

Features of Orality, Academic Writing and Interaction in Asynchronous Student Discussion Forums

Julie Skogs, Karlstad University

Abstract

This study employs quantitative and qualitative methods to compare the frequency and usage of selected linguistic features with a deictic function in discussion forum messages taken from three undergraduate courses in English. The main aim of the study was to examine how the written asynchronous interaction in the discussion forums relates to spoken registers (conversation and an oral academic seminar) and written academic prose; a secondary aim was to investigate student interaction. The results of the study show that the frequencies of the majority of features examined were positioned between the spoken registers and academic prose and that these features were sometimes used in structures typical of conversation and other times used in structures typical of academic prose.

Keywords: discussion forums, pronoun frequencies, oral and written, deixis, asynchronous communication

1. Introduction

Knowledge about the language used in different academic settings can be of use to both learners and educators. However, research on classroom discourse tends to focus on educational processes and attempts to answer questions about what works and what does not with regard to learning rather than investigating the language used (Temple Adger 2001: 512). Some researchers who highlight the importance of language in academic settings are Bourdieu, Passeron, & de Saint Martin (1994), Hyland (1998, 2008, 2005), and Biber (2006). Gee (2004) specifically points out that there is a need to do more research on the language used in specific disciplines, as students' lack of subject-specific language proficiency can be an obstacle to learning the content. According to Gee (2004: 3), academic discourse is connected with complex ways of thinking about the content and is "significantly different from everyday language".

There is a great deal of variation between the way language is used in different academic disciplines, as shown in Hyland's (2005) work on metadiscourse. For instance, self-mention and the direct address of others are more common in applied linguistics than in other academic

Skogs, Julie. 2014. "Features of Orality, Academic Writing and Interaction in Asynchronous Student Discussion Forums." *Nordic Journal of English Studies* Vol(n):54-82.

disciplines (Hyland 2005: 57). Self-mention and explicitly addressing the reader are examples of what Hyland calls “interactive” metadiscourse resources (Hyland 2005: 50-51). Broadly speaking, *metadiscourse* refers to that “which goes beyond the subject to signal the presence of the author”. Hyland believes there is scope for research into the following areas: interactive features and their meaning, frequencies and clusters in particular communities and types of text (Hyland 2005: 201). The present study aims to examine how a number of interactional linguistic features are used in an asynchronous computer-mediated academic environment and how their usage compares to their usage in oral conversation, academic prose, and in an oral academic seminar.

1.1 Aims

The present study aims to investigate the patterns of usage of a limited number of deictic expressions in student communication in asynchronous discussion forums. The frequencies are then compared to the patterns of usage for these same expressions in academic prose and oral conversation to determine to what extent the usage patterns in the forums resemble patterns of usage in oral conversation and academic prose. The term ‘usage’ refers to both the frequency of the words and their collocates. The items chosen for this study belong to a closed-class group of words. Closed-class words occur frequently and are used in all types of text as opposed to open-class words, such as verbs and nouns, the frequencies of which vary greatly (Biber, Johansson, Leech, Conrad and Finegan 1999: 55).

The features examined in the present study have a deictic function and are often used when people communicate and react to one another, that is, in interaction. These deictic or pointing expressions involve “the traditional philosophic and linguistic categories of person, place and time” (Mey, 1993: 54). The items chosen can be classified into three different groups. The first group consists of the first and second person pronouns (*I, me, my, we, us, our, you, your*). These items “reflect the fact that the speaker and listener typically interact with one another while reader and writer do not” (Biber 1988: 43). The reason that the third person pronouns were excluded is that they do not reflect interaction between participants in the same way as the first and second person pronouns do. In line with Halliday (1994: 313-315), the second group

consists of demonstrative pronouns and determiners (*this, that, these, those*), and the third consists of temporal and spatial adverbs (*here, there, now, then*). While the first and second person pronouns reflect interactivity between participants, the demonstratives and the temporal and spatial adverbs show how participants refer to context both within and outside the interaction itself. With the exception of *those*, the frequencies of the items chosen contrast noticeably between oral conversation and academic prose. An examination of collocates and multi-word sequences within which the items occur are also examined to see if the sequences in the discussion forums are more like those found in oral conversation or academic prose.

2. Deixis

Deixis, from an ancient Greek word meaning 'to point', concerns the use of linguistic items which rely on the context for their interpretation. Context may refer to the orientation or position of events or entities in the real world. Hence, deictic words often refer to specific people and objects, and demonstratives (including spatial and temporal adverbs which have a demonstrative function) indicate proximity to the speaker or writer (Halliday 1994: 312-314). In asynchronous communication, those communicating are normally not at the same location. This is a potential problem for the use of at least spatial deixis and perhaps even temporal deixis. Baron (2008: 47) suggests that writers avoid deictic expressions because of a lack of context. Still, those communicating share common experiences, which provide a context. In addition the text itself also provides a context. Haas, Carr and Takayoshi (2011: 280) stress the need for more research on deixis in written language.

To identify the referents of the personal pronouns *I* and *you*, as well as temporal expressions such as *now* and *then* and spatial *here* and *there*, a context is needed. One problem is that the context as well as the focus of the interlocutors and their location may change during interaction (Goodwin 2000: 1519). More recently, Hanks (2009) observed that the idea of the speaker as the centre and referents as being categorised according to their proximity or distance from the speaker is inadequate, and it is necessary to look at more than just the perspective of the speaker to fully understand the pragmatic functions of deictic expressions (Hanks 2009: 11). He shows in his study of Yucatec Maya how easily a speaker

can change perspectives and use, for example, both *here* and *there* to refer to the same referent (Hanks 2009: 21). Hindmarsh and Heath (2000) claim that reference is “interactionally organized” and not solely the work of the speaker, while Eriksson (2009: 247) points out that referring is a socially situated activity which can only be understood from the activity itself, the environment in which the activity takes place and the participants.

2.1 Deixis in oral and written communication

One important quantitative difference between oral and written discourse is in the use of deictic words, which generally occur much more frequently in conversation than in writing. Biber et al. (1999: 333) suggest that the high frequency of first and second person personal pronouns in oral conversation compared to academic prose is a result of participants in conversation having immediate contact, the first person plural pronouns and possessive determiners typically being used to refer to those involved in the current interaction (Biber et al. 1999: 270, 333). In academic prose, on the other hand, the individuals who read and write the text are not the focus of the discourse, and hence there is no need to refer to them. The situation is slightly different for the first person plural pronoun (*we*), which can refer to the speaker or writer but which may also have a more general reference, referring to the group to which the writer belongs or to people in general. The second person pronoun can refer specifically to the person or people being addressed, but like the first person plural, *you* can also be used with a more general reference.

