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The Frequency of the Passive Voice in Freshman Academic Books

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THE FREQUENCY OF THE PASSIVE VOICE
IN FRESHMAN ACADEMIC BOOKS

by

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ABSTRACT

The use of passive voice has long been an area of difficulty for English learners. Celce-Murcia & Larsen-Freeman (2015) noted that it is learning when to use the English passive that presents the greatest long-term challenge to ESL/EFL students" (p. 352). Because textbooks are a source of language input for English learners, this study investigated the frequency of passive voice verbs in samples from four academic textbooks in courses commonly taken by freshmen. The study also examined whether there are significant differences between the frequencies by textbook. The data was collected from four General Education Plan (GEP) subject textbooks used in freshman classes at a large metropolitan university in the southeastern United States, namely English composition, history, psychology, and biology. The data was then compiled into a corpus of approximately 20,000 words created specifically for the current study, with 5,000 words randomly and sequentially selected from each of the four textbooks. The study utilized a table created by Folse (2009) to analyze differences between the basic passive voice tenses found in the textbooks. The study examined the *be*-passives, *get*-passives, and *have*-passives and their frequency in different tenses. The findings revealed that passive voice occurred in academic textbooks with an overall frequency of 7.06% (of all conjugated verbs). The results also found significant differences between the academic genres ($p < 0.05$). In this particular corpus, passive voice occurred more in biology than in the other subjects. Therefore, the results of the study indicated a need to explicitly teach the basic *be*-passive voice to English language learners to all English learners, but teachers also need to be especially aware that certain university subjects (e.g., biology) use more passive voice verb forms than others.

This humble work is dedicated to my beloved parents, my

siblings, my son, A.K., my daughters, R.K. and M.M.,

and my friend and sister, Amal Barzanji.

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LIST OF DEFINITIONS AND ACRONYMS

❖ *__Active voice:__* is a sentence in which the subject performs an action indicated by the verb.

❖ *__Aspect:__* *"*expresses how the speaker views the action of the verb – for example, as complete (perfect aspect), incomplete (imperfect aspect), ongoing (progressive aspect), repetitive (iterative aspect), or regular (habitual aspect). English expresses progressive aspect by *be* + present participle (-*ing*) and perfect aspect by *have* + past participle (-*ed*)." (Cowan, 2008, p. 354). "All of these aspects are represented in the verbs of different languages;" (Cowan, 2008, p. 351). Except the progressive and perfect aspect, which are two aspects expressed through auxiliary verbs and the form of main verbs used in the English language. "[T]hese two forms in English encompass a range of aspectual meanings that in other languages may be expressed by distinct forms" (Cowan, 2008, p. 351).

❖ *__Corpus:__* "is a large computer-held collection of texts (spoken, written, or both) collected together to stand as a representative sample of a language or some part of it" (Johnson & Johnson, 1999).

❖ *__English as a Foreign Language (EFL):__* is used to identify learners who are learning English in a country where English is not the main and first language used, so students who are learning English in a foreign country, which means outside of the USA, Canada, Australia, and the United Kingdom. Therefore, they are surrounded by the native language being used in the foreign country where they live or study English, and they can use English only in class.

- ❖ ***English as a Second Language (ESL):*** is used to identify learners who are learning English in a country where the English language is the main and first language used, so students who are learning English in the USA, Canada, Australia, and in the United Kingdom. Therefore, they are surrounded by English and will need to use it outside of class.

- ❖ ***English for Academic Purposes (EAP):*** is for student who are intensively learning English in order to study or do research in an academic setting.

- ❖ ***English Learners (ELs):*** are individuals who are learning the English language at various stages of proficiency regardless of their educational setting (ESL/EFL), usually K-12 settings.

- ❖ ***Grammar:*** is the patterns and rules that govern a language and the way it should be used.

- ❖ ***Learners' first language (L1):*** is the learners' native language.

- ❖ ***Learners' second language (L2):*** is the learners' second language, regardless of which language they are learning at the time, which could be their third, fourth, or even fifth language.

- ❖ ***Lexical Aspects:*** *"*refers to semantic properties of verbs, for example, whether or not an action is characterized by duration, an end point, or change. Thus, aspectual concepts are also conveyed through lexical aspect. Verbs fall into four categories in terms of lexical aspects – *stative verbs* and three types of *dynamic verbs* (*activity, achievement, and accomplishment verbs*)*"* (Cowan, 2008, p. 355).

- ❖ ***Native Speakers of a Language (NSs):*** an individual's first language is considered their native language.

❖ **_<u>Non-Native Speakers of a Language (NNSs):</u>_** an individual who is learning a new language other than their native language.

❖ **_<u>Passive voice:</u>_** is a sentence in which the subject is the recipient of the action denoted by the verb.

❖ **_<u>Tense:</u>_** "in verbs express the time that an action occurs in relation to the moment of speaking. It has three dimensions – present, past, and future" (Cowan, 2008, p. 350).

CHAPTER 1
INTRODUCTION

Statement of the Problem

English is a global and international language that is widely used by more non-native English speakers than native English speakers themselves, and they have different reasons for the pursuit of learning English (Beckett & MacPherson, 2005; Haberland, 2011; Mauranen, 2003). Therefore, there has been a need to understand different aspects of the English language and to gain insight into the benefits derived by educators and learners alike.

In language learning, there are different issues that need to be taken into account for successful learning and acquisition of a new language to occur. Grammar is incorporated into the four skills of any language, English included, that must be taught and understood in order to grasp the patterns and rules of that language. In most grammar textbooks for English learners, there are 12 verb tenses. Few, if any, other languages have these same tenses used in the same ways as English does, which causes confusion for learners.

While the verb tenses are a definite source of student confusion, an additional complicated layer of the English verb system is voice. All verbs can be either transitive or intransitive, and the transitive verbs can be either active voice or passive voice. Voice is one element in writing that can affect the intended meaning of the writer, and it is important in imparting the main issue and focus in academic writing to readers (Barratta, 2009). The focus of the current research is on the use of voice in the English language, specifically the frequency of the passive voice in university textbooks.

During the 20th century, passive voice was a part of English grammar that educators warned students against using, and this action had learners both fearing and hating it (Pullum, 2014). In an academic setting, passive voice is often taught while at the same time hinting that it is better to avoid and instead use active voice (Biondi, 2001; Folse, 2009; Millar, Budgell, & Fuller, 2013). While prescriptive grammarians warned against the use of passive voice, descriptive grammarians noted that passive voice occurs naturally and frequently in English. Therefore, passive voice is a grammar point that must be taught regardless of the attitudes surrounding it because it is a natural part of English grammar. Its usefulness is unique in conveying ideas and attitudes about a certain topic and focusing on specific points the speaker or writer thinks are important. Therefore, understanding its frequency, usages, exposure, and importance for second language (L2) learners is important. Moreover, understanding which fields of study might use either the active voice or the passive voice more frequently should aid educators in preparing their students for higher education and clarifying academic writing expectations in those fields.

One way to understand and learn a language is to find the pattern and rules that govern it, and the use of a corpus can give some insight. A corpus is primarily a large collection of data which can be studied, counted, and analyzed for different purposes. In recent years, corpus analysis has become one focus area that the linguists, educators, and researchers used to assist them in understanding how languages work. Corpus linguistics is concerned with compiling and organizing information on a certain topic, mainly language, and is a valuable tool for educators (Conrad, 1999). Thus, corpus linguistics can provide insight into the most common or frequent

occurrence of a specific item. In this research, corpus linguistic-based analysis has been used to (a) analyze the frequency of passive voice in texts and to (b) evaluate whether there are significant differences between content areas.

Background and Need

There has been much controversy about the use of passive voice over the decades. Passive voice has negative attitudes associated with its usage. More often than not it has been avoided, and instead its counterpart the active voice has been recommended (Biondi, 2001; Folse, 2009; Leong, 2014; Pullum, 2014). It poses difficulty not only to non-native speakers of a language (NNSs) but to native speakers of a language (NSs) as well. Moreover, it has been said that passive voice is mostly associated with specific genres such as science or law or that those genres tend to overuse passive voice to overly complicate the language (Bulatovic, 2013; Thompson, Ling, Myachykov, Ferreira, & Scheepers, 2013). Thus, there is a need to investigate how frequently passive voice is used in academic textbooks utilized with both NSs and NNSs of English who are pursuing higher education in the United States.

Because there seems to be a lack of research on passive voice occurrences in textbooks in general, this study attempts to investigate the frequency of passive voice in freshman academic textbooks that learners learning English as a second language (L2) might encounter in tertiary/higher education settings. L2 learners will be exposed to a variety of academic texts in higher education, not all of which have the same style of writing. This study has the potential to

aid students in writing according to the guidelines of acceptable academic expression and instructors in teaching necessary passive forms for their students to be successful.

Purpose of the Study

Therefore, in order to bridge this gap in research, the study aimed to determine (a) the most common entry level courses (i.e. texts) taken by freshmen at the target university; (b) the frequency of use of the passive voice in the texts; and (c) significant differences, if any, in frequency of use of passive voice in texts by subject matter. The aim was to identify if there is a need to intensively teach passive voice due to its frequency in academic textbooks.

Research Questions

This research focused on answering the following two questions:

1. How frequent is the use of passive voice in selected freshmen academic textbooks?

2. Are there statistically significant differences in frequency of use of passive voice by subject matter of textbooks?

Design of the Study

The researcher identified four common academic textbooks from the General Education Programs [GEP] at a large metropolitan university in the southeastern United States, which are frequently used in freshman classes and compiled a corpus by randomly selecting 5,000 words from each textbook for a total of approximately 20,000 words. This corpus was then analyzed for

the overall frequency of the passive voice and was compared to determine the frequency of the passive voice by subject texts.

Significance to the Field

This study has the potential to aid educators and students in (a) understanding the stylistic features of voice in academic genres, and (b) being aware of the passive voice and its frequency. Moreover, the study could inform teachers and material writers with respect to the passive voice. In addition, it may eliminate some of the negative attitudes surrounding the passive voice.

Ethical Considerations:

Limitations

This study did not account for all the different types of passives and their syntactic structures and semantic features; however, the researcher counted the overall frequency of occurrence of the basic "*be*-passive voice," "*get*-passive voice," and "*have*-passive voice". Four general freshman academic textbooks (written forms) were selected and subjected to analysis, and no student writing was included in the analysis. No student input, tests of understanding or level of knowledge, or student feedback were included in the analysis.

Benefits

The study could provide information about how frequently passive voice is used in some textbooks. Thus, it has the potential to prepare educators and students on what to expect from

academic textbooks, and it may, in addition, yield some insight on what student writing style should simulate in order to write effectively and clearly.

Organization of the Study

Chapter Two provides a literature review of passive voice and corpus linguistics, focusing specifically on previous corpus analysis studies of passive voice.

Chapter Three describes the methodology used in this study including data collection procedures and analysis.

Chapter Four discusses the results of the study where the frequency of the passive voice was analyzed. It also analyzes if there were significant statistical differences between the academic subjects.

Chapter Five concludes and summarizes the most important findings of the results. Additionally, it provides some recommendations and suggestions in regards to the teaching of passive voice, which in turn will open a new window to future research.

CHAPTER 2
LITERATURE REVIEW

Introduction

There has been much controversy about whether to use passive voice or to avoid it over the decades. This study addressed the frequency of passive voice occurrences in four selected academic textbooks used by freshman college students by comparing the frequency of its usage across various content areas to see if there are statistically significant differences by subject matter.

The literature review conducted for the study was intended to provide a contextual framework for the research. It has been organized to briefly review passive voice and corpus linguistics. The passive voice section concisely explains what passive voice is, active versus passive voice, verb transitivity, when passive voice is used, passive voice importance, negative attitudes towards passive voice, and L2 learner difficulties with passive voice. The corpus linguistics section briefly defines corpus and why it is used, then goes on to mention previous corpus studies and previous passive voice corpus studies that investigated its frequency for different reasons with the aid of different corpora.

Passive Voice

What is Passive Voice?

When researchers examine grammar, they try to find the patterns in a language. The grammatical category that was the main focus of this study is the category of *voice*, "which uses

a form of verb to tell us whether the subject is the actor or is acted upon. The two basic voices are active and passive" (Celce-Murcia & Larsen-Freeman, 2015).

Toyota (2009) described the English passive as follows: "it is commonly divided into two constructions, i.e. the verbal passive and the adjectival passive. The distinction is made according to the characteristics of the past participle. When it behaves like the verb, the construction is considered to be the verbal passive and when it shows adjectival characteristics, the adjectival passive" (Toyota, 2009, p. 476 - 477).

Toyota further explained that only transitive verbs can become passive voice. Cowan (2008) reiterated this in stating that to change an active voice sentence into a passive one the verb needs to be transitive because they contain a direct object which can be moved to the subject position. (Celce-Murcia & Larsen-Freeman, 2015; Cowan, 2008; Folse, 2009; Toyota, 2009).

Active Voice Vs Passive Voice

The basic sentence structure pattern for an **active voice** is Subject (the agent/"doer" of the action) + Verb + Direct Object, while the sentence structure pattern for a **passive voice** is Subject (the patient/"receiver" of the action) + Verb + Past Participle (Folse, 2009).

The passive voice can be identified by adding "by", and the structure would be as follows: Subject (the "receiver" of the action) + Verb + Past Participle + by + Indirect Object (or the "doer" of the action) (Folse, 2009, p. 243).

Figure 1 shows the pattern and structure of an active voice sentence while Figure 2 shows the pattern and structure of a passive sentence.

