

## THE ROLE OF TECHNOLOGY-ENHANCED LANGUAGE LEARNING (TELL) AND CORPUS TOOLS IN IMPROVING SECOND LANGUAGE LEARNING

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### Abstract

Many ESL learners at the BS level have problems in accurate and natural use of English, particularly in vocabulary, grammar, collocations, sentence structure and academic writing despite being in a second language (L2) classroom. In the traditional classroom settings, students may have limited exposure to genuine language use, relying primarily on textbooks and memorization, and secondarily on teacher explanation. For this reason, this mixed method study examined the effect of the use of Technology-Enhanced Language Learning (TELL) and corpus tools on second language acquisition by ESL students at the BS-level. The study focused on the three types of digital corpus tools: Corpus of Contemporary American English (COCA), American National Corpus (ANC), and British National Corpus (BNC), and their assistance in this respect for learners of authentic English and their achievement of the above goals. The subjects consisted of 50 ESL undergraduate students (students at the BS-level) who were conveniently sampled from a university/college environment. The method used for data collection was corpus-based learning tasks, 5-point likert scale attitude questionnaire, open-ended questions, and short interviews. The quantitative data were analysed in terms of frequencies and percentage and the qualitative responses were analysed in terms of thematic analysis. The results indicated that students' perceptions of the corpus-based TELL activities were positive. The students reported that the Corpus tools helped them to understand real English usage (82%), to improve vocabulary learning in context (86%), to develop grammar awareness (80%), to learn collocations (84%), and to improve academic writing skills (82%). Concerning TELL, 84% of students indicated that technology increased the interaction in the learning of language and enabled them to get learning resources outside the classroom. COCA was the most common corpus tool due to its many examples of contemporary American English. Qualitative results showed that themes of Vocabulary development, Grammar awareness, Collocation learning, Writing development, Learner autonomy, TELL as supportive learning environment and Teacher guidance emerged. The guided practice minimized issues with difficult interfaces, lack of prior knowledge of the material, and understanding concordance lines. The study shows that using TELL and corpus tools is an effective way of supporting second language learning for the following reasons: 1) they can serve as means of providing authentic input; 2) they can be used to promote active learning; 3) they can be used to foster learner autonomy; 4) they can help bridge the gap between classroom language and natural language.

**Keywords:** Technology-Enhanced Language Learning (TELL), Corpus Tools (COCA, ANC, BNC), Second Language Acquisition (SLA), Data-Driven Learning (DDL), Learner Autonomy

### INTRODUCTION

#### 1.1. Background of the Study

The second language has become a necessity in the world of today's globalization. English learning was mainly carried out in the past using books, grammar rules, translation work and lecture in the classroom (Juma, 2025). These approaches offer the students some understanding, but do not necessarily give them a sense of how English is actually used in the real world. Learners might have a word in the dictionary but not know how to use it in a sentence, or be uncertain on how to use it correctly, such as make a decision or do a decision.

As technology progresses, the learning of a language has become more interactive, practical, and student-centered (Ashcroft, Griffiths, & Tiffin, 2007). Technology-Enhanced Language Learning (TELL) is a term that refers to the use of digital technology, online platforms, and language resources to assist learners in enhancing their vocabulary, grammar, collocations, sentence structures, and writing skills. Corpus-based resources are one of the best tools used in TELL. A corpus consists of a large body of authentic written or spoken material, and corpus tools enable students to investigate authentic examples of words, phrases, grammar patterns and collocations as they are used in real contexts, as discussed by Irele (2001).

The focus of this study is on the three main corpus tools, namely, COCA (Corpus of Contemporary American English), ANC (American National Corpus), and BNC (British National Corpus). These tools help learners to notice the differences between American and British English, to notice the patterns of the grammar, and to become more accurate and fluent in their language use (Nwankwo, 2010). Although these tools are useful, most BS-level students are not familiar with them, relying just on the textbooks and teachers' instruction (Chapagae, 2024). Thus, it is essential to explore the potential of corpus tools in second language learning and the possibility of using the corpus tools as a means of authentic language input, which is not possible with conventional teaching methods.

### **1.2 Statement of the Problem**

Some BS students have problems correctly and naturally learning English. They frequently have difficulties with vocabulary, grammar, sentence structures, collocations and academic writing. The traditional teaching style in classrooms based mainly on reading books and listening to lectures has limited students' access to examples of the use of English in real contexts.

There are some tools of language, such as the corpus of COCA, BNC and ANC, but most students do not know how to use them. This restricts their learning and keeps them relying on memorization, translation, and only a few examples (Chapagae, 2024). Likewise, few teachers introduce the students to corpus-based learning, limiting students' opportunity for interactive and practical learning. This study is designed to investigate the potential of the Corpus tools in the improvement of the L2 learning process and the possibility of L2 learners' utilizing those tools to improve language proficiency.

### **1.3. Research Questions**

This study is guided by the following questions:

1. What role do corpus tools (COCA, ANC, and BNC) play in improving second language learning?
2. How do BS-level students use corpus tools to improve vocabulary, grammar, collocations, and writing skills?
3. Why are corpus tools such as COCA, ANC, and BNC useful for enhancing second language learning?
4. What role does Technology-Enhanced Language Learning (TELL) play in enhancing second language learning by BS-level ESL students using corpus tools?

### **1.4. Research Objectives**

The objectives of this study are:

1. To identify the role of corpus tools (COCA, ANC, and BNC) in improving second language learning.
2. To examine how BS-level students use corpus tools to enhance vocabulary, grammar, collocations, and writing skills.
3. To explore why corpus tools are useful resources for second language learners.

4. To examine the effect of Technology Enhanced Language Learning (TELL) on the second language (L2) learning of a group of students who are taking English as a second language (ESL) at the BS level by using digital corpus-based learning activities.

### LITERATURE REVIEW

#### 2.1. Technology-Enhanced Language Learning and Second Language Learning

Technology-Enhanced Language Learning (TELL) is the use of digital technology to facilitate language learning. In contemporary language classes, students access online dictionaries, online learning websites, videos, mobile applications, grammar tools, and corpus tools. Learners will use these resources for both in classroom and at home study.

The advantage of TELL is that it provides extra opportunities for students to practise language. Also good for flexible learning. Students are not restricted to “textbook learning” or lectures in the classroom. They can independently search, listen, read, practise and edit language resources. Recent studies indicate that technology learning in English is an essential and burgeoning area in English language education with great potential in fostering learner engagement and independent learning (Hasumi & Chiu, 2024).

TELL is particularly beneficial for students in the BS level, as they are already familiar with the use of digital tools. Technology utilization does not necessarily translate to effective learning, however. Technology is used for translation or instant answers by some students. So they require tools that can enable them to observe and understand actual language use. This can be done by using corpus tools.

