Research Article

Functional Analysis of Transition Markers in Academic Students' Essays: A Cross-Disciplinary Study

Azadeh Mallaki [1], Seyed Foad Ebrahimi [2], Mohammed Taghi Farvardin [3]

1. Ph.D. Candidate, Department of English Language, Bushehr Branch, Islamic Azad University, Bushehr, Iran
2. Department of English Language, Shadegan Branch, Islamic Azad University, Shadegan, Iran
3. Department of English Language, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran

* Corresponding author: Seyed Foad Ebrahimi; Email: seyedfoade@gmail.com

ABSTRACT

Transition markers contribute as necessary metadiscoursal devices facilitating the reader's comprehension and improving cohesion in an academic text. Transition represents a change from an idea to the other in writing, fulfilled by the use of transition terms or phrases. English writing classes are increasingly focusing on using transitional words and phrases (Lili 2021). Thus, the current paper aims to examine the frequency and functions of transition markers in students' academic essays. Hence, 100 essays (making a total of 293.692 words) were chosen from the Michigan Corpus of Upper-Level Student Papers (*MICUSP*) and analyzed according to Hyland's (2005) classification of transition into type and function. It was shown that transition markers had enough frequency to be considered in teaching writing. The results confirmed the links among ideas internal and external to the text. It was also indicated that transition markers mainly used signal additive, causative, and contrastive functions between the main clauses or statements. Moreover, the research results can be directly applied to syllabus design for academic essay writing.

Introduction

Writing as the writer-reader social and communicative engagement involves the writer in producing a text which conveys three lines of meaning, or as Halliday (2004) calls them, 'metafunctions.' These metafunctions are ideational, textual, and interpersonal.

Textual metafunction consists of language features, which generate text, connecting what is said to the readers' world. Through textual metafunction, language relates what is said (or written) to the real world and various linguistic phenomena. This comprises language use to organize the text, known as textual meta-function (Bakuuro, 2017). Textual metafunction reflects the verbal world, particularly information flow within a text, and considers clauses as *messages*. The enabling meta-function of language is usually emphasized given its involvement with the text generation. Textual function enables speakers or writers to construct 'texts,' or related passages of discourse with situational relevance, while listeners or readers are enabled to differentiate a

text from a random set of sentences. It, therefore, involves phenomena such as thematic structure, information structure, and cohesion. One of the significant elements of the textual metafunction is the use of metadiscourse markers (Bakuuro, 2017).

Metadiscourse shows how authors provide the readers with their intended messages, consequently assisting them to understand the author's viewpoints (Abdul Kadir et al., 2020). Metadiscourse can also convey the expression behind the author's text (Lee & Deakin, 2016), enhancing the author's words and feelings and leading to the practical and adequate analysis of texts and writings. Readers are enabled to figure out specific words and phrases used by the author through text analysis utilizing metadiscourse. Thus, it seems that the concept of metadiscourse has found its time; nonetheless, although metadiscourse is a popular concept, there are complexities in its definitions and frequently diverse ways to understand it. Furthermore, its expansion has taken place with no clear concept of its general evolution, contribution to discourse research, or overall direction, making it impossible to measure its influence or the regions where it has the most impact, as with many phrases that appear and rapidly garner a large following.

Hyland (2005) proposes that metadiscourse is a term for negotiating interpersonal meaning in a discourse that helps writers express their views and establish interactions with the reader in a specific discourse community. The definition proposed by Hyland (2005) suggests metadiscourse as the cover term for the self-reflective statements utilized for the negotiation of interactional meaning in a text, helping the writers to express their viewpoints and communicate with their audience as accepted by most people.

According to Hyland (2000, p.109), metadiscourse represents the interpersonal resources utilized to establish a discourse or express the author's viewpoint concerning the related content or the reader. This concept includes various linguistic features employed by writers in framing their arguments based on the demands and desires of the readers, enabling them to establish bonds with the text and perceive

it as the writer wishes. Metadiscourse considers the final meaning of the text as the result of interactions among its constituents; however, the ideational content of the text should be identified from the content-organizing elements and convey the writer's perspectives and standpoint (Hyland & Tse, 2004). Transition can be regarded as an essential metadiscourse function.

Transition represents a change from one idea to in the other throughout writing, fulfilled by the use of transition terms or phrases. Transition is typically located at the initial position of sentences, independent clauses, and paragraphs, accomplishing various objectives. In other words, transition markers contribute as essential metadiscoursal devices facilitating comprehension from the reader part (Hyland, 2005) and improving cohesion of academic texts.

Transition enhances cohesion throughout academic texts, making the logical development of writing more transparent to readers. Transitional words and phrases establish close connections among ideas and facilitate the readers' understanding of the logic behind the text.

