Original Article

A Corpus Study on Linking Adverbials in Two Classroom Spoken Genres

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Abstract

Linking adverbials as cohesive features tie the ideas to form dynamic and satisfactory text. This study intended to investigate the use of linking adverbials in two spoken genres; student presentations (Class other than a seminar in which one or more students speak in front of the class or lead the discussion) and discussion sections (Additional section of a lecture class designed for maximum student participation; maybe also called recitation). To this end, the study was based on the data collected from a corpus including 11 student presentations and nine discussion sections. The data were taken from MICASE (the Michigan Corpus of Academic Spoken English) corpus and then analyzed based on Liu's (2008) taxonomy of linking adverbials. The results indicated that in both genres additive and sequential classes of linking adverbials have received similar attention while the two genres were different in the proportion dedicated to the realizations of additive and causal/resultive classes of linking adverbials. The results pointed to differences concerning the use of subclasses adversative linking adverbials in both genres. The results of this study could have a contribution in teaching these important cohesive features in ESL classes aiming to improve students in relation to these two genres.

Keywords: Discourse, Discussion Sections, Linking Adverbials, Spoken Genres, Student Presentations

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1. Introduction

Linking adverbials are considered to act as a logical connector between parts of sentences or even sentences as indicate the segmental relationship of discourse. In spoken and written texts, there are a series of linking adverbials that are responsible for linking ideas together to create meaningful texts. Thus, these linking adverbials are used in the text for the sake of creating connected, dynamic, and successful spoken or written texts. Linking adverbials could act as connectors or organizers of units of discourse to develop a coherent text. Through the use of these adverbials, the writers or speakers are able to organize and develop their ideas and help the readers or listeners to follow them from one sentence to another. English grammar could be tricky when it comes to using connectors correctly. Thus, to make the text to be easily understandable, we need to see how to use linking adverbials correctly to develop smoother spoken or written texts. Understanding the use of these linking adverbials is very important in language use and learning (Liu, 2008).

The present study aims to address the realization of linking adverbials used by the native speakers of English in classroom genres; namely student presentations and discussion sections. In this study, we follow the definition suggested by Liu (2008). According to the Liu (2008), linguists have used terms such as connective adjunct (Pullum & Huddleston, 2002), connectives (Finch, 2000), linking adjuncts (Carter & McCarthy, 2006), and logical connectors (Celce-Murcia & Larsen- Freeman, 1999) to refer to linking adverbials. Moreover, conjunctive adverbials (Bussmann, 1996), conjuncts, connective adverbs, and linking adverbials (Biber, Johansson, Leech, Conrad, & Finegan, 1999) are also used interchangeably. In this study, we will adopt the term linking adverbials because as Liu (2008) mentioned, 'linking' is more comprehensible than 'conjunctive' for general readers and 'adverbial' is more inclusive than 'adverb'. Moreover, Biber et al. (1999) pointed out that the primary function of linking adverbials (LAs) is to make semantic connections between spans of the discourse of varying lengths. In this regards, Celce-Murcia and Larsen-Freeman (1999) said that linking adverbials "are lexical expressions that may add little or no propositional content by themselves but they serve to specify the relationships among sentences in oral or written discourse, thereby leading the listener/reader to the feeling that the sentences make sense." The findings of this study could help students especially EFL students in using appropriate LAs while participating in

these two classroom genres. Findings could also highlight the fact that understanding and using LAs constitute an important part of communicative competence.

2. Literature Review

Within the last two decades, some researchers have shed the light on the realizations of linking adverbials in different academic genres (Altenberg & Tapper, 1998; Bolton, Nelson, & Hung, 2002; Chen, 2006; Feng & Choe; 2016; Lei, 2012; Liu, 2008; Tapper, 2005; Zareva, 2011). Bolton et al. (2002) investigated the use of linking adverbials used by native and non-native writers of English in writing of academic research articles. The research articles written by non-native researchers were extracted from the Hong Kong component of the International Corpus of English (ICE-HK), comprising 2755 sentences (46,460 words) and consisted of 10 untimed essays and 10 timed examination scripts written by undergraduate Hong Kong students. Thus, the research articles written by native writers of English were taken from the International Corpus of English (ICE-GB), comprising 2471 sentences and 42587 words. The findings of their study suggested that research articles written by native writers of English present a better use of linking adverbials. The findings also suggested that both groups of writers practiced the underuse of certain linking adverbials.

