

ARTICLE

Semantic and Pragmatic Analysis of Adverbial Clauses of Reason in Applied Linguistics Research: The Case of *Because* and *Since*

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ABSTRACT

As a lecturer in the subject of research methodology for Thai EFL learners, they face difficulties in explaining reasons in methodology sections and using the English language to explain reasons. To alleviate this problem, the current study investigates information packaging and factual clauses in reason adjuncts in applied linguistics research methodology. To investigate the factual clauses with the synonyms *because* and *since*, the data collection used a purposive sampling method. After checking the SCOPUS website, *Journal of English for Specific Purposes* and *Journal of English for Academic Purposes* have similarity at 82 percent. The data analysis used SPSS version 29 called *Pearson Correlation* to seek relationships between two variables. The results show that there is a statistically significant relationship between factual clauses and adverbial clauses of reasons in the textual analysis of applied linguistics research methodology. The *p*-value is reported at 0.032. This explains that the similarities of 82 percent in Q1 SCOPUS *Journal of English for Specific Purposes* and *Journal of English for Academic Purposes* could refer to their reliability and validity of scientific reasons in research methodology. Even though the connectors *because* and *since* are near-synonymous, this study found the newest sense of the connector *since* to explain its difference from the connector *because*. The use of the adverbial clauses of reason in the left edge is explained by the pragmatic discourse of givenness. It is suggested that further investigation could lead to the codification of the newest sense of the connector *since* into the dictionary.

Keywords: Adjuncts of Reason; Applied Linguistics Research; Non-Factuality; Quantitative Study; Pearson Correlation; Semantics; Synonym

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1. Introduction

Many junior researchers face difficulties when explaining reasons for their selection of methodology^[1]. This results in reviewers raising questions. In addition, to support one's arguments and methodological selection, reasons should be given at the right time. The problem is that some researchers give too few or too many reasons, both of which lack effectiveness.

It is agreed that justifications are vital in writing academic research articles^[2]. This is related to the reliability and the validity of the results of the study. In the section of research methodology, justifying the reasons as to why one type of data analysis is selected over another is crucial to the reliability of the result of the study.

There are two ways to give reasons. While the first way is called *epistemic reasons* relating to one's beliefs and attitudes, the other is *scientific reasons*, referring to fact and empirical evidence to support. Unlike academic papers, most advertisements use epistemic reasons to arouse the buyers' desire to purchase products. For example, the Nike tagline, as in *just do it*, is interpreted as an epistemic reason^[3]. It is pragmatically interpreted with the directive speech act to mean *buy these shoes*. In addition, epistemic reasons were studied via the syntactic structures of *it*-extraposition in *Vogue* magazine, the British Version^[4]. The semantic denotations of gorgeousness are used to promote luxurious high-end products.

(1) It is nice to use colour and texture on bags and shoes to add excitement to outfits^[4].

This previous study focused on epistemic reasons or the reason of improving the sales volumes of the company. The writers in *Vogue* magazine tend to avoid using the words *important* and *necessary* when recommending products, like luxurious bags and shoes, to customers as they are not necessary objects for everyday living^[4]. The results of writing business communication, such as emails, magazines and newsletters can be measured by subscriptions, sales volumes and business profits. However, the results of the academic research measure reliability and validity of the study, leading to citations. Thus, justifications in academic research studies should sound scientific, empirical and non-subjective.

In terms of sentence structures, reasons can be ex-

pressed into adverbial clauses of reason with the adverbial connectors *because* and *since*. For example, *since we are living in the world of digital era, selling online has come to replace shopping malls*. Prescriptive grammar books addressed the interchangeably use of the adverbial connector *since* and *because*^[5]. Based on an observation, the connector *since* sounds more academic, which is likely to be used in a written register. Nevertheless, it is important to have empirical evidence and statistical data to support this hypothetical statement.

Reasons could be classified into being epistemic and factual, interchangeably known as scientific reasons. Factual reasons are objective, while epistemic reasons are subjective^[6]. *Subjectivity* includes personal attitudes and own viewpoints. Including subjective reasons in academic research writing may undermine the validity and reliability of the research study. Nevertheless, providing factual reasons in research methodology what to say and when to say it is a challenging task for novice researchers.

Most previous studies have paid attention to how business writers give reasons to encourage their customers to spend money. To the best of my knowledge, no one has studied how academic researchers give reasons to attest to the validity and reliability in their studies. This study contributes to the field by focusing on the study of measuring non-factuality of reason adjuncts in applied linguistics methodology. With this contribution, junior researchers in the field can visualize the terms of reliability in research studies more clearly, especially when they prepare literature reviews. There are two research questions in this study: 1) Is there a statistically significant relationship between adverbial clauses of reason and factual clauses in applied linguistics research methodology? 2) Is there a statistically significant relationship between adverbial clauses of reason and the placement on the right edge in applied linguistics research methodology. This information leads to the following objectives of the study.