Subject		Verb		Direct Object
• The agent ("doer" of the action)	➕	• The action	➕	• The patient ("receiver" of the action)
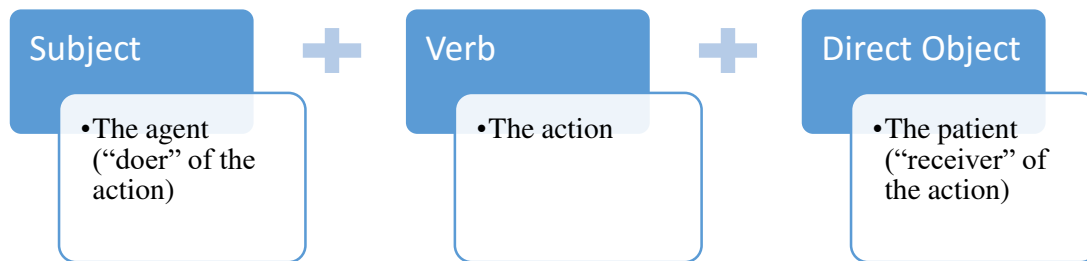
Figure 1: The Basic Sentence Structure Pattern for Active Voice (Folse, 2009)

Subject		Verb		Past Participle		by + Indirect Object
• The patient ("receiver" of the action)	➕	• The action • "verb to be"	➕	• The action	➕	• The agent ("doer" of the action)
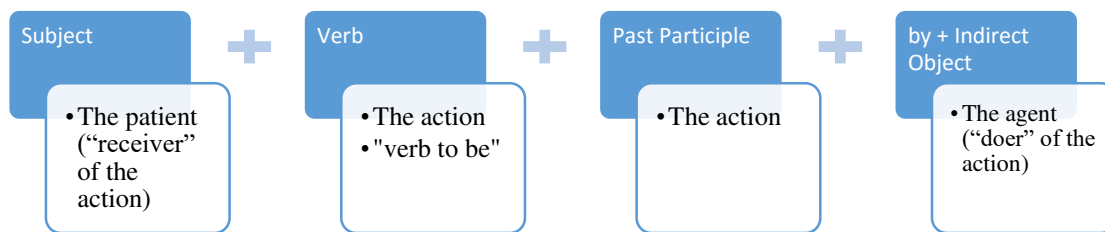
Figure 2: The Basic Sentence Structure Pattern for Passive Voice (Folse, 2009)

The most common or basic type of passive voice that is known and used is the passive with the *"verb to be" + past participle*, but there are other structures of passives such as *passives with get, have*, and other passive-like structures (Cowan, 2008). Examples are found in Figure 3.

Active Voice:
The boy kicked the ball.

Passive Voice:
The ball was kicked by the boy.
PASSIVE – BE
The ball got kicked by the boy.
PASSIVE – GET
The ball had been kicked by the boy.
PASSIVE – HAVE
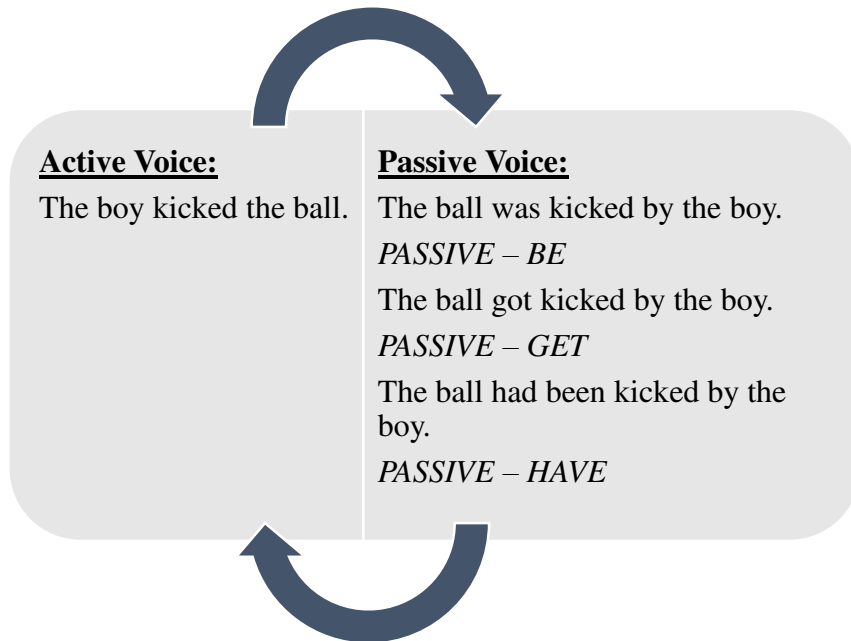
Figure 3: Active and Passive Sentences (Cowan, 2008, ch. 17, p. 383-419)

Regardless of the verb tense used in the previous examples, it would seem that one way to verify the sentence is a passive voice construction is if one can add "*by + Object*" to it (Cowan, 2008; Folse, 2009). Toyota clarified that "The active-passive alternation in essence captures a causer-causee relationship…" (Toyota, 2009, p. 477).

Passive voice sentences can occur in all of the tenses such as present, past, present progressive, present perfect, and modals (Cowan, 2008; Folse, 2009). The tense used depends on when an action happened and on the message that is being conveyed. Not all sentences with a "*be + past participle*" are passive sentences. Some past participles are adjectives, so the sentence is considered a passive look-a-like (Cowan, 2008).

Table 1: Comparing the Difference between the Active and Passive Voice of the Verbs in these Sentences (as cited in Folse, 2009, p. 244)

Verb Tense	Active Voice VERB	Passive Voice be + PAST PARTICIPLE
Present	I *wash* my car every Saturday.	My car *is washed* every Saturday.
Past	Shakespeare *wrote* that play.	That play *was written* by Shakespeare.
Present Progressive	They *are making* a special plan.	A special plan *is being made*.
be + going to	They'*re going to build* a house here.	A house *is going to be built* here.
Present Perfect	People *have* officially *celebrated* Mother's Day since 1914.	Mother's Day *has* officially *been celebrated* since 1914.
Modals	The government *should prohibit* the sale of cigarettes.	The sale of cigarettes *should be prohibited* by the government.

Leong (2014) also stated that most grammar books include the basic passive voice form which includes the "*be + past participle*". Leong agreed with Puckish (2009) that only viewing the passive voice as "*be + past participle*" is limiting. Passive voice is a part of the verb phrase, but the "*auxiliary verb to be*" is not always present in verb phrases. The only time a passive voice does not have the "*auxiliary verb to be*" is when it is a *get*-passive.

Celce-Murcia and Larsen-Freeman (1999) elaborated that "the *get*-passive construction, as with ordinary *be*-passive, presents a process or event as undergone by the subject." They go on to give an example of a *get*-passive sentence: "My car got broken into this weekend, and the crooks stole 1,500 of stuff" (Celce-Murcia & Larsen-Freeman, 1999, p.354). They go on to explain the have-passive, which can also function as a *be*-passive. It is referred to as "the

experiential *have* to distinguish it from the causative *have."* (Celce-Murcia & Larsen-Freeman, 1999, p. 354-355). The example they give is shown below in Figure 4. They also mentioned that the *have*-passive is more complicated than the *be*-passive and the *get*-passive because the *have*-passive's pattern includes a noun phrase that intervenes between the auxiliary have and the past participle.

Mary had her purse snatched.

Passive (experiential - The purse snatching happened to her. It was beyond her control.)

Causative (Mary arranged for someone to snatch her purse- perhaps to file a fraudulent insurance claim.)
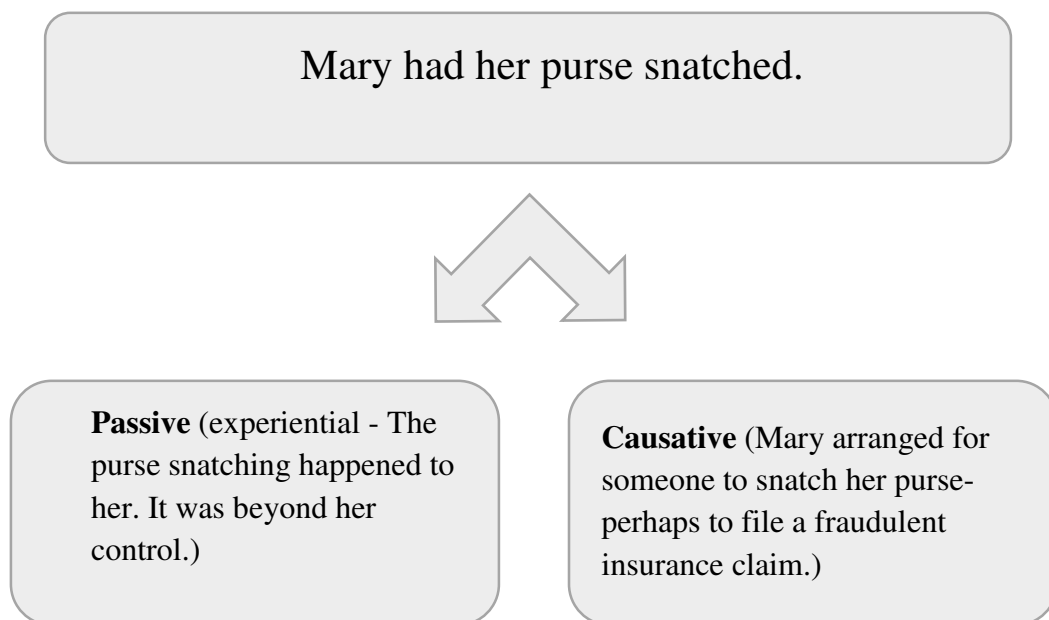
Figure 4: The difference between an experiential have (passive) and a causative have (Celce-Murcia & Larsen-Freeman, 1999, p. 355).

Verb Transitivity

Verbs are usually separated into transitive verbs which have a direct object and intransitive verbs which cannot have a direct object. Some verbs can be both transitive and intransitive depending on its sentence structure and meaning. According to Folse (2009) "there are some verbs that can never be used in the passive voice"; these verbs "are called intransitive

verbs. Intransitive verbs are never followed by a direct object, so they cannot be changed to passive voice. Some examples of verbs that are never used in passive are *happen, die, arrive, depart* (and many other verbs of motion)" (Folse, 2009, p. 244). Thompson et al. (2013) further explained that "A transitive event is one involving two participants: an Agent, the "doer" of the action, and a Patient, the person or thing that "undergoes" the action. In English, such events can be described in Active-voice or Passive-voice." (Thompson et al., 2013, p. 1).
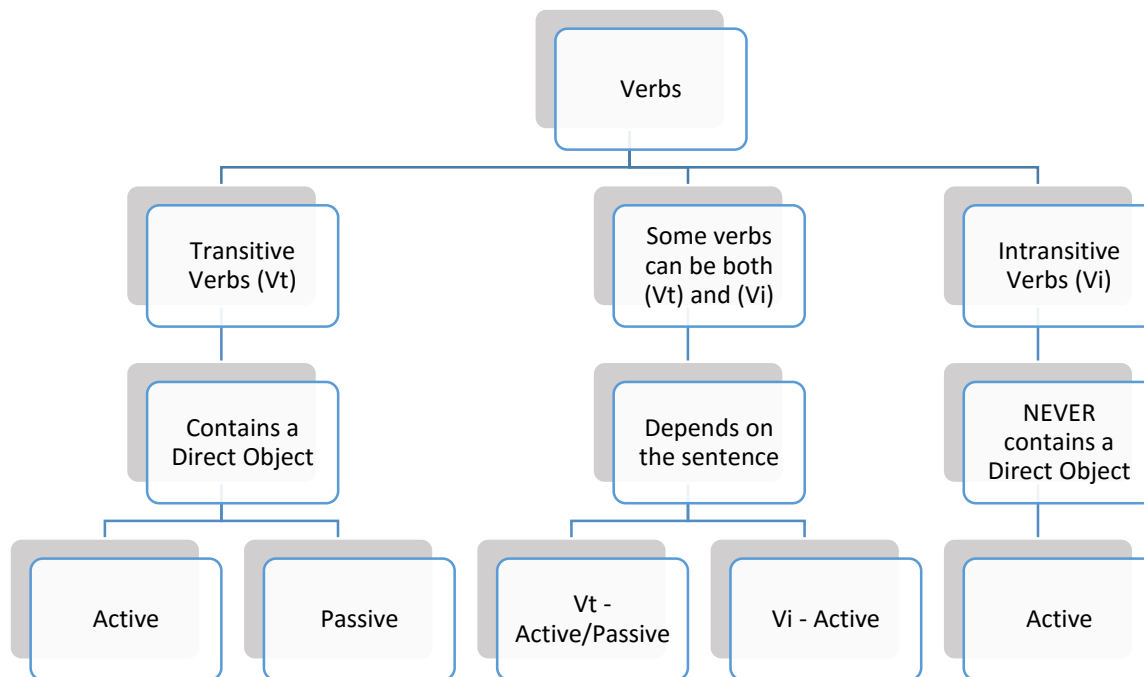
Figure 5: Type of Verbs

To sum up, the active voice is used more frequently because it is straightforward and clear and because teachers and learners avoid the passive voice. The passive voice is used to shed light on the receiver of the action rather than the doer of the action in the sentence, while

the active voice is used to shed light on the doer of the action rather than the receiver (Folse, 2009).

Only transitive verbs can be in the passive voice, thus making it more limited than the active voice. Some sentences using passive voice in English do not have an active voice counterpart or variant (Celce-Murcia & Larsen-Freeman, 1999). Consequently, it can be concluded that all verbs are either transitive (Vt) or intransitive (Vi) depending on the sentence content, and the verbs are either active voice or passive voice.

When Passive Voice is Used

Generally, the passive voice is used when the agent of the action (subject - "doer") is not the most important information. The subject of a passive voice sentence can be either a person or a thing that receives the action. If the writer or speaker wants to name the agent in a passive voice sentence, they can do so using "*by + agent phrase*" (Folse, 2009, p. 244). Folse continued to clarify that naming the agent sometimes sounds strange. Folse stated that "You should not name the agent when it is not new information or when it is not important" (Folse, 2009, p. 244). An example would be "*The president was elected by the people." By the people* can be omitted because it is not new information and it is not the most important thing in the sentence (Folse, 2009).

Passive voice can be used with almost any of the verb tenses (Cowan, 2008). Anderwald (2014) mentioned that the progressive passive, which became a more common phenomenon in the 19th century, is a feature used in written rather than spoken data and continues today in

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British English. Cowan (2008) stated that the perfect progressive is rarely used in the passive voice constructions.

The Importance of Passive Voice, in Speaking? in Writing?