Chen (2006) studied the realization of linking adverbials in papers developed by Taiwanian MA students. To this end, he developed corpora including learner and the control corpus. The learner corpus included 23 final papers written by TESOL students and the control corpus included 10 journal papers extracted from two leading TESOL journals. She analyzed the corpus adopting Celce-Murcia and Larsen-Freeman's (1999) classifications which divide linking adverbials into four types; additive, adversative, causal, and temporal. The findings of his study indicated that those papers written by the MA students included more linking adverbials. In relation to the inappropriate use of linking adverbials, the findings pointed to the inappropriate use of some linking adverbials.

Peacock (2010) described an analysis of linking adverbials in research articles across eight disciplines in a corpus of 320 published research articles (RAs). There were 40 from each discipline, four science (chemistry, computer science, material science, neuroscience), and four non- science (Economics, language and linguistics, management, and psychology), and to develop a more comprehensive list of LAs. In the study, new lists of

linking adverbials were developed and the parameters of frequency, function, and disciplinary variation were examined using WordSmith Tools. They were found to be more frequent than previously thought, with numerous statistically significant disciplinary differences, for example between the sciences and non-sciences. Also, they often clustered together in complex sequences. The study showed that those linking adverbials are more important in RAs as signaling and cohesive devices, and for helping RA authors construct and strengthen claims than previously thought by experts in this field. Also, different disciplines achieve this in significantly different ways, confirming the importance of discipline variation when researching their use.

The realizations of linking adverbials in undergraduate and graduate students' presentations were studied by Zareva (2011). The study was run on two corpora of individual presentations. L1 and L2 corpora contained equally about 30000 words. The results indicated that both groups of students showed somewhat similar attention concerning frequency, position, and semantic meanings of linking adverbials in their presentations. The results indicated that the ESL students overused some linking adverbials in their presentations. In addition, Zareva (2011) claimed that the ESL students prefer using linking adverbials in the wrong register, for example, they used formal linking adverbials, which normally are found in academic writings, in the oral presentations.

Lei (2012) investigated the use of linking adverbials in Chinese doctoral ESL students' writings. He relied on two self-compiled learners and control corpora. The learner's corpus contained 20 doctoral dissertations from the field of applied linguistics. The other corpus was made of 120 articles extracted from six international journals from the field of applied linguistics. The results showed that linking adverbials were overused by Chinese doctoral students. The results also signaled some underuse and misuse of some of the linking adverbials in writings of Chinese doctoral students. In addition, the results declared that the adversative linking adverbials were the major source of misuse in Chinese doctoral students' writings.

Gao (2016) analyzed written texts in which readers can get back while reading and see the references of the information, while in the current study, researchers analyzed spoken genres where speakers need to explicitly and in a clear manner announce the sequence of the information presented. The two sub corpora have shown a small difference in the attention devoted to the realizations of this kind of linking adverbials.

Feng and Choe (2016) investigated the use of linking adverbials in Chinese EFL students' argumentative academic essays. The study was built on four sub-corpora including essays from each year in college and control corpus including essays written by English L1 students. They found that Chinese students use linking adverbials more excessively as composed to English L1 students. They overused causal and sequential LAs across all years of study while gradually approaching the target norms in the use of additive and adversative LAs.

In addition, the reviewed literature here could suggest that most of the studies have focused on written discourse and spoken discourse has received little attention. The literature also suggests that in most of the studies the list of the most frequent linking adverbials was not provided, and this could hinder the use of the most frequent linking adverbials in different genres. Thus, this study intends to investigate the realizations of linking adverbials in two spoken genres namely student presentations and discussion sections.