Where deixis is concerned, complications may arise when communication is asynchronous as in letter writing or pre-recording where the deictic centre may not be the writer/speaker at the time they produced the text (Levinson, 1983: 73). One of the main differences between speech and writing according to previous research is reference to the self and others. Chafe and Danielewicz (1987: 105), however, found that such reference is determined primarily by the context and not by whether the communication is written or spoken. Reference to the self and others was found quite frequently in letters and conversation, and much less frequently in lectures and academic papers.

2.2 *Deixis in CMC compared to deixis in oral and written communication*

It has been suggested that written computer-mediated communication (CMC) is a hybrid of oral and written language (Ferrara, Brunner, and Whittemore 1991, Collot and Belmore 1996). In computer-mediated email and chat, for instance, features have been found which are typical of oral exchanges. Some features that may be described as indicating orality in email and other online communication are exclamation marks, repetition of letters or punctuation, syntactic reduction, and capitalization for emphasis and emoticons (Ferrara, Brunner, and Whittemore 1991, Cho 2010, Crystal 2006, Riordan and Kreuz 2010). On the other hand, Thomas (2002:363) claims that it is difficult to reproduce the interactional nature of conversation in written contexts.

Yates (1996) found that in computer-conferencing the overall frequencies of pronouns were more like in writing, while the higher proportion of first and second person pronouns was similar to speech (Yates 1996: 41). Honeycutt (2008: 43) found that students used first and second person pronouns more frequently in chat peer-reviewing than they did in their e-mail peer-reviewing. In Table 1, the frequencies of first and second person pronouns in oral conversation and academic prose (written), taken from Biber et al. (1999), are compared with the frequencies in two different studies of oral academic language from Fortanet (2004) and Yeo and Ting (2014). As can be seen, first and second person pronouns are rare in written academic prose but frequent in the two types of oral academic text.

Table 1. Frequencies of first and second person pronouns in four registers per 1,000 words

	Oral conversation (Biber et al. 1999: 334)	Lectures and colloquia (Fortanet 2004: 51)	Lecture introductions (Yeo and Ting 2014: 30)	Academic prose (Biber et al. 1999: 334)
I	38	17.9	11.5	2
we	7	9.7	11.7	0.6
you	30	20.7	27.9	1

When it comes to what words deictic pronouns collocate with, it is noteworthy that one category of verb typically found together with the first person pronoun *I* in conversation is mental or cognition verbs (Biber et al. 1999: 378). It is not surprising that mental verbs, such as *know*, *think*, *mean* are frequent in conversation, since these verbs express actions of the mind such as desire and perception as well as awareness and certainty. In academic prose, by contrast, there are relatively few verbs from this category (Biber et al. 1999: 365-378). There is also variation within academic prose. Personal pronouns are found more frequently in textbooks than in scientific articles and they occur even more frequently in classroom teaching (Biber, Conrad and Cortes 2004: 378). For the second person pronouns, Yeo and Ting (2014: 34) found that in lecture introductions, collocates that relate to student activity such as *move*, *read*, *find*, *get* and *study* were most frequent.

Demonstratives such as *this* and *that* are traditionally thought to reflect proximity and distance, but Biber et al. (1999) show that this explanation alone does not account for their distribution across registers. For instance, Biber et al. (1999: 349-351) suggest that the reason why *that* is used less frequently in academic prose than in conversation is that the word as such is vague and imprecise, and any potential misunderstandings are more easily dealt with in conversation. On the other hand, demonstratives can also have their referents within the discourse itself. When the referent is textual rather than extralinguistic, *this* and *these* are typically used anaphorically, that is, they refer to a preceding part of the text, whereas *that* and *those* are typically used cataphorically, that is, they refer to what follows (Biber et al. 1999: 273-274). The frequency of *those* does not vary much between oral conversation and academic prose. However, it is used in different grammatical patterns in conversation and academic prose. In academic prose, *those* is frequently postmodified by a clause or phrase, while in conversation *those* is rarely postmodified. In comparing e-mail and synchronous chat for peer-reviewing student work, Honeycutt (2001: 45) found that *this*, *that*, *these* and *those* were used less frequently as independent pronouns in the e-mail responses than noun phrases referring directly to the material being discussed.

The temporal adverbs *now* and *then* and the spatial adverbs *here* and *there* refer to time and place, although the distinction between the two is not always clearly defined (Cummings 2005: 28). These adverbs can be

absolute and refer to a named place, or they can be relational; in the latter case, the referent is only identifiable from the context of the interaction. In academic prose, temporal and spatial adverbials are used less frequently than in conversation. Instant messaging, however, although written, is conversation-like in its brief exchanges, and the study by Haas et al. (2011) shows frequencies more similar to oral conversation than to academic writing, as can be seen in Table 2.

Table 2. Frequencies of deictic adverbs in three registers per 1,000 words

	Oral Conversation (Biber et al. 1999: 796)	Instant Messaging (Haas et al. 2011: 281)	Academic Prose (Biber et al. 1999: 796)
now	2	5.7	0.4
then	2.8	2.05	0.6
here	2.2	2.7	0.4
there	3.8	3.4	<0.1

In conversation, temporal and spatial adverbs occur frequently, reflecting the fact that speakers often refer to when and where events occur (Biber et al. 1999: 794-795). The adverb *then* is commonly used in conversation to refer to the context of the utterance in the sense of ‘at that time’, or ‘after that’ to mark the next event in a series or sequence. In the same way, *here* and *there* refer to the location in which the conversation takes place or may refer to a place in the conversation itself (Biber et al. 1999: 799). In summary, deictic pronouns and demonstratives, including temporal and spatial adverbs, occur to varying degrees in different types of written and spoken discourse. Their frequencies and usage appear to be influenced by a number of situational factors such as the written or spoken mode as well as the circumstances in which the communication takes place and the purpose of the communication.

3. Collocations

Examination of large corpora shows that there are systemic differences in linguistic features across different registers. Sometimes there are multi-word sequences that occur often in different registers. These are referred

to as lexical bundles, that is, “sequences of word forms that commonly go together” (Biber et al. 1999: 990). Even when frequencies are similar across registers, the words and the grammatical structures in which they occur may differ. For example, in conversation the pronoun *I*, together with verbs showing thought, such as *think* and *mean*, occur frequently controlling a *that*-clause. *That*-clauses occur frequently in newspapers also, but with third person subjects and with verbs denoting speaking. In order to better understand and describe language use, it is important to look not only at individual words but also at the words that tend to co-occur. These co-occurrences often differ between registers because the communicative purpose varies (Biber et al. 1999: 11-14).