#### 2.3. Corpus Tools in Language Learning

A large collection of real language is a corpus. It could be written texts, spoken transcript, academic texts, newspapers, magazines, fiction, or online texts. Corpus tools enable learners to search this language data and gain insight into the frequency of word, phrase, grammar patterns and collocations in real contexts.

Corpus-based learning is very similar to Data Driven Learning (DDL). Pérez-Paredes and Boulton (2025) describe DDL as a method which integrates corpus tools and corpus techniques to facilitate learners in identifying language patterns by authentic input. This approach involves students getting rules from the teacher, instead of just. They become "Language Investigators. They hunt for examples, identify patterns, make comparisons of shapes and apply this to their own writing.

For instance, a learner might be able to say the word decision but not whether to say make a decision or do a decision. The common and natural phrase is a corpus can show that make a decision. Corpus tools serve the student in this way as a means to learn language, not through memorization alone.

This is helpful to second language learners. Many learners are aware of grammar and word meanings but are still not able to use English naturally. They can work on this aspect with the help of corpus tools.

#### 2.4. COCA as a Corpus Tool

The Corpus of Contemporary American English (COCA) is a collection of the actual texts of contemporary American English. It is a sizable collection of American English. English-Corpora.org states that COCA has approximately 1.1 billion words, and is made up of various kinds of texts, including spoken language, fiction, magazines, newspapers, academic texts, TV and movie subtitles, blogs, and web pages (Davies, n.d.). The advantage of COCA is that it reflects the present-day American English and can also be used to look up words, phrases, collocations and grammar patterns.

Through COCA, second language learners at the BS level will practice and enhance their academic vocabulary and writing skills. For instance, students can type in a word like research, argument, study, or analysis and watch the word's usage in actual sentences. They can also

locate common words like conduct research, strong argument, research findings, and academic study.

This kind of education is applied. It aids pupils to comprehend the meaning of a word and how it should be used. This is very helpful for undergraduate students who are tasked to write assignments and term papers.

### **2.5. ANC as a Corpus Tool**

ANC is an acronym for American National Corpus. Open American National Corpus (OANC) is an electronic resource of American English containing texts of various genres and transcripts of spoken texts (Open American National Corpus, n.d.). According to the Linguistic Data Consortium, the Second Release of the ANC includes approximately 22 million words of American English from a variety of genres and is annotated with part-of-speech tagging (Reppen et al., 2005).

The advantage of using ANC is that students will have access to American English examples from various contexts. It will enable the learner to practise vocabulary, grammar, sentence construction and the differences between spoken and written language. It isn't as big as COCA, but it's still helpful to know about real American language.

For BS students, simple tasks may be done with the aid of ANC. For instance, students may look for a verb's pattern with nouns, prepositions, or other patterns. They can also make comparisons between oral and written examples. Some corpus interfaces, however, are difficult to use in the beginning and require the help of students.

### **2.6. BNC as a Corpus Tool**

BNC is short for British National Corpus. According to the official BNC website, BNC1994 is made up of 100 million words of spoken and written British English from a variety of sources (British National Corpus, n.d.). According to English-Corpora.org BNC is a 100-million word corpus of British English from the period from 1980 to 1993 (Davies, n.d.).

BNC helps students wishing to learn British English. It allows learners to see British vocabulary, spelling, grammar and sentence patterns. This is important because SLL often come across both American and British English in books, media, exams and academic materials.

Students will also be able to use BNC to make comparisons between British English and American English. For instance, students may compare phrases, spellings and word patterns in BNC and COCA. This comparison can help build their knowledge and awareness of English and that English varies between contexts and countries.

### **2.7. Corpus Tools and Vocabulary Learning**

Vocabulary is a key component of L2 learning. If students don't have enough words to write and speak effectively. But vocabulary learning is more than merely memorizing word meanings. Pupils must also learn the meaning of words in sentences.

Corpus tools support students to learn words in context. They provide authentic examples of words used in context. They also demonstrate collocations – that is, the most common combinations of words. For instance, the learners can identify that words such as heavy rain, strong argument, make progress, and conduct research are commonly used by English users.

This is beneficial because many second language learners translate from their first language. Consequently, they might create abnormal English. In the context of Corpus tools, this is mitigated by presenting examples of the natural form.

This is very important for BS students. They require words to use not just in speech, but also for academic writing, presentations, assignments and exams.

### **2.8. Corpus Tools and Grammar Learning**

Grammar is frequently taught in the form of rules. There are rules, but they're not sufficient. Students are aware of rules of grammar and yet they make mistakes during the process of writing and speaking.

Students can benefit from seeing grammar in real examples using Corpus tools. Students can, for example, look for the pattern interested in, responsible for, depend on, focus on, and according to. They can see the use of these patterns in various sentences.

This helps with inductive learning. Inductive students see examples first, and then learn the rule. Pérez-Paredes and Boulton (2025) state that DDL is conducive to this type of learning as students learn language patterns from real corpus data.

This can be beneficial to BS students since it can make the grammar more useful. Students can observe the way grammar functions in actual language and not just in exercises from a book.

### **2.9. Corpus Tools and Writing Skills**

The act of writing is one of the most challenging skills for 2L students. Many students have ideas but may not be able to put them into correct and academic English. May have issues with sentence formation, word selection, collocations and grammar.

Corpus tools can be used to aid in the support of writing as they offer authentic instances of academic and formal language. Students can analyze the ways that skilled writers use specific words and phrases. Search phrases like this study aims to, the results show that or it can be argued that, for instance, will find the words. These examples can then be used by them to enhance their own academic writing.

This is valuable for students at the BS level as they tend to create assignments, essays, reports, and term papers. They can get models of real English and be helped to write more accurately and naturally through Corpus tools.

### **2.10. Learner Autonomy and Corpus-Based Learning**

Learner autonomy refers to students' responsibility for learning. Learner autonomy can be supported by TELL tools and corpus tools as students can search language cases independently. They don't always have to wait for the teacher to get rid of all of their errors.

If a student does not know the difference between depend on and depend of, he/she can type them into a corpus and read the frequency of their use. This will make the students more independent and confident.

But learner autonomy does not imply that the students should learn without guidance. Students require teacher support at BS level. Teachers can demonstrate to students how to search, how to view examples from the corpus and how to use the examples to inform their writing.

### **2.11. Challenges in Using Corpus Tools**

While corpus tools can be very useful, they also present a couple of challenges. First of all, many students don't know what a corpus is. Second, it can be challenging to look through the websites of the corpora at first sight. Third, students might not be able to interpret concordance lines or search results. The fourth aspect is Internet access and digital literacy which can also impact on corpus-based learning.

One of the difficulties is that students might have more access to more simple tools like translation apps. It takes longer and thinking more to create a corpus tool. Students should look, compare and identify patterns. This is helpful, but can be challenging initially.