The reviewed studies indicate that ESL learners could over/under/miss use linking adverbials. Thus, this indicates that there is a need for a guideline to help ESL learners overcome such problems concerning the cohesion of texts. The guideline could stress the following outcomes: first, it should indicate that linking adverbials, at which frequencies should be used. Second, as the reviewed literature based their conclusions mainly on frequency comparisons of realizations of linking adverbials in ESL and native writers or speakers, thus the guideline should indicate how and when each identified linking adverbial is used in texts. Third, the guideline should stress the practical use of most frequent adverbial linkers. To this end the following research questions were put forward:

1. What are the frequencies of the used linking adverbials categories and sub-categories in student presentations and discussion sections?

2. Are there any differences between the two genres, concerning the use of linking adverbials categories and sub-categories?

3. Methodology

3.1 Design and Context of the Study

This study followed a mixed-methods approach (qualitative and quantitative). This study is quantitative as it checks the frequencies and percentages of realizations of linking

adverbials. This study is qualitative as it discusses the frequencies and percentages of linking adverbials in the analyzed contexts (corpus). This study was run on a corpus including 11 student presentations and nine discussion sections. The corpus was taken from the MICASE corpus. MICASE includes samples of academic spoken genres categorized as class and non-class academic genres. This study selected two of the common class genres; student presentations and discussion sections. Student presentations refer to presentations in the class other than a seminar in which one or more students speak in front of the class or lead the discussion. In the MICASE corpus there are 11 student presentations from different disciplines that are lasted for 932 minutes and transcribed in 155085 words. Discussion sections refer to an additional section of a lecture class designed for maximum student participation; may also be called recitation. There are nine discussion sections from different disciplines that lasted for 532 minutes and transcribed in 78628 words. The particular of the corpus is presented in Tables 1 and 2.

Table 1.

Particulars of Selected Student Presentations

File Name	Recording Length	Transcript Word Count
Second Language Acquisition Student Presentations	69 min.	10365
Bilingualism Student Presentations	99 min.	15956
Multicultural Issues in Education Student Presentations	72 min.	13078
Chemistry Discussion Section Student Presentations	51 min.	7303
Architecture Critiques	123 min.	24228
Brazilian Studies Student Presentations	78 min.	12905
Community Change Student Presentations	66 min.	11267
Rehabilitation Engineering and Technology Student Presentations	32 min.	5605
Nursing Student Presentations	155 min.	25251
Black Media Student Presentations	66 min.	10540
Teaching Biochemistry Student Presentations	121 min.	18587
Total	932 min.	155085

Table 2.

Particulars of Selected Discussion Sections

File Name	Recording Length	Transcript Word Count
Philosophy Discussion Section	51 min.	8939
Biology of Birds Discussion Section	55 min.	8461
Economics Discussion Section	61 min.	9269
Intro Biology Discussion Section	59 min.	7791
Intro Anthropology Discussion Section	51 min.	8485
History Review Discussion Section	119 min.	16708
Heat and Mass Transfer Discussion Section	48 min.	8352
Intro to American Politics Discussion Section	55 min.	7751
Intro Astronomy Discussion Section	33 min.	5872
Total	532 min.	78628

3.2. Framework

Linking adverbials connect two independent clauses or sentences. They provide a transition between ideas. They can also be called conjunctive adverbs. We use linking adverbials to explicitly state relationships between sentences, paragraphs, and ideas. The result is more cohesion text. According to the classification done by Liu (2008), linking adverbials can show four different classes of relationships: 'Additive', 'Adversative', 'Causal/ Resultive', 'Sequential' linking adverbials.

3.2.1. Additive Linking Adverbials

Additive linking adverbials link items together. They state explicitly that two items are similar to each other. The subcategories of additive linking adverbials include Apposition/ Reformation, Similarity/ Comparative, and Emphatic. Appositive linking adverbials can show that the following piece of information is a restatement of the previous information by expressing it in a slightly different manner to make it more explicit (e.g. 'which is to say', 'in other words', 'that is'). Similarity/ Comparative LAs can show the similarity between the information, ideas, or sentences (e.g. 'alternatively', 'likewise', 'similarly'). Emphatic LAs can give additional support to the given information (e.g. 'above all', 'additionally', 'also', 'furthermore', 'moreover').