The structures that are frequent in conversation have more verbs and personal pronouns than academic prose (Conrad and Biber 2004: 64). There are seventeen three-word lexical bundles which occur more than 200 times per million words in oral conversation and of these, fourteen contain either *I* or *you*. The three most common bundles were *I don't know*, with more than 1,000 occurrences per million words, *I don't think* and *do you want*, which both occurred more than 400 times per million words. This contrasts with academic prose where none of the most frequent three-word lexical bundles contained first or second person pronouns (Biber et al. 1999: 994-995). In a study of students' oral communication, Sánchez Hernández also found that the three-word combination *I don't know* frequently occurred in the lexical bundles examined (2013: 193). As Biber et al. (2004) point out, “no single approach can provide a whole story” about multi-word units (2004: 372). The multi-word units discussed in the present study are limited to those that contain the deictic words chosen for this study as a way of providing information about the functions of these words in this particular type of discourse.

4. Material and methods

The material for the present study consists of messages in online discussion forums taken from three separate undergraduate courses in English studies taught at the university undergraduate level in Sweden in the spring of 2009. The three courses were culture, literature and language proficiency. The discussion forums were a complement to other course activities, such as lectures, seminars and hand-in assignments, and

the students' participation in the forums contributed to their final grade. Each forum was only open to the students for a period of four days. The topics and tasks in the forums varied somewhat, but mostly, students were required to post answers to specific questions and ask and answer one another's questions. The questions pertained to course material, such as novels, films and exercises in a textbook. The students were also required to interact with one another in the discussion forums by responding to one another's contributions and giving feedback. There were eight forums from the culture course, fifteen from the literature course and nine from the language proficiency course, making 32 in total. Table 3 presents details of the forum data.

Table 3. Overview of the forum statistics

Course discussion forums	Number of forums	Number of forum messages	Total number of words per course	Average number of words per message
Culture	8	315	96,222	317
Literature	15	785	144,901	228
Proficiency	9	346	110,403	379

The total number of words displayed in Table 3 includes automatically generated text such as date, time and function button text. The automatically generated text accounted for nine to ten words per message, so the number of messages was multiplied by ten and this number was subtracted from the total number of words, leaving a corpus of 337,066 words in a total of 1,446 messages. Altogether there were 98 individuals who contributed to the discussion forums for each course and some of these participated in more than one of the courses. After the participants had completed the courses, they were contacted and informed of the study, and permission was obtained to use the material. The majority of participants did not have English as their first language, but they can be considered as proficient in English.¹

¹ Based on the entry requirements of the courses and student performance, students were proficient (B2 to C1), according to the Common European Framework of References for Language (CEFR).

The forum material was saved as text files and the frequencies were calculated for each of the three courses and for the total. The software used for analysis was *WordSmith Tools*, and its concordancer was used to determine frequencies and collocations. The frequencies of the features in the discussion forum material were compared to two general registers, taken from Biber et al. (1999), namely oral conversation and academic prose. Oral conversation and academic prose represent contrasting registers with regard to interaction and the use of deixis, which is why they were chosen. To add a further dimension to the analysis, the frequencies were also compared to an oral university composition seminar taken from MICASE.² The size of this text was 20,256 words. The frequencies for all features investigated in the four corpora were calculated per 1,000 words. In addition, some of the most frequent collocations in the online discussion forums and the oral seminar were investigated in order to shed further light on the interaction.

Results were checked manually to remove words that were typing errors or spelling mistakes, such as *then* when *than* was intended. All quoted text was removed from frequency counts, as well as words that were homonyms of the words examined, such as *then* used as a linking adverb or a conjunction. The frequencies of these items in the discussion forums were then compared to their frequencies in oral conversation, written academic prose and the oral seminar.

5. Results

The results section is divided into three parts, each dealing with the three separate sets of features: personal pronouns and possessive determiners; demonstrative pronouns and determiners; and temporal and spatial adverbs. In each section, comparisons are made to the frequencies in oral conversation, academic prose and the MICASE oral seminar.

² *The Michigan Corpus of Academic Spoken English* is a collection of academic speech events recorded at the University of Michigan (Simpson et al. 1999).

5.1 First and second person personal pronouns and possessive determiners

The results for personal pronouns and possessive determiners are displayed in Figure 1. Overall, the frequencies form a cline from larger to smaller across the four text types: conversation, oral seminar, discussion forum, academic prose. The trend is especially clear for *I* and *you*. The frequencies of *we* and *your* in the discussion forums, however, lie closer to conversation than to academic prose. The frequencies of *us* and *our* are quite low, so no trend can be discerned.

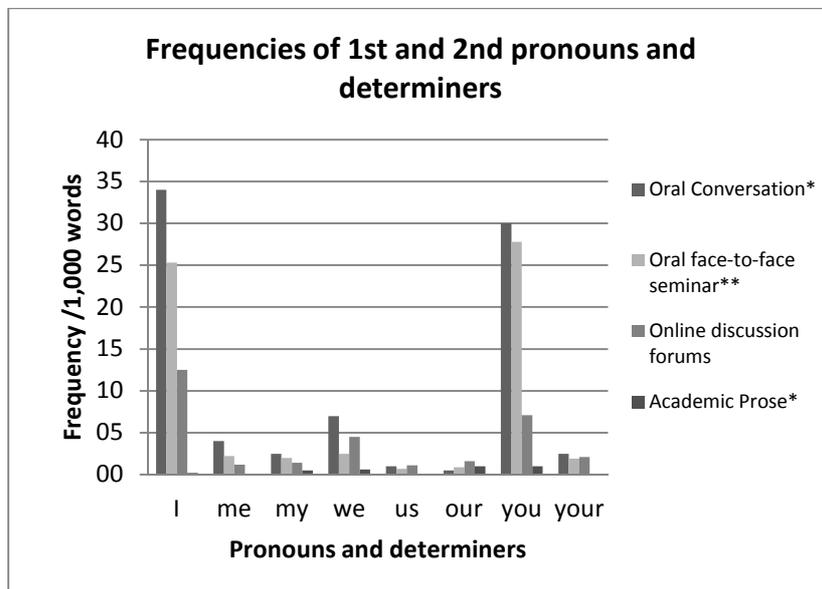


Figure 1. Distribution of frequencies per thousand words across the four registers

*Figures converted from Biber et al. 1999: 271, 334

** MICASE seminar

In order to provide more information about the interaction in the online discussion forums, some of the most frequent collocations were also examined. The twenty most frequent collocates of *I* are displayed in Table 4. The words in the position immediately to the right (R1) of the first person pronoun *I* are frequently auxiliary verbs, which is why the

words in the second position (R2) are also included in the table. The most frequent lexical verb both in R1 and R2 position is the mental verb *think*. A further eight mental verbs can be found among the most common verbs occurring directly after *I* (*believe, agree, find, like, see, know, feel, guess*). All of these, with the exception of *find*, occur frequently in conversation but rarely in academic prose (Biber et al. 1999: 365-378). The mental verbs commonly used in the forum discussions are also the verbs that typically control a complement *that*-clause, and the verb *think* is the verb that most commonly controls a *that*-clause in conversation (Biber et al. 1999: 663).