1.1. Objectives of the Study

1. To measure the relationship between adverbial clauses of reason and factual clauses in applied linguistics research methodology.
2. To measure the relationship between adverbial clauses of reason and the placement on the right edge in

applied linguistics research methodology.

1.2. Statement of Hypotheses

1. There is a statistically significant relationship between adverbial clauses of reason and factual clauses in applied linguistics research methodology.
2. There is a statistically significant relationship between adverbial clauses of reason and the placement on the right edge in applied linguistics research methodology.

2. Literature Review

2.1. Semantic Principle of Compositionality

The semantic principle of compositionality refers to the syntactic arrangement phrases, clauses and sentences to create meaning ^[7]. Compositionality requires rules to follow where the placement of arguments in different positions of the sentence has an impact on its semantic denotations. This means that different positions of arguments are analyzed with different semantic roles, such as *agents*, *themes* and *experiencers* ^[7]. Agents are the one who performs an action ^[7]. Themes receive the energy of the action ^[7]. Consider the following examples.

(2) Tom hit Jerry.

(3) Jerry hit Tom.

Example (2) and (3) show the differences between how the two sentences are composed. *Tom* and *Jerry*, in the subject position in (2) and (3) are the agents, referring to the one instigating the act of hitting. On the other hand, *Jerry* and *Tom* in (2) and (3) as the objects of the transitive verb *hit* are themes, referring to the one who receives the energy of being *hit* by the agent. The syntactic arrangement is different from the semantic principles of compositionality. Syntactically, *Tom* and *Jerry* are the same as they are the determiner phrase (DP), which is indexed into the Spec T ^[8]. In contrast, the doers between the two sentences are different entities semantically. Thus, form is different from function.

In the theory of semantic principle of compositionality, the term *synonym* refers to closely related words ^[6,7,9], such as *freedom* and *independence*. While words can be synonymous, identical synonyms are rarely found. For ex-

ample, *rise*, *increase*, *augment*, *multiply* and *skyrocket* are synonyms, but they cannot exactly replace each other in the same context. Most synonyms are near synonym ^[6,7,9]. This study contributes to the closed-ended category of the connectors *because* and *since*. The closed categories are the set of words that are fixed and not usually expanded, which impacts semantic flexibility.

2.2. Semantic Principle of Non-Factuality

Semantically, clauses are classified into two types which are *factual clauses* and *non-factual clauses* ^[6]. Consider the following sentence to understand the semantic principle of factuality.

(4) I insist *that Sandy works hard*.

(5) I insist *that Sandy should work hard*.

The differences between (4) and (5) are *complementizer phrases* (CP). The noun clause *that Sandy works hard* is a factual clause ^[6]. However, *that Sandy should work hard* is a non-factual or epistemic clause. This shows possibility or probability, but it is not factual. Along the same lines, the term *epistemic* refers to attitudes, opinions and evaluation, which can be stratified into layers. For example, modal verbs in English are classified into types. For example, the meaning of possibility is exemplified via *may* and *might*. The level of certainty is exemplified via *have to* and *must* ^[6,9].

Epistemic clauses, which are sometimes called *epistemic reasons* in this study, are another principle that is used to analyze adverbial clauses of reason in this study. Consider example (6).

(6) AI is an educational tool *because it could help the writer check their spelling, grammar and word choice*.

Adverbial clauses of reason as in (6) are interpreted as an epistemic clause. Due to the modal verb *could*, it cannot be guaranteed that AI can completely and perfectly check a student's errors in academic writing.

2.3. Structuring Information: End-Weight Principle and Pragmatic Discourse of Givenness

End-weight principle is a pragmatic property, referring to how clauses and sentences are structured ^[10]. Since

the English language is a topic-focused language^[8], supplementary and additional information are structured in the final position of the sentence. The head or the subject of the sentence in English is shorter, but the predicate of the sentence is heavier^[10], such as (7).

(7) Mr. Tom, *who grew up in the USA, works as an English teacher in Thailand.*

Example (7) shows that *Mr. Tom* is the topic, which is thematically the agent of the sentence. The predicate is *who grew up in the USA, works as an English teacher in Thailand*. It follows the rule of end-weight principle where additional information about *Mr. Tom's* place of birth and his career is given at the final position of the sentence. To support the reliability of this statement, the expletive *it* is used with the delayed subject of control constructions. This is more common than using *to*-infinitive as the subject of the sentence^[11], such as (8)–(9).

(8) *To drink green tea everyday* is good for our health.

(9) It is good for our health *to drink green tea everyday.*

Even though examples (8) and (9) are the same in terms of their semantic denotations, which have the same truth value, using control constructions as the subject of the sentence as in (9) was found only once out of 800 tokens^[11]. Accordingly, the end-weight principle is a core linguistic principle in structuring sentences in the English language^[11].

