



Syntactic Mechanisms in the Transition from Academic Written to Oral Discourses¹

Mecanismos sintácticos en la transición de los discursos académicos a los discursos orales

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Abstract

This article presents the results of a pilot study that sought to identify: (1) the syntactic mechanisms that a group of PhD-level Colombian EAP students used to express originally written content in oral presentations, and (2) how those mechanisms can be used to describe the differences of performance between high- and low-rated presentations. To achieve these objectives, a discourse analysis comparison of eight parallel pairs of texts (eight essays and their corresponding oral presentation transcriptions) was performed. Quantitative analyses were also performed to confirm the qualitative analyses. Syntactic modifications to clause structure and heavily modified noun phrases were identified as some of the mechanisms that students used to transition from written to oral discourse. The analysis of these mechanisms includes the description of further sub-mechanisms, the linguistic resources that are implemented, their pragmatic appropriateness, and their grammatical correctness. Among the sub-mechanisms deemed as useful indicators of quality of oral performance are topicalization and reduction of heavily modified NPs. Other sub-mechanisms such as the rhematization of NP modifiers were not useful to discriminate among levels of oral performance. This report ends with the presentation of the implications and limitations of the study, and the perspectives for future research.

Keywords: academic discourse, EAP, EFL, information structure, oral presentations, syntactic modifications

Resumen

Este artículo presenta los resultados de un estudio piloto que buscó identificar: (1) los mecanismos sintácticos utilizados por un grupo de estudiantes colombianos de EAP a nivel de doctorado para expresar contenidos originalmente escritos en presentaciones orales y (2) cómo estos mecanismos pueden ser utilizados para describir las diferencias de desempeño entre las presentaciones de alta y baja calificación. Para lograr estos objetivos, se realizó una comparación de análisis de discurso de ocho pares paralelos de textos (ocho ensayos y sus correspondientes transcripciones de presentaciones orales). También se realizaron análisis cuantitativos para confirmar los análisis cualitativos. Los mecanismos identificados fueron las modificaciones sintácticas a (1) la estructura de las cláusulas y (2) las frases nominales altamente modificadas. El análisis de estos mecanismos incluye la descripción de sub-mecanismos

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adicionales, los recursos lingüísticos que se implementaron, su adecuación pragmática y su corrección gramatical. Entre los sub-mecanismos que se consideran como indicadores útiles de la calidad del desempeño oral se encuentran la topicalización y la reducción de NPs altamente modificadas. Otros sub-mecanismos tales como la rematicación de los modificadores de NP no fueron útiles para discriminar entre los niveles de desempeño oral. Este informe termina con la presentación de las implicaciones y limitaciones del estudio, y perspectivas para la investigación futura.

Palabras clave: discurso académico, estructura de la información, inglés para propósitos académicos (EAP), inglés como lengua extranjera (EFL), modificaciones sintácticas, presentaciones orales

Introduction³

We are living a moment in history with the highest offering of PhD programs that the world has seen (Cyranoski, Gilbert, Nayar, & Yahia, 2011). This trend has created a fierce competition for prestige and visibility in which the English of academia is key (Hyland, 2006, 2009) for its status as the preferred language of publication in the global academic community (Kirchik, Gingras, & Larivière, 2012). Non-English speaking universities, at an apparent disadvantage, are implementing plans such as the inclusion of courses in English for Academic Purposes (EAP) to help scholars and students develop skills for writing articles for publication as well as for giving effective oral presentations (OPs).

I am an EAP instructor at a non-English speaking university in Colombia whose main purpose is to help students divulge their research in English. In our program, instructors expect OPs, as well as articles, to be clear and well organized. Oral presentations, additionally, are expected to be delivered in a way that is engaging and clear for the audience to process. Unfortunately, this is not always the case, and oftentimes students' presentations pose difficulties on both the presenter and the audience. To help my students develop the skills to give effective OPs, I use the available literature on OPs. However, in comparison to written genres, there is very little information on the linguistic

characteristics of this academic genre or on how NNS (non-native speakers) perform in OPs, which is key in helping students develop the necessary skills.

In the last two decades, studies that describe oral academic genres linguistically have grown in number with greater emphasis on NS conference presentations and related genres. These investigations study key aspects such as information structure (Carter-Thomas & Jowley-Rolivet, 2001, 2003; Carter-Thomas, 2005), linking adverbials use by L1 and L2 students (Zareva, 2011), strategies to engage with the audience (Recski, 2005), the expression of stance (Zareva, 2012) or modality (Recski, 2006), self-mention and the projection of identity (Zareva, 2013), use of rationales for data selection (Sunderland, 2004), moves analysis (Vassileva, 2009), metadiscourse (Aguilar, 2008; Mauranen, 2009; Thompson, 2003), and formulaic sequences across disciplines (Kashiha & Chan, 2014), among others.