Transitions are significant in academic writing because they are responsible for connecting paragraphs and turning disconnected writing into an integrated text. Transitions do not treat paragraphs as isolated ideas, but they rather assist the reader figure out their associations and reference to each other to deliver more significant points. They create a logical flow and develop a sense of connectedness in essays, helping the reader advance from one idea to the other. An essay is a piece of writing consisting of one particular topic broken down into several paragraphs, starting with the introductory and ending with the concluding paragraph (Oshima & Hogue, 2006).

This study focuses on two kinds of essays, including argumentative and critique. Argumentative essays require the students to examine specified topics, perform evidence collection, generation, and evaluation, and denote a concise position on the topic. Arguments aim at changing the viewpoints of the audience or persuading them to support new

perspectives, perform a certain action, or exhibit new behavior. Such essays have to adopt objective approaches, rely on logic and evidence, and avoid exaggeration or reliance on emotions.

An article critique represents an academic writing genre, critically evaluating an article through intensive analysis and briefly summarizing the article in formal language and a structured format. Such a critique includes an introduction, a body, and a conclusion and forces the writers to look at the writing objectively, analyze its appropriateness, ensure integration, and let words function independently. In other words, a critique represents the validity and efficiency of the arguments the writers use in their writing.

Higher education teaching and learning forms a research area covering sophisticated phenomena that are difficult to be well handled. The main objective of higher education programs is to provide students with professional knowledge which underlies their future professional abilities (Blomeke et al., 2015). Thus, the current paper focused on investigating the frequencies and functions of transition markers utilized by undergraduate and postgraduate students throughout argumentative and evaluative essays. The following research questions guided the current research:

1. How frequent are transition markers in the academic writings of students in English and Philosophy?

2. What are the functions of transition markers in the academic writings of students in English and Philosophy?

3. What are the most and the least used transition markers in academic writings of students in English and Philosophy?

Literature Review

Systemic functional grammar investigates the range of relevant choices in the kinds of meanings or functions we might want to express or perform and in the kinds of wording used to express or perform these meanings or functions. It also focuses on how these two sets of choices are matched (Thompson, 1996 p.9). Therefore, based on systemic functional grammar, "we essentially equate meaning with functions" (p.27). Generally, we use language to express three kinds of meanings. The first kind of meanings deals with how we use language to express our experience of the world to describe events and the entities involved in them. The second kind of meaning focuses on how we use language to interact, make relations, and influence the behavior of people, as well as to express our own viewpoint on things in the world. Finally, the third meaning informs on the manner in which we use language to organize our messages in a way, which indicates how they fit in with the other messages around the theme and with the wider context in which we are talking or writing (Thompson, 1996 p. 28).

Matthiessen and Halliday (1997) argue that systemic functional grammar shows the three meanings through three metafunctions. First, the interpersonal metafunction deals with speaker and listener interaction and how grammatical choices help in enacting the social role, generally, and speech role, particularly, through dialogic interactions such as establishing, changing, and maintaining interpersonal relations. Mood, as one of its major grammatical systems, is the grammaticalization of speech functions (p.12). Second, the ideational metafunction translates into ideation, which is the grammatical choice for structuring our experience of the world around and inside us. Transitivity, as another major grammatical system, is the resource for constructing our experience. It includes the description of a process, the participants in the process, and the circumstances attendant on it (p.13). Lastly, textual metafunction deals with text development. This is done through presenting the ideational and interpersonal meanings as shared information between speaker and listener in text unfolding in context. Metadiscourse markers could help writers and speakers to realize two metafunctions through interactive and interactional resources.

Metadiscourse contributes essentially to writing and the pragmatic competencies of the writers, who achieve success through adequate use of metadiscourse markers. Relevant studies have highlighted the significant impacts of

appropriately using metadiscourse on students' success in academic writing (Hyland & Tse, 2004). Metadiscourse contributes essentially to the meaning of the text, relating the text and context, addressing the needs, perception, available knowledge, previous experiences, and relative conditions of the audience (Hyland & Tse, 2004: 161). Correct application of metadiscourse features enables writers to call attention to specific relationships and dimensions of the organization that facilitate understanding of the readers while also providing them with guided reading and familiarity with the interpretations desired by the writer (Hyland & Tse, 2004: 164). One of the metadiscourse markers is transition.

Transition markers mainly include adverbial phrases and conjunctions, assisting the reader in the interpretation of pragmatic links among different stages in every argument (Hyland 2005). Hence, the readers are guided throughout the text and take advantage of its coherence. According to Sanford (2012), transition markers provide the connections between ideas internal and external to the text, including comparison or contrast. Transition markers contribute internally rather than externally to discourse, assisting the readers in the interpretation of the connections among ideas (Gholami et al., 2014:5) and indicating addition, causation, and contrast among the main clauses or ideas.