In contrast to end-weight principle, *pragmatic discourse of givenness* refers to the placement of given information before the new piece of information^[11]. This provides cohesion between the given and new information structures in sentences. Givenness is information that has already been introduced from the previous sentence. The readers have known this background knowledge. Therefore, it is possible to keep givenness shorter, nominalized or replaced by pronouns. Consider the following example.

(10) Tom hit Jerry. *He* quickly ran away from him.

(11) Jerry was hit by Tom. *He* quickly ran away from him.

After considering examples (10) and (11), which sentence makes more sense in terms of its case marking?

The answer would be example (11). The pronoun *he* refers to *Tom* as *Tom* is the one who instigated the action of hitting and running away from Jerry.

2.4. Structuring Adverbial Clauses of Reason

This section presents how adverbial clauses of reason are structured. Consider adverbial clauses of reason as follows:

(12) AI is an educational tool *because it could help the writer check their spelling, grammar and word choice.*

Adverbial clause of reason, such as (12), is a type of complex sentences^[5]. In English, a complex sentence has two clauses, which are independent and dependent clauses^[5]. The independent clause, such as *AI is an educational tool*, can stand alone grammatically. In contrast, the dependent clause *because it could help the writer check their spelling, grammar and word choice* cannot stand alone as it leads to ungrammaticality of the sentence. It is possible for the two clauses to swap positions interchangeably. It does not affect its grammaticality and meaningfulness^[11].

(13) *Because AI could help the writer check their spelling, grammar and word choice*, it is an educational tool.

In addition, a variety of adverbial connectors can be used synonymously or replaced with the same meaning, such as *since*, *because* and *as*.

2.5. Adjuncts of Reason

Adjunct is a linguistic term which is commonly used in descriptive linguistics, cognitive linguistics and generative linguistics. It is a part of a sentence that is possible to omit without affecting the grammaticality of the sentence^[8,12,13]. There are different kinds of adjuncts, including place, manner, time and reason^[8]. Place indicates location as in *I will meet you at the canteen*. *At the canteen* is an adjunct. In the sentence *She is running quickly*, the adverbial phrase *quickly* is an adjunct of manner. In the sentence *I have a cup of green tea every morning*, *every morning* is an adjunct of time or a temporal adjunct. Omitting *at the canteen*, *quickly* and *every morning* do not affect the grammaticality of the sentences.

Adjuncts of place, manner and time are common-

ly found in prescriptive grammar books ^[14] and they are taught in English language classrooms.

This study sheds light on adjuncts of reason. Although English syntax classifies adjuncts of reason within the same category as adjuncts of place, manners and time ^[14], the focus of reason adjuncts in the current study is adverbial clauses or reasons, such as (14).

(14) Peter took antibiotic drugs *because he had a respiratory infection*.

Example (14) shows that the dependent clause *because he had a respiratory infection* is an adverbial clause of reason. It is syntactically classified as an adjunct as omitting this information does not impact the grammaticality of the sentence ^[8].

2.6. Related Previous Studies

Previous studies focused on the study of epistemicity and non-factuality in different linguistics layers ^[15]. The lexical semantics in their study included the words *believe*, *think*, *know* and *understand*. The verb *believe* and *think* are classified as non-factual, while the word *know* and *understand* are classified as factual ^[15]. These lexical items were investigated in news headlines in English. When the words *believe* and *think* are used in the news headlines, the readers mostly perceived that the contents presented in supportive move were opinions and attitudes rather than fact. This relates to how much the readers trust the writers ^[15]. Epistemic verbs in Buddhist texts were investigated by applied the levels of epistemic modality verbs into three layers, including certainty, probability, and possibility. The model verbs representing certainty are *have to* and *must* ^[16]. The model verbs that express the level of probability are *will*, *would*, *should*, *ought to* and *shall* ^[16]. The model verbs that express the level of possibility are *may*, *might*, *can* and *could*, such as (15).

(15) After this life, you *may* be reborn in a realm filled with extreme suffering ^[16].

The results in his study showed that the epistemic model verbs in the layers of certainty, probability and possibility in Buddhist texts are 1.10 percent, 26.51 percent and 72.37 percent, respectively. The level of possible epistemic model verbs was the highest frequency since the

next life has not yet been proven to be factual or non-factual. Non-factuality at a lexical level was found in a study of control constructions in British and American English news articles ^[11]. This study reported the factuality and non-factuality of control constructions in different variants including gerunds and *to*-infinitive clauses, as in (16)–(17).

(16) Peter enjoys *playing football*.

(17) Mary wants *to study a third language*.

The inflectional morpheme *-ing* as used in *playing football*, indicates factuality as it is habitual. The psychological state *enjoys* and the activity of *playing football* are simultaneous. On the other hand, *to*-infinitive control constructions are interpreted as non-factual clauses as the event of *studying a third language* is Mary's expectation or desire. The interpretation of *to*-infinitive clauses as non-factual events is interpreted as future events ^[17]. The infinitival *to* was interpreted as the epistemic modal verb *will* ^[17]. While most previous studies focused on smaller linguistic units to investigate the non-factuality of textual analysis, this study contributes something new to the field by focusing on epistemic clauses focusing on adverbial clauses of reason. The semantic principles of non-factuality may provide a new contribution to this textual analysis leading to new results and discussion.