However, despite the considerable amount of studies describing OPs linguistically, most of the available literature approaches OPs from other pedagogical aspects such as professional development (Boyd, 1989; Rowley, 2012), needs analysis in EAP contexts (Ferris, 1998; Ferris & Tagg, 1996a), academic development and socialization (Castronova, 2013), ways to improve language classroom practices (Al-Issa & Al-Qubtan, 2010; Munby, 2011; Shimo, 2011; Wilson & Brooks, 2014), promotion of language learning strategies and independent learning (Bankowsky, 2010; Tsai, 2011), and students' perceptions of OPs (Alwi & Sidhu, 2013; Chou, 2011; Devi, Amir, & Krisch, 2014; Evans, 2013; Heidari & Ghanbari, 2012; Miles, 2009, 2014; Otoshi & Heffernen, 2008), etc.

³ This article is a partial report of a study that I conducted as part of my studies in the PhD Program in Applied Linguistics and English Language at the University of Birmingham. This study was also presented as a paper entitled *Syntactic Mechanisms in the Transition from Academic Written to Oral Discourses: Performance Differences in a Colombian PhD-level EAP course at the 2016 AAAL (American Association for Applied Linguistics) Annual conference in Orlando, Florida.*

These pedagogically based studies provide interesting but not crucial information for the improvement of OP delivery of NNS. As students and teachers in EFL contexts, we would benefit more from linguistic descriptions of NS and NNS, professional and non-professional, successful and not successful oral genres providing information on the discourse features that our students should learn (or avoid) to improve the verbal aspects of their talk and adopt if they want to participate in the English-speaking academic arena.

This study aims at contributing to the understanding of PhD-level EAP students' oral academic discourses in an EFL context with a focus on two syntactic mechanisms to transition from written to oral discourses and their usefulness in discriminating levels of oral performance.

Information Structure and Noun Phrase Modification

A person giving an oral presentation needs to cope with demands that are specific to this genre: focus on novelty, engagement with the audience, use of the visual channel, and simplification of information (Carter-Thomas & Rowley-Jolivet, 2003). This last aspect, simplification of information, can be a challenge for NNS, especially when what is said orally is based on written versions of the content. Academic written language makes use of complex linguistic structures such as nominalizations, heavily modified noun groups, and the passive voice (Biber, Grieve, & Iberri-Shea, 2009; Halliday & Matthiessen, 2004). Not knowing other resources to express written content in speaking might pose difficulties for both the speaker and the audience. Two concepts—information structure and noun phrase modification—allow us to understand the simplification of information in the transition from written to oral content by the same author.

Information structure. Information structure relates to the way writers or speakers package their message into informational units within or between clauses. Information is packaged in certain ways to make the message easy to understand or to highlight its most important parts. In structural terms, an information unit is composed of “a Given

element accompanied by a New element” (Halliday & Matthiessen, 2004, p. 89). The weight given to Given and New elements can be altered by manipulating diversions from the normal SVO clause structure. The process of putting an element at the right end of a clause (rheme) as New, to facilitate its processing, is referred to as end-weight (Quirk, Greenbaum, Leech, & Svartvik, 1985). To guarantee thematic continuity between clauses, end-weighted elements can be restated as GIVEN in the next adjacent clause. Adverbials are usually the elements that can be moved to the right as NEW or restated as GIVEN inside the clause or between clauses. Biber, Johansson, Leech, Conrad, and Finegan (1999) define adverbials as those elements of clauses that have three main functions: to add information about the circumstances of the proposition expressed in the clause, to express the writer/speaker's position towards the proposition, and to connect the clause to other discourse units, the function being referred to here. Adverbials can also take different syntactic forms (e.g. prepositional phrases, subordinate clauses) and can be placed in different positions within the clause.

The concept of information structure has been used to study syntactic choice variation between spoken and written academic discourses created by the same authors. Two of these studies (Carter-Thomas & Rowley-Jolivet, 2001; Rowley-Jolivet & Carter-Thomas, 2005) compared written and spoken versions of the same information by NS only, and by NS and NNS respectively. They identified two significant differences related to information structure: the use of *there* (more frequent in spoken than written versions) and the use of passives (more frequent in NNS than NS spoken versions). In each case, they noted a trade-off between the optimum information order and interactive features of speech. In the NS-NNS study, the existential *there* fulfilled end-weight functions in the written and oral versions. In the OPs, *there* fulfilled other typical roles: enumerating, organizing discourse, showing elements to the audience (deictic), responding to the communicative context of OPs in which presenters have to segment information in a way that is easy to process as well as to constantly refer to the visual channel. In the comparison between NS and NNS, passive structures were found to allow the manipulation of clause structure to put items in

the subject as Given to facilitate information flow through the end-weight principle. However, NNS were found to use passive voice in their OPs instead of other more appropriate options used by the NS, such as active clauses with personal pronouns or SV inversions, which allow NS presenters to have a more personal engagement with the audience and to deal with the visual channel. The preference of NNS for passive voice was interpreted as demonstrating low pragmatic competence in addressing the audience.

This pilot study also analyses clause structure change to express the same written content orally and attempts to identify performance differences by analyzing whether clause modifications are used to cope with OPs pragmatic demands.