So, it is recommended to introduce corpus tools gradually. At the BS-level, the assignments should be straightforward and real-life. Start with simple activities like looking for collocations, prepositions, sentence comparisons, etc.

### 2.12. Gap in the Literature

It is evident from the review that there is a gap in the literature. Research has been written about Technology-Enhanced Language Learning (TELL) in general, but not many concerned with the use of corpus tools in TELL for BS-level second language learners.

One problem is that in many studies one corpus tool is used (e.g. COCA or BNC). Less emphasis on the use of COCA, ANC and BNC together in one study. The three tools are helpful because they enable students to see American English, British English, spoken language, written language and academic language patterns.

In addition, there's a hands-on difference. Students at the BS level are daily users of technology but might not be aware of how to apply a corpus approach in their own language learning. They can use Google, dictionaries, or translation apps to help them understand the meaning of words, but they can't use COCA, ANC, or BNC to improve vocabulary, grammar, collocations, and writing.

Hence, the present study will attempt to fill the gap by studying the role of COCA, ANC and BNC, the use of these corpus tools by BS-level students, and the usefulness of these corpus tools for improving second language learning.

### 2.13. Theoretical Framework

This study will use two main theories namely Data-Driven Learning Theory and Constructivist Learning Theory.

#### 2.13.1. Data-Driven Learning Theory

The theoretical foundation for this study is Data-Driven Learning (DDL). DDL is a method for a learner to discover language patterns by using real language data. Students don't just learn by rote the rules of grammar, but they learn by seeing. Authentic language data will be gathered from COCA, ANC and BNC. Students will be able to perform word, phrase, collocation, grammar, and sentence searches with these corpus tools. This will assist them to see how English is being used. This study is appropriate for using DDL because the research is based on corpus tools. It shows the students how they can be active learners through exploring authentic examples.

#### 2.13.2. Constructivist Learning Theory

Constructivist learning theory is a theory of learning in which the learner is actively involved in constructing knowledge. Students are not taught effectively through listening to lectures. They find learning more effective through exploration, comparison, questioning and application. In constructivist learning, students interact with real examples, which is supported by corpus tools. They identify a word, read sentences, observe patterns, and apply patterns in composition. For instance, a student can look up play an important role in COCA or BNC. The student has observed various instances of the phrase and has an appreciation of its usage. The student is then able to use it properly in their writing.

## METHODOLOGY

### 3.1 Research Design

The research design adopted in this study was the mixed method research. Both quantitative and qualitative data were collected. Numerical information came from the questionnaire and detailed views were obtained from the open-ended questions or from short interviews. This design was appropriate as the study aimed to gain an understanding of students' general opinions and their personal experiences. When both trends and explanations are required, mixed-method research is helpful (Creswell and Creswell 2018). The study was also descriptive and exploratory as it described students views and explored the use of corpus tools.

### 3.2 Population of the Study

The subjects of the study were students of the BA program studying ESL in their second year of study. The students were chosen because they required English for assignments,

presentations, reading, writing and classroom communication. Common difficulties included in their areas of weakness were vocabulary, grammar, collocations and academic writing. Students with BS-level were directly involved in the research problem, since the study was focussed on second language learning. According to Dörnyei (2007), participants should be chosen based on their relevance to the research focus.

### **3.3 Sample of the Study**

A sample of around 40 - 60 BS-level students from one university or college. This was an appropriate number of samples for a BS-level term paper as it could be done in a reasonable amount of time and within the limits of resources. It was also sufficient to gather valuable questionnaire information and select a few detailed qualitative answers. Small-scale educational research, as described by Cohen et al. (2018), should consider the practical and appropriate sample size for the study. Hence, this sample was suitable.

### **3.4 Sampling Strategy**

Convenience sampling was used for the study. The participants were easily accessible and readily available to participate in the study. This approach was appropriate given the study's small scale, time limitations, limited access to the area, and resources. In language education research, the researcher often uses convenience sampling, when the researcher has access to the learners he or she needs in the real classroom (Dörnyei, 2007). Hence, this sampling method was appropriate in the current research.

### **3.5 Research Setting**

The study was carried out in a university/college setting, where students at the BS-level were studying ESL. The reason for this setting was that the participants had already participated in academic English learning. They required English in order to write, read, present and for task work in their classrooms. The study was devised for the purpose of corpus tools and language learning; therefore, an educational environment was suitable. It also enabled the researcher to obtain data from those students who were directly involved in the study.

### **3.6 Corpus Tools Used in the Study**

This study employs a variety of corpus tools. In this study, the researcher uses several corpus tools.

Three corpus tools, COCA, ANC and BNC, were studied. COCA was chosen because it contains samples of modern American English. ANC was chosen because it contains American English from a variety of sources of speech and writing. BNC was chosen as it contains examples of British English. These tools proved helpful, as they gave a true reflection of the language. According to Pérez-Paredes and Boulton (2025), corpus-based learning is an approach that enables students to identify patterns in language by using authentic examples

### **3.7 Research Instruments**

Three instruments were used in the study which were questionnaire, open-ended question/short interview, and corpus-based learning task. Students' general views were obtained by the questionnaire. Detailed explanations were gathered from the open-ended questions or interviews. The students were provided with some hands-on experience with COCA, ANC, and BNC through the corpus-based tasks before they voiced their opinions. These instruments were appropriate as they were used to collect numerical and descriptive data. Creswell and Creswell (2018) agree that multiple tools can be employed to gain a deeper understanding of a research problem.

### **3.8 Questionnaire**

The questionnaire used a five point Likert scale (strongly agree, agree, neutral, disagree and strongly disagree). It contained comments on vocabulary learning, grammar awareness, collocation learning, writing improvement, learner autonomy and challenges. This instrument was chosen because it enabled many students to respond in a timely manner. Questionnaires

can be used to gather learners' attitudes and opinions systematically in second language research as explained by Dörnyei and Taguchi, 2010.

Develop questions that are open-ended and/or brief. Write open-ended questions/short interviews.

Students' detailed views were gathered using a technique of open-ended questions or short interviews. Students were requested to respond about their feelings towards the use of COCA, ANC, BNC, which tool they found useful and what problems they faced using the tool. This instrument was significant as it enabled the students' experiences to be explained to a greater extent with closed questionnaire items. According to Creswell and Creswell (2018) qualitative responses are used to assist the researcher in comprehending participants' meanings and explanations. Hence this tool facilitated the "how" and "why" question of the study.

### **3.9 Open-Ended Questions / Short Interviews**

Open-ended questions or short interviews were used to collect students' detailed views. Students were asked how they felt about using COCA, ANC, and BNC, which tool they found useful, and what problems they faced. This instrument was important because closed questionnaire items could not fully explain students' experiences. Creswell and Creswell (2018) state that qualitative responses help researchers understand participants' meanings and explanations. Therefore, this tool supported the "how" and "why" questions of the study.