In other words, there are countless types of transition used in various conditions. It is possible to use single words, phrases, sentences, or even whole paragraphs for transition, but all of them have a similar function, which includes providing a direct summary of the previous content or implying such a summary. In the next step, the readers are allowed to predict or understand the new information that the writer wished to deliver. The inclusion of traditional paragraphs seems essential in the transition between sentences, especially when the work is longer. Such transitional paragraphs provide the readers with a summary of previously presented information and highlight its connection with the forthcoming content. The example below shows the transition between sections:

- Example 1

Having established that the subjective experience of time is Mann's main concern in The Magic Mountain, *it is now possible to explore* how this theme can facilitate the novel's association with WWI. The book does not narrate the war itself but refers to it as something awaiting Castorp beyond the final pages. Hence, Mann connects his protagonist's subjective experience of time to more than only his illness; *it is also used* to delve into the period ending in the war outburst.

Concerning transition between paragraphs, when paragraph arrangement is performed adequately, and there is a logical content delivery from one paragraph to the following, the transition can highlight the previously existing links through a summary of the already given paragraph and clues to the content of the next one. One or two words (however, for example, similarly), phrases, or sentences can be utilized for transition between paragraphs. Similar to transitions between sections and paragraphs, a transition within paragraphs provides clues to help readers predict the content that is going to be presented before reading it. In such conditions, single words or short phrases are used for transition. The example below shows the transition between paragraphs:

- Example 2

… The consensus view is clear from these quotations.

However, several scholars dissent from this consensus. The first one to consider is …

- Example 3

On the contrary, he liked animals that could fly, such as sparrows and falcons.

Commitment to the right balance is the main point for the effective use of transitions. The absence of transition words leads to considerable difficulties in following the logic behind the text; however, beginning all sentences with traditions may give the readers of over-explanation. Thus, this paper intends to examine the application and functions of transition markers within two academic essay genres from two disciplines.

Review of Related Studies

The overview of research and studies related to the present study has been mentioned in the following paragraphs.

Pavlović and Đorđević (2020) compared metadiscourse markers used in essays written by ESP university students from mechanical engineering. The study, which was conducted on a corpus of 100 essays addressing two mechanical engineering topics, aimed to examine the frequencies of using these markers and then identify their types based on Hyland's (2005) taxonomy. It was shown that students preferred to use interactional metadiscourse, primarily engagement markers and hedges, indicating their prompt involvement in the text to draw the attention of their audience and encourage them to engage in the discussion. In the meantime, transitions had the highest frequency among the markers used in general, highlighting the students' familiarity with the critical role of connections among ideas to ensure coherence through this type of interactive metadiscourse. Similar studies have also highlighted the high frequency of transitions (e.g., Hyland–Tse, 2004).

IL-Hee Kim (2017) examined metadiscourse in the persuasive writing of fourth graders belonging to both urban and rural contexts. Fourth graders from public elementary schools in the US and Korea participated in the study (224 in South Korea and 188 in the U.S.). The students were supposed to write a persuasive essay in their native language with regard to a story they had not been already exposed to. Analysis based on Hyland's (2004) taxonomy showed that these two countries were significantly different in terms of the metadiscourse used. As shown, students in South Korea employed more sentence-level transitions compared to those in the U.S.A., who primarily used frame ad endophoric markers. Yet, American students showed a higher frequency of hedges, boosters, engagement markers, as well as self-mentions, regarding interactional metadiscourse. The students' living contexts were also compared in this study, indicating the use of more hedges by students living in rural areas of the U.S. compared to those living in urban settings, who considerably used more self-mentions. However, the type of community caused no significant differences in the metadiscourse of South Korean students.

Han and Gardner (2021) have studied transitions in the Han *CH-EN* corpus, mentioned below in detail. It was assumed that investigating transitions in an almost strongly matched corpus would effectively resolve the inconsistent and indecisive results for both *EAP* students and teachers. The study, particularly, identified all transitions the Chinese and English students utilized to successfully write academic essays in the Han *CH-EN* corpus. It sought to examine the over- and under-use questions, along with the frequent transitions, suggesting that Chinese university students preferred a more restricted set of transition markers with position limitations. Although such a strategy can be safe in some conditions, it may be associated with the inadequate differentiation of transitions proposed in textbooks and dictionaries for their application in various settings (Lee & Chen, 2009; Milton, 1999). Overall, there were 46 transitions throughout the Han *CH-EN* corpus, including those brought in appendices of Hyland (2005) and others such as meanwhile and whilst were highlighted by the corpus query language. The Chinese writers showed a lower frequency of the 46 transitions (1746) than English writers (1870), but the two were not significantly different in statistical terms.