3.2.2. Adversative Linking Adverbials

They have two subcategories, Contrastive and Proper Adversative linking adverbials. Contrastive linking adverbials signal differences or alternatives between two pieces of information (e.g. 'on the other hand', 'in contrast', 'alternatively', 'conversely', 'by comparison', 'instead'), and Proper Adversative linking adverbials, on the other hand, demonstrate that the following pieces of information signal a reservation concerning the previous information (e.g. 'though', 'anyway', 'however', 'nevertheless', 'in any case').

3.2.3. Causal/ Resultive Linking Adverbials

Causal/ Resultive linking adverbials demonstrate to readers that the following textual element is the result or consequence of the previous information. They are in two

subcategories of general causal and conditional causal (e.g. 'consequently', 'thus', 'as a result', 'hence', 'so', 'therefore').

3.2.4. Sequential Linking Adverbials

Enumerative or Listing linking adverbials, Summative linking adverbials, Simultaneous linking adverbials, and Transitional to another topic. Enumerative linking adverbials can be used to show the order of pieces of information. Enumeration can follow logical or time sequences, or they can simply be used to move on to the next piece of information. Summative linking adverbials explicitly state that the text is concluding. They often signal that the author will summarize the information he or she has already presented, hence the name 'summative' (e.g. 'in sum', 'in conclusion', 'to conclude', 'all in all', 'overall', 'to summarize').

3.3. Data Collection Procedure

The researchers went through the following procedures to collect the data. First, the MICASE corpus was scanned for classroom genres and two genres of student presentations and discussion sections were selected. Second, the student presentations and discussion sections were downloaded. Third, as the presentations and discussion sections were already transcribed, the researchers only saved them in a suitable format for analysis.

3.4. Data Analysis Procedure

The corpus was investigated for the linking adverbials list suggested by Liu (2008). Then, having the frequencies of linking adverbials prepared, the whole corpus scanned manually to find the possible missed linking adverbials. Next, the most frequent linking adverbials in each class of linking adverbials were identified (see Appendix A for the list of linking adverbials used in both genres). Then, to increase the reliability of the analysis, four student presentations and four discussion sections were analyzed by a researcher who has some publications on close topics. In the case of disagreement, the researchers went through the text to decide on the LA item's type and function. Finally, the results were tabulated and discussed.

4. Results

The data were analyzed for the overall frequencies of LAs in student presentations and discussion sections per 1000 words. The results are presented in Table 3.

Table 3.

Frequencies of Linking Adverbials Per 1000 Words in Student Presentations and Discussion Sections

	Frequency	Per 1000 words
Student Presentations	2633	16.97
Discussion Sections	1286	16.35

The data were analyzed for the frequencies of linking adverbials classes in two spoken genres namely; student presentations and discussion sections and findings are presented in Table 4.

Table 4.

Frequencies of Linking Adverbials in Student Presentations

Linking Adverbial	Student Presentations	Discussion Section
Additive	490 (%18)	177 (%14)
Adversative	424 (%17)	107 (%8)
Causal/ Resultive	1195 (%45)	795 (%62)
Sequential	524 (%20)	207 (%16)
Total	**2633 (%100)**	**1286 (%100)**

Table 5 presents results concerning the frequencies of the sub-classes of the causal/resultive linking adverbials.

Table 5.

Frequencies of the Sub-categories of the Causal/resultive Linking Adverbials

Causal/resultive LAs	Class presentations	Discussion section
General	1137 (%95)	770 (%97)
Conditional	58 (%5)	25 (%3)
Total	1195 (%100)	795 (%100)

Table 6 displays the frequencies of sub-classes of the sequential linking adverbials.

Table 6.