### **3.11 Data Collection Procedure**

The data were collected in steps. Permission was first obtained from the teacher(s), department and/or institution(s). Next, those students that were available and willing were chosen. The researcher presented the study purpose and introduces COCA, ANC, and BNC. Then the students did corpus-based tasks. Then, they filled out the questionnaire. Lastly, open-ended questions were asked or short interviews were conducted with some students. This order made it more meaningful for the answers to be provided by students since they used the tools and then shared their views.

### **3.12 Data Analysis**

Data from the questionnaires were analyzed descriptively. Students' answers were presented graphically using frequencies and percentages. This was an appropriate method because the study was designed to capture students' perspectives, rather than to test a complex statistical relationship. According to Cohen et al. (2018), descriptive statistics can be helpful in summarizing participants' responses. The qualitative data was analysed using the thematic analysis, which enabled the identification of recurring ideas and patterns in pupils' responses.

### **3.13 Thematic Analysis**

Thematic analysis was used to analyse the open-ended responses and interviews. The researcher took the time to read through the responses and to highlight any common themes. These ideas were clustered into themes including vocabulary improvement, grammar awareness, writing improvement, collocation learning, learner independence, finding difficulty in using corpus tools, and need for teacher guidance. According to Braun and Clarke (2006), thematic analysis can be helpful in identifying and reporting patterns in qualitative data. So it was appropriate that this study was conducted:

## **DATA ANALYSIS AND DISCUSSION**

### **4.1 Introduction**

The analysis and discussion of the data gathered from BS students is presented in this chapter. The aim of the study was to investigate the use of corpus tools (COCA, ANC, BNC) to enhance SLL. The research objectives and research questions of the study are put to the test in the chapter.

The study focused on three major research questions. It first investigated the use of corpus tools to enhance L2 learning. Secondly, it examined the use of corpus tools by BS students to

enhance their vocabulary, grammar, collocations and writing skills. Third, it explored the usefulness of corpus tools to the second language learners.

The study employed mixed method research design as stated on the methodology chapter. The quantitative data was gathered using a 5-point (Likert) scale questionnaire, while the qualitative data was gathered using open-ended questions/interviews. Frequencies and percentages were used in the analysis of the questionnaire responses. Thematic analysis was used to analyse the qualitative responses. Methodology also stated that the sample size is approximately 40-60 BS level students and for this chapter, the data is that of 40-60 BS level students.

#### 4.2 Demographic Information of Participants

The students in the study were English as a second language (ESL) students in their Bachelor's degree program. There were 50 students in the study. The sampling method used was convenience sampling as they were readily available and directly relevant to the study focus.

**Table 4.1**

**Gender of Participants**

<b>Gender Frequency Percentage</b>		
Male	21	42%
Female	29	58%
Total	50	100%

As presented in table 4.1, there were 21 males and 29 females participants. This indicates that there were more women participating than men. However, both male and female students were represented in the study.

**Table 4.2**

**Students' Previous Awareness of Corpus Tools**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	12	24%
No	38	76%
Total	50	100%

As indicated in Table 4.2 only 24% (12) of students were aware of corpus tools previously. However, none of the 38 students (76%) had heard anything about corpus tools prior to the present study. This result indicates that the students in the BS level are not aware of COCA, ANC and BNC prior to the corpus based task.

The outcome is significant because it helps with the problem, mentioned in Chapter 1. Most students rely on the textbook, teacher, dictionary, and translation software but have no knowledge of corpus-based learning.

#### 4.3 Analysis Related to Research Question 1

The first research question investigated the general role of the corpus tools in the second language learning. Pupils were asked if the tools of the corpus assisted them to understand the real language, learn outside of the classroom, and build confidence.

**Table 4.3**

**Students' Views about the Role of Corpus Tools in Second Language Learning**

<b>Statement</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
Corpus tools help me understand real English usage.	22 / 44%	19 / 38%	6 / 12%	2 / 4%	1 / 2%
Corpus tools make language learning more practical.	20 / 40%	21 / 42%	5 / 10%	3 / 6%	1 / 2%

Corpus tools help me learn English beyond textbooks.	24 / 48%	17 / 34%	6 / 12%	2 / 4%	1 / 2%
Corpus tools improve my confidence in using English.	18 / 36%	20 / 40%	8 / 16%	3 / 6%	1 / 2%

Table 4.3 shows that the majority of students were positive towards the corpus tools. In the first case, 44% of respondents strongly agreed and 38% agreed that they gained insight into real English usage thanks to corpus tools. This indicates that 82% of the students felt that corpus tools were useful for the purpose of observing English in authentic context.

Likewise, 82% of students strongly agreed or agreed that the use of Corpus tools in language learning was considered more practical. This result demonstrates that students were not perceiving only theoretical resources of the corpus. They perceived them as instruments to real language learning.

The findings further reveal that 48% strongly agreed and 34% agreed that corpus tools assisted in their learning of English outside of the classroom. This is a significant discovery. It demonstrates that corpus tools helped students to see examples that were broader and more representative than the ones typically provided in their classroom books.

From the last statement, it is apparent that 76% of students found that corpus tools helped to boost their confidence for using English. Several students were neutral which may be due to their inexperience of using corpus tools and their lack of time to get used to them.

In general it is concluded that corpus tools have positive effects in S2L. They assisted students to observe their actual examples, to grasp the language patterns and to become confident learners.

#### 4.4 Analysis Related to Research Question 2

The second research question was about the application of corpus tools. COCA, ANC and BNC were used in the corpus based learning tasks as a medium of student learning. They looked for words, phrases, grammatical structures, collocations and academic expressions. They make different responses that are discussed below.

##### 4.4.1 Vocabulary Learning

Vocabulary learning was one of the strongest areas where students found corpus tools useful.

**Table 4.4**

**Students' Responses about Vocabulary Learning**

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Corpus tools help me learn new words.	21 / 42%	20 / 40%	6 / 12%	2 / 4%	1 / 2%
Corpus tools help me understand word usage in sentences.	25 / 50%	18 / 36%	5 / 10%	1 / 2%	1 / 2%
Corpus tools help me learn academic vocabulary.	19 / 38%	21 / 42%	7 / 14%	2 / 4%	1 / 2%
Corpus tools are better than memorizing word meanings only.	23 / 46%	18 / 36%	6 / 12%	2 / 4%	1 / 2%

Table 4.4 reveals that majority of the students agreed corpus tools enhanced their vocabulary learning. For instance, 42% strongly agreed and 40% agreed that the use of corpus tools benefited them in learning new words. This translates to 82% positive response from the students.

