A Study on the Use of Prepositions mediated by an ICT Tool

Suriati ABAS

Beacon Primary School, Singapore

suriati.abas@bcps.sg

Abstract: This paper describes how an English language teacher from a primary school in Singapore employed an ICT tool to understand the use of prepositions amongst nine-year-old children. Using the written composition of 28 primary three pupils in a Modular lesson that she has taught, the teacher created a learner corpus, named it CLAL (Corpus-based Learning about Language), and used Ant Conc, a corpus analysis technology, to identify patterns in her pupils' usage of prepositions, 'in', 'on' and 'at'. Drawing from the preliminary findings, the teacher then attempted to adopt the data-driven learning (DDL) approach in the teaching of grammar, harnessing on similar technology. She concludes by showing two angles in which Ant Conc could be used in classrooms.

Introduction

The use of prepositions in English language is a concern. Among the twenty most frequently used words, eight are prepositions: of, to, in, for, with, on, at and by (Kucera & Francis, 1967). Leech and Svartvik (1975) defines prepositions as words which connect nouns or noun phrases with other structures in a sentence. Most prepositions are simple, 'short, invariable forms' (Biber, Johansson, Leech, Conrad & Finegan, 1999) such as, at, for, in, into, on, off, to and with, but, there are also others which consists of multi-word units. Some examples of such complex prepositions include, apart from, because of, such as, in addition to, and in spite of. Although prepositions are said to appear as soon as a child can produce two word utterances (Kochan, Morgenstern, Rossi & Sekal, 2007), pupils generally encounter difficulties in the use of even one-word prepositions.

1.   Studies conducted on learners' use of prepositions

Learners of varying age group had problems in using prepositions. After a freshman writing exam, Scarcella (2002) reported that approximately 60% of the university students failed and had to attend a remedial freshman writing course despite their previous schooling experiences. To add on, one of the grammatical difficulties which they experienced in their writing include the use of prepositions. The prepositions are often either absent or, used incorrectly. Meanwhile, in another study conducted by Connors and Lunsford (1998) on college students' writing, prepositions surfaced as the list of frequency of errors made by students. The findings clearly indicate that prepositions are one of the language areas that should be addressed in classroom teaching. At the secondary level, Silayong (1984) affirmed that Thai students encountered problems in the use of prepositions in English due to interference from their mother tongue language. In similar vein, Mariano (1984) highlighted that the fourth grade students of Juan Sumulong Elementary School in

Philippines made mistakes when using simple prepositions such as *in, on, over, beside, under* and *behind,* because they had a hazy concept of the meanings. Furthermore, the multiple personalities taken by prepositions, which may be inconsistent and capricious (Wahlen,1995), contributed to their non-standard use. Additionally, it is possible for several prepositions to be used for similar purposes. For instance, *in* the afternoon, *on* Thursday afternoon and *at* night, are used to indicate time, albeit their differences.

Retrospectively, while non-corpus based studies as mentioned above have shown that prepositions are one of the problematic areas (Lindstromberg,1991;Capel,1993), previous corpus-based research in similar language area which involved English language learners merely focus on using a concordancer to teach prepositions and compositions.In the teaching of prepositions, Daud & Abusa (1999) claimed that the use of concordance output helped learners discover the use of in, on and at, in multiple contexts. On the other hand, through corpus consultation, in a research which involved Korean in-service teachers, Lee, Shin & Chon(2009) discovered that there were significant improvements in their use of vocabulary, but not for grammar.When the compositions were rated, those from the post-training writing tasks reveal problems in prepositions and collocations. Likewise, in the written assessment of native speakers at the masters and undergraduate level, O'Sullivan and Chambers (2006) gathered that prepositions and word choice are one of the most common problems possibly due to native language interference between English and French. Thus far, in the local context, only Mei Ling (2007) has used corpus-based materials to teach prepositions. Her findings suggest an alternative approach which could possibly benefit teachers and pupils in language learning.