Noun phrase modification. Noun phrases are units that consist of a noun (as head) and determiners and modifiers. Modifiers are used to “describe or classify the entity denoted by the head noun” (Biber et al., 1999, p. 97) and can be placed before (premodifiers) or after (postmodifiers) the noun. As premodifiers, a noun can take adjectives, participial modifiers, and other nouns. As postmodifiers, the same noun can take relative clauses, -ing clauses, -ed clauses, to- infinitive clauses, prepositional phrases, and other NPs in apposition. Heavy noun modification occurs when a noun has several pre and/or postmodifiers which in turn can also be pre or postmodified. Heavy NP modification is a characteristic of written academic discourses (Biber, Grieve, & Iberri-Shea, 2009).

In a search for studies on changes to heavy NPs in (or to transition from written to) oral discourses, none that specifically addressed syntactic mechanisms to simplify them was found. Avoidance of heavy NPs through extraposed and *there* clauses, or through passive voice is explained in Carter-Thomas and Rowley-Jolivet (2001) and Rowley-Jolivet and Carter-Thomas (2005). In this regard, these authors point out that “noun modification is much lighter [in OPs], due to constraints on real-time processing for both the speaker and the audience” (Carter-Thomas and Rowley-Jolivet, 2001, p. 7); they do not explain mechanisms through which written heavy NPs are reduced to lighter ones in speaking.

The Study

Research Context (Programa IPD) and Questions

Programa IPD (inglés para doctorados/English for doctoral students) is a Colombian EAP program created in 2010 (Janssen, Ángel, & Nausa, 2011) to help students in the PhD programs at a private university in Bogotá develop language skills in the academic English areas of writing for publication and speaking for presentations (Janssen, Nausa, & Rico, 2012). The second course of this program (IPD2) requires that students write essays about their doctoral research and present them to the class—a multi-department audience—in the form of oral presentations (OPs). Essays usually meet the expected grading criteria in terms of content, organization, and language use. In the OPs, however, struggling students, like their ESL counterparts (e.g., Berman & Cheng, 2010; Cheng, Myles, & Curtis, 2004), face several difficulties to make their talk in OPs fluent (Ferris & Tagg, 1996b). These difficulties may range from lack or misuse of linguistic resources to heavy dependence on slides or scripted versions of their talk, which in many cases recycle the sentences in the essays. Thus, a good essay is not always a predictor of good performance on the OP. Teachers in this EAP program anecdotally comment that speaking in OPs is the greatest area of observable performance discrepancy between high- and low-achieving students, and also a difficult area to evaluate.

To better understand the oral performance discrepancies, in spite of the ‘writing homogeneity,’ this pilot study considers the following questions:

- What are the differences between the written and the oral versions of the same content produced by students in this class in terms of (1) the syntactic changes made, (2) their grammatical accuracy, and (3) their pragmatic appropriateness?
- What syntactic differences in terms of information structure principles are there between high-rated and low-rated OPs?

Participants

Eight participants were chosen from the nine IPD2 courses taught between 2011 and 2015. Three students were enrolled in PhD programs in the humanities, three in social science programs, and two in science/engineering programs. Three students were promoted from the first course (IPD1), and five classified in IPD2 through the in-house placement test. This test is not aligned with international standard evaluations like TOEFL or IELTS; however, our rough estimations place these students between the A2 and B1 levels of the Common European Framework of Reference for Languages (CEFR). Participant selection was based on the grades assigned to their OPs, on a scale from 1 to 5, with 5 being the maximum possible grade. Grades close to 5 were classified as *high achieving*; those below the class average (3.8), as *low achieving*. To achieve a balanced comparison, 4 low-rated and 4 high-rated OPs were chosen.

The following procedures were followed to guarantee the integrity of this study. First, the project was presented to the research ethics committees of the university where the study took place and the University of Birmingham, where I am doing my PhD studies. Approval was granted for this pilot and future studies. Second, all students who have taken the course were informed about the study via e-mail; 81 completed electronic online consent forms, and 80 expressed their consent to participate. Third, only essays and OPs from students who expressed consent were considered. Fourth, OPs were videotaped and kept in a hard drive; essays and OPs transcriptions were modified where necessary to guarantee students' confidentiality and anonymity.

Identification of Sample Sentences

Following Carter-Thomas and Rowley-Jolivet (2001), eight pairs of parallel texts (11064 tokens) were analyzed to identify differences between essays and OPs and levels of oral performance: essays (5255 tokens) and their corresponding OPs transcriptions (5809 tokens; see Appendix A). OPs were video-recorded and transcribed orthographically including tags for hesitation marks, repetitions, false starts,

and the moments in which students read from slides or a script (see Appendix B).

This corpus was manually analyzed in three stages: (i) identification of parallel sentences in the written and oral corpora, (ii) qualitative analysis, and (iii) quantitative analysis. In the identification stage, the eight pairs of texts were analyzed and marked to extract sentences ($n = 108$) expressing the same propositions ($n = 54$). In the qualitative analysis stage, the 108 sentences (3166 tokens) were compared to identify mechanisms for re-working written content in the oral context and to identify the relative success of those mechanisms. The identification of changes to clause structure was completed based on the concepts of information structure, theme-rheme, given-new (Halliday & Matthiessen, 2004), and their related mechanism, end-weighting (Quirk et al., 1985), through the identification of moved adverbials (Biber et al., 1999). The analysis of heavy NP simplification was based on the identification of changed, eliminated, or moved modifiers; occasionally, the information structure and end-weight principles were also used. Finally, a quantitative analysis was performed: frequency of topicalizations, heavily modified NPs, and the number of words in them. The purpose of the analysis was to obtain raw and normalized frequencies (per 1000 words) and averages that confirmed that successful modifications to written discourses were more frequent in high achieving OPs. Again, the analysis was performed manually since, to my knowledge, the automated identification of topicalizations and NPs in learner corpora is still something that cannot be completed reliably with corpus software.