The most frequent construction to occur in R2 position is a *that*-clause, which indicates stance-taking. The only verb which frequently controls *that*-clauses not found among the R1 collocates in the present study is the verb *say*; however, this occurs frequently in the second position (R2), mostly after a modal verb, as in *I would say*. Rather than being a speech act verb, *say* in the combination *would say* has a function similar to other mental verbs such as *believe* and *think* and hence marks stance. The verbs *think, see* and *say* are lexical verbs commonly used in the classroom in university teaching (Biber 2006: 37).

In conversation, activity verbs are also common, but the only activity verb occurring directly after *I* (i.e., in R1 position) among the most frequent ones in the online discussion forum material is *read*, which is related to a typical student activity. The interactive nature of the communication in the discussion forums can be seen by the frequency of the first and second person pronouns in the commonly occurring dialogic multiword units such as *I agree with you, I think you...* and *I enjoyed reading your...*, which refer to what other participants have written in the forum.

Table 4. Most frequent collocates to the right of first person pronoun *I* in the online discussion forums

Order of frequency	Most frequent collocates of <i>I</i> (R1)	Number of occurrences	Most frequent collocates of <i>I</i> (R2)	Number of occurrences
1	THINK/THOUGHT	729	THAT	403
2	HAVE	255	THE	254
3	WOULD	253	IT	233
3	DON'T/DONT	239	NOT	164
4	AM/'M	215	THINK/THOUGHT	134
5	BELIEVE	177	TO	114
6	AGREE	154	WITH	100
7	DO	131	YOU	98
8	FIND/FOUND	124	LIKE/LIKED	90
9	ALSO	100	AGREE	83
10	WAS	97	SAY	79
11	CAN	85	THIS	74
12	LIKE/LIKED	79	A	72
13	SEE/SAW	78	YOUR	61
14	REALLY	69	HAVE	55
15	KNOW	49	READ/READING	53
16	FEEL	46	I	44
17	HAD	46	IN	40
18	READ	43	SEE*/SAW	40
19	GUESS	40	USE	34
20	WILL	38	ALSO	32

The most frequent collocates of *my* in the discussion forums are displayed in Table 5. Words such as *opinion*, *mind* and *thoughts* relate to the participants' thoughts and ideas, while *question/s* and *comment/s* relate to what they have written in the discussion forum. The reason why the possessive determiner *my* is so often found with collocates such as *grandfather*, *life* and *mother* has to do with the fact that they reflect the participants' personal life experiences. The participants relate course content to personal experiences by comparing their own experiences to cultural and social issues being discussed, as in *My grandfather's father already lived in USA when my grandfather was born; I was in direct contact with handguns on several occasions in Michigan for the first*

time in my life. Instances of *my* are also used when issues of language proficiency are discussed, as in the following example: *I must admit I might have been biased by my mother tongue*. The collocates refer to the participants, their thought processes and their personal feelings, as in examples such as *my head is so full of literature that I forgot to post*. Other participants subsequently reply *my head is also "full of literature"* and *my head is full of Macbeth*. These contributions were posted in the proficiency forums by students studying both literature and proficiency at a time when there was a lot of work to do for both courses. In contrast to the discussion forums, the most common word in the oral seminar occurring immediately to the right of *my* was *god*, as in *and I was going, oh my god*. All of the uses of *oh my god* in the oral seminar involved students reporting their thoughts about an event in another class or in another social setting. This type of dramatic narrative did not occur in the forum discussions even though the participants sometimes related personal experiences.

Table 5. Most frequent collocates of *my* in the online discussion forums

Order of frequency	Most frequent collocates of <i>my</i> (R1)	No. of occurrences
1	OPINION	28
2	MIND	20
3	OWN	20
4	QUESTION/S	29
5	COMMENT/S	17
6	GRANDFATHER	11
7	POINT	11
8	THOUGHTS	11
9	HEAD	9
10	FIRST	8
11	LIFE	8
12	MOTHER	8
13	VIEW	8
14	ANSWER	7
15	FATHER	6

Like *I, me* occurred more frequently in the online forum discussions than in academic prose but less frequently than in conversation. The most common multiword units were *made/make me think* and *seems to me*, indicating students' awareness of their thought processes.

In the discussion forums, *we* is used to refer to the group involved in the discussion forum as shown in the examples *on Wednesday, we will comment on each other's drafts* and *I just thought we need to reflect a bit more on this*. This usage is similar to the observations of Biber et al. (1999: 270, 333), that is, that the first person plural pronouns and possessive determiners are typically used to refer to those involved in the current interaction. However, the vast majority of the altogether 1,530 instances refer to people in general, as reflected in the following examples: *It's the 21st century and we still have prejudices; we are all human and we all make mistakes*.

Neither *us* nor *our* were frequently used in the discussion forums. A manual analysis of the concordance line texts for *us* indicates that it is used in a general sense like *we* to include a wider group of people than just the other participants in the course, especially in the phrases *most of us, many of us*. The three most common verbs occurring to the left of *us* (i.e., in L1 position) were *tell, make* and *help*. Although *us* is here sometimes used inclusively to refer to the speaker and the group members, a number of times it is used generically. As with the pronoun *we*, the collocates that frequently occur immediately after *our* show that *our* refers to people in general when the participants discuss such things as social and environmental issues, rather than to the writer and the other participants in the forum. This is reflected in examples such as *What if our society is based on the fact that we need to keep consuming* and *We take too big a risk by putting our children in front of the television set*.