3. Materials and Methods

The current study is a quantitative research study. The sampling in this study was *a purposive sampling method*. The purposive sampling method is suitable for a research design that expects to gain insightful interpretation for specific data collection ^[18]. The sample must be homogeneous ^[19]. As such, this method is appropriate to the current study as the researcher seeks certain characteristics of linguistic properties in research articles.

3.1. Population

The population in this study is Q1 SCOPUS applied linguistics research publications of the United Kingdom (UK) in 2024 as listed in **Table 1**.

Table 1. Q1 SCOPUS applied linguistics research publications of the UK in 2024.

Journals		Similarities
<i>International Review of Applied Linguistics Teaching</i>	<i>Language Teaching Research</i>	89 percent
<i>System</i>	<i>Language Teaching Research</i>	85 Percent
<i>Journal of English for Academic Purposes</i>	<i>English for Specific Purposes</i>	82 percent
<i>Language Teaching</i>	<i>Language Research</i>	81 Percent
<i>Language Learning Journal</i>	<i>Language Teaching Research</i>	80 percent
<i>RELC Journal</i>	<i>TRSL-EJ</i>	71 percent
<i>Applied Linguistics</i>	<i>Applied Linguistics Review</i>	68 percent
<i>Computer Assisted Language Learning</i>	<i>CALL-EJ</i>	74 percent
<i>Assessing Writing</i>	<i>Journal of Second Language Writing</i>	62 percent

Language Teaching Research and *System* are excellent journals, but they also focus of other languages in addition to English such as foreign language teaching, for example, Chinese and Arabic. To make sure that the data collection in this study is homogeneously about applied linguistics in the English language, *Journal of English for Academic Purposes* and *English for Specific Purposes* are the samples in this study. These two journals were made into a corpus of data collection.

Data Collection

The data collection in this study is based on non-probability sampling method. The sampling technique in this study is purposive sampling technique. *Journal of English for Academic Purposes* and *English for Specific Purposes* were selected. Two publications of Q1 SCOPUS applied linguistics journals were selected as the sample of applied linguistic research in this study. The first criterion was that the two publications selected are homogeneous, as shown in **Figure 1**.

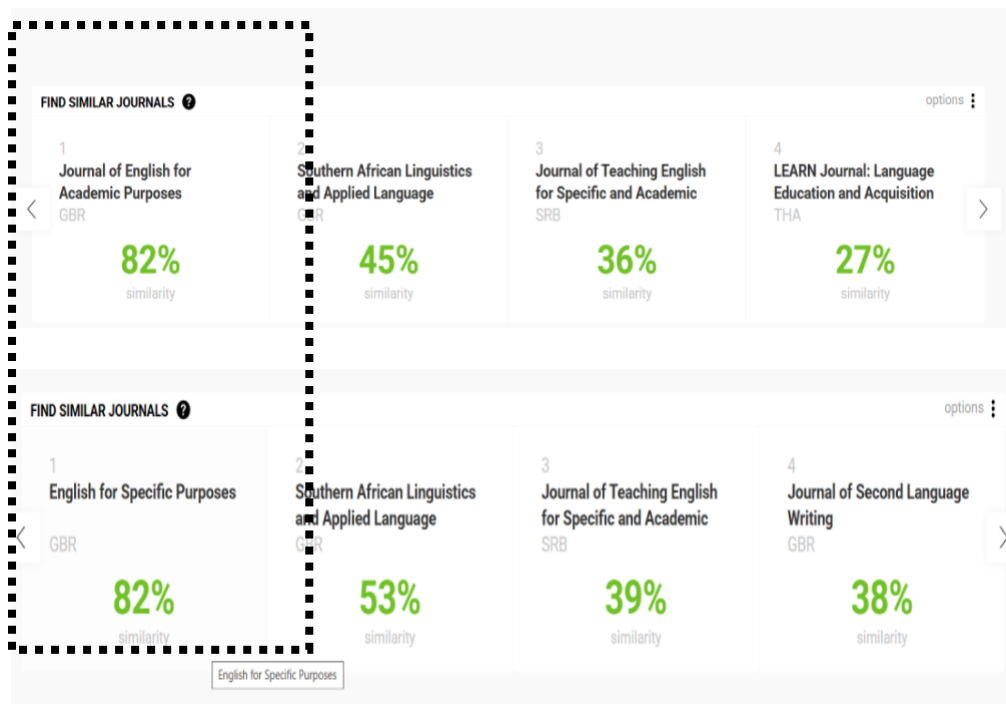


Figure 1. Similarity between the Two Journals (Scimagojr Website, July 3, 2025).