Granger and Tyson (1996) compared essays written by university students with Arts degrees from England and France. Totally, they did not find significant differences in the frequencies of using connectors in English essays written by native English and advanced EFL French speakers. However, Kennedy and Thorp (2007) showed less frequency of using markers such as "however" by advanced writers at IELTS 8 compared to lower levels of 4 and 6. It was concluded that less proficient writers would prefer to use more transitions throughout their texts to help their audience compared to more proficient writers. The different sentence positions of connectors were also investigated by Granger and Tyson, revealing the use of connectors such as "however" mainly in the sentence-initial position (87%) by the Chinese student and its more equal distribution at the sentence-initial (49.7%) and non-initial positions

in their English counterparts. (Granger & Tyson, 1996 p.25).

Leedham (2012) examined the British Academic Written English (*BAWE*) corpus in contrastive Chinese-English investigations of successfully written university student texts. The BAWE subcorpus of 29 texts, including 48,367 words, written by four university students educated in China, was investigated. The texts belonged to the years 1/2 and 3 of the students' undergraduate studies while also including three discipline-matched reference subcorpora of L1 English *BAWE* texts. In line with the study of Chen and Baker (2010), the results confirmed that Chinese learners overused some connectors such as "on the other hand". Leedham (2015:46) also used a mixed corpus of texts from BAWE and different sources (Leedham, 2015:8) and showed that Chinese undergraduate writers had more preference (88%) for the sentence-initial position compared to English students (65%). Besides, Chinese students overused some transitions (on the other hand, in the long run, etc.) mainly in the sentence-initial position, showing complete agreement with previously conducted research (Granger & Tyson, 1996; Lee & Chen, 2009).

The study conducted by Rasooyar and Hossein (2019) sought to examine the frequency of transition markers (and, since, hence, in addition, and then) in English master's theses in 2019, using 30 English master's theses compiled by Iranian students from the Azad University of Kermanshah. The authors used Hyland's (2005) interpersonal model of metadiscourse to identify the frequency of transition markers, and the texts were analyzed with Cutting-Edge software. A simple and easy corpus analysis toolkit, *AntConc*, was used to calculate the frequencies of transition markers, identifying 6924 cases. The highest and lowest frequencies of transition markers belonged to "and" and "hence". According to the results obtained from the Chi-square test, there was an unequal use of transition markers in master's theses.

Having the above studies reviewed, it could be concluded that still there is a gap in literature to provide instructors and students on how frequently are transitions used and what are the possible functions performed by the transitions in essay writings. It seems also necessary to give a clear image of the most and least frequent transitions markers. To fill this gap, this study intends to study the frequencies, functions, and realizations of transition metadiscourse markers in two corpora of essays from two disciplines of English Language Teaching and Philosophy.

Method

Corpus of the Study

The corpus of the study was drawn from the MICUSP and included 100 student essays (making a total of 293.692 words) from 2 disciplines of English Language Teaching and Philosophy, with 70 articles in English Language Teaching and 30 in Philosophy.

Cross-disciplinary research reflects studies and creative methods that comprise two or several academic fields. This type of research has the following forms: a) **multidisciplinary,** b**) interdisciplinary,** and c) **transdisciplinary.** The present paper aimed to examine the frequencies and the importance of transition markers in students' academic writing. Detailed information about the corpora appears in Table 1.

Table 1

Particulars of Corpus

Disciplines	Paper	Types of papers	Number	Total word count
English Language Teaching	70	Argumentative Essays	65	196.180
		Critique/Evaluation	5	
Philosophy	30	Argumentative Essays	20	97.512
		Critique/Evaluation	10	

Analytical Framework

This research employed the interactive model of metadiscourse markers proposed by Hyland's (2005) and examined a group of interactive metadiscourse markers, known as transition markers. Table 2 presents the macro-category, subcategory, and examples:

Table 2

Subcategories of transition markers

Macro category	Subcategory	Examples
Transitions	Addition	1. Hermia is his daughter not only because she was born to his wife, but **also** since he is in control of her. 2. This portrait **not only** qualifies the feminine ideal by introducing the realities of menstruation, **but also** qualifies idealized memories and interpersonal relationships. 3. **Furthermore**, the development of the individual depends both on Aristotle's definition of the human being as a 'rational animal' and also thus on his deliberate inner decision.
	Comparison	4. In Hamlet, Ophelia is granted a little more freedom in her actions, **but** she is still supposed to adhere to her father's wishes. 5. It is **for this reason** that I come here before you. 6. **However**, even in this scenario the employees are still entitled to their rights, which Eleanor would be violating.
	Consequence	7. Writing is also intellectual, and is, **therefore**, much more complex. 8. **As a consequence**, it really affects the way people think. 9. **Then** it would follow that our actions could be said, in theory, to be right or wrong in relation to the amelioration of the human condition.

