

Content list available at <http://ijltr.urmia.ac.ir>

*Iranian Journal
of
Language Teaching Research*
ORIGINAL ARTICLE



Urmia University

Using Metadiscourse to Create Effective and Engaging EFL Virtual Classrooms during the Covid-19 Pandemic ¹

Ghaleb Rabab'ah ^{a,b*}, Sane Yagi ^{a,b}, Sharif Alghazo ^{a,b}

^a *University of Sharjah, United Arab Emirates*

^b *University of Jordan, Jordan*

ABSTRACT

This study investigated the use and functions of metadiscourse markers in English as a foreign language (EFL) virtual classroom during the Covid-19 pandemic. The study examined which metadiscourse markers—interactive or interactional—were used more frequently and how they were employed in an EFL context. It explored two interactive metadiscourse resources (code glosses and evidentials) and two interactional metadiscourse resources (attitude and engagement markers). The study utilized a mixed-method approach, using Hyland's (2004) two-componential taxonomy, to analyze a corpus of 303,148 words from 35 online lectures (90 minutes each) delivered by three university instructors in the UAE. The Mann-Whitney U test was employed to determine any significant differences in the use of these resources and their subcategories. The results revealed that the three instructors used more interactional than interactive resources. The qualitative analysis showed that code glosses and evidentials were primarily used to manage the flow of information, provide elaboration on propositional content, and provide evidence to support arguments. They were also employed to achieve cohesion and logical coherence in online classrooms. In contrast, attitude and engagement markers were used to engage students and signal the instructors' attitudes toward their material and audience. The study concludes with pedagogical implications for EFL instructors, students, and syllabus designers to foster social justice and fairness in the online learning environment, ensuring all students feel valued and empowered in their educational journey.

Keywords: engagement resources; fairness; interactional resources; interactive resources; metadiscourse; social justice; virtual classroom

© Urmia University Press

ARTICLE HISTORY

Received: 13 May 2023

Revised version received: 30 July 2023

Accepted: 15 Jan. 2024

Available online: 15 Feb. 2024

* Corresponding author: Department of Foreign Languages, University of Sharjah, United Arab Emirates
Email address: grababah@sharjah.ac.ae

© Urmia University Press

10.30466/ijltr.2024.121421

Introduction

The Covid-19 pandemic turned academia into an online environment. Most students, especially university students, were in virtual classrooms, i.e., online classes. Online interaction is different from face-to-face interaction as teachers do not see their students (particularly in the context of UAE and most Arab countries), which may affect students' willingness to interact and force teachers to use metadiscourse resources different from those used in face-to-face classes to engage their students, to organize their discourse, and to be more persuasive. In the context of English as a foreign language (EFL) instruction, where face-to-face interaction plays a critical role in language learning, the Covid-19 pandemic has caused substantial changes in the education sector. With the rapid growth of online learning, it has become fundamental to investigate viable techniques that can improve the quality of online EFL classrooms and guarantee students' enthusiasm, engagement, and learning outcomes. Mauranen (2010) argues that the presence of students and teachers in one class significantly impacts students' learning and contributes to the discourse.

One of the most important techniques or devices that assist EFL instructors in making online instruction more useful is the use of metadiscourse markers. Although metadiscourse has recently attracted interest in academic and written discourses (Jiang & Hyland, 2016; Rabab'ah, 2015; Rabab'ah et al., 2022; Al-Anbar, et al., 2023; Alghazo, et al., 2023), little attention has been given to the use of these devices in spoken discourse (Zhang et al., 2017). Research on metadiscourse resources in spoken discourse has mainly focused on analyzing textual metadiscourse in lectures (Thompson, 2003), public hearings (Buttny, 2010), and parliamentary discussions (Ilie, 2003). However, rare attention has been paid to metadiscourse in EFL virtual classes. For example, Zhang and Sheng (2021) examined metadiscourse in lectures and confirmed that more adequate attention must be paid to lecture discourse. The current research, thus, responds to this call and aims to explore the use and functions of metadiscourse markers in online lectures during the Covid-19 pandemic in the UAE setting. The findings will contribute to discourse analysis and linguistics in general since the studies on metadiscourse in EFL virtual classrooms are lacking. The results will demonstrate how English language instructors at a university in the UAE use metadiscourse in virtual classrooms. This research aims to answer the following research questions:

1. Which type of metadiscourse markers (interactive vs. interactional) is more frequently used by university instructors in EFL virtual classrooms?
2. Are there any significant differences in the use of the types of metadiscourse markers?
3. What functions do these metadiscourse markers perform in online lectures?