On the Scimagojr website, *English for Specific Purposes* shows a similarity at 82 percent with *Journal of English for Academic Purposes*. This study will explain what is meant by the similarity percentage of 82 percent between the two international journals. These two journals were, therefore, selected as the data collection in academic textual analysis in this current study.

In 2024, *English for Specific Purposes* published 4 volumes, containing approximately 10 articles per issue. There was a total of 40 articles that year. In 2024, *Journal of English for Academic Purposes* published six issues containing approximately 10 articles per issue. There was a total of 60 articles for the year. Thus, the population in this study is 100 applied linguistics research methodologies. To avoid bias and to gain maximum representation in the data collection, the current study contained 100 applied linguistics research methodologies for both Q1 SCOPUS research journals, whereas book reviews and academic articles were excluded as they did not have methodologies.

English for Specific Purposes volumes 73–76, published in 2024, were collected as the sample in this study. It appeared that there were 16 research articles using either the connectors *because* or *since* in the section or methodology. While *Journal of English for Academic Purposes* published six issues, containing approximately 10 articles per issue, to make the number of research articles collected equivalent to *English for Specific Purposes*, only four volumes were collected including the volumes 69–72. Thus, the corpus size in this current study was approximate 700,000 words.

The nodes that the researcher used to select the adverbial clauses of reason in this study were the lexically synonymous *since* and *because*. These keywords are common connectors to introduce reason^[14,18]. The data collection in this study is exemplified as follows:

Data Collection Procedure

[...] Peter took antibiotic drugs *because* he had a respiratory infection [...]

[...] Peter took antibiotic drugs *since* he had a respiratory infection [...]

The data were collected manually and recorded in Microsoft Excel as a corpus of data collection. However, three research articles that were observed as a pilot study were excluded from the main results of the study. The data

were annotated as follows: [BECAUSE; RIGHT-EDGE; FACTUALITY].

Regarding the corpus in this study, all adverbial clauses of reasons in the section of methodology containing *since* and *because* were collected. This is because the connector *since* could denote either temporality and reasons. It is important for the researcher to carefully extract the tokens that is contextually used with the semantic denotations of reason. Moreover, the study of pragmatic analysis of adverbial clauses of reason in this study is beyond a sentence level. Sentences in the left and in the right are important adjacent to support the data analysis of pragmatic discourse of givenness, so the length of extracting has an influence of precise data analysis pragmatically.

In addition, it is important to point out the factual constitutes and criteria for right-edge placement in this study. Analyzing whether it is left-edge placement of right edge placement depends on the matrix clauses. For example, *since* he had a respiratory infection is the right-edge placement according to its matrix clause.

3.2. Data Analysis

Measuring meaning is a challenging task. The data analysis in this study was divided into linguistic frameworks for textual analysis and inferential statistical analysis, including coding system and analytical tool. Therefore, the study of meaning in this study is measurable.

The principle of *synonym* in this study follows semanticists^[6,7,9]. There are different types of synonyms in English including *identical synonym* and *near synonym*. After the data analysis, which type of synonym the synonymous pair *because* and *since* in research methodology belong to was determined.

The semantic principle of factual clauses is used in this study^[7]. There are four kinds of embedded clauses, including full statement, full question, gerund and infinitive.

(18) I insist *that Cameron work hard*^[7].

(19) I insist *that Cameron should work hard*^[7].

That Cameron work hard and *that Cameron should work hard* represent embedded clauses, known as *noun clause complements*^[20]. In (18), the subject *I insist that* is true when uttered. Consequently, this makes the embedded clause true. However, example (19) is semantically interpreted as non-factual due to the epistemic modality verb

should as it is attitudinal and subjective.

The embedded clauses investigated in this study are the adjuncts of reason, which are adverbial clauses of reason. Reasons can be classified into scientific reasons which are always true, and non-factual reason which are

true subjectively and attitudinally. The conditional system of coding is shown in **Table 2**.

H1. *There is a statistically significant relationship between adverbial clauses of reason and factual clauses in applied linguistics research methodology.*

Table 2. Coding System of Semantic Principles of Factual Clauses.

Code 1	Code 2
Code 1 was assigned if the adverbial clauses of reason in applied linguistics research methodology were factual clauses.	Code 2 was assigned if the adverbial clauses of reason in applied linguistics research methodology were non-factual clauses, containing subjectivity, attitudes and personal opinions.
Example	Example
(20) Abstracts were selected from the 2019 conference <i>since conference programs beyond that year were not accessible online at the time of the corpus compilation</i> .	(21) This was not a challenge <i>because the majority of those published on websites tended to be general and those shared by participants were requested to be untailored</i> .

According to **Table 2**, example (20) is a factual clause. Example (21) is a non-factual clause. The verb *tend to*, which denotes the writers' subjectivity. An inferential statistical program was used to calculate the statistical relationship. In the fields of humanities and social sciences, if the *p*-value is equivalent to, or less than 0.05, it is interpreted to have a statistically significant relationship ^[18,19].

