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Lexical Composition of Effective L1 and L2 Students' Academic Presentations

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Abstract

The present study set out to examine the lexical profiles of L1 (n = *30) and proficient L2 students' presentations* (n = *30), aiming at finding out the overall lexical composi-tion of successful academic presentations. It was also of interest to see how some of the presentations' lexical features compared to findings about the lexical composition of students' productively used vocabulary in writing. In addition to this, the analysis focused on the lexical composition of both groups' oral production in an attempt to uncover patterns of lexical uses that may need to be discussed in oral communication courses, specifically targeting the development of L1 and L2 students' presentation skills. Overall, the analysis revealed more similarities than differences in the lexical composition of the L1 and L2 presentations while, at the same time, outlined few areas that need to be addressed in oral academic instruction.*

KEYWORDS: **STUDENT ACADEMIC PRESENTATIONS,** SLA, **ORAL DISCOURSE, PRODUCTIVE VOCABULARY IN SPEAKING, LEXICAL PROFILES, LEXICAL RICHNESS**

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1. Introduction

Tertiary education culture, particularly in North American colleges and universities, is dominated by written assignments. However, there is growing realization among instructors and students, especially as students progress through the specialized coursework requirements of their programs, that being able to give effective presentations in academic settings is a task that is essential to the training of future professionals (Zareva 2009a). Thus, developing students' skills to deliver well-planned, logically organized, clear and expressively rich presentations is increasingly seen as an integral part of college students' professional training in both undergraduate and graduate programs. Although much work has been done on the features of oral academic discourse in the last couple of decades (e.g., Dubois 1980a, 1980b, 1982; Boyd 1989; Andeweg ***et al.*** 1998; Rowley-Jolivet 1999; Carter-Thomas and Rowley-Jolivet 2001; Magin and Helmore 2001; Mauranen 2001, 2002; Thompson 2002; Vassileva 2002; Crawford-Camiciottoli 2004; Simpson 2004; etc.), we still know little about the features of student academic presentations, in general, and the extent to which these features are shared (or not) across the other oral or written academic genres. There is no doubt, though, that academic presentations form an inte-gral part of the network of academic genres to which students are exposed and expected to master reasonably well as part of their professional development in the course of their tertiary education. In this regard, it is crucial for us to know what features of the academic presentation distinguish it from the other academic genres (both oral and written) so that we can give presentation guide-lines, recommendations, and advice to our students based on research findings rather than on prescriptive 'tips'. The need to study student prepared discourse becomes even more pressing when it comes to international students, who are second language (L2) users, as they may not have had previous experience with presenting in their native or subsequent language(s), nor may they have sufficient experience with the traditions of this academic genre in their new educational settings. In this sense, knowing more about the different aspects of academic presentations (e.g., lexical, grammatical, discourse, rhetorical, etc.) may give us valuable insights into what features of this genre need to be incorporated in English for academic purposes (EAP) instruction and what features English as a second language (ESL) students have good knowledge about and do not need to be discussed in class or oral communication materials.

One specific aspect of the academic presentation which has not received sufficient attention in the research literature is its lexical composition, particularly in relation to the effects. of mode of delivery. In other words, given that the academic presentation is!a largely monologic speech act with a focus on an academic topic or issue(s), thus, dense in informational content, it is

reasonable to expect that, lexically, it will share features with written academic prose as well as oral academic discourse. Indeed, as Swales (2004) has rightly pointed out, unlike written academic prose, academic speech in the US tends to be largely informal which is shown by the high frequency of contracted forms (e.g., *wanna, gonna, kinda,* etc.), relatively high incidences of fillers (e.g., *like, you know,* etc.), and other kinds of disfluencies (e.g., *um, ah, uh,* etc.). However, other than this general impression, we do not seem to have much empirical evidence of the extent to which the lexical composition of academic presentations contributes to the formal or informal aspect of this oral aca-demic genre; much less do we know about how L1 and L2 students compare on the lexical composition of their presentations. Such a comparison will give us valuable insights into those users' lexical profiles, which have been found to be rich in a variety of academically important variables, such as vocabulary knowledge, writing/speech quality, general characteristics of speaker/writer competence, level of professional expertise, speaker/writer sense of audience, etc. (McCarthy and Jarvis 2007). Yet, they have been systematically researched neither in native speaker (Ll) nor international L2 student presentation production.

