Effects of Concordance Feedback on Engineering Students' English Vocabulary Learning

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ABSTRACT

The main objective of the present research study is to investigate the effects of concordance reference to learn implicit vocabulary. For this purpose, the present study proposes British National Corpus (BNC) language data to learn contextual vocabulary through cloze test reading. Despite some difficulties, the study found that participants of the study analysed the language data successfully and identified word's correct meaning in multiple choice of words and usage in the concordances i.e. keyword in context (KWIC) format. The study also presents participants' beliefs and practical difficulties towards the concordance activities.

Keywords: Corpus, BNC (British National Corpus), Concordancer, ICT (Information and Communication Technology) CALL (Computer Assisted Language Learning), incidental vocabulary.

1. Introduction

Teaching and learning vocabulary is an essential activity for ESL teachers and learners to acquire and enhance the language skills of the students. However, Berne & Blachowicz (2008) found that ESL/EFL teachers are not aware of best practices to impart vocabulary. Muthulingam (2016) also opined that the ESL teachers use traditional methods such as finding meaning(s) in the dictionary, guessing from the context, providing synonyms or antonyms of a word. word association etc. These scholars emphasised an independent strategy to support their learning vocabulary in and after the EFL/ ESL class. Ellis & Farmer (1996 & 2000) suggested that the students should be offered an opportunity to acquire vocabulary with suitable modus and actively engage them in the learning process. In this context, computerrelated concordance is believed to be an effective reference tool to enhance ESL students'

incidental vocabulary (Shaw, 2011; Jiao, 2012). The students can utilize the corpus data in concordances in their free time as a reference tool without depending much on their ESL teacher(s).

2. Importance of Vocabulary Learning

Vocabulary is one of the major concerns for foreign and second language learners and they should get an ability to understand and use words in a given context to master the target vocabulary. Schmitt (2000) also elevated that "lexical knowledge is central to communicate competence and to the acquisition of a second language" (p. 55). According to Wilkins (1972), "Without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (p. 111)

2.1. Implicit and Explicit Vocabulary Learning Strategies

Ellis (1994) defines "acquisition of knowledge

about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply and without conscious operations" (p.1). Thus, learners will grasp word meaning through contextual exposure which draws the learner's attention. On the other hand, explicit means conscious vocabulary learning and the learner will be exposed to a specific vocabulary such as academic words (Coxhead, 2000). Paribakht and Wesche (1993) said that vocabulary can be learned more effectively with a rich context of a word or phrase than explicit learning.

Concordance and Vocabulary Learning

After evolution of Information and Communication Technology (ICT) and Computer Assisted Language Learning Computing (CALL) in EFL/ESL context; teaching and learning was changed significantly. The ICT tools are widely in use to develop the language skills of the students because the ICT is a resource of vast authentic material, convenience, user friendly, learner-centric, and positive impact on the learners. One of the very popular computer-basedtools in the EFL/ESL context is corpus. Research studies in corpus reported positive results as a reference to learning vocabulary and to improve lexical and grammatical linguistic competence (Vijay Kumar, 2010); Suman Rani 2011)

One of the key features of concordance is KWIC (keyword in context). Search results in a corpus output will be displayed in the centre. The highlighted word in the centre provides the immediate context of a word or phrase or word. The following example is a search result for the phrase *ending up* in a KWIC format of BNC-BYU.



Fig. 1 concordances for the phrase ended up

The above-mentioned concordances for the phrase *ended up* highlighted with pink colour, which means part of the speech *verb phrase*, the other words in each concordance line also highlighted with different colours example prepositional words in yellow colour, articles and adverbial words grey colour etc.

The present study aims at investigating the effects

of the concordance reference to learn incidental vocabulary through cloze reading tests. And it also discusses students' attitude towards concordance based vocabulary learning it can drives the learners positively and draws their attention (Johns, 1990).

2.1. Research Questions

1. To what extent can the concordance output

help the students to analyse and find appropriate word contextually?