In addition to the mechanisms described here, I also identified differences that included speaking disfluencies and indicators of direct interaction with the audience. However, given the scope of this study, I focus only on syntactic mechanisms for they appeared to be more transparent linguistic marks of oral performance.

Findings

This article describes two syntactic mechanisms to transform written into oral content: changes to

clause structure and modifications to heavy NPs. It will be demonstrated below that these mechanisms generally serve to distinguish high and low levels of performance. Some sub-mechanisms, however, do not clearly indicate whether a student is performing successfully or not.

Changes to Clause Structure

Clause structure changes were reflected in two sub-mechanisms: topicalization and movement of adverbials across clauses. These mechanisms were analyzed as important oral performance markers from their grammatical correctness and pragmatic appropriateness, following information structure principles (Halliday & Matthiessen, 2004). I expected to find other mechanisms like switching from passive to active voice, but they were not present.

Topicalization. Topicalization is the movement of adverbials or “an element other than the subject to the left edge of the [clause]” (Speyer, 2005, p. 243). Sentences (1w) and (1s)⁴ illustrate the use of topicalization by a high achiever.

(1w) ...it has been created an important legislation that establishes limits and controls to the rights over the urban land **since 1997**.

(1s) **Since the nineties** we have a legislation that permit eh to the authorities do this kind of things. (E2-P2)⁵

In (1s), topicalization is evidenced in the movement of *since 1997* to the left end as *since the nineties*. In the context of the OP (1s-c), (1s) is connected with the previous clause, which also has a topicalized adverbial of time (*today*), with a coordinating conjunction. The

4 For clarity purposes, henceforth, sentences will be marked (#w) for the written version and (#s) for the spoken version. For example, (1w) and (1s) are the written and spoken version of the same sentence. In some cases, a sentence is shown in isolation and then in its context. To distinguish this, (#w) or (#s) is used for the sentence alone, and (#wc) or (#sc), for the sentence in its larger written or oral context. In other cases, a rewrite of the sentence or utterance is shown to demonstrate a particular point; this is coded as (#wi) or (#si) to indicate that this is an idealized version, not what the student wrote or said.

5 See appendix A for essays and OPs inventory.

placement of time adverbials at the beginning of the two coordinated clauses emphasizes their meaning in terms of time progression.

(1s-c) **Today** we have in Colombia a conception of the property like a social function that can be limit by the authorities[, **and**] eh **since the nineties** we have a legislation that permit eh to the authorities do this kind of things.

This use of topicalization can be said to be a mark of high performance for three reasons. First, as was expected in this class, the student succeeded in making syntactic changes that preserve the meaning written in the essay. In fact, not only does (1s) achieve syntactic change, but it also clarifies the meaning expressed in (1w). The placement of *since 1997* in the clause-final position in (1w) creates a structural ambiguity since the adverbial could be interpreted as a complement of *creation* or as a complement of *establish* and *control*. The movement to the left end in (1s) clarifies the meaning: ‘the law was created in the 90s.’ Second, as pointed out, topicalization creates a parallel time structure similar to the one in the previous clause. Finally, in pragmatic terms, these movements and coordination frame in (1s-c) can be said to have facilitated comprehension to the audience.

This is in partial alignment with Carter-Thomas and Rowley-Jolivet’s (2001, 2005) findings that the modification of clause structure is a mechanism used to achieve information flow in oral and written modes. The difference lies in the fact that these authors found the use of expletive constructions (those that have *there* and *it* as empty subjects) as preferred to modify information structure with the end-weighting principle. Their studies do not refer to the topicalization of adverbials as a mechanism to facilitate comprehension for the audience. Other studies such as those by Zareva (2009, 2011) focus on the use of adverbials by NS and NNS as mechanisms used by NS in informational packaging to engage with the audience; however, she does not mention the topicalization of adverbials to guarantee flow of information.

Another reason that topicalization of written elements in the oral version seems to be an important mark to discriminate among levels of oral performance is that no cases were found in the low achievers' sentences (see Table 1). This does not mean that low achievers do not use topicalization in writing or speaking; it means that they do not use it to transition from the essay to the OP.

Moving adverbials between clauses. The movement of adverbials between clauses was the second sub-mechanism to change clause structure. The difference between this mechanism and topicalization is that the latter happens within clauses while the former happens between clauses. The following sentences illustrate the mechanism:

(2w) [Among mechanical signals that insects use to communicate, vibrations are the most widespread.] **Within this mechanical channel**, Ccroft and Rodríguez stated, that 74% of the insect families use vibrational signals alone, yet this approximation is probably low (2005).