2. Measuring lexical composition

There is no doubt that the lexicon plays a central role in academic context and enables L1 and L2 university students to achieve the communicative and aca-demic effectiveness their studies require them to maintain. In reality, however, students' written production has received much more research attention than their oral production (Read 2000) and one of the reasons is that, nowadays, it is much easier to compile a corpus of students' writing samples than oral data. As a result, we have a good number of studies that have extensively researched a variety of lexical aspects of L1 and L2 students' writing (e.g., Laufer 1995; Laufer and Nation 1995; Morris and Cobb 2004; Crossley and McNamara 2009) which have also shown differences between L1 and L2 users' lexical pro-files. Most L2 lexical researchers agree, though, that in addition to mastering the first 2,000 most frequent words, which constitute the greatest percentage of words used in speech and writing, L2 students also need to master several other lexical layers, including academic and specialized/technical vocabulary, in order to be able to put their academic knowledge on display (Nation 2001). In that sense, the lexical composition of Ll and L2 students' productively used vocabulary is an area of considerable interest among researchers and educa-tors as it is an index of exposure to linguistically rich environments, which can be linked to enhanced overall language ability, vocabulary size, and literacy (Laufer and Nation 1995; Malvern *et al.* 2004; Morris and Cobb 2004).

By and large, the notions of lexical richness and lexical diversity have received different treatments in the literature, which often times makes it dif-ficult to compare results across studies. Some researchers (e.g., Wimmer and Altmann 1999) appear to use both terms synonymously by relating them to the number of different words used in a text. Others recommend taking into consideration the difficulty or relative rarity of words speakers/writers use to account for the lexical richness c,f their production (e.g., Vermeer 2000). Yet, others suggest that the different lexical measures can, actually, complement each other and provide valuable information about speakers'/writers' style and usage (Read 2000; Malvern et al. 2004). In this regard, Read (2000) points out that the notion of lexical richness of good writing, for instance, encompasses four lexical features: (1) lexical variation (similar to the notion of lexical diver-sity [Malvern et al. 2004]) - i.e. the variety of different words that create a wide range of expression (compared to a limited number of words used repeti-tively); (2) lexical sophistication - i.e. that use of lower frequency vocabulary (e.g., technical and uncommon words, jargon, etc.) which is appropriate to the topic and style of writing; (3) lexical density - i.e. the proportion of content words (as opposed to the proportion of function words), which reflects the idea that more complex information requires the use of more content words; and (4) number of lexical errors. In this paper, I adopt Read's (2000) notion of lexical richness and take the view that 'lexical richness is multifaceted and can be measured by inter-related but separate variables' (Malvern et al. 2004: 4). Thus, 'lexical composition' is taken to reflect students' overall productive lexical profiles, including the high frequency layers of their vocabularies as well as the aspects typically linked to lexical richness of expression - i.e. lexical diversity, sophistication, and density. Since the analysis focuses on graduate and senior undergraduate L1 and L2 students' prepared oral discourse (i.e. academic presentations), assessed as high quality presentations by the respec-tive instructors, the lexical errors are not taken into account in the present analysis as they play a minor role in the investigation.

The next important question is what specific measures of lexical richness to use for the analysis of oral academic data, given that many of the measures come with a number of advantages and disadvantages exclusively related to text length. There is a good amount of research that deals in great detail with all the pros and cons of using certain lexical measures as indices of lexical richness (e.g., Laufer and Nation 1995; Tweedie and Baayen 1998; Read 2000; Vermeer 2000; Meara and Bell 2001; Jarvis 2002; Malvern et al. 2004; McCarthy and Jarvis 2007; Tidball and Treffers-Daller 2007), so I will not discuss those issues here. Instead, I will elaborate on the lexical measures chosen to be used in this study with respect to their appropriateness to the type of data and the goals of the study as well as with regard to their potential to capture the multifaceted

nature of lexical richness of university students' academic presentations in a unique way.

When it comes to analyzing the lexical composition of L1 and advanced L2 users' productive vocabularies, one useful distinction pointed out by Meara and Bell (2001) is the distinction between intrinsic and extrinsic measures. The researchers explain that intrinsic measures are the ones that assess diversity solely with respect to the words that appear in the text itself (i.e. all measures which rely on the number of tokens and types that occur in a text) without categorizing them according to criteria that are external to the text itself. Similarly, the interpretation of the results of such analyses is confined to the data elicitation task itself and, thus, requires rigid control of task over informants as a pre-requisite for comparing different texts (Vermeer 2000). Extrinsic measures, on the other hand, supplement the intrinsic measures with additional informa-tion by relating a text's lexical content to frequency data that are independent of the text itself. Examples of measures of this sort are the measures provided as output of Laufer and Nation's (1995) *Lexical Frequency Profile* (LFP) package, Meara and Bell's (2001) *P_Lex* software, and Cobb's (2002) *Vocabprofiler,* which produce lexical profiles of texts by comparing their lexical frequency to exter-nal word frequency data along several frequency bands.