2. What are the attitudes of the learners towards using the concordance?

3. Context of the Study

For English language learners vocabulary plays vital role to master four language skills and vocabulary knowledge and usage are indispensable for EFL/ESL students (Nation, 2001). However, the students in the present study were facing difficulties to identify meanings of word contextually. The major reasons for their difficulties were: 1. Students were confused to choose appropriate meaning of a word in a close reading test due to similar word options. For example handle, deal, treat and mange 2. Difficulty to guess word meaning based on the context. These problems were due to students' low vocabulary knowledge and size (Hague, 1987). In addition, these learners' transferable vocabulary knowledge is also low. Moreover, the class teacher explanation and learning strategies were found to be conventional. In this context, the present study proposes computer based concordance search in British National Corpus to find contextual word meaning and word usage.

4.0. Research Methodology

4.1. The Participants of the study

In order to collect the data, the researcher approached the students who are studying Professional Communication Course at Vignans' deemed to be University at Vadlamudi, Guntur District, Andhra Pradesh, India. And they were explained about nature and purpose of the study and got their consent. However, choice was given to the students who would like to

participate in the study. Finally, 15 students were willing to participate in the study. Among the 15 adult ESL students, 8 Male and 7 female who were studying for four years Bachelor of Technology course.

4.2. Professional Communication Course

Professional Communication course has been introduced to the Bachelor of Technology students in their third year, in the first semester or second semester. The main purpose of the course is to improve the four language skills (LSRW) of the students in the professional context. The certification is highly recognised and demanded at the time of campus placements. Though the course book has corpus informed activities to learn lexical and grammatical words; it has not been explored in the context of the classroom. A few reasons for this problem are a) lack of interest among the teachers and learners, b) lack of knowledge about the teaching resources c) lack of awareness of what to teach, and how to teach d) lack of training and knowledge among the teachers to design corpus informed language activities for their students and time constraint.

4.3. Reading Skills and Cloze Test

Reading is an integrated skill along with other language skills in their course book. The cloze test in the course book aimed to develop the vocabulary and comprehension of the students through skimming and scanning techniques. It tests the students'

- Word usage in a context
- Dependent prepositions e.g. according to, fit into
- Phrasal verbs: a phrase that consists of a verb

with a preposition or adverb or both, the meaning of which is different from the meaning of its separate parts: "Pay for", "work out", and "make up for" are all phrasal verbs.

- Linking words: the words which connect sentences and ideas e.g.so, but, and, also etc.
- Collocations: the words often found together e.g. pitch dark, tight deadline etc.

4.4. Hands-on Training for the Student on BNC-BYU Corpus

After understanding the research problem, the study introduced the BNC corpus to the participants and they were offered hands-on training in the first week of the study. The instructional classes are aimed to make the students able to find the information on BNC-BYU corpus output for cloze reading options. The word "cloze relating to, or being a test of reading comprehension that involves having the person being tested supply words which have been systematically deleted from a text. Following is a sample cloze reading passage.

Go Anywhere You Want to Go

At Flight Centre, we 1...... in giving you a lot of responsibility from day one, so one of our main priorities is to make sure you get the training and support. You need to 2..... the skills which allow you to succeed.

Training Starts as soon as you 3..... and it never stops. The initial programme is 4...... partly at your office and partly in our dedicated Learning Centre. For the first 12 months, you'll have a regular programme of training, 5..... topics as diverse as advanced sales goal setting and time management.

