Proposing a comprehensive model of cohesive devices to investigate the quality of students' academic writing

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Abstract

The majority of the studies that analysed the use of cohesive devices relied on Halliday and Hasan's (1976) model, which was acknowledged to be the most comprehensive model of cohesion. Reviewing the previous studies has revealed that research has fallen short of analysing the links between the text and the contextual world, including culture, for example. This paper introduces the concepts of the cohesive devices based on the 1976 model with reference to examples from English and Arabic. Then, the paper builds on the 1976 model and expands it based on suggestions proposed by different authors, and introduces the new tool: construction-based cohesion.

Keywords: cohesive devices; text cohesion; text analysis; discourse analysis; a comprehensive model of cohesion

1. Introduction

Halliday and Hasan's 1976 model of cohesive devices has so far been used in a significant number of studies (e.g. Abu-Ayyash and McKenny 2017; Guna and Ngadiman 2015; Karadeniz 2017; Rostami, Gholami and Piri 2016); Comprehensive as it is in depicting the ties that exist between various parts of the text (Moreno, 2003; Xi, 2010), the 1976 model has not been revised for adaptation since its inception, probably because it has been perceived of as 'the best known and most detailed model of cohesion available' (Baker 2011, p. 180).

Generally, cohesive devices fall into two broad categories: grammatical and lexical. Grammatical cohesion includes *reference*, *substitution*, *ellipsis* and *conjunctions*, whereas lexical cohesion involves vocabulary ties, such as *repetition*, *synonymy* and *hyponymy*. This paper discusses the adaptations that can be integrated into the 1976 model with the aim of building an all-encompassing instrument of cohesive devices that can be used in different ways and domains in textual analysis, one of which is the analysis of students' academic writing. The sources of these adaptations will be the suggestions made by different authors in the literature in addition to the writer of this paper's proposal.

Cohesion occurs whenever the interpretation of a linguistic item is dependent on another, in what is referred to as *tie* (Halliday and Hasan 1976). Consider the following example of this relationship:

[1]   *Mary* won the competition. *She* trained hard for it.

In [1], *She* cannot be decoded except by referring to another linguistic item, which is *Mary*. The present paper seeks to come to grips with all the ties that are likely to be found in texts by reviewing the literature written on these relationships and by introducing one more cohesive tie

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that was not addressed before. The significance of this endeavor stems from the possibility of broadening the scope of students' writing assessment to include all the mechanisms possible as far as cohesive devices are concerned.

Acknowledging the seminal contribution of Halliday and Hasan (1976) to text analysis, this paper proposes the adaptation of the model in order to build a comprehensive instrument of cohesion. In essence, this paper endeavors to answer the following question: What are the adaptations that can be incorporated into Halliday and Hasan's (1976) model of cohesive devices and that can lead to a comprehensive model of cohesion?

2. Literature on cohesive devices

This section introduces the definitions of, examples on and the proposed adaptations to the cohesive devices model. According to Halliday and Hasan (1976), cohesive devise include *reference*, *substitution*, *ellipsis*, *conjunctions*, and *lexical devices* (e.g. reiteration and collocation). The following review discusses all these categories and all the suggested adjustments.

Reference

Halliday and Hasan (1976) maintain that *reference* can be of two types: *exophoric* and *endophoric*, and endophora can be represented in texts using *anaphora* or *cataphora*. To elucidate these categories, consider the following examples:

[2] Send *it* to *them*.

[3] Susan did *her* homework alone. *She* spent three hours doing *it*.

[4] *He* had no other choice. Ahmed had to change his flat.

In [2] *it* and *them* cannot be interpreted except by considering contextual factors, which makes the two linguistic items examples of exophoric reference. In Arabic, this type of reference holds in examples like قابلته هناك (I met him there), where the interpretation of *I*, *him* and *there* call for contextual factors. Examples [3] and [4] are examples of endophoric reference since the bold faced pronouns can be decoded depending on the text itself without the need for contextual clues. In [3] *her*, *she* and *it* are instances of *anaphora* as they can only be decoded by going *back* in the text, whereas in [4] *He* is *cataphoric* because its interpretation involves moving *forward* in the text.