For the purposes of this study, it was decided to use some intrinsic as well as extrinsic measures of lexical composition. To get an overall impression of the participants' lexical profiles (i.e. number of tokens in their presentations, number of types, use of high and low frequency vocabulary as well as lexical disfluencies, associated with oral production) as well as a sense of their sophistication, density, and diversity, the data were run through Cobb's (2002) *Vocabprofiler* (v. 3 Classic) whose output provides information about the frequency distribution along four categories. The first category consists of the first 1,000 most frequent words in English, the second category - of the second 1,000 most frequent words, the third one consists of the academic word list (AWL), and the last category includes words not found in the other three lists, which are usually lower frequency specialized/technical vocabulary. In addition to this, the output shows other useful information, including number of tokens, number of types, the lexical density of the profiles (i.e. the proportion of tokens that are content words to the proportion of tokens that are function words [Ure 1971; Malvern et al. 2004]). LFP has been criticized (e.g., Meara and Bell 2001; Meara 2005) for not discriminating well between short texts (less than 200 words) but it has been found to provide stable measurements with longer texts (Meara and Bell 2001), which served well the data gathered for this stud$_y$. Overall, it was important to see the general lexical distribution of the participants' lexical choices in their academic presentations and compare them with existing lexical profiles of students' written academic production in order to

find out the extent to which this oral academic genre shares lexical features with written academic discourse and the extent to which it differs from it.

Probably the most controversial feature of lexical richness in terms of assessment is lexical diversity, defined as the range and variety of vocabulary used in a text, as opposed to the potential vocabulary that a speaker or writer may have available but is not currently using (McCarthy and Jarvis 2007). It is evident in the literature on lexical diversity that the type-token ratio (TTR) and its other related transformations, frequently used to measure lexical diversity, crucially depend on text length. In other words, as noted elsewhere, TTRs of texts cannot be directly compared unless the texts are standardized to have the same number of tokens since the TTR has been found theoretically and empirically to fall with increasing token count. Even though there are some ways of standardizing various samples, there is no universally agreed upon way of doing so without discarding data from text samples, particularly when working with naturally produced data which never come with exactly the same token count from text to text. In this regard there have been some serious efforts over the years to find a valid index of lexical diversity which is sufficiently reliable and stable over samples of various lengths. One such measure, along with several others that were reported. by McCarthy and Jarvis (2007) to work well with longer texts (range 1,000-2,000 words), is MTLD (the Measure of Textual Lexical Diversity) (for a detailed review, see McCarthy and Jarvis 2010). What makes MTLD a preferred index of lexical diversity is that it takes into consideration several important features of text construction - i.e. text length and text homogeneity - in assessing lexical diversity. In other words, it takes into account the fact that the type count decreases as a function of length, which is, probably, because there is a point at which a text reaches a thematic saturation (e.g., Morse 1995) beyond which no new types are introduced. In addition, text structure is governed by different rhetorical purposes, which may in turn trigger different parts of the text to have different diversity levels none of which need necessarily reflect the totality of the text (Jarvis 2002). Thus, to preserve text construction features and maintain the integrity of texts, MTLD evaluates texts sequentially, without discarding any remaining data. Given the considerations behind this measure, its effectiveness, reliability, validity and high correlation with other sophisticated measures of lexical diversity (e.g., vocd, Maas, K, HD-D) (see McCarthy and Jarvis 2010), MTLD was chosen as a measure of lexical diversity in this study.

The following research questions were of interest to the investigation:

1. What is the overall lexical composition (total number of words, variety of used vocabulary, use of words from different frequencies, etc.) of effective L1 and L2 presentations and how do they compare with the lexical composition of written academic prose?

2. How do L1 and L2 students compare on the lexical sophistication, density, and diversity of their academic presentations?
3. Does each lexical composition feature chosen for investigation uniquely describe an independent aspect of the L1 and L2 lexical profiles?

3. The study

3.1. Participants

This study is based on two corpora of academic presentations by L1 and L2 students who, at the time of data collection, were taking courses in linguistics and applied linguistics. The presentations (N = 60) were given by L1 (n = 30) and L2 (n = 30) presenters of both genders (43 females and 17 males), between the ages of 21 and 50. The data were collected at four US universities during routinely scheduled presentation sessions. The L1 corpus consists of 61,422 tokens of individually given presentations by senior undergraduate *(n* = 14) and first year graduate students *(n* = 16) who were actively seeking a degree in linguistics or applied linguistics with a concentration on TEFL/TESOL.