Speakers and writers who use the passive voice are "more effective in accurately and efficiently conveying the intended message." (Folse, 2009, p. 244). Baratta (2009) gave support to the previous statement by stating that the passive voice is used and has a role in academic writings. Baratta (2009) further clarified that:

> Placing the object of the sentence in the subject position is the basic function of passive voice... passive voice does have a role to play in academic writing, which goes beyond the disguising of the author and can help to reveal the author instead." (Baratta, 2009, p. 1420)

Carter & McCarthy, (1999) similarly explained that the construction of a passive voice sentence is related to the transitivity of a verb. The authors concentrated on the *get*-passive constructions and found it is mostly related to spoken informal language and reported speech, which is used in teaching English and in various academic courses.

Thompson et al. (2013) stated that

> "It has also been found that passives are more likely in written as opposed to spoken language. Chafe (1982) noted that passives are as much as five times more common in the written modality. Likewise, in a study utilizing the BNC, Brown, Switch Board, and

Wall Street Journal corpora, Roland (2007) found that passives were less common in spoken data. Biber (1993) noted that passives are much more common in scientific writing than in spoken conversation or fictional writing" (as cited in Thompson et al., 2013, p. 2).

Passive Voice and Native Speakers: The Negative Attitudes towards Passive Voice

The passive voice is most commonly taught with the hint of avoidance. Educators and writers tend to have negative attitudes associated with the usage of passive voice such as "it will make the writing wordy" (Folse, 2009), or they are told that active voice is more clear and direct (Biondi, 2001). In scientific writing, for example, "many writing guides favor the use of active voice for reasons of clarity and conciseness" (Leong, 2014). This same anti-passive voice attitude prevails in other subjects, too. Writing guides may say that the passive voice is "unnecessary and overused in legal writing", which is simply not true (Bulatovic, 2013).

According to Folse (2009) native students were taught to avoid passive voice or that passive voice makes writing weak. Use of the passive voice is not a problem, but overuse of the passive voice hinders the writing/reading flow. The passive voice is used depending on what the writer/speaker intends to convey and how it fits into the paragraph. (Baratta, 2009; Carter & McCarthy, 1999; Folse, 2009;). In other words, it is not possible to make a blanket statement that passive voice, or active voice for that matter, is either bad or good. It just depends on the structure of the individual sentence and what the writer intends to say. Is the subject doing something? Or is something being done to the subject?

Pullum (2014) summarized what others have said about the use of passive voice in that it needs to be avoided; and that these negative opinions about the passive voice is a 20th century phenomenon. However, Pullum (2014) does not agree with their opinions on the passive voice. Some graduate students, authors of grammar books, and educators tend to avoid it because they do not understand it very well or because they might be repeating a prescriptive rule they were taught. Therefore, passive voice needs to be explicitly taught to NSs and NNSs alike in grammar and academic writing. (Biondi, 2001; Hinkel, 2004; Pullum, 2009).

Some NSs might tend to avoid the usage of the English passive voice for the previously mentioned reasons; however, some NNSs might tend to avoid using the English passive voice because it may be difficult for them to produce, or they do not use it correctly in their L2 since it could overlap with what they know about passive voice or how it is used in their L1 (Marzouk, 1995).

Therefore, it seems that some educators continue to view passive voice negatively and reiterate what has been said and thought in the past: its usage is considered bad writing without extensive thought. Other educators are skeptical on whether passive voice aids in the production of clear and concise writing or active voice does. Therefore, investigating this phenomenon is needed.

L2 Learner Problems with the Passive Voice, and Why it is Difficult?

Many L2 learners incorrectly use intransitive verbs, which never can be used in passive voice, and construct incorrect sentences that look like passive voice such as: "*The accident was

happened late last night. or *Ten people were died in the accident." (Folse, 2009, p. 244). Celce-Murcia and Larsen-Freeman (2015) also said that "Our experience has shown us that it is learning when to use the English passive that presents the greatest long-term challenge to ESL/EFL students. Nonetheless, as with all constructions, students will have to learn its forms and their meanings…" (Celce-Murcia & Larsen-Freeman, 2015, p. 352).

Straus and Kaufman (2014) explained in their grammar book that students "should use active voice whenever possible", and they note that "the passive voice has often been criticized as something employed by people in power to avoid responsibility" (Straus & Kaufman, 2014, p. 20). This previous example is one of the grammar books that teach English passive voice to L2 learners without intensive detail and further explanation, which supports what Celce-Murcia and Larsen-Freeman (2015) indicated above the difficulties L2 learners face learning passive voice.

Some L2 learners might tend to overuse passive voice once it is taught, and that can hinder their writing from becoming effective and concise. Additionally, it may obscure the meaning they are trying to convey (Yannuar, Shitadevi, Basthomi, & Widiati, 2014). L2 learners may be able to enhance their knowledge of passive voice even with less exposure as compared to NSs of English "by explicit instruction in the L2", since the different structures and usages of passive voice all seems to depend on education (Street & Dabrowska, 2006). Other NNSs might tend to avoid using the English passive voice, as previously mentioned by Marzouk (1995), because it may be difficult or it could overlap with their knowledge of L1 (Marzouk, 1995).

Hinkel (2004) indicated that there is a difference in writing between non-native speakers and native speakers of English. Although educators teach grammar and give students grammar

exercises for practice, NNSs may produce some form of verb to fill in the blank irrespective of its correct form. The aspects, tense, and the passive voice are important in university-level formal writing; however, they are not taught in any depth. In addition, "NNSs may simply choose to avoid using complex verb constructions altogether" (Hinkel, 2004, p. 7).

Hartig and Lu (2014), as well, noticed a difference between novice and expert legal writing students. According to the authors, novice legal writing students tended to avoid using the passive voice compared to the expert legal writing students. They went on to say that the differences "may be tied to the subject matter rather than the students' proficiency" (Hartig & Lu, 2014, p. 94). Hartig and Lu (2014), stated that focused instruction on what students need rather than grammatical form is needed. This means that there is a need to explicitly instruct students on the difficult areas while making them aware of how their linguistic choices can convey their intended meaning, which reiterates Hinkel's (2004) conclusion.

Moreover, "According to the Contrastive Analysis Hypothesis, learners were strongly influenced by their L1. Where their L1 matched the L2, learning was facilitated; where it differed, learning was impeded" (Ellis, 2008, p. 41). Ellis went on to state that some might view this differently, which led to questions such as "Were learners' errors the result of L1 interference? Did L2 learners, like L1 learners, construct unique mental 'rules'?" (Ellis, 2008, p. 42). Folse (2009) demonstrated how some languages other than English use the passive voice and showed how these differences could influence the way L2 English learners produce the passive voice in English.

Folse (2009) mentions that languages like Japanese, Korean, Chinese, Arabic, and Russian do not use the "*be + past participle*" to indicate a passive form as in English. Thus, students who speak and write in these languages tend to omit the verb *to be*. Japanese and Korean indicate a passive verb by adding an infix. In Japanese, the subject of a passive sentence is frequently animate while it can be either animate or inanimate as it is in English, and the by + phrase used means "in something". In Arabic, passive voice is rarely used. It has a passive verb forms for all tenses, and it is formed by changing a vowel in the middle of a verb. In Arabic the by + phrase is usually not used, but when it is, it is indicated by adding the preposition *b-*, which leads Arabic students to overuse the by + phrase in English. In French, there are three different ways to indicate a passive form, and they use the "*be + past participle*" as in English. However, the subject and past participle must agree in gender and number, which leads French speaking students to write sentences with mistakes such as "*The plants were watereds all night" (Folse, 2009, p. 249).

To summarize, the passive voice seems to be associated with negative attitudes, and is a topic of controversy between linguists and educators on whether it should be promoted or avoided. In addition, passive voice seems to be a grammatical point of difficulty not only to NNSs, but to NSs as well (Biondi, 2001; Folse, 2009; Pullum, 2009; Pullum, 2014; Street & Dabrowska, 2006). For that reason, it is essential to investigate the frequency of passive voice regardless of its structure or presence in different genres in order to solve this controversy and include more explicit teachings of the passive voice in classrooms (Hinkel, 2004).

Corpus Linguistics

What is Corpus Linguistics and What Does it Do?

Corpus revolutionized the study of language over the recent decades and, with it, the application of language. Corpus linguistics started its use within English, but now it encompasses other languages and other fields. (Hunston, 2002) Corpora not only allowed researchers to count categories in language, but also to observe categories and different phenomena that was not noticed before (Hunston, 2002). "In corpus-based studies, words replace people" (Youngblood, 2014, p. 33).

Hunston (2002) further explained and summarized the following benefits and limitations of corpora in the study of language:

- *Corpus* can only show how frequent or infrequent an item is, but it does not give information if something is possible or not. Therefore, it can answer whether something occurred and how frequent it was, but it cannot answer if it is acceptable in a language. NSs can answer that question probably with intuition, but L2 learners will face difficulties in determining acceptability.

- *Corpus* can give evidence but not information.

- *Corpus* can only show its contents, and it presents language out of its own context.

To summarize, it can present what is available or what is known about a language, but it cannot explain why a language works the way it does (Hunston, 2002).

Thus, for the purpose of this research, using a corpus can give evidence on the frequency of passive voice in academic language, which has the potential to aid educators to prepare L2 English learners on what to expect academically when entering a college or university.

Moskowich and Crespo (2012) clarified that corpus linguistics is the process of semi-automatically retrieving data from texts. The following is a definition of a corpus according to Johnson and Johnson (1999),

"A corpus (plural 'corpora') is a large computer-held collection of texts (spoken, written, or both) collected together to stand as a representative sample of a language or some part of it. Corpora provide easily accessible and accurate data, useful to descriptive and theoretical linguistics. They may also be used to calculate the frequency of occurrence of items and, as repositories of actual instances of language use, they have a place in language teaching textbook design. Corpora rely for their effect on size." (Johnson & Johnson, 1999, p. 89-90).

According to Hunston (2002), "A corpus essentially tells us what language is like, and the main argument in favor of using a corpus is that it is a more reliable guide to language use than native speaker intuition is" (Hunston, 2002, p. 20). Hunston went on to state that native speakers have intuition about language, and they have more experience about language compared to a corpus; however, they cannot state why a particular phrase is used in a particular context. Moreover, intuition is a poor guide to frequency, collocations, and phraseology...etc. Thus, using a corpus is a suitable tool for this study.

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Previous Corpus Studies

General Corpus Studies

Corpus linguistics has aided linguists, language educators, and in turn benefited language learners (Ferris, 2011). Scott (2012) specified that "Corpus Linguistics is not just about data resources, such as corpora. It is about "adding value to data", which in turn demonstrates and alludes to the fact that corpus linguistics can be used in other fields. Fields other than language" (Scott, 2012, p. 82). Corpus could help theorists and researchers make their claims and prove their theory or hypothesis Hymes, 1970; (as cited in Johnson & Johnson, 1999).

Coxhead (2000) and Durrant (2014) are two researchers who have conducted primary studies using corpora when considering the best way to benefit students who are learning English and prepare them for examinations or real-life situations. Coxhead (2000) conducted a study that has led to benefits for academic learners, compiling a corpus of 3.5 million words from various academic fields. She came up with the most frequent Academic Word List (AWL) that were not among the first 2000 words of English as given in West's (1953) General Service List (GSL). At the time of the present study, the AWL was being used in English for Academic Purposes (EAP) courses (Coxhead, 2011). Durrant (2014) studied collocations, which is the sequence of words or terms that co-occur often with each other. However, there is still a need to research other areas specific aspects.

Kim (2009) conducted a corpus-based study on the 1st and 2nd person pronouns used in both English and Korean. This study helped linguists and educators to understand the different ways writers connect with readers and showed how they present their ideas and opinions in their

writing. Kim found that the 1st and 2nd person pronouns in both English and Korean were used

differently to connect the writer with the reader, and the conveyed message was dependent on the

sociocultural differences between the two languages. This information can be used to guide

students to the proper way to present information and opinions in writing following the specific

genres, registers, and styles of English.

Passive Voice Corpus Studies

Previous research has centered around *be*-passives, *get*-passives, *have*-passives, and like-

passives; the similarities and differences between them and their usages; the words or verbs used

or associated with a given form of passive; comparing the English passive forms with other

languages; and how frequently one type is used in written or spoken data between NSs and NNSs

of English. Some of these primary empirical studies are mentioned below.

Shintani (1979)

Shintani (1979) studied the frequency of passive constructions, how they are used, and

how this information relates to teaching and learning the passive voice. The researcher compiled

her own corpus containing spoken and written contemporary American English (approximately

146,690 words total) from sources such as discussions, informal conversations, interviews,

Senate hearings, novels, scholarly journals, journalistic writing and readers' letters to the editor.

Shintani analyzed the frequency of ordinary passives, adverbial participle constructions, and adjectival participle constructions. The author compiled the most frequent verbs that occurred in passive voice and the other constructions she studied with the different genres in mind (Shintani, 1979).

The researcher noted that different words appeared in different constructions. For instance, the author found that the surface subject in passive sentences is inanimate while the by-subject is animated. Animate proper nouns are hard to delete. A passive construction with an agent +by phrase is more commonly associated with the passive voice than the agentless -by phrase. Modals do not occur in speech as often as they appear in written English. Tenses are not related to the passive voice but rather to the general rule of tense usage. Shintani went on to analyze the different aspects of the passive verb forms and how this related to real life spoken and written language. The researcher also commented on how teachers and learners might perceive or react to these grammatical constructions (Shintani, 1979).

Tarone, Dwyer, Gillette, and Icke (1998)

In another study examining passive and active voice, Tarone, Dwyer, Gillette, and Icke (1998) studied the frequency of the constructions in two astrophysical journal articles taken from The Astrophysical Journal. The authors counted finite verb phrases, all active voice verb forms, and they "counted as passive all verbs which appeared in the "*subject + be + verb + -en' form*" (Tarone, et al., 1998, p. 116). The researchers omitted the existential verbs *to be*, *to have*, *to exist*, *to become* and *to get* (if they were used in the sense of become), as none were passive

forms. Tarone et al. found that the active voice was utilized more frequently than the passive

voice. (Tarone et al., 1998).