Distinguishing context from culture, Paltridge (2012) suggested that linguistic items that call for the readers' cultural awareness in order to be decoded should be distinguished from those that call for contextual clues. Therefore, he introduced *homophora*, which roughly refers to ties that hold between linguistic items and culture. To elaborate on this, consider the word 'pilgrimage' in this example: Sam performed *pilgrimage* last year. In this example, in order to understand what 'pilgrimage' refers to, some cultural knowledge is needed on the part of the reader, because this expression involves a ritual that is distinct based on the religion or belief according to which it is performed.

Cutting (2008) added the category of *associative* reference, which involves a noun phrase that is linked to entities that are associated with another noun phrase in the same text. Cutting (2008) introduced the following example (p. 10):

[5] | Youtube is a popular *video sharing* website where users can upload, view and share video clips.

Although Arabic shares with English the majority of the categories described above, one should not be oblivious of the substantive discrepancies between the two languages in the pronoun system at the levels of number and gender (Alfadly and Aldeibani 2013; Wightwick and Gaafar 2005). For example, while English has seven subject pronouns, Arabic has double the number. Consider Table 1 below for these differences:

Table 1. English and Arabic subject pronouns

English pronoun	Corresponding Arabic pronoun(s)
I	أنا
He	هو (للعاقل)
She	هي (للعاقل)
It	هو (لغير العاقل)
	هي (لغير العاقل)
We	نحن
You	أنتَ، أنتِ، أنتمِ، أنتم، أنتنّ
They	هم، هما، هنّ

Still, in both languages the referent of the pronoun can be interpreted exophorically, homophorically or endophorically.

Ellipsis

Ellipsis is a cohesive device that involves the deletion of items that can be retrieved from elsewhere in the text (Hoey 2001). Examples of this cohesive device as per the 1976 model are presented below:

[6] | This isn't her brother's car. It is her own.

[7] | She will make it and win. I am fully confident she will.

[8] | Have they attended the party? Yes.

The example in [6] is an instance of *nominal* ellipsis since the deleted item is the noun *fault*. [7] is an example of *verbal* ellipsis with part of the verb (make) deleted, and [8] is an instance of clausal ellipsis since a whole clause is omitted.

A number of adjustments related to ellipsis have transpired. While the majority of researchers stressed that ellipsis can only be anaphoric (e.g. Crystal 2006; Halliday and Matthiessen 2014), McCarthy (1991) confirms that English *does* have cataphoric ellipsis as illustrated in [9] where to retrieve what has been deleted after 'could', the reader has to move forward in the text.

[9] | If you could, I'd like you to be back here at five thirty (McCarthy 1991, p. 43).

Thomas (1987) was concerned with the various guises of verbal ellipsis, and introduced two more subdivisions based on the nature of deletion. These two divisions were *echoing* and *auxiliary contrasting*, which are presented in [10] and [11] respectively.

[10] | A: *Is* he joining our team?
     | B: Yes, he *is*.

[11] | A: *Is* he joining our team?
     | B: He already *has*.

This classification, though, may not apply to all languages, particularly those which do not have auxiliary verbs, such as Arabic.

Substitution

Substitution has much in common with ellipsis, except that it involves the replacement of the noun with linguistic items, such as *one* and *ones* (nominal substitution), the replacement of the verb with items like *do* and *does* (verbal substitution), or the replacement of the clause with words like *so* and *not* (clausal substitution). Arabic houses equivalent substituting items, such as كنلك and تفعل واحدة.

Quite understandably, while substitution was described in terms of anaphora, it is unwise to rush for generalisations, as the author of this paper located an instance of what can be considered as cataphoric substitution. Consider the following example for clatification:

[12] | The Italians got *this one* right. Last week,…Their tweets,…, included…(Friedman
     | 2015)

Conjunctions

The four categories introduced in the 1976 model of cohesive devices (*adversatives*, *additives*, *causal* and *temporal*) went on an adaptation spree, most probably because it is difficult to generate an exhaustive list of the entire range of conjunctions (McCarthy 1991). Table 2 delineates the last list of conjunctions in English and Arabic.