The L2 corpus consists of 61,287 tokens of presentations delivered by L1 speakers of 13 languages: Arabic (n = 1), Chinese (n = 10), French (n = 2), German (n = 1), Goun (n = 1), Japanese (n = 4), Indonesian (n = 2), Korean (n =l), Portuguese (n = 3), Slovenian (n = 1), Spanish (n = 2), Subian (n = 1), and Ukrainian (n = 2). All L2 participants had learned English through formal instruction in their native countries and had spent on average over a year in the US (M = 1.2). There was one exchange senior undergraduate student and the rest of the L2 participants were beginning graduate students (n = 29), working towards a degree in TEFL/TESOL. Part of the admission requirements for the L2 students required the submission of official TOEFL scores as a measure of overall proficiency. The L2 students' paper-based TOEFL scores were ranging from 550 to 647 (M = 597) and their internet-based TOEFL scores were in the range of 83 and 101 (M = 96). Based on the TOEFL score comparison table (see http://www.ets.org/Media/Tests/TOEFL/pdf/TOEFL_iBT_Score_Comparison_Tables.pdf), the average internet-based scores correspond to 557-610 score on a paper-based TOEFL format, which altogether shows that the L2 students were proficient users of English.

4. Data and data analysis

The presentations were on topics of the participants' choice (as restricted by the course content) and were delivered to satisfy a course requirement for a final project presentation. They were given before small audiences of peers, in classroom settings, over the final weeks of the respective terms they were

scheduled. To keep both corpora comparable, there was an attempt to match them as closely as possible along several variables which may potentially influence the features of the presentations. The controlled variables included:

1. Type of research - the presentations were based primarily on library research (with only two case studies in each corpus).
2. Discipline - the presentations were limited to coursework typically offered to students seeking a degree or teaching certificate in TEFL/ TESOL.
3. Time spent in the academic programs - all graduate students were in their first year of study in meir respective programs.
4. Audience size - the classroom audience ranged from 16 to 23 students (M= 19).
5. Time limit- the presentations were restricted to a 15-20 min. time limit as set by the respective instructors (M= 16.2 min.).
6. Use of visuals - all presenters used some sort of a visual, including handouts (n= 14) and/or PowerPoints (n = 46).
7. Grade received for the as.,ignment – all presentations were given the highest grade, based on the criteria of the respective instructors, and the grade was used as an indication of their effectiveness.

The presentations were audio-recorded and afterwards transcribed orthographically, following the Michigan Corpus of Academic Spoken English transcription conventions (for a full description of the transcription conventions, see http:// lw.lsa.umich.edu/eli/micase/MICASE_MANUAL.pdf). The data included only the presenters' prepared discourse, meaning that the question-and-answer por-tions of their presentations were excluded from the analysis.

4.1. Data analysis

The lexical profiles of the L1 and L2 participants were determined by running their presentations through *VocabProfile* (v. 3 Classic) (Cobb 2002). By and large, oral data is not as 'tidy' as the data produced in writing; however, it was decided not to dean up the samples of any words so that the analysis could capture certain features that may be typical of oral academic discourse and set it apart from written academic prose. The following variables were used in the study as measures of the participants' lexical profiles:

1. total number of words (tokens);
2. number of different words (types);
3. percentage of the first one thousand (Kl) most frequent words, including both function words (e.g., *and, could, by, but, in, few, however; which, what,* etc.} and content words (e.g., *generally, call, history,* etc.};

4. percentage of words falling into the second thousand (K2) most commonly used vocabulary (e.g., *according, basis, content, degree, literature, recent, separate,* etc.);
5. percentage of words from the Academic Word List (AWL) (e.g., *apparently, assumption, distribution, explicit, incorporate, research, strategy, techniques, uniformity, variation,* etc.);
6. percentage of off-list content words, which included:
   (a) specialized vocabulary (e.g., *adjacency, auxiliary, bilingualism, allophonic, proficiency, morpheme, phrasal,* etc.);
   (b) lower frequency vocabulary (e.g., *accusatory, cognitive, competence, execute, macrostructure,* etc.);
   (c) names of countries and languages (e.g., *Chinese, Ukraine, Hindi, Urdu,* etc.);
   (d) proper names used as citations (e.g., *Meara, Nation, Laufer, McLaughlin,* etc.);
   (e) acronyms (e.g., *TEFL, TOEFL, ESL, SLA, SPSS,* etc.);
   (f) foreign words used in examples (e.g., *velik, ist, nicht,* etc.).
7. percentage of off-list other words, mostly reflective of oral discourse, which included:
   (a) word fragments - i.e. truncated words (e.g., *sp-, economi-, stra-* etc.);
   (b) hesitations and fillers (e.g., *um, uh, ah, like, you know,* etc.);
   (c) lexicalized phonological reductions (e.g., *gonna, wanna, cuz, kinda, dunno,* etc.);
   (d) inserts (e.g., *alright, okay, oops, wow, yeah, ya, yah).*
8. lexical density (i.e. the proportion of content words to the proportion of function words);
9. MTLD (i.e. the range and variety of vocabulary used in a text).