2.   An ICT tool that helps to understand pupils' use of prepositions

Drawing my knowledge from previous studies on the use of prepositions, while at the same time, leveraging on the ubiquitous use of computers in my school, I attempted to use Ant Conc. Ant Conc is a freeware concordance program. It could be obtained from Laurence Anthony's website at http://www.antlab.sci.waseda.ac.jp/software.html. My intent in employing such ICT tool is mainly to identify and understand the patterns of usage in the prepositions, 'in', 'on' and 'at' from my pupils' written compositions since the freeware facilitates the identification of 'linguistic and situational co-occurrence patterns' (Reppen, 2010). AntConc is basically a corpus analysis toolkit. A corpus is a large, principled collection of naturally occurring texts (written or spoken) stored electronically. By 'naturally occurring texts', I am referring to diverse language that is obtained from authentic language situations such as daily conversations, meetings, letters, class assignments and books, rather than made-up language (Reppen, 2010). Over the years, with the advent of technology, Ant Conc has proved to be effective in classroom context (Noguchi, 2004). For instance, in the learning of vocabulary, learners were found to acquire new words by looking at huge examples of varied natural contexts (Cobb, 1999). Meanwhile, in the teaching of grammar, the use of corpora enables teachers and pupils to observe nuances of usage (Hunston, 2002) to better understand specific language items.

3.   Features of Ant Conc

For this particular study, the freeware application sufficiently affords a set of features for analysing a small-sized corpora. In fact, by analysing a corpora, it is possible to gain insights into the typical linguistic contexts of a word (Hunston, 2002) instead of simply relying on how people normally think it should be used. However, since the corpus of words was

meant to "highlight the regularities which are hidden from the naked eye" (Lorenz, 1999) in two written compositions of a group of 28 pupils, therefore, I created a learner corpora, which I named it as CLAL (Corpus-based Learning about Language).

4.   Data collection

In CLAL, I managed to input 62 texts with an average of 200 words per composition, making up a corpus of 10 000 words. Although the corpus is very small as compared to most present-day corpora, as Leech (1991) argues, size is not important. In this case, the small corpora serve as a sample for a specific investigation (Gavioli, 1997:88) of which, I decided to focus on the use of prepositions. Nonetheless, a small corpus such as CLAL cannot be considered a representative sample of the written compositions of primary three pupils in Singapore.

5.   Analysing the patterns of use

In order to investigate the patterns of use for the prepositions, 'in', 'on' and 'at', in primary three pupils' written compositions, I input CLAL into the concordance tool in AntConc. The prepositions ('in', 'on' and 'at') were typed into the search term, individually, to retrieve related sentences. Since the patterns of a word is defined as "all words and structures which are regularly associated with the word and which contribute to its meaning" (Francis & Hunston, 2000), therefore, I examined the concordance lines which were automatically generated from the search results. From the concordance output, it is possible to find out the word use and how the same word can have multiple meanings (Reppen, 2010). I then grouped these lines as a set, to explain the patterns of their usage in my pupils' written compositions.

6.   Preliminary findings

From the CLAL output in Ant Conc, I observed that 'in' has the highest frequency of 187, followed by 'at' with a total frequency of 116 and 'on' which has 83 of such occurrences in the two written compositions of the primary three pupils. Generally, the prepositions, 'in', 'on' and 'at' tend to be used most commonly in the pupils' writing for describing a position and expressing time. In terms of position, pupils have been using 'in' to describe the state of being in a three-dimension enclosed space such as 'in his house'. They use 'at' to denote a point in a space, such as 'at the right hand corner', and 'on' to tell the position on a surface which could be 'a table' or 'chair'. With regards to time, pupils use 'in' to tell part of a day as in 'in the afternoon', whereas 'at' has been used to indicate the specific time on a clock, 'at 4pm' as well as the time of the day, 'at night'. Meanwhile, the preposition 'on' is solely used to state a particular date. Having analysed instances of how the pupils used 'in', 'at' and 'on' in their compositions using AntConc, those that are atypical from a teacher's intuition were grouped into sets. Each of the concordance lines in these sets were compared with the written subcorpora in ICE-GB since the use of one variant over another could not be reliably predicted from our intuitions (Biber, Conrad & Reppen,1998). Concomitantly, Sinclair's (1991) upward and downward collocates were applied to analyse the collocational pattern which might prove that the non-standard use of prepositions could be accepted.
     While downward collocation involves a more frequent node (the word being studied), a, with a less frequent collocate, b, the reverse occurs in an upward collocation, which tends