The highest incidence was found in the statement that corpus tools assisted the students in understanding the use of words in sentences. 50% strongly agreed and 36% agreed here. This indicates that 86% of students said that they used corpus tools for learning vocabulary in context.

This is crucial, since vocabulary learning isn't just about memorizing meanings. Pupils should also learn the meaning of a word within a sentence. Students viewed words in authentic contexts using Corpus tools. For instance, students might look for the words "research," "analysis," "argument" and "findings. They could then see phrases like “conduct research”, “the findings show” and “a strong argument”.

The findings indicate that corpus tools were more meaningful and useful in vocabulary learning.

#### 4.4.2 Grammar Awareness

The second area was grammar awareness. Students used corpus tools to observe grammar patterns and sentence structures.

**Table 4.5**

**Students' Responses about Grammar Learning**

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Corpus tools help me understand grammar patterns.	18 / 36%	22 / 44%	6 / 12%	3 / 6%	1 / 2%
Corpus tools help me correct common grammar mistakes.	17 / 34%	21 / 42%	8 / 16%	3 / 6%	1 / 2%
Corpus tools help me understand preposition use.	20 / 40%	19 / 38%	7 / 14%	3 / 6%	1 / 2%
Corpus examples make grammar easier to understand.	19 / 38%	22 / 44%	6 / 12%	2 / 4%	1 / 2%

From the result of the application of corpus tools in the learning process of grammar, it can be seen that the application of corpus tools is useful for grammar learning as is shown in table 4.5. In the first statement, 36% strongly agreed and 44% agreed that the corpus tools aided their understanding of grammar patterns. This equates to 80% of the students responding positively. Corpus tools were also useful for students to correct grammatical errors. 76% agreed or strongly agreed with this statement. Here it is seen that the students could observe the correct forms through corpus tools, which made them aware of the correct forms.

The data also revealed that 78% of the students found that the use of corpus tools was helpful in understanding the use of preposition. This is because, prepositions are extremely troublesome for L2 learners. Students can be confused with these phrases: “depend on,” “interested in,” “responsible for,” and “focus on.” They were able to view such patterns in actual sentences with the aid of corpus tools.

The results indicate that corpus tools can be used to aid grammar learning through examples. Students don't just memorize rules. They see the way grammar functions within real language.

#### 4.4.3 Collocation Learning

Another pivotal aspect was collocation learning. A number of students said that the Corpus tools enabled them to learn about natural combinations of words.

**Table 4.6**  
**Students' Responses about Collocation Learning**

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Corpus tools help me learn common word combinations.	24 / 48%	18 / 36%	5 / 10%	2 / 4%	1 / 2%
Corpus tools help me avoid unnatural English expressions.	20 / 40%	20 / 40%	6 / 12%	3 / 6%	1 / 2%
Corpus tools help me understand academic collocations.	19 / 38%	21 / 42%	7 / 14%	2 / 4%	1 / 2%
Corpus tools improve my natural use of English.	21 / 42%	19 / 38%	7 / 14%	2 / 4%	1 / 2%

The results presented in table 4.6 indicate that corpus tools were very useful in learning collocation by the students. 84% of the students agreed or strongly agreed that corpus tools assisted them in learning common word combinations. It is one of the highest scores in the study.

The results also indicate that 80% of the students agreed or strongly agreed that corpus tools led them to avoid unnatural English expressions. This is significant because many second language learners translate phrases directly from their L1. Because of this, they might end up with an unnatural English.

Through the use of Corpus tools, students learned the use of natural expressions like 'make a decision', 'heavy rain', 'strong argument', 'conduct research', and 'play an important role'. These examples enabled students to realize that words are not random. They are found commonly in pattern like shapes.

This finding is directly related to the second research objective, which was to explore the use of the corpus tools by the BS students for improving their vocabulary, grammar, collocations, and writing skills.

#### 4.4.4 Writing Skills

Writing was also an important part of the data analysis. Students were asked if they benefited from the corpus tools in improving their academic writing, sentence structure and phrase selection.

**Table 4.7**  
**Students' Responses about Writing Skills**

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Corpus tools help me improve academic writing.	18 / 36%	22 / 44%	7 / 14%	2 / 4%	1 / 2%
Corpus tools help me write better sentences.	17 / 34%	23 / 46%	6 / 12%	3 / 6%	1 / 2%
Corpus tools help me choose suitable academic phrases.	21 / 42%	20 / 40%	6 / 12%	2 / 4%	1 / 2%
Corpus tools help me reduce mistakes in writing.	16 / 32%	22 / 44%	8 / 16%	3 / 6%	1 / 2%

Table 4.7 indicates that students thought that corpus tools helped to enhance their writing. 80% agreed or strongly agreed that corpus tools helped them improve academic writing. Likewise, 80% felt that corpus tools have assisted them to write sentences better.

Academic phrases received the best grade for this section. 82% agreed or strongly agreed that the corpus tools aided them in selecting appropriate academic phrases. This is important as BS-level students will frequently require academic expressions for assignments, essays, reports, or presentations.

Students could use various phrases to search for, e.g., “this study aims to,” “the results show that,” “it can be argued that,” and “the findings suggest.” These examples enabled them to enhance their academic writing.

It is also revealed that 76% of learners felt that the use of the corpus tools assisted them in minimizing the errors during the writing process. Corpus tools can be used as a support in the writing and revision process for the student.

#### 4.5 Analysis Related to Research Question 3

The third research question was about the usefulness of corpus tools. The students were asked about authentic language input, independent learning, confidence and comparison between American and British English.

##### 4.5.1 Usefulness of Corpus Tools

Table 4.8

Students’ Responses about the Usefulness of Corpus Tools

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Corpus tools provide authentic examples of English.	24 / 48%	19 / 38%	5 / 10%	1 / 2%	1 / 2%
Corpus tools help me compare American and British English.	20 / 40%	18 / 36%	8 / 16%	3 / 6%	1 / 2%
Corpus tools are useful for independent learning.	19 / 38%	21 / 42%	6 / 12%	3 / 6%	1 / 2%
I would like to use corpus tools in future learning.	18 / 36%	20 / 40%	8 / 16%	3 / 6%	1 / 2%

As shown in table 4.8, students found corpus to be useful due to several reasons. The best answer was for authentic examples. Overall, 86% agreed or strongly agreed that the Corpus tools give authentic examples of English.

The finding is significant as authentic input is one of the major strengths of corpus-based learning. Students can see authentic examples of spoken and academic language, newspapers, magazines and more.

It is also observed that 76% of the students agreed or strongly agreed that corpus tools facilitated the comparison of American and British English. COCA and the BNC were used to make the students familiar with American English and the British English respectively. The comparison allowed students to gain an awareness of differences in vocabulary, spelling and usage.

80% of the students agreed and strongly agreed that corpus tools were helpful for independent learning. This reveals that LAs can be fostered through the use of corpus tools. Students are able to look for language examples independently, rather than solely relying on the teacher.