Since adjuncts can be positioned in either the initial position of the sentence or the final position of the sentence ^[8] structuring adjuncts of reason could or could not relate to non-factual reasons and scientific reasons. The second part of investigation applied the linguistics theory of *information structuring* ^[10] and factual clauses to examine their relationships. It is possible to structure adjuncts in different positions of the sentence, while their semantic denotations and truth values are the same.

(22) *In 2025*, the number of elderly citizens in Thailand has increased 3 percent.

(23) The number of elderly citizens in Thailand has increased 3 percent *in 2025*.

Example (22) and (23) are semantically the same despite the temporal adjuncts *in 2025* being landed on the other edge of the sentence.

According to prescriptive grammar, adverbial clauses of reason with the connectors *because* and *since* are not suggested to be placed at the beginning of the sentence, which is the left position of the sentence ^[5,14]. Especially,

in English grammar classrooms, English language teachers usually suggest that adverbial clauses of reason should be placed at the right position of the sentence. With the suggestion in prescriptive grammar books and the belief of English language teachers, the second hypothesis was formulated as follows:

H2. *There is a statistically significant relationship between adverbial clauses of reason and their placement on the right edge in applied linguistics research methodology.*

Table 3 shows the data analysis that was coded into digits. Example (24) is an adverbial clause of reason that is placed at the right edge of the sentence. Example (25) is an adverbial clause of reason that was placed at the left edge of the sentence. Analysing whether it is the right edge or the left edge depends on the matrix clause. An inferential statistical program was used to calculate the statistical relationship. For statistical analysis, if the *p*-value is equivalent to or less than 0.05, it is interpreted to have a statistically significant relationship in the field of humanities and social sciences ^[18,19]. To make sure the reliability of the data analysis in this study, inter-rater readability was applied. Three linguists were asked to validated five items from the data analysis randomly as a pilot study. This allowed the researcher to visualize their agreement and consensus of the data analysis. Suggestion and negotiation created the improvement of data analysis in this study.

Table 3. Coding System of Factual Clauses of Reason Adjuncts.

Code 1 (Right Edge)	Code 2 (Left Edge)
Code 1 was assigned if the adverbial clauses of reason in applied linguistics research methodology were placed on the right edge of the sentence.	Code 2 was assigned if the adverbial clauses of reason in applied linguistics research methodology were placed on the left edge of the sentence.
Example	Example
(24) Abstracts were selected from the 2019 conference <i>since conference programs beyond that year were not accessible online at the time of the corpus compilation</i> .	(25) they are considered as local <i>Since connectives are used to connect phrases, clauses, and sentences, measures of cohesion</i> .

4. The Results

H1. *There is a statistically significant relationship between adjuncts of reasons and factual clauses in applied linguistics research methodology.*

This section presents the results of the study. A total of 100 methodologies in applied linguistics research articles were gathered to study adverbial clauses of reasons, focusing on the synonyms *because* and *since*. The results of the study were found as in **Table 4**.

Table 5 reports the correlation between the adverbial clauses of reason and factual clauses in research methodology. The results in this study showed a significant relationship between the linguistic variables of adverbial clauses of reason in research methodology and factual clauses. The *p*-value was reported at 0.032. Thus, unlike epistemic reasons, the reasons that are used to explain in applied linguistics methodology are scientific. To support this quantitative data, empirical evidence of factual clauses is given in (26)–(27).

Table 4. Correlation of the Adverbial Clauses of Reason and Factual Clauses in Research Methodology.

		Tokens	Factual Clauses
	Pearson Correlation	1	−0.274*
Tokens	Sig. (2-tailed)		0.032
	N	61	61

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5. Correlation between Adverbial Clauses of Reason and their Right-Edge Placement in Research Methodology.

		Tokens	Right-Edge Placement
	Pearson Correlation	1	0.031
Tokens	Sig. (2-tailed)		0.814
	N	61	61

(26) *Since connectives are used to connect phrases, clauses, and sentences*, they are considered local measures of cohesion^[23].

(27) Abstracts were selected from the 2019 conference *since conference programs beyond that year were not accessible online at the time of corpus compilation*^[21].

The adverbial clauses of reason with the connector *since* in (26) and (27) are factual clauses. In discourse analysis, connectors are grammatically used to connect phrases, clauses and sentences^[23]. In (27), the abstracts before 2019 were unavailable online. Thus, there is no at-

titude, subjectivity or personal opinion included in the researchers' justifications.

However, a few tokens were found with the researchers' personal attitudes as included in their factual clauses. Examples (28) and (30) are epistemic clauses of reason,

(28) *Because students often feel tempted to report findings/methods/perspectives from studies as a group without detailing those of individual studies*, it was also pointed out and illustrated through genre exemplars that in constructing their argument authors may often use information not only from groups of studies but also from indi-

vidual studies as evidence ^[24].