The term 'metadiscourse', initially introduced by Harris (1959), is regarded as "discourse about discourse" (Vande Kopple, 1985, p. 83), a "kind of talk about talk" (Lemke, 1990, p. 20), or a secondary level of meaning that concerns itself with helping readers or listeners to bond, organize, understand, assess, and change attitudes toward the material (Vande Kopple, 2002). Crismore and Farnsworth (1990) and Hyland (2005) regarded metadiscourse as a set of linguistic resources that writers/speakers use in a discourse in order to interact with readers/listeners. Hyland and Tse (2004) argue that writers use these markers to make a text more coherent and persuasive. Hence, metadiscourse is considered interpersonal. Hyland (2005, p. 37) considered metadiscourse to be "self-reflexive" and useful to negotiate meanings, help the speaker or the writer to voice their point of view, and engage with readers.

Building on Crismore and Hill's (1988) classification of metadiscourse markers in academic discourse (i.e., attitudinal, voice, and informational), Hyland (2004, 2005) proposed his model of metadiscourse markers that included two primary resources, interactive and interactional. The interactive resources refer to the metadiscourse markers writers/speakers use to manage the flow of information and develop coherence and cohesion. These markers include *transitions, frame markers, and evidentials*. On the other hand, the interactional resources are the metadiscourse markers, such as *hedges, boosters, attitude markers, engagement markers, and self-mentions* (Hyland, 2005), which focus on the interaction between the writer and the reader. These metadiscourse resources have a variety of functions. Writers/speakers use interactive devices to connect pieces of information (e.g., using transitions and frame markers) or elaborate on propositions (e.g., using code glosses and evidentials). In this way, they create cohesion and coherence, determining how texts appear to readers/listeners as conceivable and persuasive. Interactional functions allow writers/speakers to express their viewpoints using boosters, hedges, attitude markers, and self-mentions. They engage the reader/listener using engagement markers (Jiang & Hyland, 2016). Interactive and interactional resources create a coherent discourse (Jiang & Hyland, 2016). Thus, for Hyland (2005), metadiscourse refers to how writers shape their message, involve their readers, and show their attitude toward their material and audience. Hyland (2019, p. 58) proposed the following interpersonal model of metadiscourse:

Table 1
An Interpersonal model of metadiscourse (Hyland, 2019, p. 58)

Category	Function	Examples
Interactive	Help to guide the reader through the text	Resources
Transitions	Express relations between main clauses	<i>In addition; but; thus; and</i>
Frame markers	Refer to discourse acts, sequences or stages	<i>Finally; to conclude; my purpose is</i>
Endophoric markers	Refer to information in other parts of the text	<i>Noted above; see Fig; in section 2</i>
Evidentials	Refer to information from other texts	<i>According to X; Z states</i>
Code glosses	Elaborate propositional meanings	<i>Namely; e.g.; such as; in other words</i>
Interactional	Involve the reader in the text	Resources
Hedges	Withhold commitment and open dialogue	<i>Might; perhaps; possible; about</i>
Boosters	Emphasize certainty or close dialogue	<i>In fact; definitely; it is clear that</i>
Attitude markers	Express writer's attitude to proposition	<i>Unfortunately; I agree; surprisingly</i>
Self-mentions	Explicit reference to author(s)	<i>I; we; me; our</i>
Engagement markers	Explicitly build relationship with reader	<i>Consider; note; you can see that</i>

According to Hyland's (2004, 2019) model, metadiscourse includes two dimensions of interaction: the interactive dimension and the interactional dimension. The interactive dimension concerns the writers' awareness of their readers' interests and how they accommodate knowledge, interests, expectations and abilities (Hyland, 2004). The interactive metadiscourse resources assist writers in organizing their discourse and guiding readers through the text. On the other hand, the interactional dimension concerns how the writer interacts with the reader (Hyland, 2005). The interactional metadiscourse resources help writers to involve the reader, express camaraderie, expect opposition, and react to imaginary situations.