Data Analysis Procedures

The current study used two corpora chosen from two disciplines, including 70 and 30 academic students' essays in philosophy and English. English and Philosophy essays consisted of 196.180 and 97.512 words, respectively. First, the 100 students' essays that included argumentative and evaluative were downloaded from the MICUSP and saved in 2 separate PDF files. According to the website explanations, MICUSP has nearly 830 A-grade papers (nearly 2.6 million words) belonging to various disciplines in four academic divisions (Humanities & Arts, Social Sciences, Biological & Health Sciences, Physical Sciences) of the University of Michigan. Second, the argumentative and evaluative student essays were scrutinized in terms of transition markers considering Hyland's (2005) interactive model of metadiscourse markers, in which transition markers indicate addition, comparison, and consequences. Third, a search was performed to identify and highlight transition markers, after which the results were tabulated and elaborated.

Results

Corpus of the study was analyzed and the results are presented to answer the research questions. Frequencies of Transition Markers in ELT and PHI The first research question focused on the frequencies of transition markers in essays prepared by English and Philosophy students, the results of which are shown in Table 3.

Table 3

Frequencies of transition markers in research corpus

Disciplines	Function	Frequency	Word count	Frequency (Per 1.000 words)
ELT	Transitions	635	196.180	3.236
Philosophy	Transitions	360	97.512	3.691

As can be seen, there were 635 realizations of the transition markers in the analyzed essays in English (Examples 1, 2, and 3) and 360 realizations in the analyzed essays in Philosophy (Examples 4, 5, and 6).

• Example 1

*This portrait **not only** qualifies the feminine ideal by introducing the realities of menstruation, **but also** qualifies idealized memories and interpersonal relationships.*

• Example 2

***Although** Frances' father and Link want to cast her in the male role because of her intellect and independence.*

• Example 3

***Thus** engender success, thereby reproducing societal exclusions and norms.*

• Example 4

***Likewise**, understanding Ethics, some moral realist might claim, consists in part of being able to draw the right normative conclusions about novel cases.*

• Example 5

***Yet**, according to the realist, they all say genuinely different things about the state of the universe.*

• Example 6

***Hence**, according to Foot, it is at least morally permissible.*

Functions and Frequencies of Transition Markers in ELT and PHI

The second research question focused on the functions of transition markers in essays of English and Philosophy students. The first subcategory in the interactive resources is transition markers. This marker creates a relationship between the meanings of main clauses in the text. Table 4 indicates **addition** (*In addition to, likewise, Not only / but also, etc.*) **comparison** (*However, Although, Despite, etc.*), and **consequence** (*Thus, Then, Consequently, etc.*).

The third research question focused on the most and the least utilized transition markers in essays written by English and Philosophy students. Table 4 represents the frequencies of transition markers in function in students' essays.

Table 4

Frequency of transition markers in function

Transition markers	Frequency (Per 1.000 words)			Total
ELT	Transition markers indicating addition	Transition markers indicating comparison	Transition markers indicating consequence	3.22
	0.61	2.15	0.46	
Philosophy	0.57	2.13	0.98	3.68

Concerning the frequency of transition markers in function, 3.22 transition markers were totally found in every 1.000 words in English (Table 4). Similarly, 3.68 transition markers were observed in every 1.000 words in Philosophy. More particularly, 2.15, 0.61, and 0.46 transition markers of comparison, addition, and consequence were reported in 1.000 words in English, respectively. Meanwhile, 2.13, 0.98, and 0.57 transition markers of comparison, consequence, and addition were reported in 1.000 words in Philosophy, respectively. Overall, Philosophy exhibited a greater number of transition markers. As shown in Table 4, transition markers of comparison had the highest frequency in both disciplines. Transition markers of consequence and addition were the least frequent subcategories in English and Philosophy, respectively.