to show a weaker relationship as it pertains to grammatical property.

7.   Linking main findings to previous studies

Putting together evidences from previous research on the problems students encountered in using prepositions (Mariano, 1984; Silayong,1984, O'Sullivan & Chambers, 2006), as aforementioned, it appears that similar findings could be deduced from the primary three pupils' compositions; In a nutshell, their non-standard use of prepositions lie on the fact that they had a hazy concept of prepositions, and that they could have experienced 'language interference' (Dulay, Burt & Krashen,1982) from their mother tongue, aside their inability to use them in a semantically inappropriate manner. Yet, to deduce that these children are not able to use the prepositions correctly because of several non-standard instances in their writing is irrational, for, what could possibly count in the prepositional meanings is how the object is construed, for the purposes of speaker and learner (Clark, 1993).

To gain a deeper understanding of my pupils' work, I then used Ant Conc to investigate whether the use of prepositions in their writing reveals further findings with regards to their language development. In order to do so, I had to generate the number of prepositions that were used by my own pupils in CLAL and compare them with those of the learners in the ICE-GB corpus. Since the size of the corpus is far smaller than the ICE-GB, therefore, I had to normalise it as shown in Table 1b below.

Table 1a Prepositions, 'in', 'at' and 'on' in CLAL & ICE-GB (written subcorpora)

Prepositions	CLAL 10 000	ICE-GB(written) 423,702
At	116	2128
In	187	8564
On	83	2925

Table 1b Normalised figures per million words

Prepositions	CLAL 10 000	ICE-GB(written) 423,702
At	116 x 100 = 11 600	2128/ 423 702 x 1million = 5022.4
In	187 x 100 = 18 700	8564/423 702 x 1million = 2012.3
On	83 x 100 = 8 300	2925/423 702 x 1million = 6 903.4

From Table 1b, it was evident that the nine-year-olds in this study used the prepositions, 'at', 'in' and 'on', more than the writers in ICE-GB. In fact, the frequency of use is twice or more in the three prepositions. This could be due to the differences in age group between the learners in CLAL and ICE-GB. Comparatively, it is partly the cognitive maturity that enables the older learners in ICE-GB to compose more abstract language than the nine-year-old children in the study (Taylor, 1974). Yet in reality, there are also exceptional cases of younger learners who acquire language proficiency earlier and are as competent as the older ones.

8.   Conclusion

There are indeed two ways in which Ant Conc can be used in classrooms. Firstly, it is a useful ICT tool to inform language teaching. From the analysis, as a language teacher, I could gather that there are spatial and temporal patterns in the ways the primary three pupils use in, on and at. However, instances of their non-standard use of prepositions do not reveal

any patterns as they are semantically inappropriate. Clearly, I was made aware that the pupils could have been confused by the fact that moments in time could simultaneously be construed as being analogous to points in space. At the same time, their mother tongue languages could have contributed to their non-standard usage of prepositions. Lastly, I speculated that the high frequency of prepositions used in the children's might be due to their lack of lexical knowledge.