(2s) **Within those mechanical communication or mechanical channel**, [there are different types of uses of vibrations.]
(E7-P7)

Sentence (2w) is expressed through two independent clauses then simplified into one simple spoken clause in (2s). In this transition, the second clause in (2w) is left out with the exception

of one topicalized adverbial (*within this mechanical channel*), which is re-topicalized in (2s). In (2s), the meaning of the originally written clause (*Among...*) is slightly changed and expressed with an existential clause (*there are...*).

These syntactic modifications seem to be pragmatically motivated. On the one hand, the omission of the second clause in (2w) can be said to be due to the student's understanding that the information can be deemed too technical (authors and statistics) or unnecessary for their non-expert audience, and that it would have been more appropriate to focus on facts that they could more easily understand. Second, in the context of the presentation (2s-c), (2s)'s main focus was on the types of vibrations as a means for insects to communicate. Placing *different types of vibrations* at the right end of (2s) as NEW seems to also be motivated by the end-weight principle as evidenced by the spoken context, in which *vibrations* is iterated as GIVEN in the adjacent clause.

(2s-c) Within those mechanical communication or mechanical channel, there are **different types of uses of vibrations**. **There are vibrations** that travel through the substrate and the most eh family members eh of insects use it...

This syntactic mechanism to transition from written to oral content was not found in low-rated OPs either.

Table 1. Frequency of Topicalization in Raw and Normalized Frequencies

	Corpus		Sentences		Topicalizations	
	# of words	Raw	Per 1000 words	Raw	Per 1000 words	
Essays						
High	2683	113	42	33	12	
Low	2572	91	35	29	11	
	5255	204	39	62	12	
OPs						
High	3553	185	52	43	12	
Low	2256	117	52	11	5	
	5809	302	52	54	9	
Total	11064	506	46	116	10	

Quantitative analysis. The sample sentences above and a quantitative analysis of the frequencies of topicalization, discussed here as topicalization (in clauses) and moving adverbials (between clauses) allows us to conclude that high achievers make more versatile use of these information structure mechanisms in OPs than low achievers.

Raw (33 vs. 29 instances) and normalized frequencies (12 vs. 11 times per 1000 words) for the essays show that both high and low achievers can use topicalization in writing. In the OPs, however, not only is topicalization higher for high achievers (12 vs. 5), but also none of the 11 instances found for low achievers corresponded to any of the two mechanisms described here, while most of the instances found in the high achievers sentences, as exemplified in (1w)(1s)(1s-c) and (2w)(2s)(2s-c), did.

In the few examples explained above, it is clear that the movement of elements inside clauses or between clauses is motivated by the GIVEN/NEW information structure principle and that they are more fully followed in speech than in writing by high achieving students. These findings are complemented by the quantitative analysis that points out more frequent use of topicalization by high achievers in OPs. Therefore, these mechanisms of clause structure change might potentially be considered as important oral performance markers.

Changes to Heavily Modified Noun Phrases

Another syntactic mechanism to express written content in OPs is the simplification of heavily modified noun phrases (NPs), discussed here in terms of the movement, removal, and change of function of postmodifiers. These changes were not found in isolation but being simultaneously used. Like changes to clause structure, NP simplification was more consistently found in high achievers' sentences through three submechanisms.

*Reduction of modifiers.*⁶

(3w) First of all, the **[conception] (of the land property right) (as an individual and absolute)** was predominant during the 19th century (...) and it caused bad consequences to our cities.

(3s) First, eh **the [concept] (of an individual)** [fs] eh **[concept] (of the property [right])** has eh the related eh ah very bad effects.

(E2-P2)

In the transition from the essay (3w) to the OP (3s), three syntactic mechanisms to reduce a 12-word NP to two 5-word NPs were used. In (3w), *conception* has two postmodifiers (*of the land...*, and *as an...*). The first reduction mechanism is the elimination of *land* in the first postmodifier. The second is an attempt to make *of an individual...* the first postmodifier; this attempt, however, is abandoned as evidenced by the false start (tagged [fs]) and hesitation marks (*eh*). This leads to the third mechanism: the elimination of *as an individual*.

These mechanisms used to simplify heavy NPs can be explained in pragmatic terms. Firstly, the reduction of *land property right* to *property right* is appropriate, for no meaning is lost given the previous occurrences of *land*. Similar considerations apply to the movement and subsequent elimination of *as an individual*. Secondly, the presence of hesitation disfluencies (i.e., *eh*; Corley & Steward, 2008) and false starts at the exact point where two of the modifications happened suggest that the student is adjusting content to help the audience understand. The abandonment of the first NP is not necessarily the student not being able to think quickly enough or talk appropriately, but a way of simplifying information for the hearers. Finally, the student fixes an error: *of an individual* in (3s) lacked the noun *right*; its complete removal after the false start eliminates that error.

⁶ For clarity purposes, sample sentences include square brackets [] for the heads of noun phrases and parentheses () for their pre- and postmodifiers.