The results in Figure 1 show **a)** the type and classifications of the transition markers used in the current paper following Hyland's (2005) interactive model of metadiscourse markers only on one group of interactive metadiscourse markers, transition markers, **b)** the frequency of these markers in 100 students' essays, and **c)** more detailed information on the type of transition markers with the most and the least realizations in academic students' essays.
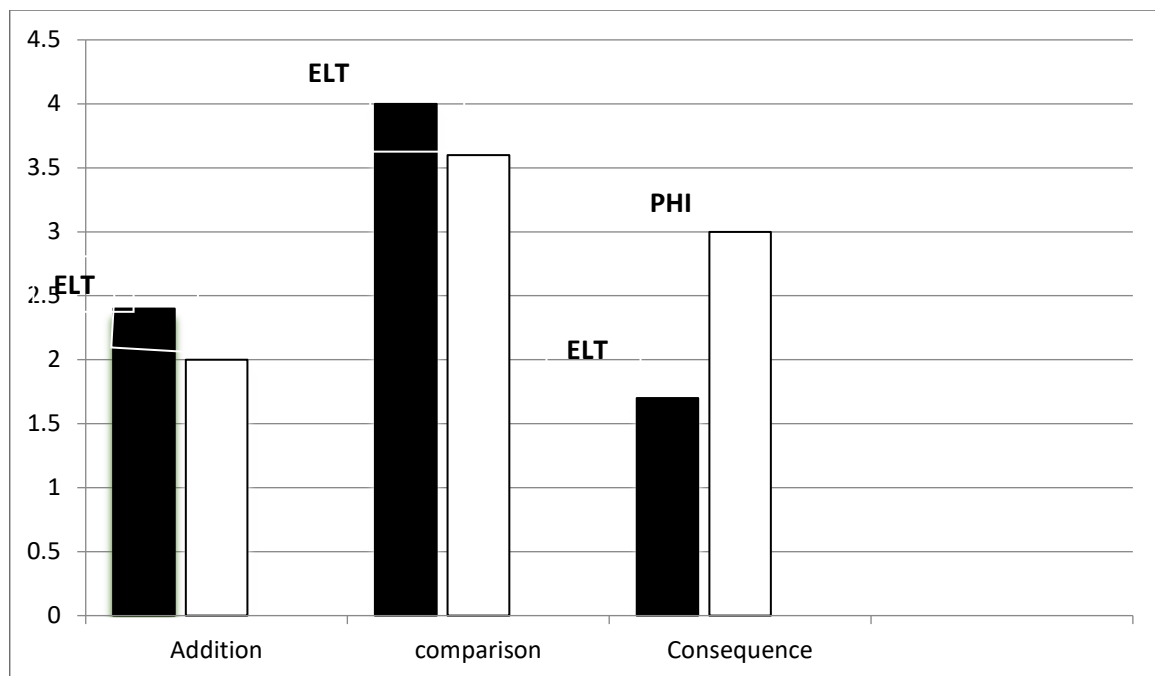
Figure 1: Frequency of transition markers in functions

According to Figure 1, transition markers could be classified into three main categories, including **addition** (ELT 0.61 and PHI 0.57), **comparison** (ELT 2.15 and PHI 2.13), and **consequence** (ELT 0.46 and PHI 0.98). In terms of frequency, Philosophy has the most and ELT the least number of appearances.

Transition Markers with the highest frequency in ELT and PHI

Table 5 indicates transition markers with the highest frequency in English and Philosophy.

Table 5

List of most frequently used transition markers in ENG and PHI

English		
Addition	Comparison	Consequence
-Not only...but also	-Nevertheless	-Consequently
-Additionally	-Nonetheless	-Therefore

English		
-Furthermore	-Likewise	-Because
-In addition	-Although	-Thus
-Moreover	-However	
-Then	-Despite	
-Also	-Though	
-And	-Unlike	
	-Yet	
	-But	

Philosophy		
-Not only...but also	-Although	-Therefore
-Additionally	-However	-Hence
-Furthermore	-Yet	-Thus
-In addition	-But	
-Moreover		
-Then		
-Also		
-And		

According to Table 5, learners utilize transition markers more frequently in their essays; however, they employ a restricted set of these markers, particularly to show comparison and consequence.

Discussion

The current paper aimed to analyze the frequency and functions of transition markers in academic argumentative and evaluative essays compiled by English and Philosophy students. Sentences represent a stack of bricks. With no mortar to glue the bricks together, there is only a pile of bricks. However, mortar holds the bricks and leads to a house or structure which is more solid and integrated. Transition words can be defined as the mortar, fitting the sentences together and creating textual cohesion. The first research question focused on determining the frequency of transition markers in English and Philosophy. As shown by the results (Table 3), learners utilize transition markers more frequently in their essays; however, they employ a restricted set of these markers. A closer analysis shows the uneven distribution of markers, revealing 32 transition markers in one essay and only 1 in another. English showed a higher frequency of transition markers compared to Philosophy. Han and Gardner (2021) examined transitions in a corpus of Han Chinese-English and compared the frequencies of transition markers in texts written in these two languages.

Overall, the authors found 46 transitions in the study corpus, including many provided in the appendices of Hyland (2005) and others like meanwhile and whilst highlighted by the corpus query language. The Chinese writers showed a lower frequency of the 46 transitions (1746) than English writers (1870). According to the results of this study, Chinese university students, who wrote successfully, preferred a more restricted set of transition markers with position limitations. Although such a strategy can be safe in some conditions, it may be associated with the inadequate differentiation of transitions proposed in textbooks and dictionaries for their application in various settings.