After that, you can develop in any direction you choose by 6...... and events in key areas: Sales and Services, Products and Affairs, Systems, and Personal Development. All this is provided at no 7...... to you. We have a consistent 8...... of promoting from inside the company; currently about 90 per cent of our Team Leaders have come through the ranks, and want to keep it that 9...... [is this a cloze passage? how have you defined 'cloze' operationally? a line or two tracing its origin will be helpful to the uninitiated reader]

1.	A. believe	Bthink	C feel	D faith
2.	Awin	B gain	C. Earn	D Collect
3.	Ajoin	B recruit	C contract	D employ
4.	A situated	B located	C based	D fixed
5.	A dealing	B covering	C learning	D working
6.	A going	Bassisting	Chaving	D attending
7.	A money	B payment	C cost	D price
8.	A record	B reputation	C activity	D standard
9.	A type	Bsort	C kind	D way

Extracted from Cambridge Business Benchmark Upper Intermediate (2016, p.8) Following are BNC concordances to distinguish word's contextual meaning(s) for each multiple choice for the question 1.



Fig.2 Concordance display for the word believe

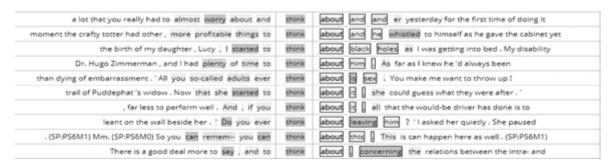


Fig.3 concordance display for the word thinks



Fig.4 concordance display for the word feel

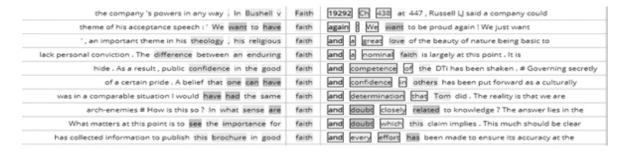


Fig.5 concordance display for the word faith

The students were asked to find the word meaning with the concordances in Fig.2. They identified the right answer i.e. *believe*. Initially, the participants were trained on the BNC corpus and concordances. The training ensured the participants' confidence to understand the corpus output, browsing skills and search target vocabulary in concordances.

Procedure

The study was conducted during the professional communication Lab class periods at the Vignan's Foundation for Science Technology and Research Deemed to be University of Guntur, Andhra Pradesh, India.

The cloze reading test material has been extracted from the course book *Cambridge English*; *Business Benchmark Upper Intermediate* authored by Guy Brook-Hart (2014). This book has corpus informed activities but they were not practised in the class due to a lack of knowledge about the corpus and resources for the teachers. As a result, the study focused on incidental vocabulary learning through cloze reading activities. The study was confined to test the effectiveness of the concordance reference to identify appropriate word usage of vocabulary. And the study hasn't tested the retention of students' vocabulary knowledge.

Week	Research Activity	Objective(s)
Week-1	Administering a pre-test and offering hands- on training on BNC-BYU.	 To find out the students' scores in vocabulary in the context. To understand students' difficulties in vocabulary learning and usage. To make the students understand and apply the tools to find the information.
Week-2	Applying the tools to the pre-test cloze reading.	Data received and logged
Week-3	Applying the tools to second cloze reading.	Data received and logged.
Week-4	Applying the tools to third cloze reading.	Data received and logged.
Week-5	Administering open-ended questionnaire	To understand the student's attitude towards the tools

Table 1: Summary of Data collection procedure

5. Result Analysis

5. 1. Initial Cloze Test and Informal Interaction with the Students

The initial cloze test result displays the students' vocabulary level. The students also reported that they were confused to find the right answer in the cloze test reading because of synonyms or equivalence word meanings in nature. It was due to lack of word usage in a context (Nation,

2001) for the student and their low-level vocabulary knowledge. The students also reported that sometimes they were helpless and depend on teachers to get clarification or else they search on Google or refer a dictionary to find the meanings. But, they said that they were not completely satisfied with the available resources and techniques to learn vocabulary and language. The student's performance in the pre-test is presented in the following table 2.