Change of the syntactic function of head modifiers. Another mechanism to change heavy NPs is changing the function of NP modifiers to perform similar or other syntactic functions attached to other elements.⁷

(4w) [Insects] (of the family *Triatominae*), (known as **kissing bugs**), produce vibrations by a mechanism called stridulation;

(4s) So [the way] (the **kissing bugs**) produces the vibrations is called stridulation.

(E7-P7)

In (4w), the NP head *insects* is the subject of the clause and takes two post-modifiers: a prepositional phrase (*of the family Triatominae*) and a participial adjective phrase (*known as kissing bug*). In (4s), three mechanisms to change the syntactic function of head modifiers are applied. First, the first postmodifier, *of the family Triatominae*, is removed. Second, *known as* is removed but *kissing bugs* is kept. Third, *kissing bugs* changes its syntactic function and becomes the subject of a new clause *the kissing bugs produces vibrations*. Fourth, this clause is attached to the NP *the way* as a postmodifying subordinate adjective clause.

These NP modifications can be explained in grammatical and pragmatic terms. Grammatically speaking, this student eliminates and moves modifiers, changing their grammatical function, but using standard English modifications and structures. In pragmatic terms, the original propositional content is kept. In fact, the eliminations of *of the family Triatominae* and *insect* are arguably ways of removing heavy technical and redundant information to focus on what is important in the two clauses: the inclusion of *stridulation* to refer to the way insects communicate. This is confirmed in the context of occurrence, in which the following clauses elaborate the meaning of *stridulate*.

⁷ In this sub-section, square brackets [] are used to represent the element being modified (verb group head or noun group head) and parentheses () for the elements modifying the heads of groups.

(4s-c) So the way the kissing bugs produces the vibrations is called stridulation. Eh they stridulates. That means that takes two parts of their body and rub against each other.

It can then be argued that changing the function of NP head modifiers also appears to be useful as a mark of oral performance given the complexity of the syntactic changes and the simplification of information that they imply.

NP simplification mechanisms were also found in low-rated OPs, but it was common to find that they did not really make the oral version pragmatically appropriate.

(5w) This identification is based on the (molecular) [analyses] (of **specific sections of mitochondrial [DNA] that is still preserved in the bones, which survives much longer than nuclear DNA.**)

(5s) This identification eh is based on the (molecular) [analyses] (**the specific sections of DNA [data] eh that is preserved in the tissue [fs] different tissues**) [reading5].

(E3-P3)

To make the transition into the OP, the general structure of the NP in (5w), whose head is *analyses*, remains the same in (5s). An NP (head= *DNA*) inside the postmodifier undergoes five changes: (1) elimination of *mitochondrial*, (2) inclusion of *data*, (3) *data* replacing *DNA* in its head function, (4) replacement of *bone* for *tissue* in the first postmodifier, and (5) elimination of the subordinate clause starting with *which*.

The use of five mechanisms of NPs modification (more than in the previous examples) slightly altering the original meaning does not necessarily imply high oral performance. The changes were made to a noun phrase (*DNA*), which was in turn part of another noun phrase (*sections*) embedded in another noun phrase (*analyses*). This double

embedding of post modifiers, which would arguably place a heavy processing burden, remained unchanged. Unlike the cases in (3s) and (4s), heavy noun modification is not reduced. A possibly easier to process version of (5s) could have been done with some of the mechanisms discussed in this article:

(5s-i) we use a technique called molecular analysis to make the taxonomic identification of **ancient remains**. To identify the **ancient remains**, we use the DNA preserved in their tissues.

Rhematization of modifiers. The following sentences introduce another type of modification made to noun phrases: reduction and movement to clause final (rheme) position.

(6w) Among **the (external) [causes] (that generate the messianic millenarian movements)**, colonialism is considered the most important.
(6s) [reading2] the the [fs] the colonialism is (the principal) [aspect] (of the **external cause**).
 (E6-P6)

In (6w), *causes* is premodified by *external* and postmodified by a relative clause. In turn, this NP is part of a topicalized adverbial phrase that appears in theme position, at the beginning of (6w), before the grammatical subject *colonialism*. The purpose of this topicalization is to introduce colonialism as one of the external causes of messianic millenarian movements. In the transition to (6s), the noun *causes* undergoes four changes: (1) postmodifier (*that...*) removal, (2) removal from topicalized adverbial (*Among the...*), (3) inclusion in the postmodifier of a new NP (head=*aspect*), and (4) placement in rheme position in its new postmodifier function.

These modifications to *external cause*, albeit complex, change the propositional content of (6w) in two ways. First, the nature of colonialism is presented differently. In (6w), colonialism is presented as an external cause while in (6s) it is

presented as an aspect of 'the external cause.' Second, the use of *the* and *cause* in singular form in (6s) could be interpreted as meaning that there is only one external cause, which contradicts what is originally expressed in (6w): there are several external causes. (6s-i) is an alternative sentence that uses these NP change strategies and keeps the original idea.

(6s-i) Messianic millenarian movements have several external causes, and colonialism is the most important one.

From (6w) and (6s), it can also be concluded that changes and movement of NP modifying elements cannot be marks of high achievement in themselves. It is expected that modifications contribute to the simplification of complex meanings without distorting the original (written) ones.