Transitional words and phrases can be placed into a limited number of categories, identified according to the purpose and function of the word. The second research question aimed to highlight the functions of transition markers in essays written by English and Philosophy students. Transition markers mainly include adverbial phrases and conjunctions, helping readers to figure out the pragmatic associations among steps in an argument (Hyland 2005). According to Gholami et al. (2014), these markers contribute internally to discourse rather than externally, helping readers in interpreting the associations of ideas. Based on the results (Table 4), transition markers include **addition** (giving additional information or expanding further on a point), **comparison** (establishing a comparison or

a contrast, effectively and extensively utilized in different forms of writing, and making essays flow much better), and **consequence** (cause and effect transition words, or consequence transition words, describing cause and effect relationships between two ideas). Leedham (2015) discusses the overuse of some connectors (on the other hand, etc.) by Chinese students, which agrees with the results obtained by Chen and Baker (2010). Leedham (2015) also used a mixed corpus of texts from *BAWE* and different sources (Leedham, 2015) and showed more preference for the sentence-initial position by Chinese undergraduate writers (88%) compared to English students (65%). Besides, Chinese students overused some transitions (on the other hand, in the long run, etc.) mainly in the sentence-initial position, which completely supports previously conducted research (Granger & Tyson, 1096; Lee & Chen, 2009).

The third research question aimed to highlight the most and the least used transition markers in essays composed by English and Philosophy students. According to Table 4, Philosophy exhibited a greater number of transition markers, while those of comparison had the highest frequency in both disciplines. Students write multiple essays, research papers, statements of purpose, etc., which requires putting the gathered information into words and conveying the intended message to the readers. Transition markers of comparison look at the similarities and differences between two or more items, ideas, methods, theories, characters, etc. They also examine the subjects from multiple viewpoints. The least frequent subcategory was transition markers of consequence in English and addition in philosophy. Thus, transition markers like *in addition, and, not only...but also, however, but, though, thus, because* in English or *also, not only...but also, furthermore, then, additionally, however, yet, but, thus, hence* in Philosophy were used far more often than the others, as also highlighted in books, articles, or textbooks more than others. This is possibly because teachers emphasize some certain sets of transition markers more than others in the classroom. Also, in some essays, the nature of the topic or sentences requires a particular set of transition markers.

Conclusion and Implications

Academic papers have certain objectives, including persuasion, argument, description, contrast, and comparison, as some examples among several others (Ballenger, 2010). Cross-disciplinary studies represent research and creative methods containing two or several academic fields of study. Cross-disciplinary research collaborations in learning and instruction contribute critically to dealing with complicated problems found in contemporary education. The present paper examined the frequencies and functions of transition markers utilized by students in their academic writing, including argumentative and evaluative essays. The results will provide a pattern for using transition markers in teaching writing skills to students of different disciplines.

Results of the corpus analysis indicated the following concluding remarks; first, transition markers were significantly frequent in students' essays in English and Philosophy, indicating an insignificant difference between these two disciplines. Second, transitions function to connect words, phrases, and clauses. It includes addition, comparison, and consequence. Third, transition markers of comparison showed the highest frequency in the two disciplines. Transition markers of consequence and addition had the lowest frequencies in English and Philosophy, respectively.

Transition markers contribute essentially to writing by ensuring textual coherence and cohesion. Knowing and recognizing the functions and meaning of transition markers can help in teaching and learning academic writing for different disciplines.

While teaching transition markers, instructors ought to explain both the functions and the meaning of transition markers and enable learners to see what each category of transition markers may offer. It is also necessary to motivate students to take their audience into account while considering how they would like the readers to understand their writing to enhance their general familiarity with metadiscourse because it represents a critical communication component The current paper has pedagogical implications

for both teaching and learning academic writing as well as creating reader-friendly academic writing. These functional analyses of transition markers have been applied in academic writing textbooks of different disciplines by curriculum designers to highlight their contribution. Interested researchers and people in this domain can update their information and be informed of the most recent achievements.

This study could have a number of suggestions for further studies: First, this study limited the focus on the transition markers, while other studies could extend the focus to include more metadiscourse markers. Second, this study limited the corpus of essays to be from only two disciplines, another study could extend the focus to be on more studies.

References

Alaei, M., & Ahangari, S. (2016). A study of ideational metafunction in Joseph Conrad's" Heart of Darkness": A critical discourse analysis. *English Language Teaching*, 9(4), 203-213. https://doi.org/10.5539/elt.v9n4p203

Andersen, T. H., Boeriis, M., Maagerø, E., & Tonnessen, E. S. (2016). *Social semiotics: Key figures, new directions*. NY: Routledge.

Bakuuro, J. (2017). Demystifying Halliday's metafunctions of language. *International Journal of Language and Literature*. 5. https://doi.org/10.15640/ijll.v5n2a21.