Although *you* is more frequently used in the discussion forums than in academic prose, a closer examination shows that not all occurrences indicate interaction between the participants. The most common three-word units with the second person *you*, displayed in Table 6, show that *you* is used to directly address other participants in the discussion forum in response to what they have written. In addition, *I*, referring to the writer, occurs frequently in these units as well, reflecting the dialogic interaction between the participants in the forum. Some of these units introduce direct questions addressed to other participants, as in *what do you think?; what do you see?; and what do you say?*. Others indicate

responses to what other participants have written in the forum, such as *I agree with you* and *I totally agree with you*. *I think you* can be expected to show involvement with other participants, but on closer examination of the contexts, *you* in some of these units is used with generic reference such as in *I think you are still a member of society*. In about half of the multiword units with *you have to*, the pronoun is used generically, as in *to succeed in American society you have to be a strong individual*.

Table 6. Most frequent three-word units with *I* and *you* in the online discussion forums

Order of frequency	Three-word unit containing <i>I</i> or <i>you</i>	No. of occurrences/ million in discussion forums*	No. of occurrences/ million in oral conversation (Biber et al. p. 994)
1	AGREE WITH YOU	376	not listed
2	DO YOU THINK	231	not listed
3	I THINK YOU	207	not listed
4	WHAT DO YOU	187	>200
5	I DON'T THINK	124	>400
6	YOU HAVE TO	118	>200

* converted from raw numbers.

As can be seen from Table 6, three of the most common three-word units found in oral conversation are also among some of the most frequent combinations in the discussion forum material, whereas the first three, *agree with you*, *do you think* and *I think you* are not found as frequently in oral conversation.

The most frequent collocate of the possessive determiner *your* is the adjective *own*, while the rest of the high-frequency collocates are all nouns (see Table 7). The most frequently occurring nouns in the R1 position with *your* are expressions referring exclusively to the course work and topic being discussed, which in itself provides a context for reference. This is seen even more clearly when more context is displayed, as in *It was very interesting reading your analysis*. With *own*, the reference was both to the participants themselves, as in *what your*

own standpoint is, but it was also used in a more general sense, as in *adjust to the new culture while maintaining your own customs*.

Table 7. R1 collocates of second person possessive determiner *your* in the online discussion forums

Order of frequency	Most frequent collocates of <i>your</i> R1	No. of occurrences
1	OWN	45
2	ESSAY	39
3	ANALYSIS	31
4	ARGUMENT/S	28
5	TEXT	25
6	THOUGHTS	25
7	COMMENT/S	21
8	CONTRIBUTION/S	20
9	CLAIM	19
10	RESPONSE/S	18

A comparison of frequencies across the three courses revealed some variation. Table 8 is an overview of the frequencies of the first and second person personal pronouns and possessive determiners in comparison with oral conversation, the oral seminar and academic prose. When frequencies in the forums for the three subjects were examined, there was some degree of variation. Above all, the figures for some of the pronouns in the proficiency courses are very close to or even surpass the frequencies in oral conversation (*my, we, us, our, your*). It thus appears that the interaction in the proficiency forum showed more signs of orality than that in the culture and literature forums. Certain interactional patterns also seem to have developed in the various forums. For instance, it is noteworthy that there is much less reference to *we, us, and our* in the culture forums than in the other two courses.

Table 8. Comparative frequencies per 1,000 words of personal pronouns and possessive determiners in the different course forums

	Oral conversation*	Oral seminar	Online forum: Culture	Online forum: Literature	Online forum: Proficiency	Academic prose*
I	38	25.3	10.76	13.63	12.46	2.0
me	4.0	2.2	0.82	1.29	1.37	<0.5
my	2.5	2.0	1.18	1.25	1.77	0.5
we	7.0	2.5	2.26	4.45	6.62	0.6
us	1.0	0.7	0.38	1.21	1.25	<0.5
our	0.5	0.9	0.33	1.24	3.25	1.0
you	30	27.8	5.21	6.22	9.92	1.0
your	2.5	1.9	0.42	2.06	3.58	<0.25

*Figures converted from Biber et al. 1999: 271, 334

Although the three different courses had similar tasks, the course content varied. As can be seen from Table 8, the proficiency course on the whole had higher frequencies of the first and second person pronouns and determiners. The proficiency course discussions differed somewhat from the culture and literature course discussions in that the discussion concerned language usage rather than novels or films which provided the topics for discussion in the latter two courses. Rather than answer specific questions and give opinions about the issues being discussed, the students in the proficiency forums were expected to bring up their own language problems. The instruction they were given was “your task here is to post any questions or confusions you might have regarding tense and aspect as well as clause elements. Answer at least two students’ questions here.” It could be that this format of directly asking others for help with an individual problem resulted in a higher frequency of the first and second person pronouns. Some of the proficiency forums included short essays, and in these forums there was a higher frequency of *we* than in the other forums. This was due to its frequent use as a general pronoun in essays dealing with societal issues as in *every vaccine we are given as children* and *our planet is becoming warmer and we are experiencing a higher average temperature*.

5.2 Demonstrative pronouns and demonstrative determiners

As pointed out in section 2, demonstrative pronouns and determiners may refer to events or entities in the real world, but they can also refer to the discourse itself, which explains why frequencies of use do not form a cline from larger to smaller across the four registers. For instance, as can be seen in Figures 2 and 3, the frequency of *this* as a pronoun and a determiner is actually lower in conversation than in the other three registers. At the same time, *this* and *that* are used as determiners much more frequently in the oral seminar than the other registers. This might be explained by the fact that it was a composition seminar and students' work was being referred to and could also be pointed to in the face-to-face seminar. Frequent phrases in the oral seminar are *this idea* and *this part*. *That*, on the other hand, is more frequent in the two oral registers examined here, at the same time as it is fairly rare both in the forum discussions and in academic prose.

In academic prose, *those* is most often postmodified by a clause or phrase, while in conversation *those* is rarely postmodified (Biber et al. 1999 : 273). In the discussion forum material, the structures following *those* are similar to those found in academic prose in that a postmodifying clause or phrase typically occurs after *those*. The most common collocate to the right of *those* is *who*. A closer examination of collocates of *that* as a pronoun in the discussion forum material also reveals a pattern of post-modifying prepositional phrases headed by *of*. Examples for the discussion forum material include the following: *that of a salesman*; *that of reality*; *that of the narrator*.