Hundt (2001)

In a longitudinal study investigating passive voice, Hundt (2001) examined the entire

range of get-constructions from the 1600s to the 1900s. Hundt's research focused on the

syntactical and semantic features of the get-constructions, *get*-passives, passive-like

constructions, and their frequencies. This information shed light on how *get* was utilized in

American and British English over the decades.

Hundt compiled her own corpus by collecting data from various corpora, which included

the ARCHER Corpus (A Representative Corpus of Historical English Registers); "the Brown

(AmE) & LOB (BrE) corpora; and their later counterparts, Frown & FLOB corpora" (Hundt,

2001, p. 50). The author focused on the connection between: a) get + past participle, and b) get

+ NP + past participle.

Hundt found that the get-construction frequencies differed between the American and

British English. The get + past participle construction did not always function as a *be*-passive,

but it seemed to function as an adjective to describe the agent instead of the action. It seemed

that get-constructions were more associated with unanimated objects. The get + past participle

adjective has increased in the last 30 years (Hundt, 2001).

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Hinkel (2004)

In her study, Hinkel (2004) analyzed a small number of verb phrase features such as tense, aspect, and passive voice, and their frequencies in NSs and NNSs written discourse to identify areas in need of intensive instruction. The author compiled her own corpus of 226,054 words from 746 essays written by L1 NSs (English) and L2 NNSs (Chinese, Japanese, Korean, Indonesian, Vietnamese, and Arabic). The essays were written in response to one of the three prompts given in the placement and diagnostic tests for four US universities.

Hinkel found that even after years of instruction and use, L2 advanced learners still had difficulty producing tense, aspect, and passive voice in written academic texts. Most advanced NNSs avoided complex and difficult constructions and features such as the passive voice and perfect aspect. Hinkel (2004) concluded that there was a lack of intensive instruction on the academic usage of tense, aspect, and the passive voice in instructional texts, which needs to be remedied.

Millar, Budgell, and Fuller (2013)

Millar, Budgell, and Fuller (2013) assessed how passive voice is used and the effect of journal guidelines on the use of passive voice. The researchers compiled a corpus of 297 primary research articles from five top medical journals. The research compared the New York Times corpus (NYT), which is a corpus of General English, along with selected medical articles from the Randomised Controlled Trials (RCT) corpus in 2005 in order to investigate the stylistic

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writing discourse differences between both genres. Millar et al. first identified all the verbs in the corpus and then analyzed the occurrence of the passive voice in both the NYT corpus and RCT corpus.

Millar et al. found 20 common verbs associated with passive voice constructions. The passive voice was more frequently used in the methods and results sections. They noted that the usage of the passive voice is unavoidable, and was sometimes necessary in order to focus the reader's attention on important points. The medical journals guidelines had an effect on the usage of the passive voice. The guidelines need to be clearer as when to use the passive voice or active voice (Millar et al., 2013).

Leong (2014)

Similarly, in his 2014 study, Leong studied the frequency of passives used in the contexts and the forms in which they occurred. The author compiled his own corpus developed from 60 original recent scientific research articles from six 2013 journals.
Leong marked the clauses. Since each clause had only one verb phrase, by dividing the articles by clauses, it allowed the author to count the number of passives in the corpus compared to the total number of verb phrases. The clauses in which the passives occurred were classified as either main or subordinate clauses. The author counted the occurrence of the following passive forms, with "Ven" indicating past participle:

a) Basic (be + Ven);

b) Progressive (be + being + Ven);

c) Perfective (have + been + Ven);

d) Modal (modal + be + Ven);

e) Modal perfective (modal + have + been + Ven);

f) To-infinitive (to + be + Ven);

g) Non-finite –ing (being + Ven);

h) Bare (Ven)

Leong found that passive clauses constituted 30.02% of the total number of clauses analyzed. The most commonly used forms were the basic and bare passives. Approximately 29% of all the passive clauses were located in the methodology section. Leong concluded that the use of the passive voice in the methodology section would continue to be widespread.

Schwarz (2015)

Schwarz (2015) studied the occurrences and differences between *be*-passives and *get*-passives. The researcher used the Corpus of American Soap Operas (100 million word corpus). The corpus contains written language that imitates natural spoken language. The author examined seven soap operas that were present in 2002 and 2010. The study investigated the decline in the use of the base *be*-passive and the increase in the informal *get*-passives in written language. She focused on the *get*- and *be*-passives that were either directly followed by a past participle or followed by an adverb and then a past participle. She studied if the constructions were true passives or look-a-likes.

Schwarz found that the *get*-passives frequencies were similar for the two years, but the *be*-passives frequencies showed a 25% decline. Additionally, there was a decline in the overall use of passive constructions. She found that the *be*-passive is considered a form of formal language, so to have a decline in informal spoken language would be expected. She went on to explain the decline could be due to the writers' avoidance of passive constructions in order to imitate natural speech.

Table 2: Summary of Corpus Studies on Passive Voice

Study	Target	Corpus	Method/Procedure	Results
Shintani (1979)	The occurrence of the passive and past participle constructions and phrases.	Corpus compilation containing spoken and written contemporary American English of approximately 146,690 total words.	Analysis of the frequency of ordinary passives, adverbial participle constructions, adjectival participle constructions, and miscellaneous structures.	A passive construction with an agent +by phrase is more commonly associated with the passive voice than the agentless -by phrase.
Tarone, Dwyer, Gillette, & Icke (1998)	The frequency of the active and passive voice.	Two astrophysics journal articles.	Frequency of the finite verb phrases, active verb forms, passive verb forms, and the plural first person pronoun *we* in active and passive voice.	The researchers found that the active voice was more frequently used than the passive voice. The active *we* or passives were utilized in the procedure section.
Hundt (2001)	Get-constructions and their frequencies over time.	The ARCHER corpus, the Brown and LOB corpora, and the Frown and FLOB corpora (approximately 5 million words total).	Hundt analyzed the occurrence and usage of get-constructions between AmE and BrE, while focusing on the connection between: a) get + past participle, and b) get + NP + past participle.	Get-constructions were more frequent in AmE than in BrE, and are associated with unanimated objects. The get + past participle sometimes functioned as adjectives. The get + past participle adjective increased in the last 30 years.
Hinkel (2004)	The occurrence and usage of verb phrase features between NSs and NNSs.	The author compiled her own corpus of 746 essays from NSs and NNSs which contained 226,054 words.	The tense, aspect, and passive-voice occurrences and usages were analyzed.	Most advanced NNSs avoided complex and difficult constructions and features such as the passive voice and perfect aspect.

Study	Target	Corpus	Method/Procedure	Results
Millar, Budgell, & Fuller (2013)	Assessing how passive voice is used, and the effect of medical journals guidelines on the use of passive voice.	297 primary research articles from five medical journals.	The research compared the articles from the RCT corpus with NYT corpus.	The author found 20 common verbs associated with passive voice constructions. The passive voice was more frequently used in the methods and results sections. The journals guidelines had an effect on the usage of the passive voice.
Leong (2014)	The frequency of passives used in the contexts and the forms in which they occurred	60 original scientific research articles from six journals.	Frequency of passive clauses and forms versus the overall verb phrase clauses.	Passive clauses constituted 30.02% of the total number of clauses analyzed, and approximately 29% were located in the methodology section. The most commonly used passive forms were the basic and bare passives.
Schwarz (2015)	The occurrences and differences between *be*-passives and *get*-passives	The Corpus of American Soap Operas (100 million words corpus)	Analyzing the frequency of *be*-passive and *get*-passives.	The author found that *get*-passives frequencies were similar for 2002 and 2010, but the *be*-passives frequencies showed a decline by 25%.

Conclusion

The passive voice corpus studies investigated different passive voice constructions using corpora. However, what all the studies have in common is that they analyzed the frequency of the passive voice. While these studies did not include academic textbooks in their corpora, they still examined the frequency of the passive voice statistically.

In conclusion, by reviewing the literature, one can see that while there have been studies examining established corpora, there has not been much research on the occurrence of passive voice in recent freshmen academic textbooks to support or oppose the claims that it should be avoided. Moreover, it is not known if there are significant differences between subjects in academic textbooks. Investigating passive voice occurrences in academic textbooks might aid in the way passive voice is taught in English courses, and it may have the potential to aid in preparing L2 for successful writing and expectations of higher education settings.

CHAPTER 3
METHODOLOGY

Introduction
Purpose of the Study

The study aimed to determine (a) the most common entry level courses (i.e. texts) taken by freshmen at the target university; (b) the frequency of use of the passive voice in the texts; and (c) significant differences, if any, in frequency of use of passive voice in texts by subject matter. The purpose of the study was to identify if there is a need to intensively teach passive voice due to its frequency in academic textbooks.

Research Questions

This research focused on answering the following two questions:

1. How frequent is the use of passive voice in selected freshmen academic textbooks?

2. Are there statistically significant differences in frequency of use of passive voice by subject matter of textbooks?

This research examined the frequency of passive voice in approximately 5,000-word samples from four textbooks representing four of the five required subject areas in the General Education Programs [GEP] at a large metropolitan university in the southeastern United States. Coxhead (2000) stated that the corpus of a particular register such as academic texts should involve three components. First, a corpus should include texts from the variety of texts representative of that particular register. Second, a corpus should include sub-registers for the

purpose of organization. Finally, a corpus should be large enough to encompass the wide variety

of that particular register, which will be the size of the corpus. When conducting a corpus based

study the larger the sample the better, especially when compiling word list. However, Granger

(1998) found that a corpus containing less than a million words is suitable in conducting a

qualitative study.

Similarly, in Conner and Upton's book (2004) they indicated that in specialized corpus it

might be more beneficial to have a smaller and more focused corpus depending on the purpose of

the study. Compiling a corpus to analyze a particular grammatical feature in academic textbooks

is considered a specialized corpus. Conner and Upton (2004) explained that a sub-corpus, small-

scale corpus, or a specialized corpus size is between 20,000 – 250,000 words, while a whole

corpus size is between 1 – 5 million words. Thus, for the purpose of this study, a 20,000-word

corpus was deemed sufficient since the researcher was not looking at the occurrence of particular

words, but rather the occurrence of passive voice verbs compared to the total overall verbs.

Corpus and Preparation

Pilot Study 1: Passive Forms

A pilot study was conducted to determine which verbs would be counted. This pilot

study utilized the first page (Information to Users) from Shintani (1979) article's titled "The

Frequency and Usage of the English Passive" and resulted in Table 3 below. (See Appendix A.)

Table 3: Initial Study

Letter	Verb Type	Example
A	Vt/ active voice	John bought the house.
B	Vt/ active reduced	People building a new house must pay an impact fee.
C	Vt/ passive voice	The house was built by John.
D	Vt/ passive reduced	We didn't like the quality of the report submitted.
E	Vi	We ate.
F	Vt active/ Infinitive	She likes to interview others.
G	Vt passive/ Infinitive	She likes to be interviewed.
H	Infinitive/ Vi	She likes to sleep.
I	Vt active/ Gerund	She likes interviewing others.
J	Vt passive/ Gerund	She likes being interviewed.
K	Vi/ Gerund	She likes exercising.
Total	11 types	

Vt = Verb transitive; Vi = Verb intransitive.

Based on the results of the pilot study 1, the basic passive voice verb form was more frequent in comparison to the other verbs as seen in Table 3 (see Appendix A). Thus, the researcher decided to focus on the frequency of the basic passive voice verbs form (*be*-passives, *get*-passives, and *have*-passives) listed in Table 4.

Table 4: Type of Verbs and their Occurrences

Verb Type	Example
Vt/ *be*-passive	The house was built by John.
Vt/ *get*-passive	The house got demolished by the construction workers.
Vt/ *have*-passive	She had her purse stolen from her.
Total basic passive voice verbs	

Vt = Verb transitive

Pilot Study 2: Sample Size

In the initial stages of the study, the question of a necessary sample from each textbook arose. Therefore, this second pilot was initiated to estimate how many pages were needed to be scanned to compile the 5,000-word sample from each textbook.

One page (p. 165) was randomly selected from Yule (2010) "The Study of Language". Hyphenated words (e.g., one-sidedness) were counted as one word. The approximate number of words on page 165 was 500 words. It was concluded that a given page would have approximately around 500 words; however, the number of words may differ depending on the print, font, added graphs or other materials that a certain genre might utilize in their printed books. Based on Conner and Upton (2004), a 20,000-word corpus is a sufficient size for conducting a specialized corpus study.

Corpus linguistics procedures were used to assemble a corpus selected from academic freshman textbooks, which most freshman L2 learners might encounter across different fields of study when pursuing a higher education, in order to investigate the occurrence of the passive

voice. The most common textbooks were selected depending on required textbooks for college freshman enrolled in the top 10 fields of study at a large metropolitan university in the southeastern United States.

Beginning on page 100, words from random pages were scanned and compiled in a word document and numbered according to the different section such as A1 – p.1 for the first book in section A in the GEP, B1 – p.1 for the first book in section B in the GEP, D2 – p.1 for the second book in section D in the GEP, and E2 – p.1 for the second book in section E in the GEP. After all the pages were compiled in a corpus, the verbs were identified and counted accordingly with the following described method. First, the researcher counted all the *be*-passives, *get*-passives, and *have*-passives in each textbook sample selected from the required academic fields. Second, the researcher found the percentage of each basic passive verb compared to the total of all the verbs in each academic field. Third, the researcher compared the percentage of the basic passive voice verb occurrences to the total number of verb occurrences across the different academic textbooks. This method was followed in order to evaluate and calculate the frequency of the passive voice in freshman academic textbooks, which L2 learners might encounter and need to understand in order to prepare to write successfully in their perspective fields and disciplines.

Textbook Sample Selection Process

Information on the most common entry-level courses, the most common academic fields students enroll in, and the textbooks used in their freshman year courses was collected from web sources of a large metropolitan university in the southeastern United States. This university was

deemed a good target population because it is the nation's second-largest university and was ranked as one of the nation's "Most Innovative" universities in the 2016 U.S. News & World Report's Best Colleges rankings.