Some of the measures were directly calculated by the *Vocabprofiler* (v. 3 Classic) (Cobb 2002) (i.e., total number of words, number of different words, percentage of K2 words, percentage of words from the AWL, lexical density), while others (i.e., percentage of Kl words, percentage of off-list content words, percentage of off-list words reflective of oral discourse) had to be re-calculated based on the criteria described above. (For details on obtaining MTLD values, consult McCarthy and Jarvis (2010).)

The following null hypotheses were tested in the study:

1. The L1 and L2 presentations do not differ in their general lexical profiles in terms of length (number of tokens), variety of used vocabulary (number of types), percentage of used words from the Kl and K2 frequency bands, and off-list other vocabulary.

2. The L1 and L2 presentations do not differ in their lexical sophistication in terms of AWL and content words associated with specialized/ technical vocabulary.
3. The L1 and L2 presentations do not differ in their lexical density.
4. The L1 and L2 presentations do not differ in their lexical diversity.
5. Each lexical measure uniquely captures an independent aspect of the L1 and L2 students' lexical profiles of their presentations.

5. Results

To test hypotheses 1 through 4, the features of the L1 and L2 students' lexical profiles associated with the different measures were compared by running a series of ANOVAs. Means and standard deviations are presented in Table 1.

Table 1: Means and standard deviations of the L1 and L2 presentations' measures of lexical composition.

Lexical profile measures	L1 presentations (n = 30)		L2 presentations (n = 30)	
	Mean	*SD*	*Mean*	*SD*
Number of words (tokens)	2,093	490	2,067	309
Number of different words (types)	507	94	478	78
% K1 words	79.13	4.11	79.46	3.63
% K2 words	3.16	0.95	3.36	0.76
% AWL words	5.80	2.33	5.56	2.11
% off-list content words	5.63	1.64	7.06	3.50
% off-list other words	5.65	2.83	4.64	3.06
Lexical density	0.49	0.02	0.50	0.03
MTLD	37	4	33	6

The results did not confirm tlhe null hypotheses and showed that the L1 and L2 presentations differed in some of their lexical composition features. The two groups of presenters were found to be statistically different on three lexical measures - their use of off-list content words, $F(1, 58) = 4.097, p < 0.05$, $\omega^2 = 0.05$, the lexical density of their presentations, $F(1, 58) = 5.771$, $p < 0.05$, $\omega^2 = 0.07$, and MTLD, $F(1, 58) = 9.844$, $p < 0.05$, $\omega^2 = 0.13$. This revealed that the L2 presenters used significantly more subject specific and lower frequency vocabulary than the L1 presenters did, their presentations were significantly more lexically dense than the L1 presenters'; however, the lexical diversity of their presentations was significantly lower than the L1 presenters'. In the rest of the profile features, which included number of words, percentage of K1, K2, AWL words, and the use of different words and words typical of oral discourse (off-list other words), the L1 and L2 presentations were not meaningfully different ($p > 0.05$) .

After the examination of the scatter diagram showed that the relationships between the variables were linear and there were no outliers in both corpora, the last hypothesis was tested by computing bivariate Pearson correlations for each group. Using the Bonferoni approach to control for Type I error across the nine correlations, a p-value of less than 0.006 (0.05/9 = 0.006) was required for significance. The only significant correlation in the L1 corpus was found between number of words and number of different words ($r = 0.85, \boldsymbol{p} < 0.001$), meaning that 72% (r) of the variance in the L1 participants' use of differ-ent words can be explained by the length of their presentations. This finding also suggests that, since these two lexical measures are strongly correlated, accounting for just one of them will be sufficient to account for the other. The more interesting finding, however, is that the rest of the lexical features provide independent measures of the lexical profiles of the L1 presenters, which implies that each of the chosen variables adds to the overall lexical profile of L1 presenters in a unique way.

Table 2 presents the correlations between the lexical measures in the L2 corpus. It shows that number of words (tokens), number of different words (types) and the percentage of Kl words were correlated moderately with some of the other measures - i.e. tokens were significantly correlated with types and percentage of AWL words, types - with MTLD, and percentage of Kl words with percentage of off-list content words and lexical density. The implications of this finding will be discussed in the following section.