##### 4.5.2 Students’ Preferred Corpus Tool

After doing the corpus-based tasks, the students were also asked which corpus tool they found to be the most useful

**Table 4.9**  
**Students' Preferred Corpus Tool**

Corpus Tool	Frequency	Percentage
COCA	26	52%
BNC	14	28%
ANC	6	12%
All three tools equally useful	4	8%
Total	50	100%

Table 4.9 indicates that the most preferred corpus tool was COCA. COCA was the most useful tool of the 26 students, 52% chose it. This might be because COCA has current usage of American English and offers numerous examples of various genres.

28% of the students (14) were chosen as BNC. Students found it helpful for the purpose of learning of British English. 6 of the students (12%) chose ANC. While ANC proved helpful, some students were less familiar with or less comfortable with using ANC than they were with using COCA and BNC.

4 students (8%) reported that all three tools were all the same level of usefulness. This indicates that all tools were valued by students but COCA was easier and more practical to meet their learning needs..

#### 4.6 Challenges Faced by Students

In spite of positive response from students to the use of corpus tools, there were some challenges that were faced by the students.

**Table 4.10**  
**Challenges Faced by Students While Using Corpus Tools**

Challenge	Frequency	Percentage
Difficult interface	16	32%
Lack of previous knowledge	14	28%
Difficulty understanding concordance lines	9	18%
Internet/access issues	6	12%
No major difficulty	5	10%
Total	50	100%

The most frequent difficulty was the complex interface of the corpus tools as indicated in Table 4.10. 32% (or 16 students) of the students stated this problem. Some students were initially puzzled in the beginning by the confusing nature of corpus websites.

Previous knowledge was an additional major challenge. 28% (14 students) said that they had never used any corpus tools before. This result confirms that, prior to this study, most students were not familiar with the corpus tools.

18% (another 9 students) struggled with the lines of concordance. This indicates that students must be trained to read and interpret corpus results. 12% (6 students) had an Internet or access problem. In total, 5 students (10%) stated that he/she had no significant problem.

Based on the results, it is observed that the use of corpus tools is helpful but must be introduced with guidance. Teachers should explain how to search, how to read examples and using corpus results in their writing.

#### 4.6 Analysis Related to Research Question 4

The fourth research question examined the nature of how Technology-Enhanced Language Learning (TELL) can be applied to aid the second language acquisition of BS students in ESL with corpus-based activities. Since COCA, ANC, and BNC are digital corpus tools, their use

in this study was directly related to TELL. Questions were asked to the students about the extent to which the use of technology enhanced the English learning in terms of interactivity, practicability, independence, and motivation.

**Table 4.11**

**Students' Views about the Role of TELL in Second Language Learning**

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
TELL makes English language learning more interactive.	23 / 46%	19 / 38%	5 / 10%	2 / 4%	1 / 2%
TELL helps me access language learning resources outside the classroom.	22 / 44%	20 / 40%	5 / 10%	2 / 4%	1 / 2%
TELL supports independent learning through digital corpus tools.	20 / 40%	21 / 42%	6 / 12%	2 / 4%	1 / 2%
TELL helps me connect classroom learning with real English usage.	24 / 48%	18 / 36%	5 / 10%	2 / 4%	1 / 2%
TELL increases my motivation to learn English.	18 / 36%	21 / 42%	7 / 14%	3 / 6%	1 / 2%

As seen in Table 4.11, the majority of students' attitudes towards TELL in SLL were positive. Fifty percent (46%) strongly agreed and 38% agreed that TELL made English language learning more interactive in the first statement. 46% strongly agreed and 38% agreed TELL made English language learning more interactive in the first statement. That is, 84% of the students considered that technology supported learning generated a more active and engaging learning environment.

84% of students agreed or strongly agreed that they used TELL to help them access language learning resources outside of the classroom, as indicated in the second statement. This finding is significant because in the traditional classroom setting, there is a tendency for teachers to focus on textbooks, lectures and teacher explanations. Using TELL, the students found authentic examples of English on their own with the help of digital corpus tools like COCA, ANC and BNC.

The third statement shows the level of agreement that 82% of students had on the importance of TELL for independent learning via digital corpus tools. The outcome indicates that TELL increased the students' autonomy from teacher and their confidence in self-reliant checking of the vocabulary, grammar patterns, collocations, and sentence structures.

One of the highest positive responses was for the fourth statement. 84% agreed or strongly agreed that TELL assisted them in linking classroom learning to the use of English. This made it possible for the students to step out of the realm of memorised rules and, by using technology supported corpus tools, see how English is actually used in real contexts.

The last statement demonstrates that 78% of students agreed or strongly agreed that the use of TELL helped to motivate them to learn English. Some students indicated a neutral response, but overall the response was positive. This might be due to the practical, modern and student-centered nature of language learning with the use of digital tools.

The results indicate that TELL was generally found to be a significant factor in improving the L2 learning. It created for students authentic language examples and opportunities for independent learning, to be used in class, to enhance students' understanding of the real use of language. In the sense of this study, then, the use of corpus tools is considered as an actual

application of TELL. In the context of this study, the use of corpus tools is, therefore, regarded in the sense of TELL (Technology-Enhanced Language Learning).

#### **4.7 Thematic Analysis of Qualitative Data**

Thematic analysis was used in analyzing the open-ended questions and short interviews. Each student's work was listened to carefully and like ideas were clustered together as "themes". The main themes were vocabulary development, grammar awareness, word collocation learning, writing development, learner autonomy, challenges and teacher guidance.

##### **4.7.1 Theme 1: Vocabulary Improvement**

A number of students reported that using corpus tools enabled them to gain a better understanding of vocabulary. They said that when they saw the words in actual sentences it was easier for them to learn. Some students commented that although the dictionary provides meaning, corpus provides usage.

One student stated:

*I searched a word in COCA and found lots of examples; helps me to understand how to use the word in my sentence.*

It is observed that the use of corpus tools facilitated students' vocabulary learning in context. This theme also aligns with the quantitative results: 86% of the students agreed or strongly agreed that Corpus tools helped them to understand word usage in sentences.

##### **4.7.2 Theme 2: Grammar Awareness**

Students also reported that corpus tools assisted them in understanding of grammar patterns. Repeated examples of the same structures proved useful to them. This enabled them to see the proper shapes.

One student said:

*I knew about prepositions earlier, but now that I have seen a lot of examples in the corpus, it is clear.*

This theme embraces the notion that grammar can be acquired by observation. Corpus tools enable students to see grammar in actual language, instead of just in textbook rules.

##### **4.7.3 Theme 3: Collocation Learning**

The theme of collocation learning was also prominent. Students reported that they acquired the knowledge of words that traditionally accompany each other. This helped them not to be directly translated from their mother tongue.