S	S	S	S	S	S	S	S	S	Sl	Sl	Sl	Sl	Sl	Sl	Mean
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	Score
6	5	7	6	9	9	5	6	7	8	8	5	6	4	3	6
4	3	4	4	6	6	3	4	4	52	52	22	40	27	20	42
0	3	7	0	0	0	3	0	7	23	23	23	40	21	20	42
	6	1 2 6 5 4 3	1 2 3 6 5 7 4 3 4	1 2 3 4 6 5 7 6 4 3 4 4	1 2 3 4 5 6 5 7 6 9 4 3 4 4 6	1 2 3 4 5 6 6 5 7 6 9 9 4 3 4 4 6 6	1 2 3 4 5 6 7 6 5 7 6 9 9 5 4 3 4 4 6 6 3	1 2 3 4 5 6 7 8 6 5 7 6 9 9 5 6 4 3 4 4 6 6 3 4	1 2 3 4 5 6 7 8 9 6 5 7 6 9 9 5 6 7 4 3 4 4 6 6 3 4 4	1 2 3 4 5 6 7 8 9 0 6 5 7 6 9 9 5 6 7 8 4 3 4 4 6 6 3 4 4 53	1 2 3 4 5 6 7 8 9 0 1 6 5 7 6 9 9 5 6 7 8 8 4 3 4 4 6 6 3 4 4 53 53	1 2 3 4 5 6 7 8 9 0 1 2 6 5 7 6 9 9 5 6 7 8 8 5 4 3 4 4 6 6 3 4 4 53 53 33	1 2 3 4 5 6 7 8 9 0 1 2 3 6 5 7 6 9 9 5 6 7 8 8 5 6 4 3 4 4 6 6 3 4 4 53 53 33 40	1 2 3 4 5 6 7 8 9 0 1 2 3 4 6 5 7 6 9 9 5 6 7 8 8 5 6 4 4 3 4 4 6 6 3 4 4 53 53 33 40 27	1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 5 7 6 9 9 5 6 7 8 8 5 6 4 3 4 3 4 4 6 6 3 4 4 53 53 33 40 27 20

Table 2: Students' scores in the initial cloze test out of 15 marks

The data in Table 2 elucidates that students' lower vocabulary level in the pre-test. Out of the 15 students, only two students scored 60% and the rest of them were below 50%. The mean score of the student was 6 out of 15 marks i.e. equal to 42%. In an informal interaction, some students informed that they were not sure about their answers and they just draw answers from the multiple options. This indicates students' lexical competence was low and they need innovative independent reference tool such as BNC to enhance their vocabulary knowledge.

5.2. Table3:Comparison of all three cloze tests scores after applying the tool

Findings after Applying the Concordancer

After the pre-test, the participants were given training on the BNC and the training ensured the concordance skills of the students. Later, the participants were given three cloze reading tests and asked to find the appropriate word in each gap. The students' performance and improvement were logged and analysed. The following is the data of three cloze tests and the mean of three cloze readings.

Student No	S1	S2	S3	S4	S5	S6	S 7	S8	S9	S10	S11	S12	S13	S14	S15
Cloze Test-1 %	70	70	78	80	86	79	77	86	83	88	79	76	76	55	40
Cloze Test-2%	73	80	80	86	93	80	87	73	86	90	89	86	80	60	40
Cloze Test-3%	90	93	93	93	100	95	92	93	93	100	100	90	92	66	47
Mean of All Tests %	78	81	84	84	93	85	85	84	87	93	89	84	83	60	42

Table3: Comparison of all three cloze tests scores after applying the tool

- 1. 81% of the students able to analyse keywords in concordances and found correct word in the given context.
- 2. Majority of the subjects are comfortable with concordance display of language output and they also tried to answer all questions in the cloze test. However, student 15 was found to be a very low performer (mean is 42) from the first test. The reasons for his low performance are low motivation towards corpus based concordances of discovery learning, low linguistic knowledge, and vast corpus data and tend to depend on dictionary meaning. In this case concordance search is not suggestible to learn vocabulary. However, some students who could not find the information they seek the help of the
- researcher and posted an improvement in the reading.
- 3. The students whose proficiency is at B1& B2 levels analysed the data and successfully locate the right word. It was observed that students' success rate was high because they were motivated to spend time and learn vocabulary with concordances. Their performance also significantly improved. In this regard, the study identified that the students with good proficiency can be motivated and yields positive result.
- 4. Some students also often consulted the Cambridge online dictionary concordances helped the students to find and analysed s the words used in the context and made them

better autonomous, learners.

