pÿCJŋ OJ QJ \□□ aJŋ h□ o(γ)±h!  
th>bá @^pÿCJŋ OJ QJ \□□ aJŋ h□ o(γ)±h!  
th†3; @^pÿCJŋ OJ QJ \□□ aJŋ h□ o(γ)±h!  
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f\_\_\_\_\_ loyal to me in good and bad times, which is a wonderful a\_\_\_\_\_ of his personality. I feel I ought to contact the police or social services, but I don't want to make a s\_\_\_\_\_ decision which I'll regret later. 2 . Add the missing words in the blanks. Sometimes the first letter is given. My boyfriend has a really friendly, o\_\_\_\_\_ personality and a great \_\_\_\_\_ of humour. He's h\_\_\_\_\_ intelligent and has a \_\_\_\_\_ -sharp mind. The perfect man. We've been together now for a year, and I like him a lot, but don't love him any more. Should I be b\_\_\_\_\_ honest with him and tell him? Stage 8: Collocation Make nine collocations out of the words in the box. Use each of the words once only. a a a accept affair an at commitment contact contact first friends friendship have in keep lose make love love proposal return sight someone's special strike up

•• Stage 9: Collocation errors Find the mis-collocations in the sentences. 1. We live on a busy road, but we're lucky because we have off-road park. 2. We're building an expansion to our house which will give us a bigger kitchen. 3. There is no buyable housing for young people in this area; prices are ridiculously high. 4. The flat is totally furnished, which is good because I have no furniture of my own. Congratulation! You are the winners! Examples in: English Applicable Languages: English Applicable Levels: Tertiary Sooin Chun TESOL Major, Graduate School of Education 5 Woncheon-dong, Yeongtong-Gu, Suwon, 443-749, Korea Tel) (031) 219-3260/H.P.: 010-5262-7339 Email: sooic01@ajou.ac.kr

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 Corpus: Concordance English [http://www.lex Tutor.ca/concordancers/concord\\_e.html](http://www.lex Tutor.ca/concordancers/concord_e.html)  
 JustTheWord: <http://www.sle.sharp.co.uk/JustTheWord> BYU-BNC: <http://corpus.byu.edu/bnc/> COCA: <http://www.americancorpus.org/> WebCorpLive: <http://www.webcorp.org.uk/index.html> VLC The Web concordancer: <http://vlc.polyu.edu.hk/concordance/wwwconcappe.htm> MICASE: <http://quod.lib.umich.edu/cgi/c/corpus/corpus?c=micase;page=simple> UGRU Concordance: <http://www.ugru.uaeu.ac.ae/concordance/> Collocation quiz: <http://iteslj.org/links/search.cgi?query=collocation> Virtual DDL Library: [http://www.eisu2.bham.ac.uk/johnstf/ddl\\_lib.htm](http://www.eisu2.bham.ac.uk/johnstf/ddl_lib.htm) L J L J !! PAGE \\*

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국립중앙도서관 (국립중앙도서관) 2024년 1월

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 $\quad \uparrow tH \uparrow \uparrow u \square r 0 \downarrow h?1^2 \tau h?1^2 KH OJ PJ^L QJ^L aJ^{\mathcal{H}} mH \quad \uparrow nH \uparrow \downarrow sH$   
 $\quad \uparrow tH \uparrow \downarrow 9^L j \quad \downarrow h?1^2 \tau h?1^2 KH OJ PJ^L QJ^L U \square raJ^{\mathcal{H}} mH \quad \uparrow nH \uparrow \downarrow sH$   
 $\quad \uparrow tH \uparrow \downarrow \mathcal{J}^L j \quad \tau h \beta C \ddagger U \square r \tau h \beta C \ddagger \quad \downarrow h'' \downarrow H \tau h \mathcal{E} C \emptyset CJ \uparrow OJ QJ aJ \uparrow \quad \downarrow h \mathcal{S} 6 \mathcal{S} \tau h \mathcal{E} C \emptyset C$   
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bg1="lt1" tx1="dk1" bg2="lt2" tx2="dk2" accent1="accent1" accent2="accent2"  
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$$\frac{\partial}{\partial t} \left( \frac{\partial \phi}{\partial x} \right) + \frac{\partial}{\partial x} \left( \frac{\partial \phi}{\partial t} \right) = \frac{\partial^2 \phi}{\partial x^2} + \frac{\partial^2 \phi}{\partial t^2}$$

$$\frac{\partial}{\partial t} \left( \frac{\partial \phi}{\partial x} \right) + \frac{\partial}{\partial x} \left( \frac{\partial \phi}{\partial t} \right) = \frac{\partial^2 \phi}{\partial x^2} + \frac{\partial^2 \phi}{\partial t^2}$$

$$\frac{\partial}{\partial t} \left( \frac{\partial \phi}{\partial x} \right) + \frac{\partial}{\partial x} \left( \frac{\partial \phi}{\partial t} \right) = \frac{\partial^2 \phi}{\partial x^2} + \frac{\partial^2 \phi}{\partial t^2}$$

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