The following list is the top 10 majors by total enrollment at this university:

1. Psychology

2. Health Sciences: Pre-Clinical

3. Biomedical Sciences

4. Nursing

5. Mechanical Engineering

6. Hospitality Management

7. Accounting

8. Biology

9. Interdisciplinary Studies

10. General Business

(UCF Facts, 2014-2015)

Regardless of a student's major, all undergraduate students must take General Education Program (GEP) courses. As cited from the university's webpage:

"The purposes of the [this university's] General Education Program are to introduce students to a broad range of human knowledge and intellectual pursuits, to equip them with the analytic and expressive skills required to engage in those pursuits, to develop

their ability to think critically, and to prepare them for life-long learning" (UCF's GEP, n.d.).

Students are required to finish 36 hours from the GEP courses listed on the university's website.

Selection Steps

The following steps were taken to select freshmen textbooks that were included in the compiled corpus:

1. One textbook sample was selected from four of the five required sections: Communication Foundation; Cultural and Historical Foundation; Mathematical Foundation; Social Foundation; and Science Foundation.

2. Each of the previous sections has two sub-sections with courses listed, excepting the first section (Communication Foundations) which has three sub-sections. The second sub-section from Communication Foundations was eliminated because the first and second sub-sections both contained composition courses.

3. The first course from each sub-section in each major was initially selected (Table 5).

Table 5: List of some Required GEP Courses from which Textbooks were Selected

A.	Communication Foundation		9 credit hours
1.	ENC 1101	Composition I	
2.	SPC 1608	Fundamentals of Oral Communication	
B.	Cultural and Historical Foundation		9 credit hours
1.	EUH 2000	Western Civilization I	
2.	ARH 2050	History of Western Art I	
C.	Mathematical Foundation		6 credit hours
1.	MAC 1105C	College Algebra	
2.	CGS 1060C	Introduction to Computer Science	
D.	Social Foundation		6 credit hours
1.	ECO 2013	Principles of Macroeconomics	
2.	PSY 2012	General Psychology	
E.	Science Foundation		6 credit hours
1.	AST 2002	Astronomy PR: High School Algebra or MAC 1105C	
2.	BSC 1005	Biological Principles	

4. The researcher went to the university's campus library to find the required textbook for each course that was selected.

5. The researcher asked the librarian if these courses use the same books every year and semester. The researcher was informed that despite changes to specific textbooks or editions, the book types for each academic genre remain consistent.

6. Course materials could also be found online through the following website:

http://ucf.bncollege.com/webapp/wcs/stores/servlet/TBWizardView?catalogId=10001&langId=-1&storeId=16552

7. Some subjects listed more than one book. In the case of multiple required books, the first required book was selected and included in the corpus. Additional required and recommended books were not included.

8. The books utilized in this corpus were selected from the Spring 2016 required book list and are listed in Table 6 below.

Table 6: List of Textbooks for the Required Courses in the GEP

A.		Communication Foundation		9 credit hours	
1.	ENC 1101	Composition I	WRITING ABOUT WRITING-W/ACCESS REQUIRED PACKAGE |By WARDLE EDITION: 2ND 14; PUBLISHER: MAC HIGHER ISBN: 9781457636943	Section: 0002; SPRING 2016	
2.	SPC 1608	Fundamentals of Oral Communication	BETWEEN ONE+MANY >CUSTOM< REQUIRED |By BRYDON EDITION: 7TH 11 PUBLISHER: MCG CUSTOM ISBN: 9780077597900	Section: 0001; SPRING 2016	
B.		Cultural and Historical Foundation		9 credit hours	
1.	EUH 2000	Western Civilization I	MANY EUROPES-CONNECT PLUS ACCESS REQUIRED |By DUTTON EDITION: 14 PUBLISHER: MCG ISBN: 9780077586089	Section: 0001; SPRING 2016	
2.	ARH 2050	History of Western Art I	PERSPECTIVES ON WESTERN ART REQUIRED |By WREN EDITION: 87; PUBLISHER: PERSEUS PD ISBN: 9780064301541	Section: 0201; SPRING 2016	
C.		Mathematical Foundation		6 credit hours	
1.	MAC 1105C	College Algebra	ALEKS 360 - 18 MONTH ACCESS CODE >I< REQUIRED |By MILLER EDITION: W16 PUBLISHER: MCG CUSTOM ISBN: 9781259901546	Section: 0010; SPRING 2016	
2.	CGS 1060C	Introduction to Computer Science	CGS 1060C CONCEPTS W/SAM >IC< REQUIRED |By MORLEY EDITION: 6TH 14; PUBLISHER: CENGAGE C ISBN: 9781305006652	Section: 0001; SPRING 2016	
D.		Social Foundation		6 credit hours	
1.	ECO 2013	Principles of Macroeconomics	MACROECONOMICS CONNECT+ >I< REQUIRED |By KARLAN EDITION: 1ST; PUBLISHER: MCG CUSTOM ISBN: 9781259689864	Section: 0R01; SPRING 2016	
2.	PSY 2012	General Psychology	PSYCHOLOGY, DSM 5 UPDATE REQUIRED |By MYERS EDITION: 10TH 14; PUBLISHER: MAC HIGHER ISBN: 9781464164743	Section: 0002; SPRING 2016	
E.		Science Foundation		6 credit hours	
1.	AST 2002	Astronomy	ESSEN.COSMIC PERSPECTIVE W/MASTAST >IC< REQUIRED |By BENNETT EDITION: 1ST 14; PUBLISHER: PEARSON C ISBN: 9781269945066	Section: 0001; SPRING 2016	
2.	BSC 1005	Biological Principles	CAMPBELL ESSEN...W/PHYSIOLOGY REQUIRED |By SIMON EDITION: 5TH 16; PUBLISHER: PEARSON ISBN: 9780321967671	Section: 0001; SPRING 2016	

9. The corpus was compiled from these four books and disciplines based on the expectancy of containing more passive voice occurrences than the other fields and books. However, none were selected from the mathematical foundation because it was thought to contain very little or no passive voice in the courses mentioned above.

Table 7: List of Textbooks for the Required Courses in the GEP that have been Selected

A. Communication Foundation				9 credit hours
1.	ENC 1101	Composition I	WRITING ABOUT WRITING-W/ACCESS REQUIRED PACKAGE |By WARDLE EDITION: 2ND 14; PUBLISHER: MAC HIGHER ISBN: 9781457636943	Section: 0002; SPRING 2016
B. Cultural and Historical Foundation				**9 credit hours**
1.	EUH 2000	Western Civilization I	MANY EUROPES-CONNECT PLUS ACCESS REQUIRED |By DUTTON EDITION: 14 PUBLISHER: MCG ISBN: 9780077586089	Section: 0001; SPRING 2016
C. Mathematical Foundation				**6 credit hours**
D. Social Foundation				**6 credit hours**
2.	PSY 2012	General Psychology	PSYCHOLOGY, DSM 5 UPDATE REQUIRED |By MYERS EDITION: 10TH 14; PUBLISHER: MAC HIGHER ISBN: 9781464164743	Section: 0002; SPRING 2016
E. Science Foundation				**6 credit hours**
2.	BSC 1005	Biological Principles	CAMPBELL ESSEN...W/PHYSIOLOGY REQUIRED |By SIMON EDITION: 5TH 16; PUBLISHER: PEARSON ISBN: 9780321967671	Section: 0001; SPRING 2016

10. Then, approximately 5,000 words were sequentially selected from each book, intentionally excluding pages and sections that contained many pictures, graphs, questions, or end-of-chapter summaries and discussions. This was easily possible for the composition and history textbooks. However, the psychology and biology textbooks contained pictures on every page, and the number of words on each page was therefore

less as well. For all books, the selection of the sequential pages began at page 100 and continued until the sample size reached approximately 5,000 words for that book. Subsequently, the selected pages were scanned.

11. The textbook sample range was as follows:

    a. The composition book pages were 103-104, 108-116.

    b. The history book pages were 101, 110, 115-116, 118-119.

    c. The psychology book pages were 100-111.

    d. The biology book pages were 100-103, 107-116, and 121.

12. The scanned pages were converted from PDF documents to a Word document to create one compiled easily searchable document.

13. Each textbook sample was coded with a symbol in the Word document such A1 – p.1, B1 – p.1, D2 – p.1, and E2 – p.1 as previously described above for tracking purposes.

Data Compilation and Analysis Process

After selecting the academic textbooks, the researcher first scanned and numbered the selection by subject matter in the corpus as follows: A1, B1, D2, and E2. Second, all verbs were noted. Third, the occurrence of each basic passive voice (be, get, have) for each subject matter was highlighted with a different background color. Fourth, the highlighted passive verb occurrences were counted. Fifth, the occurrence of the passive voice in comparison to the overall count of verbs for each subject matter was calculated. Sixth, the data was analyzed for significant

differences between the frequencies of the passive voice by subject matter utilizing tables, frequency (count), percentages, and graphs. Seventh, the results and conclusions were discussed.

The researcher counted the occurrence of the basic form of the *be*-passives, *get*-passives, and *have*-passives. For example, the basic passive transitive forms are *The house <u>was built</u> by John* (*be*-passive); *The house <u>got built</u> by John* (*get*-passives) and *Mark <u>had his house built</u> by John* (*have*-passives). Therefore, the following forms were excluded from the frequency analysis such as: the reduced passive transitive form *We didn't like the quality of the report [that was] <u>submitted</u>;* the infinitive passive transitive form *She likes <u>to be interviewed</u>;* and the gerund passive transitive form *She likes <u>being interviewed</u>.* The researcher acknowledged the slight structural differences between the *be*-passives and the *get*-passives and *have*-passives.

To ensure the reliability of the reported data in this study, a second and third rater who are TESOL professionals with experience in teaching the English language and English grammar, were asked to read and mark the passive voice forms in 100% of the texts. There were no discrepancies between the researcher's findings and the other professionals' findings.

Summary of Analysis Procedure

As previously mentioned, the data was analyzed as follows:

1. The complete compiled document was analyzed by counting the number of passive voice compared to the total of the overall verbs in each subject.

2. The data analysis was entered in Table 4 above on p. 38.

3. Each subject had its own table analysis and was calculated separately.

4. An overall collective analysis table was utilized to compare the differences between subjects.

5. Chi-square model fit test was utilized to find statistical significance (p-value).

CHAPTER 4
RESULTS

Introduction

Two questions were addressed in this study:

1. How frequent is the use of passive voice in selected freshmen academic textbooks?

2. Are there statistically significant differences in frequency of use of passive voice by subject matter of textbooks?

This chapter provided detailed answers for the two previous questions. First, the results for the questions were organized by utilizing numbers, percentages, lists, tables, and charts. The first question was dedicated to the overall total frequency of the passive verbs while the second question was dedicated to investigating any significant differences between the textbook genres samples.

Regarding the first question, part one analyzed the basic passive voice frequency in comparison to the total number of verbs. Part two of the first section identified and compared the basic passive voice tense and aspect frequency by utilizing Folse's (2009) table and adding the past perfect tense.

Regarding the second question, part one discussed the basic passive voice frequency across the four academic textbooks selected. Part two of the second question identified the basic passive voice tense and aspect frequency across the four academic textbooks selected while also utilizing Folse's (2009) table and adding the past perfect tense.

To ensure the reliability of the reported data in this study, a second and third rater, who are TESOL professionals with experience in teaching the English language and English grammar, were asked to read and mark the passive voice forms in 100% of the texts. There were no discrepancies between the researcher's findings and the other professionals' findings.

Description of the Sample

The researcher identified four common academic textbooks from the General Education Programs [GEP] at a large metropolitan university in the southeastern United States frequently used in freshman classes and which were compiled into a corpus by randomly selecting approximately 5,000 words from each textbook for a total of 22,157 words. The corpus was then analyzed.

Data Analysis

The researcher counted the occurrence of the basic form of the *be*-passive, *get*-passive, and have-passive. For example, the basic passive transitive forms are: *The house <u>was built</u> by John* (*be*-passive); *The house <u>got built</u> by John* (*get*-passives) and *Mark <u>had his house built</u> by John* (*have*-passives). However, based on the results of the pilot study 1, the basic passive voice verb form was more frequent in comparison to the other verbs as seen in Table 3. Thus, the researcher decided to focus on the frequency of the basic passive voice verbs form (*be*-passives, *get*-passives, and *have*-passives) listed in Table 4. Therefore, the following forms were excluded from the frequency analysis: the reduced passive transitive form *We didn't like the quality of the report [that was] <u>submitted</u>;* the infinitive passive transitive form *She likes <u>to be interviewed</u>;*

and the gerund passive transitive form *She likes being interviewed.* The researcher took into account and was aware of the slight structural differences between the *be*-passives and the *get*-passives and *have*-passives.

The data analysis was divided into two sections (A and B) to answer the studies proposed questions. The first question was divided into two parts. Part one analyzed the basic passive voice frequency compared to the overall number of verbs while part two identified the frequency of the basic passive voice tenses and aspects. The second question was also divided into two parts. Part one analyzed the basic passive voice frequency between the academic textbooks while part two identified the frequency of the basic passive voice tenses and aspects between the academic textbooks.

The analysis in part two was made clearer by utilizing the table that Folse (2009) created and used in his book *Keys to teaching grammar to English language learners: A practical handbook* (on p. 244)*.* The researcher searched for the future tense "*verb to be + going to + be + past participle*" while analyzing the data; however, there were no occurrences in the corpus sample. The table was adapted to contain the *get*-passives and *have*-passives as well as the past perfect tense. The data for the questions was analyzed by utilizing raw numbers (frequency), percentages, lists, tables, and charts.

Research Question One

How frequent is the use of passive voice in selected freshmen academic textbooks?

This section reported the results obtained from the data regarding the total frequency of the passive voice verbs in freshman academic textbooks. Part one was dedicated to reporting and discussing the basic passive voice verb frequency in comparison to the total number of verbs. Part two identified and compared the total basic passive voice verb tense and aspect frequency utilizing Folse's (2009) table.