Frequencies of Sub-categories of the Sequential Linking Adverbials

Sequential Las	Class presentations	Discussion section
Enumerative	490 (%94)	202 (%98)
Simultaneous	17 (%3)	4 (%1)
Summative	11 (%2)	0
Transitional to another topic	6 (%1)	1 (%1)
Total	524 (%100)	207 (%100)

Table 7 presents the results concerning the realizations of sub-classes of the additive adverbial linkers.

Table 7.

Frequencies of Sub-categories of the Additive Linking Adverbials

Additive LAs	Class presentations	Discussion section
Emphatic	432 (%88)	148 (%84)
Apposition/reformation	55 (%10)	28 (%15)
Similarity/comparative	3(%2)	1 (%1)
Total	490 (%100)	177 (%100)

Table 8 presents the results concerning the frequencies of the sub-classes of adversative adverbial linkers.

Table 8.

Frequencies of Sub-categories of the Adversative Linking Adverbials

Adversative Las	Class presentations	Discussion section
Proper adversative	138 (%33)	45 (%42)
Contrastive	235 (%56)	38 (%35)
Correction	25 (%5)	6 (%6)
Dismissal	26 (%6)	18 (%17)
Total	424 (%100)	107 (%100)

5. Discussion

The results indicate that in the two spoken genres, speakers showed somewhat similar attention to use linking adverbials (see Table 3). This might be sourced from the fact that the nature of spoken genres requires such use of linking adverbials. Frequencies of the linking adverbials in this study are not in line with findings reported by Gao (2016). This difference might suggest that there is a difference concerning the use of linking adverbials in both spoken and written discourses even they are considered as cohesive features in both spoken and written discourses.

As it is evident in Table 4, the causal/resultive linking adverbials have received the greatest attention in both sets of corpora. This result is contradicted to the findings reported in Gao's (2016) study. The variations could be due to the nature of data analyzed in the two studies. Gao studied the realizations of linking adverbials in academic writing. It seems that spoken and written discourses are different in text structure wherein spoken discourse, the speaker has little space to switch the turn to others participated in the speaking. Thus, spoken texts are shorter then they require greater use of such linking adverbials (Liu, 2008).

Comparing the analyzed genres, in the discussion section, speakers devoted a greater portion of linking adverbials to the realizations of the causal/resultive linking adverbials. This might highly stem from the level of speakers; while in the discussion section, mostly speakers are experts, in class presentations, speakers are students.

The second more frequent linking adverbials were sequential. This finding is in contradiction with findings reported in Gao (2016) and Liu (2008). The variation between findings in Gao's (2016) study and this study could be due to the difference between the nature of data. Gao analyzed written texts in which readers can get back while reading and see the references of the information, while in the current study, researchers analyzed spoken genres where speakers need to explicitly and in a clear manner announce the sequence of the information presented. The two subcorpora have shown a small difference in the attention devoted to the realizations of this kind of linking adverbials.

The third most frequent linking adverbials are the additives. These linking adverbials are required by the structure of genres where speakers have to present explanatory information regarding the topic of discussion or presentation. This finding in line with findings reported in the studies carried out by Ishikawa (2010) and Bolton et al (2002).

They indicated that speakers need to add information to intensify the meanings and such intensification is a prominent feature of students' related speaking. The slight difference between the two corpora could be due to the level of speakers. In class presentations, students feel a greater need to include additive linking adverbials.

The last class of linking adverbials is the adversatives. It seems that such linking adverbials are necessary to help speakers challenge the ideas and change the direction of the discussion. It could be indicated that the use of such linking adverbials is imposed by the nature of the genes analyzed. Based on the results in Table 4, students showed greater attention to this class possibly to announce the change of ideas' directions in a clearer manner.

As it is evident, the general causal/resultive linking adverbials were received greater attention while the conditional causal/resultive linking adverbials received very little attention. This result is somewhat similar for both sets of corpora. This result is in line with Parrot (2000) and Liu (2008). It seems that using such linking adverbials in spoken genres is a common and usual structure for presenting information in a clear resultive manner. General causal/resultive linking adverbials include linguistic features that speakers have to use to create an explicit causal/resultive relation between the information presented such as 'so', 'as a result', and 'however'. The most common linking adverbial of the causal/resultive category is 'so' (see Example 1). In both sets of corpora, this adverbial linker is used possibly due to the fact that it can perform the discourse function of causal/resultive in a clear manner.