(29) This was not a challenge *because the majority of those published on websites tended to be general and those shared by participants were requested to be untailored* ^[25].

(30) While we agree with criteria two and four, we decided to diverge from [someone] by only partially following criterion five *because EAP practitioners of the target discipline and genre might benefit from hands-on corpus interaction* ^[26].

Examples (28)–(30) are non-factual clauses. The researchers include their own subjectivity and personal expression when they explain reasons in their research methodology, such as *often feel tempted, tended to be general, might, particularly popular and commonly used*. Since only a few tokens of non-factual clause were found, a statistically significant relationship between factual clauses and adverbial clauses of reasons were reported at 0.032. Thus, the first hypothesis in this study was accepted.

Hypothesis 2: There is a statistically significant relationship between adverbial clauses of reason and their placement on the right edge in applied linguistics research methodology.

Table 5 reports the correlation between the adverbial clauses of reason in research methodology and their right-edge placement. The results in this study showed that there is no statistically significant relationship between the adverbial clauses of reason in research methodology and their right-edge placement. The *p*-value was reported at 0.814. Thus, the second hypothesis in this study was rejected. To support this with qualitative evidence, examples of adverbial clauses of reason are given in (31) and (32).

(31) *Because the control and experimental groups had different treatments*, this study was conducted in 16 weeks through a parallel design in three stages as follows ^[27]:

(32) *Since the essays were written by nonnative speakers of English*, they contained errors that impacted the tagger's precision and recall ^[28].

Example (31) and (32) show that the adverbial clauses of reason with the connector *because* and *since* are placed at the initial position of the sentences. Moreover, both tokens are factual clauses.

5. Discussion

The discussion in this study focuses on theoretical contribution to factual clauses in English, and the synonymous pair *because* and *since*. In addition, *pragmatic discourse of givenness* is the reason to explain why there is no statistically significant relationship between adverbial clauses of reason and right-edge position.

5.1. Theoretical Contributions

1. Unlike epistemic reasons, the adverbial clauses of reason in applied linguistics research methodology are used as factual clauses interchangeably known as factual reasons.
2. Prescriptive grammarians suggested that the adverbial clauses of reason with the connectors *because* and *since* should be placed on the right edge of the sentence ^[5,14]. This claim would be true with the rules of prescriptive grammar and EFL classrooms. It would be argued that this is not limited to descriptive grammar that is used by Q1 SCOPUS writers in applied linguistics research methodology.

The results in this study contributed theoretically to semantic principle of compositionality ^[6,7,9] and semantic principle of (non)-factuality in the English language ^[7].

Previous studies theoretically contributed to markedness theory, an unmarked form is a common form, while marked is an uncommon form ^[29]. To elaborate, the frequent linguistic pattern is interpreted as an unmarked feature, but the less frequent linguistic pattern is interpreted as a marked pattern. For example, the *to*-infinitive and *-ing* form are occasionally used interchangeably, as in *I like to swim* and *I like swimming*. The form of *to*-infinitive in English that is used more frequently, is interpreted as an unmarked form ^[11]. The criteria that could be used to make a judgement of either marked or unmarked form is frequency. The frequency of the connector *because* outweighed the connector *since*. The connector *because* is an unmarked form, while the connector *since* is a marked form.

While markedness reflects the higher frequencies and preferences of one form over the other, both different forms as in the connectors *because* and *since* semantically are near-synonymous relationship. So, the contribution of

semantic principle of compositionality is synonym. Although there is an identical synonym, which is rarely found [6,7,9], the results of the study should that the words *because* and *since* can be set as an example of near-synonym. The word *since* has its own specific use in terms of factual reports, while the connector *because* could be used with both factual and non-factual clauses of reason.

5.2. Semantics and Pragmatic Analysis

5.2.1. Since as a Factual Reason

According to the theory of semantic principle of compositionality, the term *synonym* refers to closely related words [6,7,9]. *Since* and *because* are closed categories [8]. Although the words in this category will not be expanded further like open category, the sense of the words never stop extending. This study leads to the new finding that the words *since* and *because* are not interchangeably synonymous in all cases. This study found that the word *since* is always (100 percent) used as a factual clause despite being placed in different positions of the sentence. In contrast, the word *because* in this study was found to be used with factual clauses and non-factual clauses as in (35)–(37).

(35) This was not a challenge *because the majority*

of those published on websites tended to be general and those shared by participants were requested to be untailored [25].

(36) *Because the control and experimental groups had different treatments*, this study was conducted in 16 weeks through a parallel design in three stages as follows [30]:

(37) *Since connectives are used to connect phrases, clauses, and sentences*, they are considered as local measures of cohesion [23].