- 5. The respondents strongly suggested that corpus-based language activities should be encouraged within the language class time. Also expressed the need of their teacher's intervention to use it for their language purpose and to assist them to browse effectively for the language learning. So, corporate learning will be happening to discuss and stimulate all the students.
- 6. Initially, the students' concordance skills were moderate. At the end of the study 30% of the students become independent users, 50% of the students were self-reliant but assistance

was offered whenever required, 10% of the students were moderate and 10% of the students did not show noticeable improvement due to lack of interest. On the whole, it is confirmed that concordance is a useful language reference tool for the students to increase their autonomy.

5.2. Attitudes of the Students

Finally, the study administered an open-ended questionnaire to the participants. The questionnaire aimed to reflect the participants' attitudes towards the concordance. The quantitative data was interpreted accordingly and presented in table 4.

Question	Agree%	Disagree%
1. Do you think that the training on the corpus helped you to find answers in the cloze tests?	86	14
2. Do you think that analysing a vast information is a difficult process?	40	60
3. Do you like to have an online line dictionary along with the corpus search?	100	0
4. Do you think that learning vocabulary with the corpus is fun and enjoyable?	66	34
5. Do you like to continue with corpus learning?	93	7
6. Do you like to suggest/recommend to your friends?	93	7

Table 4: Reflecting Participants' Opinions

It was found that 85% of respondents were more confident of using the BNC concordances after the training and they believed that the training has ensured them to analyse the data. However, 40% of the students said that they were not comfortable with the concordance search because of vast information and consuming valuable time. The respondents' anonymously said that they would like to have

an online dictionary along with the concordances. Because they felt that a dictionary can reduce the search time and faster their learning. 66% of them said that concordances are fun and created a discovery model of learning like a treasure hunt. They believe that it is a good resource for them to clear their vocabulary difficulties in the absence of the class teacher. They also reported that the tool is user-friendly

and has open access to them at any time. As a result, they are often using it on their mobile phones to clear their language doubts. 93% of the respondents would like to continue to use it for their language learning purpose and would like to share it with their friends and classmates. The students also accepted that the corpusbased concordances are rich in providing contextual examples in authentic context than teacher, dictionary and any other online dictionaries. The corpus has been explored even for other purposes like lexical usage in the context.

5.2. Students' Difficulties

- Initially, the students' concordance skills were moderate and they were confused with vast information which consumed their time. Later on, improved their speed of browsing on the BNC and to find contextual word usage.
- 2. Lower level proficiency students did not report any significant improvement and they seek teacher's or friends' assistance to browse on the corpus and to find the information. However, they did not find it is useful than their teacher's assistance and dictionaries.
- 3. Some students felt that insufficient training hours and time also reasons to understand words' meaning in concordances.

5.3. Limitations

Though the participants successfully avoided distracters and identified contextual word meaning(s) in the cloze reading, they still more training to be independent concordance users and assistance to analyse and understand concordances output. In addition, students' motivation, language proficiency and support during the activity are key factors to take their

own learning with concordances. Further, the study was conducted in a short span of time 5 weeks including instructions and training the students on the corpus, another longitudinal study is required to confine the effectiveness of the concordance reference to enhance vocabulary. The main limitation of the study was it did not test students' knowledge.

6. Conclusion

Despite a few difficulties, the participants strongly believe that it is a useful language reference tool to learn vocabulary. They also believe that it can enhance their incidental vocabulary, collocations and grammar. In this regard, the study believes that ESL teachers are vehicles to encourage their students to learn language from corpus data. It is suggested a hands-on experience to introduce innovative and self-driven language tools such as Corpus. Finally, use of corpus linguistic data in teaching and learning should not be barred and it should be made available for the learners by the teachers

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