> Example 1: ….. family two being five-point-seven, transition metals being five point-one nine and, then the most acidic heavy metals being two-point-five-two. **_So_** we concluded that basically acidity increase is going to the right on the periodic table,….. (Student Presentations)

It quite clear that speakers in the two genres analyzed care to a great extent on how to order information in ways that help better comprehension of the listener. Speakers have reached such function through the use of the enumerative linking adverbials. This result is also stressed in studies carried out by Liu and Gao. It seems that such use of linking adverbials is imposed by the nature of spoken discourse in which the listener has no chance of getting back and checking information to reach a better comprehension, thus such linking adverbials could play a significant role to help listeners' comprehension. The

results in Table 3 indicated that the attention to the sub-classes of the sequential linking adverbials was closely similar across two genres analyzed.

The most frequent adverbial linker of this class is 'then' (see Example 2). The realization of this adverbial linker was somehow greater in student presentations suggesting that students prefer to use adverbial linkers that show the sequence of idea presentations more explicit.

Example 2: it's really from here. So I mean you're, you're going in through there and **_then_** you get into the parking. so, [S4: so as soon as you come out you get a circulation.] (same way,) you park your car and you come in and **_then_** you can go right up, [S4: (up or)] into these studios or, you know (er). (Student Presentations)

It is evident that the attention devoted to these adverbial linkers are too large extent similar across two corpora. This result could indicate the importance of ideas and claims' presentations in a clearly additive manner. Such a presentation could help in better comprehension of presented ideas and claims. This result is in line with findings reported by Peacock (2010) and Ishikawa (2010). Greater use of the emphatic additive adverbial linkers at the cost of apposition/reformation additive adverbial linkers could be discussed as the speakers in both corpora prefer to introduce information and intensification of meaning in an additive manner, while underuse adverbial linkers to introduce information and sequential introduction of information in a parallel manner (Ishikawa, 2010)

The common linking adverbials that represent the additive linking adverbials class are 'also', 'too', 'again', 'and also', 'for example', and 'of course' (See examples 3-4).

Example 3: uh, so if you said the viscosity I assume here is small, therefore, uh, this term is negligible that that was a good answer. uh **also** if you said I don't know anything about the viscosity, so i can leave it in that's a good answer also. (Discussion Sections)

Example 4: right there in the sky. two stick figures. **Again** when we come down in two weeks, again, we'll talk more about, who they are. so to review quickly, what constellation is this? (Discussion Sections)

The results quite clearly indicate that the proper adversative and contrastive adverbial linkers are quite differently used by the speakers of two genres. This result could be justified based on the fact that there are differences between participants in the two genres. In student presentations, speakers seek validations of their ideas or claim by contrasting

them with other ideas or claims while in discussion sections, speakers are considered expert that does not leave too much importance for seeking validation through the use of the contrastive adverbial linkers. Speakers in discussion sections use the proper adversative adverbial linkers to create a cohesive speech that help increase the comprehension of listeners. The most common adversative adverbial linkers are 'actually', 'though', 'yet', and 'in other position' (see examples 5).

Example 5: it's interesting **though** they, in fact, compete with the little houses, or whether they're [S8: or] compatible. (Discussion Section)

6. Conclusion

This study intended to study the realizations of linking adverbials in two classroom genres namely student presentations and discussion sections. The results pointed to some conclusions. First, linking adverbials are treated as important cohesive features in two genres. This could help to conclude that there is a need to shed light on the other spoken genres concerning the realizations of linking adverbials. Second, the results in relation to the frequencies of linking adverbials could help to conclude that frequencies classes of linking adverbials are linked to the nature of genre under study. So, genre and across genre study could provide a clear image of how speakers use linking adverbials in different genres. Third, in relation to the sub-classes of linking adverbials, it seems that the nature of spoken discourse imposes the use of some linking adverbial sub-classes at the cost of others. Generally, it can be concluded that linking adverbials are important cohesive features that their realizations are linked to the type of discourse and nature of the genre. This study also developed a list of the linking adverbials used in both genres for the possible implication by ESL students aiming to give presentations or participate in discussion sections.