(38) *Since Nature published fewer RAs and NVs in social sciences*, we only selected seven texts from the journal [31]

The examples of adverbial clauses of reason in (35) and (36) are non-factual clauses and factual clauses, respectively. In contrast, the example of the adverbial clause of reason with the connector *since* in (37)–(38) is a factual clause. Example (35) illustrates a non-factual use of *because* due to the author's subjectivity *tended to be general*, whereas (36) shows a factual use. Example (37) reveals the factual system concerning the grammar in use in the English language. Example (38) highlighted the fact about journals. **Table 6** shows the summary between the similarities and differences of the synonym *since* and *because*.

Table 6. Similarities and Differences of the Synonyms *since* and *because*.

Connectors	Factual
<i>since</i>	+
<i>because</i>	±

According to Cambridge Dictionary (online), the word *since* is recommended as a synonym of the word *because* when it is used as a conjunction. This study contributes new knowledge in terms of sense extension to explain the differences between the connectors *since* and *because*. The connector *since* is only used with factual clauses in applied linguistics research methodology.

Not only did the current study find that a certain linguistic unit could denote epistemic denotations, but previous studies have also reported the epistemic denotations in other linguistic units. Within a similar scale, the infinitival *to* denotes non-factual interpretations [11]. For example, *I hope to win the game*. The *to*-infinitive *to win the game* is an event that has not yet happened at the time of uttering

the statement. Epistemic verbs with the level of possibility occur mostly in Buddhist texts [16]. Until the recent study, using the semantics of the epistemic verbs *believe* and *think* in news headlines has an effect on the readers' perceptions towards their beliefs [15].

5.2.2. Pragmatic Discourse of Givenness

Different criteria were applied to study the connectors *since* and *because* such as genre and end-weight principle [32]. The researcher studied both connectors in different text types such as academic texts and media text. It was found that with a similar collection of data, there was a little difference in percentage between the use of both connectors in the two datasets. However, a sentence con-

taining the connector *because* is likely to be longer than a sentence containing the connector *since*. Even though this is interesting, sociolinguistic application in terms of the meaning and use of the two connectors is undetermined.

To compare with a previous study, *since* and *because* are structured in the students' argumentative essays. There was a relationship between the connector *because* and the left-edge of the sentence^[33]. On the other hand, there was no relationship between the left edge and the right edge of the connector *since*. In contrast, the placement of adverbial clauses of reason with the word *since* in applied linguistics research methodology is often placed of the left edge. It is explained by the principle of cohesion, such as *pragmatic discourse of given and new information*, referring to placing an old piece of knowledge before giving the new information to the readers, such as (38).

(33) Local cohesion is cohesion at the level of sentences. The first group of local cohesion measures examined in this project are connectives based on their rhetorical use. *Since connectives are used to connect phrases, clauses, and sentences*, they are considered as local measures of cohesion^[23].

Example (38) could explain why the adverbial clause of reason is placed in the initial position of the sentence. The word *connectives* is an old piece of information that is aligned with the previous sentence. This could explain why there was no significant relationship between the use of adverbial clauses of reason in the right-edge position in the sentence, as the Q1 SCOPUS writers focused on cohesion and coherence in their academic research writing. This study found that the word *since* is beyond the connector to indicate reason. It is a linguistic unit that is used as a bridge to seamlessly link two pieces of information, the given and new information, together.

6. Conclusions

This study concluded that there is a statistically significant relationship between the variables of applied linguistics research methods and factual clauses which are adverbial clauses of reason. The *p*-value was reported at 0.032. The significant relationship between the two variables reflects reliability and validity of scientific justifications in *Journal of English for Academic Purposes* and

Journal of English for Specific Purposes. This explains why both journals have maintained Q1 SCOPUS indexing for several decades. It also accounts for their 82% similarity in scope and content. The results in this study reflect methodological contributions of the right selection regarding these two journals as the sample in this study. Semantically, the results in this study shed light on the connector *since* in applied linguistics research methodology. *Since* is a closed-category conjunction used to introduce reason adjuncts in English. Unlike epistemic reasons, the Q1 SCOPUS writer applied *since* to exclude their subjectivity, attitudes and personal judgements. Pragmatically, there is no significant relationship between the positions of adverbial clauses of reason on the right edge as is recommended as the pattern of usage in grammar books. This is because most Q1 SCOPUS writers pay attention to cohesion and how the adverbial clauses of reason can be used as a cohesive device to link with the given information in the previous sentence. The writers focus on cohesion over prescriptive grammar rules to enhance clarity and reader comprehension in academic writing. Thus, this study found that *since* is factual reasons, while *because* is both deontic and epistemic reasons. Despite having reliable results, the data in this study is rather limited to Q1 SCOPUS journals in applied linguistics, generalizing the results in this study to other fields such as business and management sciences, political sciences and architecture journals may not be applicable to the optimal levels. It is recommended that selecting other genres, such as digital marketing communication and psychological texts to study reasons would lead to the new contributions. If this study is further investigated in other genres of textual analysis, it would be possible to have applied linguistics implications concerning the sense extension of the words *since* and *because* recorded in a renowned dictionary.

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Data Availability Statement

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Conflicts of Interest

The author declares no conflict of interest.

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