Caulfield, J. (2021). *Transition sentences/tips & examples for clear writing*. Scriber. https://www.scribbr.com/academic-essay/transition-sentences/

Copland, J. (2015). *The problem and importance of academic writing*. Linkedin. https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.linkedin.com/pulse/problem-importance-academic-writing-jane-copland&ved=2ahUKEwiE6dnm2oP0AhUvREEAHVlhC7oQFnoECAQQBQ&usg=AOvVaw3I_p87K5UsZZBrcGmq-4aA

Eghtesadi, A. R., & Navidinia, H. (2009). A comparative study of metadiscourse use in research articles written by native and non-native speakers: Is audience taken into account? *Journal of Asia TEFL*, 6(3), 157-176.

Evely, A., Fazey, I., Lambin, X., Lambert, E., Allen, S., & Pinard, M. (2010) Defining and evaluating the impact of cross-disciplinary conservation research. *Environmental Conservation*, 37, 442 - 450. https://doi.org/10.1017/S0376892910000792

GEZEGİN, B. B., & Melike, B. A. S. (2020). Metadiscourse in academic writing: A comparison of research articles and book reviews. *Eurasian Journal of Applied Linguistics*, 6(1), 45-62. http://dx.doi.org/10.32601/ejal.710204

Gordon, L., & Fahlbeck, E. (2018, October). *Cross-disciplinary approaches: The 'Must have' tools to work with complexity*. https://www.siani.se/news-story/cross-interdisciplinary-approaches-the-must-have-tools-to-work-with-complexity

Han, C., & Gardner, S. (2021). 'However' and other transitions in the Han CH-EN corpus. *Journal of English for Academic Purposes*, 51, 100984. https://doi.org/10.1016/j.jeap.2021.100984

Heitzmann, N., Opitz, A., Stadler, M., Sommerhoff, D., Fink, M. C., Obersteiner, A., Schmidmaier, R., Neuhaus, B. J., Ufer, S., Seidel, T., Fischer, M. R., & Fischer, F. (2021). Cross-disciplinary research on learning and instruction - coming to terms. *Frontiers in Psychology*, 11, 562658. https://doi.org/10.3389/fpsyg.2021.562658

Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. London: Continuum Intl Pub Group.

Hyland, K., & Tse, P. (2004). Metadiscourse in academic writing: A reappraisal. *Applied Linguistics*, 25, 156-177. http://dx.doi.org/10.1093/applin/25.2.156

Jochimsen, M. (2008). *Grammar in EAP: Introduction*. Grin. https://www.grin.com/document/148621

Kim, I. H. (2017). Metadiscourse in persuasive essays by elementary students in South Korea and the US. *Journal of Language and Cultural Education*, 5(2), 80-102. https://doi.org/10.1515/jolace-2017-0020

Leedham, M. (2014). *Chinese students' writing in English: Implications from a corpus-driven study*. NY: Routledge.

Lili, T. (2021). The application of transitional devices in English writing teaching. In *2nd International Conference on Language, Art and Cultural Exchange (ICLACE 2021)* (pp. 355-358). Atlantis Press. https://doi.org/10.2991/assehr.k.210609.071

Matthiessen, C. M., & Halliday, M. A. K. (1997). *Systemic functional grammar: A first step into the theory*. China: Higher Education Press.

Pavlović, T. V., & Đorđević, D. (2020). The use of metadiscourse markers in essays written by esp

university students. *Годишњак Филозофског факултета у Новом Саду*, 45(5), 233-249. https://doi.org/10.19090/gff.2020.5.233-249

Rasooyar, H., & Hosseini, E. (2019). Investigating interpersonal metadiscourse markers in English MA theses: The case of transition markers. *Global Journal of Foreign Language Teaching*, 9(4), 184-192. https://doi.org/10.18844/gjflt.v9i4.4089

Sanford, S.G. (2012). *A comparison of metadiscourse markers and writing quality in adolescent written narratives* [Unpublished thesis]. University of Montana. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1006.9538&rep=rep1&type=pdf (accessed 10 June 2020)

Seek, N.M. (2012). *Cross-disciplinary learning*. In: Seel, N.M. (eds) Encyclopedia of the Sciences of Learning. Springer, Boston, MA. https://doi.org/10.1007/978-1-4419-1428-6_1476

Sheridan, (2020). *Types of essays.* Sheridan. https://sheridancollege.libguides.com/Academic Writing/essaytypes

Sihura, M. (2019). Transitivity process in frozen movie: A study of systemic functional grammar. *International Journal of Systemic Functional Linguistics*, 2(2), 79-85. https://doi.org/10.55637/ijsfl.2.2.1480.79-85

Thompson, S. (1996). Interactional units in conversation: Syntactic, intonational and pragmatic resources. *Interaction and Grammar*, (13), 134.

Walková, M. (2020). Transition markers in EAP textbooks. *Journal of English for academic purposes*, 46, 100874. https://doi.org/10.1016/j.jeap.2020.100874

Wordvice, K.H. (2021). *Effective transition words in academic papers.* Wordvice. https://blog.wordvice.com/common-transition-terms-used-in-academic-papers