A. **Total Passive Voice Frequency Analysis for the Four Freshman Academic Textbooks**

Part One: Total Passive Voice Frequency

To analyze the data of this study, the researcher created a table to calculate the frequency and percentage of each of the passive voice verb types (*be*-passives, *get*-passives, and *have*-passives) in comparison to the overall verb count (vertically). This step was performed in order to estimate the frequency of basic passive voice verbs in comparison with the total number of verbs in the corpus. The data also analyzed the total frequency of the basic passive voice verbs across the four freshman academic textbooks in comparison to the overall verb count. (See Table 8)

The researcher used Microsoft Office Word's readability tool to obtain the total words and sentences. The total number of words in the corpus was 22,157 words. The total number of words in each textbook sample was as follows: composition, 5,676 words; history, 5,629 words; psychology, 5,555 words; and biology, 5,297 words.

During this first step, the data was calculated by dividing the total number of basic passive voice verbs forms by the overall total number of verbs. Then, each result was multiplied by a hundred to find the total frequency percentage. For example, the total frequency was $205 \div 2{,}903 = 0.0706 \times 100 = 7.06\%$. This step was repeated for each type of the basic passive forms and then repeated for each textbook accordingly.

Table 8: Total Passive Voice Frequency

Verbs	Book A Composition	Book B History	Book D Psychology	Book E Biology	Total
be-passive	27	67	29	78	201 6.92%
get-passive	2	0	0	0	2 .07%
have-passive	0	2	0	0	2 .07%
Total Passives	29 3.57%	69 9.69%	29 3.92%	78 12.19%	205 7.06%
Total Verbs	812	712	739	640	2,903

The results showed that the total frequency of the passive voice verb in comparison to the overall verb count utilized in this corpus was 205 examples of passive voice verbs in 2903 verb forms. When looking at the different passive voice types, the data indicated that the *be*-passives had a higher frequency than the *get*- and *have*-passives. The *be*-passives had a frequency of 201 while both the *get*- and *have*-passives had occurred with a relatively low frequency of 2 each.

However, when the total frequency of the passive voice was compared with the total verb frequency in each textbook sample, the results obtained different frequency results based on the

different genres utilized in the corpus. In the composition textbook, the researcher found 29 examples of passive voice verbs of 812 verb forms. In the history textbook, the researcher found 69 examples of passive voice verbs of 712 verb forms. In the psychology textbook, the researcher found 29 examples of passive voice verbs of 739 verb forms. In the biology textbook, the researcher found 78 examples of passive voice verbs of 640 verb forms.

Part Two: Total Passive Voice Tense and Aspect Frequency Analysis

To analyze the data in this part, the researcher utilized the table created by Folse (2009). The table was adapted to display the *get*-passives and *have*-passives as well as the past perfect tense. The *have*-passives form is *have + intervening noun phrase + past participle*. The researcher calculated the frequency of each of the basic passive voice verbs for (*be*-, *get*-, and *have*-passives) by organizing the occurrences of the basic passive verbs in a list (Appendix C). Then, the researcher calculated the occurrences based on the tenses.

Table 9: Total Passive Voice Frequency by Verb and Modal Tense

Verb Tense	Passive Voice be + Past Participle Frequency (Count)	Passive Voice get + Past Participle Frequency (Count)	Passive Voice have + Past Participle Frequency (Count)	Total
Present	99	1	0	100 48.78%
Past	60	0	2	62 30.24%
Present Progressive	1	1	0	2 .98%
Present Perfect	10	0	0	10 4.88%
Past Perfect	6	0	0	6 2.93%
All Other Tenses	0	0	0	0 0%
Present Modals	25	0	0	25 12.20%
Perfect Modals	0	0	0	0 0%
Total Passives	201	2	2	205

The results indicated that the most frequent passive voice verb tenses utilized in the textbooks were the present and past tenses with a relative frequency of 100 and 62 of 205 passive voice forms respectively. However, the other passive voice tenses frequencies were relatively minimal compared to the present and past tenses. For example, there were 10 occurrences of the present perfect passive voice tense, 6 occurrences of the past perfect passive voice tense, and only 2 occurrences of the present progressive passive voice tense. No other verb tenses had examples in passive voice in this 22,157-word corpus. Therefore, of the 12 verb tenses in English normally taught to English learners, only 5 had an occurrence in passive voice in the academic textbook corpus examined in the current study. The present modals occurred in 25 instances of 205 passive voice forms. There were no passive voice perfect modal occurrences in this corpus sample.

Research Question Two

Are there statistically significant differences in frequency of use of passive voice by subject

matter of textbooks?

This section reported the results obtained from the data regarding the frequency of the

basic passive voice verbs across the four freshman academic textbooks. Part one was focused on

the frequency of the basic passive voice while part two focused on the frequency of the basic

passive voice tenses and aspects.

B. Passive Voice Frequency Analysis by Subject Texts

Part One: Passive Voice Frequency Analysis by Subject Texts

The data in this section compared each text's frequency of the basic passive voice verbs.

In the first step, the data was calculated by dividing each textbook's total number of *be*-passives

forms by the overall total number of the basic *be*-passives verbs. Then, each result was

multiplied by a hundred to find the percentage for each textbook. For example, the composition

textbook was $27 \div 201 = 0.1343 \times 100 = 13.43\%$. This step was repeated for the *get*-passives and

then the *have*-passives. This method was used to find the percentages of the passive forms for

each textbook.

In the next step, the data was calculated by dividing the total number of the basic *be*-

passives, *get*-passives, and *have*-passives forms in each textbook sample by the total number of

the basic passive voice verbs. Then, each result was multiplied by a hundred to find the

percentage for each textbook. For example, the composition textbook was $29 \div 205 = 0.1414 \times$

100 = 14.14%. This method was used to find the percentages of the different forms for each textbook (Figure 6).

Table 10: Passive Voice Frequency Analysis by Subject Texts

Verbs	Book A Composition	Book B History	Book D Psychology	Book E Biology	Total
be-passives	27	67	29	78	201
	13.43%	33.33%	14.43%	38.81%	
get-passives	2	0	0	0	2
	100%	0%	0%	0%	
have-passives	0	2	0	0	2
	0%	100%	0%	0%	
Total Passives Voice Verbs	29	69	29	78	205
	14.15%	33.66%	14.15%	38.05%	
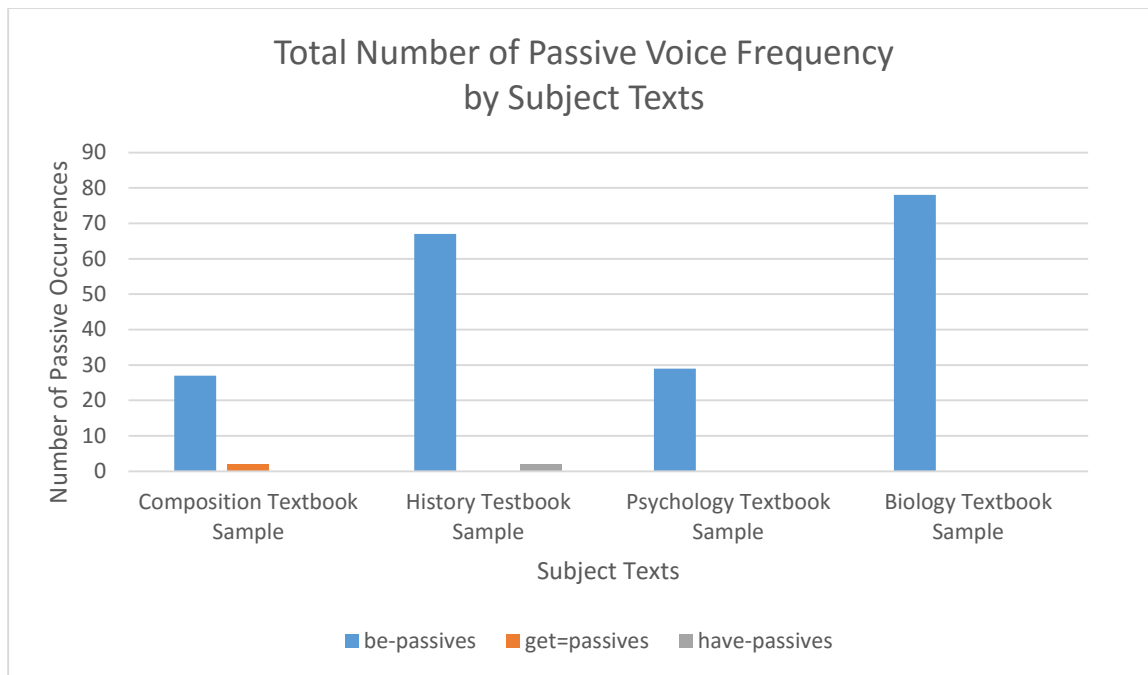
Figure 6: Total Number of Passive Voice Frequency by Subject Texts

The results in both Table 10 and Figure 6 demonstrated that the history and biology textbook samples have the relatively highest total passive voice verb frequencies at 69 and 78 of 205 passive voice forms, respectively. Additionally, they had the highest occurrence of the *be*-passives with a frequency of 67 for the history textbook sample and 78 for the biology textbook sample. However, the total passive voice frequency for the composition and the psychology textbook samples was significantly lower with the number of occurrences at only 29 each.

When looking at each textbook sample individually, the data mirrored similar results for the total overall passive voice verb as with each subject text. The results demonstrated a higher percentage of *be*-passive frequency for each textbook sample in comparison with the *get*- and *have*-passives. The individual percentages for the *be*-passives frequency for each subject

textbook sample was as follows: composition, 27; history, 67; psychology, 29; and biology, 78. The *get-* and *have*-passives frequencies showed no significant results across the different textbook genre samples.

The researcher applied the Chi-square (X^2) model fit index to compare the frequency of the passive voice across the four different genres and find the *p*-value of significance. The researcher applied the X^2 by first assuming that the textbook samples have an equal distribution of passive voice occurrence. Since there were approximately 200 occurrences of the passive voice, the expected occurrences would be 50 for each textbook sample. Second, the researcher then found the degree of freedom (df), which is the number of textbook samples – 1, which in this case was 3. Third, the researcher calculated the *be*-passives across the four academic genres.

Table 11: Chi-square (χ2) Model Fit Index Table

	Book A *Composition*	*Book B* *History*	*Book D* *Psychology*	*Book E* *Biology*	*Total*
Observed	27	67	29	78	201
Expected	50	50	50	50	200

The result of the Chi-square (X^2) model fit index, with a df = 3, was 7.00191e-09, which equals 0.000007. This means that the result is less than zero and the *p*-value < 0.05. Thus, there were significant differences between the academic genres ($p < 0.05$).

Part Two: Passive Voice Tense and Aspect Frequency Analysis by Subject Texts

In this section, the researcher compared the verb tense frequency of the basic passive voice verbs between each textbook. The frequency percentage was calculated by dividing the total number of the different verb tenses by the total number of the basic passive voice verbs. Then, the result was multiplied by a hundred to find the percentage for each textbook. For example, the present tense total percentage equaled $100 \div 205 = 0.4878 \times 100 = 48.78\%$.

Table 12: Passive Voice Frequency by Verb and Modal Tense in the Subject Textbooks

Tense	Book A Composition	Book B History	Book D Psychology	Book E Biology	Total
Present	22	6	13	59 59%	100 48.78%
Past	2	49 79.03%	6	5	62 29.27%
Present Continuous	1	0	0	1	2 0.98%
Present Perfect	2	3	1	4	10 4.88%
Past Perfect	1	4	1	0	6 2.93%
All Other Tenses	0	0	0	0	0 0%
Present Modals	1	7	8	9	20 12.20%
Perfect Modals	0	0	0	0	0 0%
Total Passive Voice verbs	29	69	29	78	205

The results in Table 12 displayed the most frequent passive voice verb tenses utilized in the textbooks. They were the present and past tense with a frequency of 100 and 62 of 205 passive voice verbs, respectively. The results also showed that the most frequent passive voice

verb tense utilized in the history textbook sample was the past tense with a frequency of 49 of 62

while the most frequent passive voice verb tense utilized in the biology textbook sample was the

present tense with a frequency of 59 of 100. The present modals occurred with a frequency of 25

examples of 205 passive voice instances. The results also showed that the modals were common

in the biology textbook sample with a frequency of 9 of 25 occurrences. The history and

psychology textbook samples had a frequency of 8 and 7 present modal passive voice in 25

instances, respectively. However, the composition textbook sample only had 1 present modal

occurrence in 25 instances.

Summary of Data Analysis Results

The most relevant results are summarized and restated below:

- In question one, part one, the results showed that the frequency of the passive voice

  was found in 7.06% of the overall verbs in the corpus. In the corpus sample the most

  frequent verb form was the *be*-passives with 6.92% of the total.

- In question one, part two, the results indicated that the most frequent passive voice

  tenses utilized in the textbooks were the present and past tense with a frequency of

  100 and 62 of 205 passive voice forms, respectively. The present modals occurred in

  passive voice with a frequency of 25 instances in 205 passive voice instances.

- In question two, part one, the results in both Table 10 and Figure 6 demonstrated that

  the history and the biology textbooks have the relatively highest total passive voice

  verb occurrences at 69 and 78, respectively. Additionally, they had the highest

occurrence of the *be*-passives with a frequency of 67 for the history textbook and 78 for the biology textbook. The Chi-square model fit index yielded a value of 7.00191e-09, with a df = 3, which equals 0.000007. Thus, there were statistically significant differences between the academic genres ($p < 0.05$).

- In question two, part two, when comparing the results of the most frequent passive voice verb tense across the individual subject texts, one can see that the biology textbook utilized 59 of 100 of all of the present tense passive verbs found in the academic textbooks. Similarly, the history textbook utilized 49 of 62 of the all of the past tense passive verbs found in the academic textbooks. The future *going to* tense did not occur in this corpus sample. Of the 25 present modal occurrences, they were most common in the biology (9), psychology (8), and history (7) textbook samples.

CHAPTER 5
CONCLUSIONS

Introduction

The purpose of this study was to determine (a) the most common entry level courses (i.e. texts) taken by freshmen at the target university; (b) the frequency of use of the passive voice in the texts; and (c) significant differences, if any, in frequency of use of passive voice in texts by subject matter. The aim was to identify whether there is a need to explicitly teach passive voice due to its frequency in academic textbooks, and if so, to what extent.