A type of NP modification that I expected to find in this study was the denominalization of nouns into verbs. Written academic texts exhibit a high degree of nominalization, or the transformation of verbs and other parts of speech into nouns (Halliday & Matthiessen, 2004); nominalizations are usually heavily pre or postmodified. Therefore, it was predicted that the simplification of heavy NPs would be accompanied by the denominalization of NP heads. However, no cases were found.

Quantitative analysis. To confirm whether the changes to heavy NPs explained here were a more common characteristic of the talk of high achievers, a quantitative analysis of NP presence in the written and oral texts was conducted (see Table 2).

This analysis provides quantitative evidence to confirm that high achievers used NP reduction mechanisms more than low achievers. First, although the frequency of NPs in the essay were similar for both groups, high achievers exhibited a reduction of 13 NPs per 1000 words (61 to 48) in their OPs while low achievers only reduced the number of NPs by 3 (58 to 55). Second, high achievers also managed to reduce the extension (number of words inside) of their NPs. While the average extension of an NP in

Table 2. NPs and Words in NPs Expressed in Raw and Normalized Frequencies, and Averages

	Corpus		NPs			Words in NPs		
	# of words	Raw	Per 1000 words	Avg.	Raw	Per 1000 words	Avg.	
Essays								
High	2683	163	61	40.75	1654	616	10.14	
Low	2572	150	58	37.50	1415	550	9.54	
	5255	313	60	39.13	3069	584	9.84	
OPs								
High	3553	172	48	43.00	1540	433	9.26	
Low	2256	125	55	31.25	1257	557	10.81	
	5809	297	51	37.13	2797	481	10.04	
Total	11064	610	55	38.13	5866	530	9.94	

the essays was higher for high achievers (10.14 vs. 9.54), it was lower in the OPs (9.26 vs. 10.81). This last observation is complemented by the number of NPs found in the OPs. High achievers used more NPs (172) but on average, those NPs were shorter. This could be interpreted as they not only eliminated words from their NPs, but also divided them into smaller NPs, as exemplified in (3s). Low achievers, on the other hand, used fewer NPs (125) but longer on average. As shown in 5w and 5s, this means that although they were able to use mechanisms to modify heavy NPs, they couldn't make them simpler, and therefore, easier to process, as exemplified in (5s).

From the sample sentences explained above, I assert that the changes to heavy NPs are motivated by information simplification concerns and that they are more successfully used in speech than in writing by high achievers. This more efficient use is also confirmed by the relative frequencies and extensions of NPs in the oral subcorpus. Therefore, heavy NP simplification mechanisms might also potentially be considered as important oral performance markers.

Conclusion

In this article, I have described two types of syntactic modifications as potential areas for the analysis of oral academic language in OPs given by PhD-level EAP students in an EFL context. The first, change to clause structure, was reflected in the movement of adverbials through two sub-mechanisms: topicalization and movement of

adverbials between clauses. Both mechanisms were interpreted to be motivated by information structure principles following the end-weight principle. These strategies were only found in high-rated OPs and therefore deemed as useful to discriminate among different levels of oral proficiency. The second, the modification of heavy NPs, was reflected in three sub-mechanisms: elimination, change of syntactic function, and rhematization of modifiers. The first and second were useful in the description of levels of achievement, for they were only found in high-rated OPs and interpreted to perform specific pragmatic functions. The third did not work well since it was not clear whether its use was motivated by pragmatic concerns, it distorted the original content, and it included the use of non-standard forms. Denominalization was expected to be found since it seemed obvious as a mechanism to make written content more easily accessible to the audience, but no cases were found.

I also conclude that three criteria could define how these two mechanisms can be used as marks to discriminate among levels of performance: presence in the OP, pragmatic relevance, and grammatical correctness.

Presence of change in the OP refers to the ability to modify originally written content. In the class in which the study was conducted, spontaneous speech based on notes or an outline was preferred over reading or recitation, for it was agreed that the former would allow more clarity, focus on the content, and interactivity with the audience.

The corpus contained a considerable number of read, unmodified sentences, more frequent in low achiever OPs (See table 3).

In brief, high achievers tend to use more of the described change mechanisms; low achievers use fewer and tend to read or recite more. Therefore, the ability to apply changes is in itself an initial mark of oral performance.

The second aspect to discriminate among levels of performance is the pragmatic relevance of the changes. Relevance can be explained in terms of information structure and simplicity. Changes to clause structure and the change of noun modifiers to adverbial positions were interpreted to be motivated by information structure concerns. Attempts to simplify information were observed in the reduction of heavily pre and postmodified nouns without altering propositional content or the general purpose of the talk. In general, the difference between performances lied in the lack of use or the pragmatic misuse of the mechanisms. For example, changes to heavily modified NPs in low achiever sentences, although frequent, were not successfully used to avoid double noun phrase embedding, and the processing difficulties that they imply.

The third aspect to discriminate among levels of oral performance is the grammaticality of the implemented changes. The difference in level of achievement among students lied in their ability to select grammatically correct standard forms to translate their contents into the oral.