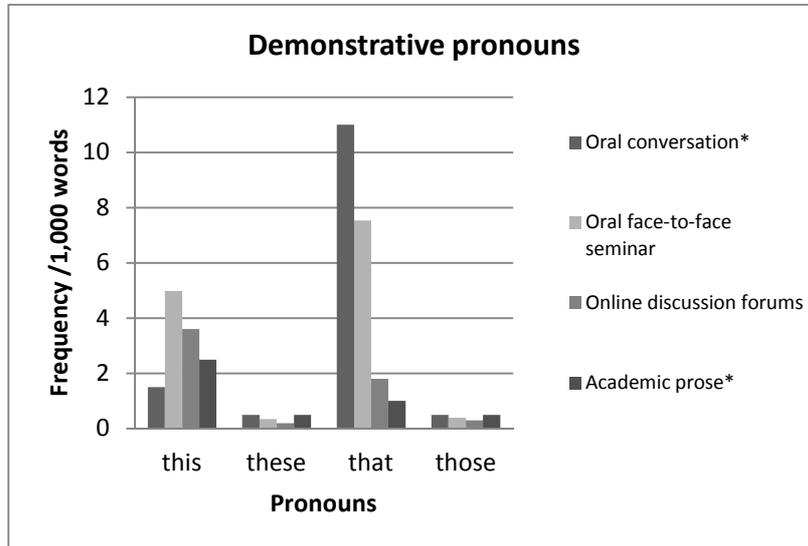


Figure 2. Distribution of demonstrative pronouns across four registers
 *Figures converted from Biber et al. (1999: 349)

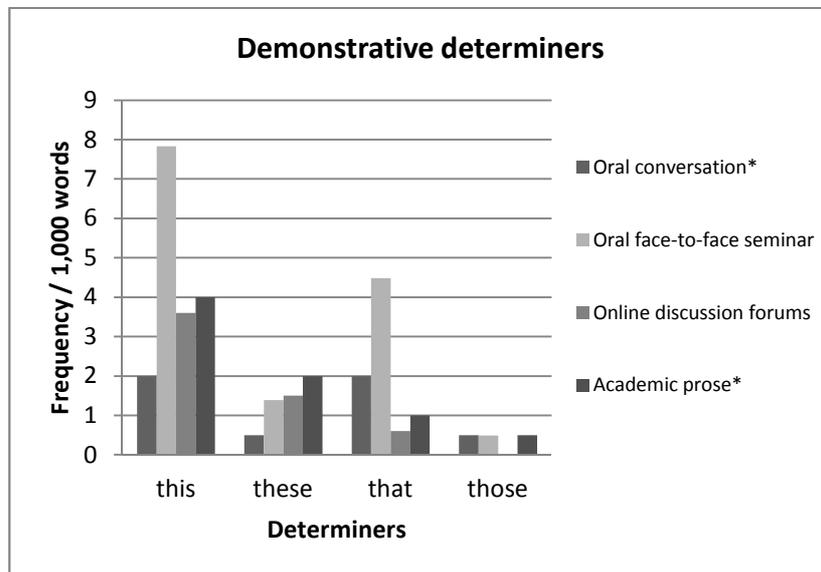


Figure 3. Distribution of demonstrative determiners across four registers
 *Figures converted from Biber et al. (1999: 275)

The frequencies of *this* and *these* as determiners were between the frequencies in oral conversation and academic prose. As can be seen from Figure 3, *those* used as a determiner is infrequent in all registers but even more so in the discussion forums. A general noun is most commonly determined by *those* after which a post-modifying clause or phrase frequently occurs as in ...*all those things that people are free to do; ...those things that are regarded as 'too much'*. The post-modification is expected in writing where there is a need for explicitness. At the same time, there are patterns which demonstrate orality and interactivity, as shown by the fact that it is the verb *be* in its different forms that most frequently follows the pronoun *that*, as in *I don't think that is the correct term* and *If so, what could that be?* The collocates of the determiner *that* show that the referent can be found in the literature or topic being discussed. However, it may also refer to content of the discussion forum messages. For example, *I never would have looked at it in that way. ☺ Well done and thanks*. The proficiency forums involved students commenting on each other's writing, and the most common nouns occurring with *this* and *that* were *sentence* and *case* respectively. In the oral seminar used for comparison, the most common nouns modified by *this* and *that* were *idea* and *sentence*, as well as *way*, *part*, *stuff*, *footnote*, *paragraph* and *word*, which also reflect the task type.

5.3 Temporal and spatial adverbs

The frequencies of the temporal and spatial adverbs in the four registers are displayed in Figure 4. For all four adverbs, the frequencies in the discussion forums are closer to academic prose than the frequencies in the two oral registers are. The frequencies of the temporal adverbs *now* and *then* and the spatial adverb *there* are most frequent in oral conversation followed by the oral seminar, the discussion forums and finally academic prose. The spatial adverb *here* is most frequent in the oral seminar, followed by oral conversation, the discussion forums and finally academic prose.

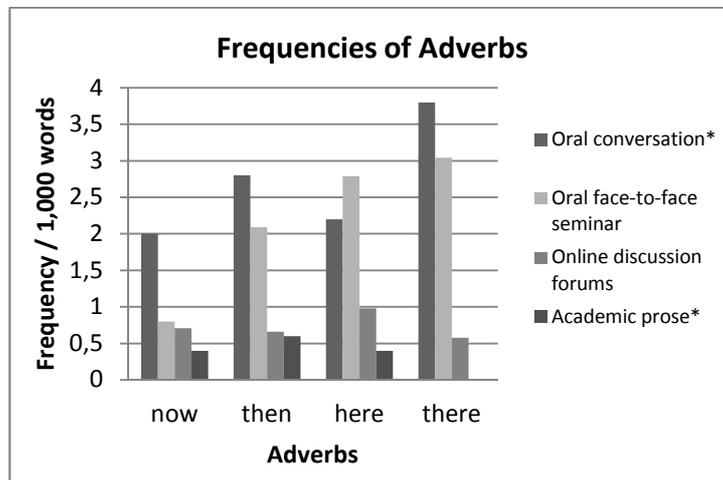


Figure 4. Frequencies of temporal and spatial adverbs across four registers

*Figures converted from Biber et al. (1999: 796)

In the culture course discussion forum, *now* is almost exclusively used to mean ‘at this time’ or ‘today’, as in *What is now the US and America now has a black president*. In the literature discussion forums, it is mostly used to refer to a point in the series of events in a novel or film, as in *now that he is dead Willy regrets that he...; now she cries endlessly*. In addition, students use *now* in all discussion forums to refer to the time of writing or how far they have come in their thinking process, as in *never felt more confused than right now!; that makes it all clear to me now=); now I obviously don’t get anything*. *Then* is used in the discussion forums to refer to a point in a series of events when the participants relate the events in past tense in films or novels, as in: *Then he came to Flint and Then Stevens notices a couple of people*.