The study focused on answering two main questions:

1. How frequent is the use of passive voice in selected freshmen academic textbooks?

2. Are there statistically significant differences in frequency of use of passive voice by subject matter of textbooks?

Data Compilation and Analysis Process

The data was collected from four of the five common freshman academic textbooks from the General Education Programs [GEP] at a large metropolitan university in the southeastern United States frequently used in freshman classes. The data was compiled into a corpus by randomly selecting at least 5,000 words from each textbook for a total of 22,157 words which were then analyzed.

The data analyzed the frequency of the basic form of the *be*-passives, *get*-passives, and *have*-passives. For example, the basic passive transitive forms are *The house was built by John* (*be*-passives); *The house got built by John* (*get*-passives) and *Mark had his house built by John* (*have*-passives). However, based on the results of the pilot study 1, the basic passive voice verb form was more frequent in comparison to the other verbs in as seen in Table 3. Thus, the researcher decided to focus on the frequency of the basic passive voice verbs form (*be*-passives, *get*-passives, and *have*-passives) listed in Table 4. Therefore, the following forms were excluded from the frequency analysis: the reduced passive transitive form *We didn't like the quality of the report [that was] submitted;* the infinitive passive transitive form *She likes to be interviewed;* and the gerund passive transitive form *She likes being interviewed.* The researcher took into account and was aware of the slight structural differences between the *be*-passives and *get*-passives and the *have*-passives.

Discussion

How Frequent is the Use of Passive Voice in Selected Freshmen Academic Textbooks?

As the results showed, the frequency of the basic passive voice verbs as compared to the total number of verbs was 205 of 2903. However, it should be noted that the researcher only analyzed the basic passive voice verb form, meaning that gerunds, infinitives, and reduced forms were excluded. The results also showed that the most frequent passive form was the *be*-passive with a frequency of 201 of the 205 observed passive voice forms. It also indicated that the most

frequent verb tenses utilized for passive voice in the textbooks were the present and past tenses with occurrences of 100 and 62, respectively. Of the 12 verb tenses in ESL textbooks, only 5 had any instances, meaning that seven had no occurrences at all in the entire 22,157-word corpus.

These results showed that passive voice is used in the academic written textbooks, which supported both Folse's (2009) and Baratta's (2009) conclusions about passive voice. Folse (2009) stated that native students were taught to avoid passive voice or that passive voice makes writing weak. Use of the passive voice is not a problem, but overuse of the passive voice hinders the writing/reading flow. Speakers and writers who use the passive voice are "more effective in accurately and efficiently conveying the intended message" (Folse, 2009, p. 244). Supporting the previous statement, Baratta (2009) explained that the passive voice is used in English and has a role in academic writings. Therefore, these results showed that passive voice is a current construction in academic textbooks and is important for students to recognize and be able to use correctly.

The research also found that there were only two basic *get*-passives and two basic *have*-passives in the entire corpus. This could be due to the usage of *get* and *have* in informal spoken language rather than its usage in formal academic settings. Carter and McCarthy (1999) similarly explained that the *get*-passive constructions are mostly related to spoken informal language and reported speech, which is used in teaching English and in various academic courses. The results of this research support their conclusions.

Millar et al. (2013) found 20 common verbs associated with passive voice constructions. However, this research had a smaller corpus and therefore could not analyze verb (word)

occurrences. The researcher did compile a list of verbs to analyze the passive voice tenses and found that only a few verbs occurred more than once. Therefore, this study's corpus size was not large enough to make definite conclusions about the frequency of common verbs that would be associated with the basic passive voice constructions.

Analyzing the results, the research found that the most frequent passive voice used in freshman academic textbooks was the *be*-passives which had a frequency of 201 of 205 passive voice verbs. The *get-* and *have*-passives might be more common in spoken language, especially in informal settings. However, further research in spoken academic language would be necessary to investigate this point.

Are there Statistically Significant Differences in Frequency of Use of Passive Voice by Subject Matter of Textbooks?

When comparing the textbook samples, the results showed that the history and biology textbook have the relatively highest total passive voice verb frequencies at 69 and 78, respectively. Additionally, they had the highest number of *be*-passives with occurrences of 67 for the history textbook and 78 for the biology textbook. However, the composition and psychology textbooks had significantly lower total passive voice occurrences with 29 of 205 each. The results showed that there are differences between the subject's writing styles. Therefore, when teaching the passive voice, it is important to account for the differences or impart to students that there are differences between genres.

According to Cowan (2008), passive voice can be used with almost any of the verb tenses. This statement could not be supported based on the results found in this study. However,

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it seems that the most frequent tenses used with basic passive voice verbs were the present and past tenses. It was found that the history textbook utilized the passive voice past tense with a frequency of 49 of 62 while the biology textbook utilized the present tense with a frequency of 59 of 100.

The perfect progressive is rarely used in the passive voice constructions (Cowan, 2008). However, the study's results could not support this statement because the study focused on the basic form "verb to be + past participle".

Moreover, when further analyzing the data by comparing the different subject texts, it became clear that the history textbook sample utilized the past tense with the passive voice verbs more frequently than the other textbooks. This was a logical result because history primarily concerns itself with events that occurred in the past.

Similarly, the biology textbook sample utilized the present tense with passive voice much more frequently than the other textbook samples. This was also a logical result as the present passive voice is more appropriate to explain processes such as those found in biology.

Analyzing the results, the research found that some academic textbooks use passive voice more frequently than others. Therefore, teachers should make their students aware of possible differences between genres while still focusing on the basic *be*-passive as it is the most widely used form throughout all genres.

Implications for Students and Teachers

The results from the first question showed that passive voice occurred about 1 in 14 verbs, or about 1 in 7 main verbs, which means it transpired frequently. The most common passive voice in academic texts was the *be*-passive with a frequency of 6.92%. Schwarz (2015) found that the *be*-passives are considered a form of formal language. Therefore, teachers need to focus on the use of the formal basic *be*-passive voice when preparing students for higher education.

The most frequent tense used with the passive voice was the present and past tense with a frequency of 100 and 62 of 205 passive voice occurrences, respectively. The other tenses had a lower frequency such as the present progressive, present perfect, and past perfect. However, there were no future *going to* tense occurrences in the corpus sample. Thus, concentrating on the most common tenses used with the passive voice could assist students in understanding that the passive voice can be utilized with other tenses and not just the past tense. Moreover, the results showed that the present tense modals and past tense modals occurred with the passive voice, which means teachers should incorporate the modals and tenses when teaching the passive voice.

The second question showed that there were differences between the academic genres in both the frequency of the basic passive voice and the frequency of the verb tenses used in basic passive voice. The chi-square model fit index yielded a value of 7.00191e-09, with a df = 3, which equals 0.000007. Thus, there were statistically significant differences between the frequencies of the four academic genres ($p < 0.05$).

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The results revealed that the frequency of the basic *be*-passive verbs in the history and biology textbook samples were higher than that of the composition and psychology textbook samples. However, the *get*-passives and *have*-passives only had 2 occurrences each, which is not sufficient enough to base any conclusive opinions. The composition textbook had only 2 *get*-passive occurrences, which might indicate that *get* could possibly be used in stories because they might contain informal spoken forms. The only 2 occurrences of the *have*-passives were in the history textbook. Therefore, educators can impart to their students that some academic genres utilize the basic *be*-passive voice more frequently than others do.

The history textbook sample utilized the past tense with the passive voice verbs more frequently than the other textbook samples. This was a logical result because history primarily concerns itself with events that occurred in the past. Similarly, the biology textbook samples utilized the present tense with passive voice more frequently than the other textbook samples. As a result, teachers should clarify for their students how and why some genres use a certain tense more frequently with the passive voice than others do.

Of the 25 present modal occurrences, they were most common in the biology (9), psychology (8), and history (7) textbook samples. Interestingly, in the history textbook sample, there was only 1 occurrence of the present modal. There were no occurrences of the perfect modal (e.g. ...could have been established…) in the corpus sample used in the current study. These results show that different genres also utilized the passive voice modals and tenses differently.

As previously mentioned, Millar et al. (2013) found 20 common verbs associated with passive voice constructions. However, the study found that most *be*-passive constructions did not repeat past participles. There were some exceptions, with the following *be*-passive voice verbs occurring more than once in the corpus: *is called (5), are used (3), are built (2), are concentrated (2), are organized (2), are solar-powered (2), can be used (2), is caused (2), is converted (2), is generated (2), is made (2), was observed (2),* and *were hypnotized (2).* Therefore, it would seem best for educators to focus on teaching the passive voice sentence structures with its most frequently used tenses, present and past, rather than focusing on lists of verbs and their collocations for this grammar point. However, further research using corpora across a larger variety of disciplines is necessary in order to come to a definite conclusion about teaching the most frequent passive voice verbs using lists and collocations. Perhaps a much larger corpus would reveal more useful lexico-grammar information.

Although this research cannot draw a conclusion about which verbs should be taught in passive voice because the data did not reveal higher frequencies of certain verbs, there is definitely something to be said about the use of modals in passive voice.

Though there are perhaps more than two dozen modal verbs, including perfect and phrasal modals, the principal modals are *can*, *could*, *may*, *might*, *must*, *shall*, *should*, *will*, and *would*. These are the modals that are taught in many ESL textbooks and on popular ESL websites. However, in the current study, only 7 of these 9 occurred, and only two appeared more than five times. The raw frequency of the modals in this corpus was as follows: can (9), could (6), may (4), would (2), should (2), might (1), must (1), will (0), and shall (0).

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The teaching implication here is clear; when teaching passive voice with modals, *can*, *could*, and *may* warrant more attention than the other modals. In grammar classes, especially in an EAP setting, special attention, including textbook space and classroom time, should be devoted to the passive verb forms with these 3 modals.

Limitations and Recommendations for Future Studies

This study did not account for all the different form types of the passive voice and its syntactic structures and semantic features. The researcher only counted the overall frequency of occurrence of the "*be*-passive voice," "*get*-passive voice," and "*have*-passive voice" regardless of the purpose and did not account for the other form types such as the infinitive, gerund, or reduced forms of the passive voice.

While analyzing the data, the researcher found that the occurrence of the past participles for the passive voice rarely repeated more than once in this study's corpus sample, with some few exceptions. However, making a list of the most common passive voice verbs would need further research. Another finding was that the passive voice tense frequency was correlated to the academic genres. Conducting another study with a larger sample may yield different results that might be more beneficial in making generalized assumptions.

This study's sample consisted of four general freshman academic textbooks (written forms). However, neither academic lecture samples (spoken forms) nor academic student writing samples were included in the analysis. Thus, no student input, tests of understanding or level of

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knowledge, or student feedback were included in the analysis. Perhaps having a variety of academic sample might give better insight on how frequently the passive voice is used, and in turn, how it should be taught.

Further research to investigate the differences between each of the academic genres is needed to fully understand the various styles and forms of passive voice that is utilized in academic textbooks. Using a larger corpus sample size and utilizing samples from both written and spoken academic language, such as lectures and presentations, could be beneficial to truly analyze the frequency of the passive voice. Additionally, including student feedback and student written samples would also be another area to investigate in order to understand how both NSs and NNSs of the English language use passive voice.

Conclusions

The study focused on answering two questions:

1. How frequent is the use of passive voice in selected freshmen academic textbooks?

2. Are there statistically significant differences in frequency of use of passive voice by subject matter of textbooks?

The findings revealed that freshman academic textbooks used basic passive voice forms with a percentage of 7.06%, and the most frequent basic form used was *be*-passives with a percentage of 6.92%. Moreover, the results found that the most frequent basic passive voice tenses utilized in the textbook samples were the present and past tenses with a frequency of 117

and 70 of 205 basic passive voice forms, respectively. Therefore, the results of the study

demonstrated that basic passive voice is indeed utilized in academic textbooks.

Based on the different textbook genre samples, the basic passive voice was more

frequently utilized in two of the textbook samples: history, 69 examples of 205 passive voice

occurrences and biology, 78 examples of 205 passive voice occurrences. However, the other two

textbook samples, composition and psychology were significantly lower with a frequency of 29

examples of 205 passive voice occurrences. The results also found that the passive voice verbs

were most frequently utilized in the present and past tenses rather than the present progressive,

present perfect, and past perfect tenses. The modals occurred with a frequency of 25 of 205

passive voice instances. Therefore, the study results demonstrated statistically significant

differences between the academic genres ($p < 0.05$). The differences between the genres

examined in the study indicate a need to intensively and explicitly teach the basic *be*-passive

voice to English language learners. However, EAP learners with time limitations for their

English study, it is recommended that passive voice instruction should focus on simple present

tense, simple past tense, and modals rather than any other tenses.

APPENDIX A: PILOT STUDY 1

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Table 3: Initial Study

Letter	Verb Type	Example	Occurrences
A	Vt/active	John <u>bought</u> the house.	6
B	Vt/ active reduced	People [who] <u>building</u> a new house <u>must pay</u> an impact fee.	2
C	**Vt/ passive**	**The house <u>was built</u> by John.**	**9**
D	**Vt/ passive reduced**	**We didn't like the quality of the report [that was] <u>submitted</u>.**	**3**
E	Vi (be)	We <u>ate</u>. She <u>is</u> happy.	6
F	Infinitive/ vt active	She likes <u>to interview</u> others.	6
G	**Infinitive/ vt passive voice**	**She likes <u>to be interviewed</u>.**	**1**
H	Infinitive/ vi	She likes <u>to sleep</u>.	0
I	Gerund/ vt active	She likes <u>interviewing others</u>.	5
J	**Gerund/ vt passive**	**She likes <u>being interviewed</u>.**	**1**
K	Gerund/ vi	She likes <u>exercising</u>.	0
Total	11 Types	–	39

APPENDIX B: PILOT STUDY 2

came via the right ear. This is known as the **right ear advantage** for linguistic sounds. The process involved is best understood with the help of the accompanying illustration. (You're looking at the back of this head.)

In this process, the language signal received through the left ear is first sent to the right hemisphere and then has to be sent to the left hemisphere (language center) for processing. This non-direct route takes longer than a linguistic signal received through the right ear and going directly to the left hemisphere. First signal to get processed wins.