Table 2: Correlations between the lexical profile measures in the L2 corpus.

Lexical profile features	Number of words	Number of different words	% K1 words	% K2 words	% AWL words	% off-list content words	% off-list other words	lexical density	MTLD
Number of words (tokens)	—								
Number of different words (types)	0.58*	—							
% K1 words	0.15	0.07	—						
% K2 words	0.15	0.12	0.28	—					
% AWL words	−0.53*	−0.17	−0.05	0.01	—				
% off-list content words	−0.35	0.79	−0.64*	0.41	−0.24	—			
% off-list other words	−0.18	−0.32	−0.52	−0.15	−0.32	−0.11	—		
lexical density	−0.32	0.11	−0.57*	−0.16	0.11	0.27	0.33	—	
MTLD	−0.01	0.63*	0.05	−0.09	0.41	0.10	−0.43	0.17	—

* $p < 0.006$

6. Discussion

There is a growing realization among instructors and students that requiring students to give presentations in their content areas of specialization not only enhances their learning of that content but also comes with some added benefits that bridge the demands ofstudents' education with their career success (Nicosia 1997). However, one cannot but notice that, being an oral genre, the academic presentation is far less researched than the written academic genres. Moreover, we see much less research looking comparatively at L1 and advanced L2 users' oral or written production, which gives the false impression that, if such comparisons do not come with statistically significant differences, they probably do not have much teaching or educational value. Contrary to this assumption, the present study set out to examine the lexical profiles of L1 and proficient ESL students, enrolled in combined graduate and undergraduate courses leading to a degree or certificate in TEFL/TESOL. It was of particular interest to see how the participants compared on nine features describing their lexical profiles and the extent to which these features can be considered to be independent lexical measures. An additional goal of the investigation was to examine the L1 and L2 lexical profiles for patterns of lexical uses that may need to be addressed in oral communication instruction, specifically target-ing the development of students' presentation skills. Finally, in the absence of previous research in this particular area of investigation, this study should be seen as a first attempt to examine the lexical composition of effective student academic presentations and the presentation as a genre.

The first research question addressed in the study concerned the overall lexical composition of effective L1 and L2 presentations and how the presentations compared lexically to written academic prose. By and large, the lexicons of L1 and advanced L2 users have been consistently found to share similar qualitative and quantitative features of their organization (e.g., Zareva *et al.* 2005; Zareva 2007). So, it did not come as a surprise that the L1 and L2 presentations shared lexically more features in common than they had differences. One of the most interesting findings from this line of analysis was, actually, related to the lexical similarities the two groups of presenters shared. On average, the length of their presentations was very similar (about 2,100 words) which was probably a result of the time limit set by the instructors that each presenter had to observe. More interestingly, about 82% (79% Kl + 3% K2) of the lexical composition of the presentations consisted of high frequency vocabulary, which percentage was slightly higher than the one reported by Nation (2001) for academic texts (78%). It should be noted, though, that on average about 50% of the Kl words were function words (i.e., determiners, prepositions, conjunctions, auxiliary and modal verbs, etc.), which leaves us with about 32% of content words from

the first 2,000 most frequent vocabulary. In addition, the student presenters in this study used between 5.5% and 5.8% words from the AWL, compared to the 8.5% that Nation (2001) has reported for vocabulary from the same category of written texts. These differences are by no means remarkable; however, they seem to reflect the subtle lexical difference between oral and written academic discourse that needs to be further explored in greater detail by comparing, for example, student presentations and the academic papers (produced by the same authors) that accompany them.

What particularly distinguishes the student academic presentation lexically from written academic prose was the presence of words and disfluencies typically associated with spoken language, such as truncated words (e.g., *morpho-* [for *morphological], spea-* [for *speaking],* etc.), hesitations and fillers (e.g., *um, uh, ah, er, eh, like, you know),* lexicalized phonological reductions (e.g., *gonna, wanna, cuz, kinda, sorta, dunno),* and inserts (e.g., *alright, okay, oops, wow, yeah, ya, yah)* (see Table 3 for more details). Those instances accounted for an average of 4.6% to 5.7% of the words the L1 and L2 presenters used and showed that all participants experienced more or less the same difficulties in delivering fluently their otherwise planned discourse. By and large, disfluencies have been treated in the literature as indicators of production difficulty (e.g., Clark 1994; Arnold *et al.* 2000) and evidence of planning in spoken discourse (Clark and Wasow 1998). In other words, the assumption is that, when speakers are not able to meet the goal of fluent production, they tend to resort to a variety of dis-fluencies which they use to stall for time and repair their production (Arnold *et al.* 2000). This view can largely explain the cut-off words, the hesitations, and fillers that every presenter resorted to in the course of a presentation delivery. A closer look at Table 3 reveals that the L1 presenters used more than twice as many fillers than the L2 presenters - the most favorite being *like,* followed by *you know.* In fairness, I should say that there were three excessive L1 users of *like* and three other excessive users of *you know* as fillers, who contributed

Table 3: Frequency of occurrence of the most common off-list other words.