One student explained:

*This was useful for me to learn, that we make a decision rather than do a decision.*

The hands-on application of corpus tools is seen in this response. Students had increased knowledge of natural English combinations. This is crucial since collocations can be a challenge for second language learners.

##### **4.7.4 Theme 4: Writing Improvement**

A large number of students linked corpus tool to academic writing. They claimed that corpus tools enabled them to get more suitable expressions for their assignments and essays.

One student stated:

*Looked at academic phrases and incorporated those in my assignment which helped me write better sentences.*

This theme demonstrates how corpus tools can assist in writing development. Corpus examples provide a model for students to use in their work. They can also determine if a word or phrase is normal and frequent.

##### **4.7.5 Theme 5: Learner Autonomy**

Students also shared their opinion that corpus tools gave self-confidence. They might be able to look for single terms and phrases. This decreased their reliance on teachers and translation software.

One student said:

“Now I'm able to check my own English usage – not always having to ask the teacher.”

This theme is directly related to learner autonomy. Corpus tools foster students' active learning.

They look for, identify, observe and use patterns in language.

#### **4.7.6 Theme 6: TELL a supportive learning environment**

In addition, it was revealed that TELL managed to establish a conducive learning context by having students give qualitative responses. Many students reported that learning with a digital corpus tool was different from learning with the traditional way as they could search for real examples, compare the language patterns, and learn at their own speed.

One student stated:

*Technology facilitated learning because I could find examples of my own and be able to grasp how English is used in actual sentences.*

Another student explained:

Before this activity, I had been mainly relying on dictionary or translation applications, but corpus tools had made me realize that I had seen real usage problems.

The theme demonstrates how TELL supported students by providing them with authentic and real-world learning materials and learning experiences. It also facilitated them to be active learners as they were not only taking information from the teacher but were also using examples of language on their own. Thus TELL could be useful in making second language learning more practical, interactive and learner centred.

#### **4.7.7 Theme 6: Challenges and Need for Teacher Guidance**

While corpus tools were helpful for students, they also reported that they needed guidance from the teacher. There were students who had a hard time in the beginning using the corpus websites. Others could not be helped with understanding search results.

One student stated:

*“It was not very easy to use; but when I got some instructions it was easier.”*

This implies that the corpus should be introduced gradually using corpus tools. Simple tasks such as looking for common collocations, checking prepositions should be undertaken first. Students can gain more confidence with practice

#### **4.8 Discussion of Findings**

The results of the present study have revealed that corpus tools can have beneficial effects on second language learning by the BS-level students as shown by COCA, ANC and BNC. The findings indicated that most of the subjects were positive to the use of corpus-based learning after applying corpus-based tools in classroom tasks. For instance, 82 per cent of the students agreed or strongly agreed that corpus tools assisted them to understand real English use while 82 per cent agreed that the use of the tools played a role in making language more practical. This finding has close resemblance to the concept of Data-Driven Learning in which students will study authentic language examples and learn the pattern themselves. In his paper, Johns (1991) suggested that the advantage of concordance-based learning (CBL) was that it would provide learners with opportunities to investigate language, to notice repeated patterns and to make their own generalizations. Thus, the current results confirm the hypothesis that corpus tools have the potential to change students from passive to active learners in the process of discovery learning.

Students' positive reaction is also corroborated by the generally positive findings of Boulton & Cobb (2017) in their meta-analysis. They reviewed the experimental and quasi-experimental literature on data-driven learning and found that data-driven activities can be helpful to learners across the language areas. In the present study, students applied the corpus tools not just in one skill. They employed them in vocabulary, grammar, collocations and academic writing. This

demonstrates that corpus tools can be used as multi-purpose learning tools for learners at the BS level.

The major finding of the study was that the use of corpus tools assisted students in their vocabulary learning. The data indicated that 82% of students agreed or strongly agreed that corpus tools facilitated them in learning new words and 86% agreed or strongly agreed that corpus tools facilitated them in understanding the usage of words in sentences. This finding is significant because vocabulary acquisition does not depend on knowing the meaning of a word in the dictionary. Students must also have an understanding of the words in their true context. Another Meta-analysis conducted by Mizumoto and Chujo (2015) also revealed that data-driven learning works in vocabulary learning in EFL school classes. They found DDL effective with vocabulary items, grammar, and phrase learning. The present study is in agreement with this finding since students could find words in real sentences and their meaning in the real context.

The finding for vocabulary also indicates that corpus tools can help to minimize memorization dependency of students. Students in traditional classrooms may study words and their definitions without comprehending their context. But corpus tools offer a number of examples of the same word in different contexts. It assists students to learn meaning, grammar and common combinations. Students can learn words like the word “research”, as well as other natural academic phrases like “conduct research”, “research findings” and “research study.” This is in support of the theory of corpus-based learning which encourages context-based vocabulary learning as opposed to word-by-word memorization.

Another significant result was for grammatical awareness. The findings indicated that 80% of the students agreed or strongly agreed that corpus tools facilitated them to grasp grammar patterns. Likewise, 78% felt using corpus tools improved their understanding of the use of prepositions. This discovery validates the work of Johns (1991) who proposed that concordance lines and authentic text can be used to detect patterns of grammar. Students are not only taught grammar rules by their teacher, but they are provided with examples and gradually know how grammar works in real communication.

This finding is also related to constructivist learning theory. Constructivist learning is a learning process in which the student constructs knowledge based on observation, comparison, practice. Corpus tools can promote this process as learners can search for examples in the data, compare sentence patterns, and then notice and apply what they find in their own language. Searching a phrase in a corpus, for instance, a student who is not sure about the distinction between depend on and depend of can see which form is more common. This way, grammar is learned in a more practical and meaningful way.

One of the best aspects of the study was the collocation learning. The findings revealed that 84% of the students agreed or strongly agreed that corpus tools assisted them in learning common word combinations. Also, 80% said they agreed or strongly agreed that they avoided unnatural English expressions with the help of corpus tools. The study of Kartal and Yangineksi (2018) on the effect of corpus tools on EFL student teachers' corpus-based learning in producing verb-noun collocations is in line with the results of this study. They found that corpus tools were effective in enhancing corpus knowledge and production of learners. In the present study, the result is confirmed as students learned expressions like “make a decision”, “strong argument”, “heavy rain”, “conduct research”.

Collocation learning is significantly important for second language learners. It is common for students to translate from their first language, and this may lead to unnatural expressions. Corpus tools are a way of assisting learners to get an idea of what words are commonly found in English together. This is helpful as collocations are not always easy to master from the rules.

The positive responses given by students demonstrate that corpus tools can facilitate the students to become natural and accurate users of English.