This study has some limitations that could suggest some further studies. First, this study focused on two spoken genres, thus further studies on other spoken genres such as lectures and seminars could help to give a full image of the use, realizations, and functions of LAs in spoken genres. Second, in the analysis, the focus was not on the disciplinary impact on the selections and functions of LAs, thus further studies could shed the light on the impact of spoken conventions of disciplines on the use, realizations, and discourse functions of LAs. Third, this study focused on corpus compiled in English native context,

thus further researches that compare the use, realizations, and discourse functions of LAs in native English and non-native (L2 and EFL) contexts are needed. Such studies could also highlight overuse and underuse of LAs by non-native speakers of English.

The results of this study could have implications for novice English speakers who participate in two spoken genres of student presentations and class discussion sections. This study could provide speakers with how and to what extent they should use LA items. In addition, the results of this study also highlight the most frequent LA items that students can use in two spoken genres analyzed. The other implication could be for instructors on what LA items should be included in the teaching syllabus.

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Appendix A

Frequencies of Linking Adverbials in Student presentations and Discussion Sections

Frequencies of Linking Adverbials in Student presentations and Discussion Sections		
Additive Adverbial Linkers		
Subclass	Student Presentations	Discussion Sections
Emphatic		
Also	276	58
Again	43	36
Too	48	25
As i/they/you say	11	2
Further	15	11
Of course	21	7
Above all	1	0
As well	6	3
As a matter of fact	0	1
Besides	6	4
In addition to	5	1
Subtotal	*432*	*148*
Apposition/reformulation		
For example	35	10
For instance	11	5
That is	5	3
That is to say	0	1
In other words	1	0
For one thing	0	1
Namely	0	4
What I'm saying is	2	4
What I mean is	1	0
Subtotal	*55*	*28*
Similarity Comparative		
Alternatively	0	1
Similarly	3	0
Subtotal	*3*	*1*
Total	**490**	**177**
Adversative Adverbial Linkers		
Proper Adversative/Concessive		
Though	38	18
Yet	31	12
However	26	4
Of course	21	7
At the same time	18	4
Then again	3	0
Nevertheless	1	0

Subtotal	*138*	*45*
Contrastive		
Actually	210	26
In fact	20	8
Conversely	1	0
In/by contrast	3	0
In reality	1	2
On the other hand	0	2
Subtotal	*235*	*38*
Correction		
Instead	20	5
Rather	5	1
Subtotal	*25*	*6*
Dismissal		
Anyway	21	12
After all	1	0
All the same	1	2
Any how	0	1
Despite this/that	2	2
Still	1	1
Subtotal	*26*	*18*
Total	**424**	**107**
Causal/Resultive Adverbial Linkers		
General Cause		
so	1113	756
Because of it/this/that	9	1
Accordingly	1	1
As a result of	3	2
Consequently	1	0
Hence	0	1
Naturally	0	3
Subtotal	*1137*	*770*
Conditional Case		
Then	53	21
Otherwise	4	4
In that case	1	0
Subtotal	*58*	*25*
Total	**1195**	**795**
Sequential Adverbial Linkers		
Enumerative/Listing		
Then	435	169
First/firstly	17	11
Afterward	5	1
Eventually	8	6

First and foremost	1	0
First of all	6	5
In the first place	0	2
To begin with	1	0
Second/secondly	4	2
Finally	4	4
Last/lastly	4	1
Next	2	1
Subtotal	*490*	*202*
Simultaneous		
At the same time	16	4
In the mean time	1	0
Subtotal	*17*	*4*
Summative		
In conclusion	8	0
To summarize	2	0
To conclude	1	0
Subtotal	*11*	*0*
Transition to another topic		
By the way	6	1
Subtotal	*6*	*1*
Total	524	207