Table 4 presents a summary of the identified submechanisms, their presence in OPs, their usefulness to rate aspects of oral performance, and their usefulness in discriminating among levels of oral performance.

The findings in this study may have both theoretical and pedagogical implications. As has been pointed out, EAP spoken discourses in L2 contexts is an area that has not received a great deal of attention. This study was inspired by several related studies like those by Rowley-Jolivet and Carter-Thomas (2001, 2005) on information structure, or Zareva's (2009, 2011) on adverbials. Although some of their findings were confirmed in this study, other new potential areas of analysis were identified, as far as the reviewed literature is concerned. These areas include topicalization and movement of adverbials to manipulate information structure, reduction of NPs, and movement of modifiers to simplify information.

Table 3. Average Number of Sentences, Reading Moments, and Read Sentences in OPs

	Sentences	Reading moments	Read sentences
Low achievers	31.67	11.67	20.00
High achievers	38.00	5.33	8.33

Table 4. Summary of findings

	Evidence of change from essay to OP	Useful for grammar ratings	Useful for pragmatic ratings	Useful as oral performance marks
Clause structure				
• Topicalization	yes	yes	yes	yes
Adverbials between clauses	yes	yes	yes	yes
• NP modifications				
• Reducing modifiers	yes	yes	yes	yes
• Changing syntactic functions of heads	yes	yes	yes	yes
• Rhematization of modifiers	yes	no	yes	yes

The findings of the study can be concretized in two pedagogical products: differentiated grammar instruction in the EAP class and creation of evaluation instruments (e.g., rubrics). EAP classes in the tertiary sector that focus on production skills generally favor academic writing and OPs. One concrete application could be the teaching and practice of information packaging through noun pre and postmodification in writing and its avoidance through NP reduction in OPs. Grammar instruction in several EFL contexts still tends to focus on correctness, but pragmatic concerns like register, sense of audience, or information flow still tend to be ignored or underestimated in spite of the availability of EAP textbooks that focus on functional and communicative instruction like Reinhart's (2005) *Giving Academic Presentations*, or Anderson, Maclean, and Lynch's (2004) *Study Speaking*. Similarly, the identification of areas of syntactic modification and the definition of markers to discriminate levels of performance could be used for the creation of evaluation tools that describe levels of performance based on the successful application (or not) of the three criteria explained above.

One limitation of this study is that it is based on a very small corpus. As a result, it is not clear whether the identified mechanisms are a representative trait of these students' oral academic discourse and reliably discriminate between levels of oral performance, or if the found phenomena are just idiosyncratic. Thus, it could be argued that the described areas are indicative rather than demonstrative. A bigger corpus along with the use of corpus linguistics methods would provide more solid evidence for the identification of such areas as typical of the OPs. Another methodological limitation was the reduced number of validity mechanisms in the transcription and analysis processes. OPs were transcribed, reviewed, and analyzed several times by the same researcher, but no other raters were involved in the process. Although the transcription process was straightforward and did not require much level of detail or tagging, the analysis process could have been biased particularly in the definition of high and low performances given that I played both the roles of researcher and instructor in the course. Other raters could have identified other aspects or provided

alternative explanations to the phenomena. A third methodological limitation is the lack of information regarding students' level as specified by standard proficiency tests. High and low achievers were chosen based on the grades they obtained in class. All participants took the in-house test which has not been aligned to international standards like the levels of the CEFR. It is my intuition that students in the IPD2 course could be placed in the A2 or B1 levels, but the lack of this information prevents me from stating that the findings apply to other EAP students in similar ESL or EFL contexts.

However, in spite of these methodological limitations, the general objectives of this pilot study were achieved. Additionally, the methodology of identifying parallel written and spoken sentences produced by the same author worked reasonably well.

The findings, implications, and limitations of this pilot study suggest potential follow-up studies on oral academic discourses. These potential studies could include the areas of analysis that were useful in the discrimination between levels of performance (see Table 4), but with a larger corpus. In addition, these studies could be complemented with the inclusion of the analysis of denominalization in NP modification and the study of personal projection of identity, an area that was identified but not included given the scope of this pilot study.

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Appendix A

Essays and Oral Presentations

	Title	Department
E1-P1	High growth firms (HGF)	Business Administration
E2-P2	Land Property Rights	Law
E3-P3	DNA Analysis Methodology from Faunal Archeological Remains	Anthropology
E4-P4	Foreign Investment as a Tool for Foreign Investment	Business Administration
E5-P5	Importance of the Methodologies for Decision Making in the Construction of Public Infrastructure	Civil Engineering
E6-P6	Theoretical Explanation of the Genesis of Messianic Millenarian Movements	Anthropology
E7-P7	Vibrational communication: the case of kissing bugs (Triatominae Heteroptera)	Biology
E8-P8	Madness at the end of the Colonial Period	History

Appendix B

Transcription Conventions

[fs]: false starts

Um, uh, er: hesitation marks

[reading 1]: sentences that were read either from a slide or a script

A: person speaking (presenter or member of the audience)

(word): words enclosed in parentheses refer to the transcriber's interpretation of words that were not completely understood and that are inferred either from how they sound or the general meaning of the speech

(xxx): used for words that were not understood or inferred