Off-list other words		L1 corpus (over 20 occurrences)	L2 corpus (over 20 occurrences)
Truncated words		203	206
Hesitations	*um, uh, ah, er, eh*	1,435	1,528
Fillers	*like*	332	140
	you know	211	94
Lexicalized	*gonna*	84	30
phonological reductions	*wanna*	34	21
	kinda	78	2
Inserts	*okay*	119	216
	yeah, ya, yah	64	197

67% and 60%, respectively, to all occurrences in the L1 corpus. The rest of the L1 presenters used them on average 3-4 times per presentation. Interestingly, there was only one L2 presenter who used *like* excessively and another one who favored *you know,* while 50% of the L2 presenters did not use at all any of those fillers in their presentations. In my view, this is a case where the L2 presenters set a good example for their L1 peers in terms of sensitivity to an acceptable level of lexical formality and fluidity of expression.

In addition to the production difficulties typically associated with the use of disfluencies there were certain lexical uses that seemed to be more closely linked to the presenters' attempts to interact with their audience in a more conversational way during their presentations, more so the L1 than L2 presenters. Most probably, those uses (particularly, the ones of lexicalized reductions and the inserts) were largely prompted by the face-to-face channel of interaction, in which the social aspects of the interaction may have led the presenters to use pre-planned as well as unplanned features of spoken discourse (Webber 2005). In any event, it would be safe to say that these more economical and conversational lexical uses helped create an atmosphere of co-operative interaction and consensus between a speaker and listeners for the purpose of information negotiation (Webber 2005). In brief, both the L1 and L2 presenters responded in a similar way to the pressures of the on-line production of their prepared and, probably, rehearsed discourse. However, each group seemed to have their own 'favorites' to compensate for the intended fluent delivery of their presentations - the L1 presenters favored the filler *like,* while the L2 presenters had a preference for *okay.* In any event, presenters (particularly the excessive users of disfluencies) should be encouraged to reduce those uses by, for example, rehearsing, recording, and analyzing their own presentations so that they become explicitly aware of their 'empty' lexical choices.

The second research question sought to find out how L1 and L2 students compared on the lexical sophistication, density, and diversity of their academic presentations. One of the surprising findings was that the L2 presenters used a significantly greater percentage (7.0%) of lower frequency and specialized vocabulary than the L1 presenters (5.6%). On the surface, this may seem to contradict findings from other studies that compared L1 and L2 users on their written production (e.g., Morris and Cobb 2004), where the general finding is that a few L2 students reach the 5% mark of academic vocabulary use in their writing. However, what makes it difficult to compare the results of this study with findings from other studies is the nature of the L2 participants (the participants in this study are highly proficient ESL users) as well as the nature of the task itself (prepared oral discourse). This finding seems to be more in line with Weissberg's (1993) observation that L2 users often view the task of giving a presentation not only as linguistically demanding but also as one that

entails mastering a written text and then orally delivering it, which gives the general impression that 12 presenters sometimes sound more 'bookish: It is also possible that some of their lexical choices, including the more frequent use of lower frequency vocabulary, may have been affected by factors such as their previous English language instruction, where the more formal written genres may have been privileged over speech. Another possibility is that they may have a cultural frame of the academic presentation as a more formal speech act (Zareva 2009a), which they tried to maintain by interspersing their speech more frequently with specialized vocabulary than their L1 peers. Finally, it is also possible that part of this effect is a result of the L2 presenters' greater use of foreign language examples in their presentations than the L1 presenters, which were also accounted for in the off-list content word category. However, whatever the reason may have been, it is important to note that the higher proportion of off-list content vocabulary used by the L2 presenters did not influence the lexical diversity of their presentations, which suggests that repetition of specialized vocabulary may have been one of the reasons for the difference between the L1 and 12 presenters in their use of lower frequency words.