Here sometimes refers to geographical locations which are explicitly referred to in a postmodifying phrase. The preposition *in* is the second most common collocate after *here* and introduces a post-modifying phrase, as in *here in Sweden, here in Finland, here in our Nordic part of the world*. Sometimes *here* refers to a geographical place previously mentioned in the text, as in *I have been in Ireland for a month and already I like it here so far! Here* is also used to refer to a certain point in a sequence of events, such as in a novel or film in a similar way to *now*

and *then*. Examples of this are as follows: *here he asks rhetorically; It's somewhere around here her external conflict takes a beginning*. The referents of *here* can be found in the discussion forum text itself or the participant's reasoning, as in *I might be completely wrong here* and *What I mean here is that...* but also refer to a place in the course literature, as in *Here the cultural difference is clear*.

The students sometimes refer to the time and place in their messages, and this gives the text a sense of immediacy that might be expected in oral conversation but that would be less common in academic prose. Even without the shared time and place, the referent can usually be understood. It is clear that *here* refers to the place and time of writing, as in *I don't have the book here so I'm not 100% sure*. *Here* is also used to refer to the forum group, the discussion forum or a place in the discussion thread messages, as in *We're lucky to have you as a native here in class; Hi, is it OK to "hop in" here?; I agree with what you write here; You raise some very good points here*. In addition, *here* is used as a way of opening or closing their message, as in *Here goes; Here are my questions; Here comes my contribution; Here I stop writing; ...that I have presented here*. Students frequently use *here* in a similar manner to *now* to refer to the place where they are in their own thought processes, as the following examples show: *Am I out on a limb here?; Please help me out here =); It might be here I get confused: I hope NN comes to my rescue here as well :)*.

When it comes to the use of *there*, it needs to be pointed out that *there* is frequently used to introduce an existential construction rather than as an adverb. In fact, more than 75% of the instances of *there* identified by the software had to be removed from the discussion forum results before frequencies could be calculated. Of those remaining, the majority of instances were easily categorized as being spatial adverbs, while a few instances were open to interpretation. For example, when discussing a novel, one student wrote *if this interaction was not there, the characters....* In this example, *there* could also be coded as an existential pronoun and the phrase would mean 'if this interaction did not exist'. This particular instance of *there* was categorized as an adverb because it can be interpreted as meaning 'if the interaction was not there in the novel'.

Similarly to *here*, when the geographical location of *there* is important, clarification could be found in the text. While *here* was

usually post-modified, *there* typically referred to a geographical place previously mentioned in the text.

Compared to the personal pronouns and demonstratives, the overall frequencies for all four adverbs were quite low in the discussion forum material as well as in the other registers, although somewhat higher for the oral seminar. In the comparison of frequencies across courses, the discussion forum frequencies for the adverbs are on the whole more like those in academic prose, with the exception of *here* in the proficiency forums (see Table 9). This again might be due to the slightly different type of task for some of the forums which required students to comment on essays in writing. This activity was similar to the oral seminar from MICASE, although in MICASE the commenting was done orally.

Table 9: Frequencies per 1,000 words of *now*, *then*, *here* and *there* in the three courses compared to oral conversation, the oral seminar and academic prose

	Oral conversation*	Oral seminar	Online forum: Culture	Online forum: Literature	Online forum: Proficiency	Academic prose*
now	2.0	0.80	0.58	0.65	0.90	0.4
then	2.8	2.09	0.77	0.58	0.64	0.6
here	2.2	2.79	0.56	0.84	1.52	0.4
there	3.8	3.04	0.70	0.69	0.35	<0.1

*figures converted from Biber et al. (1999: 796)

6. Conclusion

The main aim of this study was to explore how the frequency of occurrence in discussion forum messages of a limited number of deictic features compares with the frequency of use in speech and academic prose. The features investigated were deictic pronouns, determiners, and adverbs. Overall, the frequency of use of the examined items was found to be closer to academic prose than to oral conversation, with a few exceptions. In some respects, the frequencies and usages resemble those in academic prose but in other respects they resemble oral communication. The similarities and differences may be due to a number of situational factors that may have influenced the frequency and

distribution of the features analyzed. For instance, *here* occurred more frequently in the proficiency forums than in the culture and literature forums. This might be explained by the nature of the task, since the forum tasks involved commenting on peers' essays as well as making and responding to language proficiency queries where reference to specific parts of the essay or to a sample sentence was common. This pattern was also observed in the oral MICASE seminar where essays were discussed. The proficiency forums also had a higher frequency of *we* than the other forums, but this was due to its use in the generic sense rather than showing involvement with other participants in the course.

As indicated above, the results suggest that the written interaction in the discussion forums is more similar to academic prose than conversation. One reason for this may be the fact that the discussion forums are asynchronous and that the participants are in different geographical locations, which means that there is a need for clarification of certain items, such as *here* and *there*. Evidence of this can be seen in the post-modification of these items. Despite the fact that the discussion forum communication is asynchronous, the higher frequencies of *I* and *you* suggest a degree of interaction that is not seen in academic prose. In addition, verbs indicating perception and certainty were frequent collocates of first person singular *I* in the discussion forums, but are not normally frequent in academic prose. The reason they are rare in academic prose, according to Biber et al. (1999:265-378), is that they represent claims without support. Their more frequent use in the discussion forums might be related to the fact that there is not the same obligation to have support for claims in the forums as there is in academic prose.

The fact that the frequencies of most of the features in the forum material were between those of academic prose and conversation may also be the result of students feeling less inhibited and freer to talk about more personal topics in computer-mediated communication (Kelm 1992). This would explain the higher frequency of first person pronouns and expressions of stance such as *I believe*, *I think*, normally not present in academic texts. Additionally, the course topic and task type also appear to play a role in the choices made. Although the frequencies and collocations thus suggest a certain degree of orality, the frequencies were quite often close to those of academic prose.

The examination of collocations and lexical multi-word units shows patterns of usage typical for oral conversation as with the expressions *what do you*, *you have to* and *I don't think*. However, the three most common three-word units containing the first and second person pronoun are *not* among the most common in oral conversation, suggesting that there is a degree of uniqueness to the communication that takes place in these particular discussion forums. The frequency of *agree with you* suggests that taking a stance on one another's opinions is an important part of the communication. More research on multi-word units in online communication is needed in order to show not only similarities to other registers but also the uniqueness of different types of communication.

The variation between forums in the same course suggests that task type and topic may affect frequencies. For example, tasks such as discussing written work meant that *here*, referring to students' written work, was often used. There were also group differences within the courses, which may partly relate to the personalities of the participants in the discussion forums and their interests.