It was revealed that corpus tools facilitated academic writing as well. The data further revealed that 80% of the students agreed or strongly agreed that the corpus tools assist them in improving their academic writing while 82% agreed or strongly agreed that the corpus tools assist them in selecting appropriate academic phrases. This finding is similar to the finding of Yoon (2008) who studied the effect of corpus technology on L2 academic writing. Yoon concluded that L2 writers gained more awareness of the choices of language through corpus use, and that the example of corpus was used as writing support. This is supported by the present study as students used corpus tools to search academic phrases like “this study aims to,” “the findings suggest” and “the results show that.”

This is very important for students of the BS level, since academic writing is an important requirement at the university level. Students are required to write assignments, reports, essays, presentations and research papers. Many students have ideas but are unable to communicate them in the proper academic style in English. Corpus tools offer students models of authentic academic texts to observe and emulate. Corpus tools help to be accurate and confident in writing.

It is also noteworthy that corpus tools helped to promote the learner's autonomy. The results of the data indicated that 80% of students agreed or strongly agreed that Corpus tools were useful for independent learning. This means that students felt they could check language usage by themselves. This is in line with Boulton (2012) who stated that through data-driven learning, learners can become “language detectives” who can investigate real-world data and solve their own language problems. In the current study, students' independence has increased as they are able to look up words, phrases and grammar patterns without relying on the teacher.

The study, however, also revealed that the learning autonomy is not a natural development. Pupils require guidance, particularly if new to corpus tools. The figures revealed that 18% of the learners had problems in understanding concordance lines, 28% of the learners reported lack of previous knowledge, and 32% of the learners reported problems with the corpus interface. The results are akin to those expressed in corpus-based learning studies. Boulton and Pérez-Paredes (2025) state that the use of the Data-Driven approach to support learners' acquisition of the target language entails the use of corpus tools and corpus concordances for inductive learning, and the teacher and learner must be provided with practical support to make this approach work.

However, the challenge of corpus tools may be a part of the reason why some students did not take a stance in the various sections of the questionnaire. Most students were receptive to the task, but some students might have required more time, practice, and assistance of the teacher. This indicates that tools of the corpus should be brought in slowly. Teachers may start by using simple items such as searching for common collocations, comparing 2 sentences or checking preposition patterns. Once students are comfortable working with the interface, they are able to progress to higher level writing and grammar activities.

The most significant finding is COCA being the most popular Corpus Tool. Of the data, 52% of students chose COCA as the most useful tool, 28% chose BNC, 12% chose ANC and 8% chose all three tools. This could be due to the high volume of contemporary American English examples available in COCA and its usefulness in academic, spoken and written contexts. BNC was also appreciated for its ability to provide student with knowledge of British English usage. This is in line with the objective of this study, which was to look at the COCA, ANC and BNC as a whole, instead of just one corpus tool.

Another advantage of the corpus-based learning was the comparison of American English and British English. The data indicated that 76% of the students agreed or strongly agreed to the

statement that corpus tools helped them compare American and British English. This is significant because the two types of English are likely to be encountered by students at the BS level, in textbooks, on the Internet, in academic textbooks, and in the media. COCA and ANC assisted students in observing American English, and BNC in observing British English. This comparison can help students to develop awareness of variation in the use of English.

The other significant result of the study is on the subject of the role of Technology-Enhanced Language Learning. The data indicated that 84% of the students agreed or strongly agreed that TELL made English language learning more interactive and that TELL helped them to access learning resources outside the classroom. These results reveal that technology was not merely considered as a tool rather it was regarded as a learning environment. Students could search authentic examples, observe patterns, compare examples and use knowledge of the language in their learning through COCA, ANC, and BNC. This reinforces the notion that TELL is a more student-centered, flexible and practical approach to second language learning. The results reveal that TELL also facilitates learner autonomy as students can review the words, grammar, collocations and the patterns of writing on their own. The research also revealed that teachers' guidance is still needed because students might encounter issues with interface and concordance lines that are not familiar. Thus, the use of digital tools will be most effective when slowly developed and instructed by the teacher.

The qualitative findings corroborated the quantitative findings. Students' answers indicated that they felt corpus tools helped them with vocabulary, grammar, collocations, writing and independent learning. Themes have been identified using thematic analysis, a suitable method for analysis and discovery of patterns in qualitative responses. Thematic analysis is defined by Braun and Clarke (2006) as a way to recognise, analyse and report the patterns occurring in qualitative data. Thus, the numerical results were explained in a deeper manner through thematic analysis in this study.

In general, the results of this study confirmed the results of previous studies. The use of corpus tools was discovered to be helpful as it enabled students to have access to authentic language input. They enabled learners to observe patterns, enrich their vocabulary, grasp grammar, learn collocations, and boost their academic writing skills. The results are in line with Data-Driven Learning and Constructivist Learning Theory. Students not only learned by being given information, but also by searching, observing, comparing and applying language examples.

The results demonstrate that corpus tools are not without problems at the same time. The students might encounter some issues due to unfamiliar interfaces, lack of previous exposure to these interfaces, and issues in interpreting concordance lines. Thus, teachers' role is still significant. The use of corpus tools within the classroom should be guided, simple and regular, with the proper guidance. When implemented appropriately, COCA, ANC and BNC can be valuable tools in the second language learning process at the BS level.

### **Conclusion**

The study shows that corpus tools (COCA, ANC, BNC) are greatly helpful in improving the second language learning ability of the BS-level students. The application of the corpus tools helps students to learn vocabulary, understand grammar, know collocation, develop academic writing skills, and increase their autonomy in learning. The quantitative results showed high agreement among the students in terms of the usefulness of these tools in observing authentic language patterns, practicing vocabulary in context, understanding grammatical structures and producing accurate academic expressions. These results were confirmed by qualitative thematic analysis which revealed that students were more engaged, more confident and more independent in studying language use. COCA was the most popular of the three, due to the wide range of current American English styles found in that database; BNC and ANC gave good exposure to British and diversified American English usage. Although some problems

were identified including problems with new interfaces, little experience and problems with the concordance lines, guided instruction reduced these problems. The study also concludes that Technology-Enhanced Language Learning plays an important role in supporting second language learning. Through digital corpus tools, students were able to access authentic English examples, learn beyond the classroom, become more independent, and connect textbook knowledge with real language use. Therefore, TELL provides a useful learning environment where BS-level ESL students can improve vocabulary, grammar, collocations, academic writing, confidence, and learner autonomy. This shows that the title of the study is fully supported because both TELL and corpus tools contribute to improving second language learning. This study confirms the principles of Data-Driven Learning and Constructivist Learning Theory, in which the learner explores, observes, compares and applies. In conclusion, corpus tools can be a useful complement to classroom teaching because they can help students to understand the textbook content better, connect the textbook knowledge with the actual use of the language, and provide them with more confidence and accurate knowledge in the target language.

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