Another lexical aspect where the two groups differed was the lexical density and diversity of their presentations. The differences, however, were in different directions - i.e. the 12 presentations showed greater lexical density, yet, lower lexical diversity than the L1 presenters. Most probably, the difference between the two groups in the lexical density of their presentations is stemming from the L2 presenters' more frequent use of lower frequency and specialized vocabulary(% off-list content words) since this is the only variable contributing to density on which the two groups differed significantly. It is more interesting to note, though, that, compared to Ure's(1971) findings, the range of lexical density for both groups, which was on average 49%-50%, puts the presentation as a genre closer to written texts(especially, to narrative and expository texts) rather than to spoken monologues. This seems to suggest that, as far as lexical density is concerned, quite unlike other aspects of the academic presentation, the situational dimension of subject matter is a more influential factor than mode of delivery.

Finally, the L1 and L2 presenters also differed in the lexical diversity of their presentations, measured by MTLD. As explained by McCarthy and Jarvis (2010), the MTLD value is the average number of words required for the text to reach a point of stabilization where the introduction of repeated types or a string of new types cannot affect the TTR trajectory in any significant way. Thus, the fewer words it takes to reach the point of text stabilization, the less diverse a text is in terms of sequential lexical use. In this regard, the analysis showed that it took the L2 presenters fewer words to reach the point of saturation, indicating significantly lower lexical diversity of their presentations

compared to their L1 peers. Beyond this general conclusion, however, the results are difficult to interpret in terms of whether the obtained MTLD values for each group show that the language used by the presenters is lexically rich or poor, in comparison to other written and oral genres, for instance. In any event, these results confirm that MTLD, as an index of lexical diversity, is sensitive to fine differences between long texts, which makes it a reliable measure of textual diversity.

The last research question addressed in this study was whether each feature of lexical composition chosen for investigation uniquely described an independent aspect of the L1 and L2 lexical profiles. The answer is: 'It depends on the nature of the studied population: In other words, the correlation analyses showed that, if one is studying a group of NSs, the only two measures that correlated significantly were number of words and number of different words, which means that it will suffice to include only one of them in an analysis of the lexical profiles of NSs' oral academic discourse. The rest of the variables did, indeed, add to the overall lexical profile of the L1 presenters in a unique way and, thus, should be considered independent measures of NSs' productive vocabulary. As far as the L2 presentations are concerned, the analysis revealed several moderate, yet significant, correlations between tokens and types, tokens and% AWL words,. types and MTLD, % Kl words and% off-list content words, and % Kl words and lexical density. These correlations show that, when it comes to oral data produced by proficient ESL users, some of the lexical measures can be safely excluded from analysis if the goal is to obtain an optimal set of factors that uniquely describe the lexical profiles of these users. Thus, as long as the length of the texts is controlled, three measures can be left out of the set of lexical features - i.e., tokens, types, and % Kl words - which, generally, have not been found to be crucial to the description of the lexical profiles of proficient ESL users. In addition, this smaller set of factors, containing six independent lexical measures - i.e.,% K2 words,% AWL words, % off-list content words, % off-list other words, lexical density, and MTLD - can also be successfully used for comparative purposes as they do not reveal an interdependence for either L1 or L2 users.

7. Conclusion

In a nutshell, the present study set out to examine the lexical profiles of L1 and proficient ESL students' presentations, aiming primarily at finding out what the overall lexical composition of successful academic presentations is. It was also of interest to see how some of the presentations' lexical features compared to findings about the lexical composition of students' productive vocabulary used in writing. An added goal of the investigation was to look comparatively

at the lexical composition of both groups of presenters to uncover patterns of lexical uses that may need to be addressed in oral communication or other courses, specifically targeting the development of Ll and L2 students' presentation skills. By and large, comparative studies of L1 and proficient ESL users seem to be much less frequently done than studies comparing linguistically unequal language users (i.e., L1 and L2 proficiency developing learners), which leaves the general impression of L2 users' linguistic 'imperfections' in merely all aspects of language use. The present study, however, showed more similarities than differences in the lexical composition of L1 and their proficient ESL peers' presentations, while at the same time, outlined few areas that may need to be addressed in oral academic instruction. On a final note, to better understand and address the academic needs of such students, further research, comparing specifically the same subjects' productive lexical profiles of oral and written academic discourse, is much needed. Such research will, in fact, allow us to address objectively certain lexical features that distinguish between the two academic genres - the student academic presentation and research paper - which most frequently accompany each other in educational settings. The present study confirmed that the lexical composition of L1 and proficient ESL users' lexical profiles is, indeed, a multifaceted phenomenon that can be studied by inter-related, yet independent, variables. It also suggested that this line of research should extend over comparisons across wider networks of academic genres in which proficient ESL users actively participate alongside their L1 peers of similar academic status.

Such comparisons will allow us to give our students empirically-driven advice, rather than prescriptive 'tips', about the lexical aspect of their performance across a range of academic genres they are expected to master in their studies.

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