Even though the present study is a linguistic one, it has pedagogical implications in that by understanding the nature of different kinds of communicative situations, we can improve our ability to communicate and make informed decisions about our teaching and learning. One unexpected pedagogical implication of the present study is that the frequencies and collocations of the set of features examined show how students refer to their thought processes. These linguistic choices reflect cognitive activity and may show an awareness of the learning process. A topic for further study would be to examine explicit and implicit reference to the participants' thought processes, which may provide us with valuable information about thought processes and learning.

References

- Baron, Naomi. 2008. *Always On: Language in an Online and Mobile World*. New York Oxford University Press.
- Biber, Douglas. 1988. *Variation across Speech and Writing*. Cambridge: Cambridge University Press.
- Biber, Douglas. 2006. *University Language: A Corpus-Based Study of Spoken and Written Discourse*. Philadelphia: John Benjamin.

- Biber, Douglas, Susan Conrad, and Viviana Cortes. 2004. "If you look at... Lexical Bundles in University Teaching and Textbooks." *Applied Linguistics* 25(3): 371-405.
- Biber, Douglas, Susan Conrad, and Randi Reppen. 1998. *Corpus Linguistics: Investigating Language Structure and Use*. Cambridge: Cambridge University Press.
- Biber, Douglas, Stig Johansson, Geoffrey Leech, Susan Conrad, and Edward Finegan. 1999. *Longman Grammar of Spoken and Written English*. Harlow: Pearson Education.
- Bourdieu, Pierre, Jean-Claude Passeron, and Monique de Saint Martin. 1994. *Academic Discourse*. Cambridge: Polity.
- Chafe, Wallace, and Jane Danielewicz. 1987. "Properties of Spoken and Written Language." *Comprehending Oral and Written Language*. Eds. Rosalind Horowitz and S. Samuels. London: Academic Press. 83-113.
- Cho, Thomas. 2010. "Linguistic Features of Electronic Mail in the Workplace: A Comparison with Memoranda." *Language@Internet* 7 (Article 3).
- Collot, Milena, and Nancy Belmore. 1996. "Electronic Language: A New Variety of English." *Computer-Mediated Communication: Linguistic, Social and Cross-Cultural Perspectives*. Ed. Susan Herring. Amsterdam: John Benjamin. 13-28.
- Conrad, Susan, Biber, Douglas. 2004. "The Frequency and Use of Lexical Bundles in Conversation and Academic Prose." *Lexicographica*. 20: 56-71.
- Crystal, David. 2006. *Language and the Internet*. 2nd edn. Cambridge: Cambridge University Press.
- Cummings, Louise. 2005. *Pragmatics: A Multidisciplinary Perspective*. Edinburgh: Edinburgh University Press.
- Eriksson, Mats. 2009. "Referring as Interaction: On the Interplay between Linguistic and Bodily Practices." *Journal of Pragmatics* 41 (2): 240-262.
- Ferrara, Kathleen H. Hans Brunner, and Greg Whitemore. 1991. "Interactive Written Discourse as an Emergent Register." *Written Communication* 8 (1): 8-34.
- Fortanet, Inmaculada. 2004. "The Use of 'We' in University Lectures: Reference and Function." *English for Specific Purposes* 23 (1): 45-66.

- Gee, J. P. 2004. *Situated Language and Learning*. New York: Routledge.
- Goodwin, Charles. 2000. "Action and Embodiment within Situated Human Interaction." *Journal of Pragmatics* 32 (10): 1489-1522. doi: [http://dx.doi.org/10.1016/S0378-2166\(99\)00096-X](http://dx.doi.org/10.1016/S0378-2166(99)00096-X).
- Haas, Christina, Brandon J. Carr, and Pamela Takayoshi. 2011. "Building and Maintaining Contexts in Interactive Networked Writing: An Examination of Deixis and Intertextuality in Instant Messaging." *Journal of Business and Technical Communication* 25 (3): 276-298.
- Halliday, Michael A. K. 1994. *An Introduction to Functional Grammar*. 2nd edn. London: Edward Arnold.
- Hanks, William. 2009. "Fieldwork on Deixis." *Journal of Pragmatics* 41: 10-24.
- Hindmarsh, Jon, and Christian Heath. 2000. "Embodied Reference: A Study of Deixis in Workplace Interaction." *Journal of Pragmatics* 32 (12): 1855-1878.
- Hyland, Ken. 1998. "Persuasion and Context: The Pragmatics of Academic Metadiscourse." *Journal of Pragmatics* 30.
- Hyland, Ken. 2005. *Metadiscourse*. London: Continuum.
- Hyland, Ken. 2008. "As Can Be Seen: Lexical Bundles and Disciplinary Variation." *English for Specific Purposes* 27 (1): 4-21. doi: <http://dx.doi.org/10.1016/j.esp.2007.06.001>.
- Kelm, Orlando. 1992. "The Use of Synchronous Computer Networks in Second Language Instruction: A Preliminary Report." *Foreign Language Annals* 25 (5): 441-454.
- Levinson, Steven. 1983. *Pragmatics*. Cambridge: Cambridge University Press.
- Mey, Jacob L. 1993. *Pragmatics*. Oxford: Blackwell Publishers.
- Riordan, Monica A., and Roger J. Kreuz. 2010. "Emotion Encoding and Interpretation in Computer-Mediated Communication: Reasons for Use." *Computers in Human Behavior* 26 (6): 1667-1673.
- Sánchez Hernández, Purificación. 2013. "Lexical Bundles in Three Corpora of University Students." *Nordic Journal of English Studies* 12 (1): 187-209.
- Simpson, Rita, Sarah Briggs, Janine Ovens, and John Swales. 1999. *The Michigan Corpus of Academic Spoken English*. Ann Arbor: The Regents of the University of Michigan.

- Temple Adger, Carolyn 2001. "Discourse in Educational Settings." *The Handbook of Discourse Analysis*. Eds. D. Schiffrin, D. Tannen and H. Hamilton. Oxford: Blackwell. 503-517.
- Yates, Simeon. 1996. "Oral and Written Linguistic Aspects of Computer Conferencing: A Corpus Based Study." *Computer Mediated Communication: Linguistic, Social, and Cross-Cultural Perspectives*. Ed. Susan Herring. Amsterdam: John Benjamins. 29-46
- Yeo, Jiin-Yih, and Su-Hie Ting. 2014. "Personal Pronouns for Student Engagement in Arts and Science Lecture Introductions." *English for Specific Purposes* 34 (0): 26-37.