Secondly, Ant Conc provides opportunities for using the data-driven approach to teach prepositions. Adopting DDL, I have introduced the corpus-analytic toolkit into my classrooms and train my pupils in their use. An advantage in using DDL is that it provides opportunities for 'grammatical consciousness raising' (Rutherford, 1987) by presenting learners with evidences and asking them to identify patterns and make generalisations about language form and use (Johns, 1986) from a set of texts or corpus which serves as a source of data (Doyle, 2007). In all, the teaching of prepositions mediated by an ICT tool such as Ant Conc, has made it possible for any language teacher, to gain insights in his or her classroom experiences.

References

[1]   Biber, D., Conrad, S. & Reppen, R. (1998).Introduction to Corpus Linguistics. Cambridge:Cambridge

[2]   Biber,D., Johansson, S., Leech, G., Conrad, S. & Finegan, E. (1999). Longman grammar of spoken and written English. Pearson Education:China.

[3]   Capel, A. (1993). Prepositions. London: HarperCollins Publishers.

[4]   Cobb,T. (1999).Breadth and depth of lexical acquisition with hands-on concordancing.*Computer Assisted Language Learning*.12,4,345-360.

[5]   Doyle, P. (2007). Teaching grammar with a learner corpus. In T. Ruanni, F. Tupas, Yuan Yi and Christianty Nur (eds.), *Changing Perspectives on Pedagogical Grammar*, Singapore: Singapore Association for Applied Linguistics, 77-86.

[6]   Dulay, H., Burt, M. & Krashen, S. 1982, *LanguageTwo*. New York: Oxford University Press.

[7]   Francis, G. & Hunston, S. (2000). Pattern Grammar. Amsterdam:John Benjamins.

[8]   Johns, T. (1986). Micro-concord, a language learner's research tool. System, 14(2), 151-162.

[9]   Kucera, H. & Francis, W.N. (1967). Computational Analysis of Present-Day English. Providence:Brown University Press.

[10] Kochan, A., Morgenstern, A., Rossi, C. & Sekal, M. (2007). Children's early prepositions in English and French: A pragmatic device. Proceedings of LingO. Oxford Postgraduate Conference in Linguistics.

[11] Lee, M., Shin, D., & Chon, Y.V. (2009). Online corpus consultation in L2 writing for in-service teachers of English. *English Teaching,64*(2), 233-254.

[12] Leech,G. & Svartvik. (1975). A communicative grammar of English.London:Longman.

[13] Leech,G. (1991). The state of art in corpus linguistics. In K.Aijmer & B. Altenberg. English corpus linguistics – Studies in honour of Jan Svartvik. London:Longman.

[14] Lindstromberg, S. 1991. (Re) teaching prepositions. *English Teaching Forum*. 29(2), 47-50.

[15] Mei Ling, A. (2007). Using corpus-based materials as a teaching resource for the teaching of prepositions in a Singapore primary school. Unpublished masters thesis. Retrieved March 1, 2010 from National Institute of Education Digital Repository (http://repository.nie.edu.sg/jspui/handle/10497/9).

[16] Noguchi, J. (2004). A genre analysis and mini-corpora approach to support professional writing by nonnative English speakers. English corpus studies, 11, 101-110.

[17] O'Sullivan, I., & Chambers, A. (2006). Learners' writing skills in French: Corpus consultation and learner evaluation. *Journal of Second Language Writing, 15*, 46-68.

[18] Reppen, R. (2010). Using Corpora in the language classroom. In Richards, J.C. (Ed.) United States of America:Cambridge University Press.

[19] Scarcella, R. (2002). Effective Writing Instruction for English Language Learners. California English, 7(4),   6-13.   Retrieved   March   18,   2010   from   Education Research Complete database.

[20] Silayong, D. (1984). A comparative study of English and Thai prepositions with some suggestions for pedagogical application at secondary levels. SEAMEO Regional Language Centre: Singapore.

[21] Sinclair, J. (1991). Corpus, concordance, collocation.Oxford University Press: Hong Kong.

[22] Taylor, B. (1974). Towards a theory of language acquisition. Language learning. 24, 23-36.