The right hemisphere appears to have primary responsibility for processing a lot of other incoming signals that are non-linguistic. In the dichotic listening test, it can be shown that non-verbal sounds (e.g. music, coughs, traffic noises, birds singing) are recognized more often via the left ear, meaning they are processed faster via the right hemisphere. So, among the specializations of the human brain, the right hemisphere is first choice for non-language sounds (among other things) and the left hemisphere specializes in language sounds (among other things too).

These specializations may actually have more to do with the type of processing, rather than the type of material, that is handled best by each of the two hemispheres. The essential distinction seems to be between analytic processing, such as recognizing the smaller details of sounds, words and phrase structures in rapid sequence, done with the "left brain," and holistic processing, such as identifying more general structures in language and experience, done with the "right brain."

The critical period

The apparent specialization of the left hemisphere for language is usually described in terms of lateral dominance or **lateralization** (one-sidedness). Since the human child does not emerge from the womb as a fully articulate language-user, it is generally thought that the lateralization process begins in early childhood. It coincides with the period during which language acquisition takes place. During childhood, there is a period when the human brain is most ready to receive input and learn a particular language. This is sometimes called the "sensitive period" for language acquisition, but is more generally known as **the critical period**.

Though some think it may start earlier, the general view is that the critical period for first language acquisition lasts from birth until puberty. If a child does not acquire language during this period, for any one of a number of reasons, then he or she will find it almost impossible to learn language later on. In one unfortunate but well-documented case, we have gained some insight into what happens when the critical period passes without adequate linguistic input.

APPENDIX C: TOTAL BASIC PASSIVE VOICE
VERB FREQUENCY LIST

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
1)	are absorbed	1	get laid	1	had their lands seized	1
2)	are added	1	getting paid	1	had them thrown	1
3)	are boosted	1				
4)	are built	2				
5)	are called	1				
6)	are carried	1				
7)	are chronically sleep deprived	1				
8)	are concentrated	2				
9)	are copied	1				
10)	are dissolved	1				
11)	are drawn	1				
12)	are elaborated	1				
13)	are especially sleep deprived	1				
14)	are examined	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
15)	are exchanged	1				
16)	are exposed	1				
17)	are followed	1				
18)	are interconnected	1				
19)	are intermeshed	1				
20)	are less inhibited	1				
21)	are made	1				
22)	are marked	1				
23)	are mostly forgotten	1				
24)	are needed	1				
25)	are once again reminded	1				
26)	are organized	2				
27)	are predisposed	1				
28)	are produced	1				
29)	are solar-powered	2				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
30)	are still performed	1				
31)	are suggested	1				
32)	are then trapped	1				
33)	are told	1				
34)	are used 3	3				
35)	are well differentiated	1				
36)	are written	1				
37)	can be applied	1				
38)	can be burned	1				
39)	can be performed	1				
40)	can be screened	1				
41)	can be traced	1				
42)	can be used	2				
43)	can therefore be viewed	1				
44)	cannot be destroyed	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
45)	could be charged	1				
46)	could be handled	1				
47)	could be interpreted	1				
48)	could not be persuaded	1				
49)	could not be roused	1				
50)	could not easily be predicted	1				
51)	had been angered	1				
52)	had been damaged	1				
53)	had been overthrown	1				
54)	had been pioneered	1				
55)	had been told	1				
56)	had not been hypnotized	1				
57)	has been called	1				
58)	has been colorfully called	1				
59)	has been detected	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
60)	has been documented	1				
61)	has been raised	1				
62)	have been affected	1				
63)	have been engineered	1				
64)	have been hypnotized	1				
65)	have been reminded	1				
66)	having been imprisoned	1				
67)	he's told	1				
68)	I'm seen	1				
69)	is absorbed	1				
70)	is associated	1				
71)	is being studied	1				
72)	is broken	1				
73)	is burned	1				
74)	is called	5				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
75)	is caused	2				
76)	is completed	1				
77)	is considered	1				
78)	is converted	2				
79)	is disturbed	1				
80)	is diverted	1				
81)	is effected	1				
82)	is estimated	1				
83)	is eventually transported	1				
84)	is generated	2				
85)	is grown	1				
86)	is hurt	1				
87)	is increased	1				
88)	is kicked out	1				
89)	is less influenced	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
90)	is made	2				
91)	is meditated	1				
92)	is more commonly used	1				
93)	is moved	1				
94)	is now forgotten	1				
95)	is now said	1				
96)	is poorly absorbed	1				
97)	is provided	1				
98)	is pushed	1				
99)	is reflected	1				
100)	is regenerated	1				
101)	is said	1				
102)	is shaken	1				
103)	is split	1				
104)	is stored	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
105)	is subjected	1				
106)	is suddenly awakened	1				
107)	is then converted	1				
108)	is thus reflected	1				
109)	is torn	1				
110)	is transferred	1				
111)	is transmitted	1				
112)	is typed	1				
113)	is uncovered	1				
114)	is underscored	1				
115)	is used	1				
116)	is worsened	1				
117)	may be energized	1				
118)	may be impaired	1				
119)	may be puzzled	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
120)	may be rendered	1				
121)	might be effectively relieved	1				
122)	must be converted	1				
123)	should also be avoided	1				
124)	should first be sent	1				
125)	was abolished	1				
126)	was allowed	1				
127)	was appeased	1				
128)	was assumed	1				
129)	was called	1				
130)	was composed	1				
131)	was considered	1				
132)	was designed	1				
133)	was destroyed	1				
134)	was divided	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
135)	was driven	1				
136)	was enhanced	1				
137)	was filled	1				
138)	was forced	1				
139)	was grounded	1				
140)	was intended	1				
141)	was killed	1				
142)	was located	1				
143)	was made up of	1				
144)	was never published	1				
145)	was observed	2				
146)	was organized	1				
147)	was performed	1				
148)	was purified	1				
149)	was put on	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
150)	was shaken	1				
151)	was shared	1				
152)	was stripped	1				
153)	was supplemented	1				
154)	was surrounded	1				
155)	was tested	1				
156)	was threatened	1				
157)	was used	1				
158)	was verified	1				
159)	were allowed	1				
160)	were asked	1				
161)	were beaten	1				
162)	were caught	1				
163)	were convinced	1				
164)	were enlisted	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
165)	were enslaved	1				
166)	were given	1				
167)	were hypnotized	2				
168)	were incorporated	1				
169)	were institutionalized	1				
170)	were kept	1				
171)	were known	1				
172)	were motivated	1				
173)	were not allowed	1				
174)	were not even permitted	1				
175)	were not given	1				
176)	were offered	1				
177)	were retained	1				
178)	were sacrificed	1				
179)	were startled	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
180)	were struck	1				
181)	were supposed	1				
182)	were thus reduced	1				
183)	would be polluted	1				
184)	would be surrendered	1				
Total		201		2		2

be-passives:

Auxiliary Verbs	am	are	had	has	have	is	was	were	Total
Frequency (Count)	1	42	6	5	5	57	35	25	176

Modals	can	could	may	might	must	shall	should	will	would	Total
Frequency (Count)	9	6	4	1	1	0	2	0	2	25

APPENDIX D: COMPOSITION TEXTBOOK –
BASIC PASSIVE VOICE VERB
FREQUENCY LIST

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
1)	are elaborated	1	get laid	1		
2)	are made	1	getting paid	1		
3)	are suggested	1				
4)	are well differentiated	1				
5)	are written	1				
6)	had been told	1				
7)	has been called	1				
8)	having been imprisoned	1				
9)	he's told	1				
10)	I'm seen	1				
11)	is completed	1				
12)	is considered	1				
13)	is effected	1				
14)	is hurt	1				
15)	is increased	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
16)	is kicked out.	1				
17)	is meditated	1				
18)	is now forgotten	1				
19)	is pushed	1				
20)	is said	1				
21)	is shaken	1				
22)	is torn	1				
23)	is typed	1				
24)	is used	1				
25)	may be rendered	1				
26)	was never published	1				
27)	was verified	1				
Total		27		2		0

be-passives:

Auxiliary Verbs	am	are	had	has	have	is	was	were	Total
Frequency (Count)	1	5	1	1	1	15	2	0	26

Modals	can	could	may	might	must	shall	should	will	would	Total
Frequency (Count)	0	0	1	0	0	0	0	0	0	1

APPENDIX E: HISTORY TEXTBOOK – BASIC PASSIVE VOICE VERB FREQUENCY LIST

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
1)	are drawn up	1			had their lands seized	1
2)	are examined	1			had them thrown	1
3)	are intermeshed	1				
4)	are used	1				
5)	could be charged	1				
6)	could be handled	1				
7)	could not be persuaded	1				
8)	could not easily be predicted	1				
9)	had been angered	1				
10)	had been damaged	1				
11)	had been overthrown	1				
12)	had been pioneered	1				
13)	has been colorfully called	1				
14)	has been detected	1				
15)	have been affected	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
16)	is estimated	1				
17)	is suddenly awakened from	1				
18)	should first be sent	1				
19)	was abolished	1				
20)	was appeased	1				
21)	was assumed	1				
22)	was called	1				
23)	was composed	1				
24)	was designed to	1				
25)	was destroyed	1				
26)	was divided	1				
27)	was driven	1				
28)	was enhanced	1				
29)	was filled	1				
30)	was forced	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
31)	was grounded	1				
32)	was intended to	1				
33)	was killed	1				
34)	was located	1				
35)	was made up of	1				
36)	was observed	2				
37)	was organized	1				
38)	was performed	1				
39)	was purified	1				
40)	was put on	1				
41)	was shaken	1				
42)	was shared	1				
43)	was stripped	1				
44)	was surrounded	1				
45)	was tested	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
46)	was threatened	1				
47)	were allowed	1				
48)	were beaten	1				
49)	were convinced	1				
50)	were enlisted	1				
51)	were enslaved	1				
52)	were incorporated	1				
53)	were institutionalized	1				
54)	were kept	1				
55)	were known	1				
56)	were motivated	1				
57)	were not allowed	1				
58)	were not even permitted	1				
59)	were not given	1				
60)	were offered	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
61)	were retained	1				
62)	were sacrificed	1				
63)	were supposed	1				
64)	were thus reduced	1				
65)	would be polluted	1				
66)	would be surrendered	1				
Total		67		0		2

be-passives:

Auxiliary Verbs	am	are	had	has	have	is	was	were	Total
Frequency (Count)	0	4	4	2	1	2	29	18	60

Modals	can	could	may	might	must	shall	should	will	would	Total
Frequency (Count)	0	4	0	0	0	0	1	0	2	7

APPENDIX F: PSYCHOLOGY TEXTBOOK - BASIC PASSIVE VOICE VERB FREQUENCY LIST

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
1)	are chronically sleep deprived	1				
2)	are especially sleep deprived	1				
3)	are followed	1				
4)	are less inhibited	1				
5)	are marked	1				
6)	are mostly forgotten	1				
7)	are needed	1				
8)	are once again reminded	1				
9)	are predisposed	1				
10)	are told	1				
11)	can be performed	1				
12)	could be interpreted	1				
13)	could not be roused	1				
14)	had not been hypnotized	1				
15)	have been hypnotized	1				
16)	is associated	1				
17)	is less influenced	1				
18)	is worsened	1				
19)	may be energized	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
20)	may be impaired	1				
21)	may be puzzled	1				
22)	might be effectively relieved	1				
23)	should also be avoided	1				
24)	was supplemented	1				
25)	were asked	1				
26)	were given	1				
27)	were hypnotized	1				
28)	were hypnotized	1				
29)	were struck	1				
Total		29		0		0

be-passives:

Auxiliary Verbs	am	are	had	has	have	is	was	were	Total
Frequency (Count)	0	10	1	0	1	3	1	5	21

Modals	can	could	may	might	must	shall	should	will	would	Total
Frequency (Count)	1	2	3	1	0	0	1	0	0	8

APPENDIX G: BIOLOGY TEXTBOOK – BASIC PASSIVE VOICE VERB FREQUENCY LIST

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
1)	are absorbed	1				
2)	are added	1				
3)	are boosted	1				
4)	are built	2				
5)	are called	1				
6)	are carried	1				
7)	are concentrated	2				
8)	are copied	1				
9)	are dissolved	1				
10)	are exchanged	1				
11)	are exposed	1				
12)	are interconnected	1				
13)	are organized	2				
14)	are produced	1				
15)	are solar-powered	2				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
16)	are still performed	1				
17)	are then trapped	1				
18)	are used	2				
19)	can be applied	1				
20)	can be burned	1				
21)	can be screened	1				
22)	can be traced	1				
23)	can be used	2				
24)	can therefore be viewed	1				
25)	cannot be destroyed	1				
26)	has been documented	1				
27)	has been raised	1				
28)	have been engineered	1				
29)	have been reminded	1				
30)	is absorbed	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
31)	is being studied	1				
32)	is broken	1				
33)	is burned	1				
34)	is called	5				
35)	is caused	2				
36)	is converted	2				
37)	is disturbed	1				
38)	is diverted	1				
39)	is eventually transported	1				
40)	is generated	2				
41)	is grown	1				
42)	is made	2				
43)	is more commonly used	1				
44)	is moved	1				
45)	is now said	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
46)	is poorly absorbed	1				
47)	is provided	1				
48)	is reflected	1				
49)	is regenerated	1				
50)	is split	1				
51)	is stored	1				
52)	is subjected	1				
53)	is then converted	1				
54)	is thus reflected	1				
55)	is transferred	1				
56)	is transmitted	1				
57)	is uncovered	1				
58)	is underscored	1				
59)	must be converted	1				
60)	was allowed	1				

#	be-passives	Frequency (count)	get-passives	Frequency (count)	have-passives	Frequency (count)
61)	was considered	1				
62)	was used	1				
63)	were caught	1				
64)	were startled	1				
Total		78		0		0

be-passives:

Auxiliary Verbs	*am*	*are*	*had*	*has*	*have*	*is*	*was*	*were*	*Total*
Frequency (Count)	0	23	0	2	2	37	3	2	69

Modals	*can*	*could*	*may*	*might*	*must*	*shall*	*should*	*will*	*would*	*Total*
Frequency (Count)	8	0	0	0	1	0	0	0	0	9

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