Table 2. Types of conjunctions

Conjunctions	English examples	Arabic examples	Source
Appositive	that is	أي /'ay/	
Clarifying	at least	على الأقل /`alaa al'aqall/	
Additive	And	وَ /wa/	Halliday and Hasan (1976)
Adversative	But	لكن /laakin/	
Varying	as for	أمّا /'ammaa/	Halliday and Matthiessen (2014)
Matter	Here	هنا /hunaa/	
Manner	Similarly	بالمثل /bilmithl/	
spatio-temporal	then, when	ثّم /thumma/, لمّا /lammaa/,	
causal-conditional	so, so that, if, because	لأن /'in/, إن /li/, لِ /fa/, فَ /li'anna/,	
Listing	First	أوّلاً /'awwalan/	Locke (2004); (Lahlali 2009)

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Lexical Cohesion

The major adaptations to the two lexical categories (repetition and collocation) that appeared in the 1976 model were introduced by Halliday and Matthiessen (2014) as shown in Table 3. The table also presents equivalent examples from Arabic.

Table 3. Lexical cohesive devices in English and Arabic

Lexical cohesive device	English examples	Arabic examples
Repetition	office…office	مكتب...مكتب
Synonymy	big, huge	ضخم ...كبير
Antonymy	deep, shallow	عميق ... ضحل
Hyponymy	country, Egypt	بلد ... مصر
Meronymy	tree, branch	غصن...شجرة
Collocation	horse, neighing	صهيل...حصان

Parallelism

Parallelism, which can be defined as the repetition of a certain form or structure for the purposes of emphasis and insistence (de Beaugrande and Dressler 1981), has been accepted as a cohesive device in English (Neumann 2014) and Arabic (Aziz 2012; Dikkins, Hervey and Higgins 2002).

3. Introducing construction-based cohesion

This category is proposed by the author of this paper. The introduction of this cohesive device is based on the Construction Grammar (GC) Theory. CG is primarily built on the notion of *Constructions*, which refers to the twinning between form and function (Sullivan 2013).

Goldberg (2003, p. 219) strictly states that "any linguistic pattern is recognised as a construction as long as some aspect of its form or function is not strictly predictable from its component parts". The emphasis of constructions, then, is linguistically unusual patterns, such as *The Xer, the Yer* pattern and idioms. The author of this paper proposes that idioms can link to entire ideas or big chunks in a text, which takes cohesion into a totally different level of linkage, suggested to be called 'construction-based cohesion'.

4. Result: A comprehensive model of cohesion

Based on the conceptual framework discussed in the previous section, a comprehensive model of cohesive devices is proposed to include the following categories: endophoric reference (anaphoric and cataphoric), exophoric reference, homophoric reference, associative reference, anaphoric and cataphoric ellipsis (nominal, verbal 'auxiliary contrasting and echoing', clausal), anaphoric and cataphoric substitution (nominal, verbal, clausal), conjunctions (appositive, clarifying, additive, adversative, varying, matter, manner, spatio-temporal, causal-conditional, listing), lexical cohesive devices (repetition, synonymy/antonymy, collocation, hyponymy, meronymy), parallelism and construction-based cohesion. It is hoped that the introduction of a comprehensive model of cohesive devices will reflect positively on students' writing and their evaluation.

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5. Conclusion

The model of Halliday and Hasan (1976) has been employed in a huge number of studies about cohesion. Therefore, the author of this research thought that it was time to review the model in an attempt to improve its categories in a way that encompasses the proposals of other authors and the ideas of the writer of this study. This attempt was worthy as the study found that there are a number of cohesive tools that can be integrated into the 1976 model, and thus enrich studies that analyse writing in an academic setting. On a cautious note, the model presented in this analysis should not be considered definitive and final due to the ambivalent nature of language and the ways it is used.

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