Literature review

Since the introduction of the term metadiscourse, research has explored a wide range of academic genres. Some studies were interested in showing how persuasion is achieved by making logical relationships in academic discourse through interactive metadiscourse markers. These studies

include journal articles (Hyland, 2007; Khedri; Heng & Ebrahimi, 2013; Rabab'ah & Khawaldeh, 2016; Rabab'ah et al., 2020), MA and PhD theses (Hyland & Tse, 2004; Basturkmen & Randow, 2014), undergraduate assignments and essays (Li & Wharton, 2012), and political discourse and translation (Farghal & Kalakh, 2020). Some researchers focused on how interactional metadiscourse can impact persuasion by engaging the readers in these academic genres (e.g., Abusalim et al., 2022; Alavinia & Zarza, 2011; Alghazo et al., 2021; Hyland, 2004; Lee & Deakin, 2016). Other researchers examined metadiscourse in academic lectures (e.g., Camiciottoli, 2004; Chaudron & Richards, 1986; Jung, 2003; Khwaileh, 1999; Pérez & Macia, 2002; Stansberry, 2006; Thomson, 2003; Zare & Keivanloo-Shahrestanaki, 2017).

Research on metadiscourse has shown that advanced learners and native speakers use more metadiscourse markers in terms of frequency and accuracy. For example, in comparing essays written by native and non-native English-speaking students, Hinkel (2003) found that native English-speaking students used fewer boosters and hedges than their peers. Wu (2007) found that high-rated essays showed a higher frequency of hedges and transitions than low-rated essays. Yang and Sun (2012) studied the use of cohesive devices by second-year and senior students. The study showed that second-year students used fewer cohesive devices and demonstrated a lower accuracy than their counterparts. In their research on first-year English and Chinese L1 speakers, Lee and Deakin (2016) found that the students used more metadiscourse markers in the successful essays than in the less successful essays. Jiang and Hyland (2016) examined the interactional use of metadiscursive nouns in 120 research papers across six disciplines and showed they are another essential component of metadiscourse as they offer writers a way to organize their discourse to produce a coherent text.

Metadiscourse has been found crucial in achieving persuasion and engagement in academic writing. For example, Ho and Li (2018) investigated the persuasive effect of metadiscourse markers in first-year university students' argumentative essays. They found that high-rated and low-rated essays differed since the latter used few metadiscourse markers and faced problems while using metadiscourse to construct persuasive arguments. The high-rated essay writers demonstrated better use of the metadiscourse resources, resulting in more persuasive essays.

Metadiscourse assumes a significant role in both the structuring of discourse and the comprehension of lectures. Khuwaileh (1999) concluded that introductory chunks (i.e., restructuring devices) help guide students through science lectures given by a native speaker of English. Thomson (2003) examined text-structuring metadiscourse and intonation in organizing academic talks. He showed an inter-relationship between text-structuring metadiscourse and intonation, which can be used for teaching oral skills in an educational setting. It was also found that the academic talks are broken down into short phonological chunks, while EAP lectures are broken into long phonological units. The study revealed that metadiscourse and intonation are very helpful for undergraduate students to "form a coherent mental image of the entire talk and how its parts are interrelated" (p. 5). Camiciottoli (2004) examined the interactive discourse structuring used by guest lecturers (L1 and L2) and L1 classroom lecturers. She found that interactive discourse structuring was more frequent among L2 guest lecturers.

According to Bolliger (2009), virtual classroom discourse can be challenging because of the need for the teacher's physical presence. Based on this assumption, researchers explored the impact of online lectures on the use of metadiscourse markers and the functions they perform. For example, Zhang and Sheng (2021) investigated EFL lecturers' metadiscourse in Chinese university's *Massive Open Online Courses (MOOCs)* to determine how the course type affects metadiscourse usage. The study showed that MOOCs led to a low interactive and interactional metadiscourse frequency compared to face-to-face teaching. The study showed that metadiscourse enhanced intelligibility, reliability, and interactivity. In addition, the course type with different knowledge structures influenced metadiscourse usage.

In their study that examined EFL lecturers' metadiscourse in Chinese University MOOCs across corpus types, Zhang and Sheng (2021) revealed that MOOCs lead to infrequent use of metadiscourse. Metadiscourse was found to perform 19 functions, namely drawing attention to key issues or illustrating materials, seeking agreement/support or sound evidence, predicting response, shortening the mutual distance, invoking commonsense, mitigating imposition, sharing experiences, informing the layout, steering the development, presenting sentential logic, bringing accuracy, illustrating concepts, expressing affective feelings, memorizing key issues, considering questions, realizing the importance of actions, and acquiring approaches of fulfilling tasks. The study also showed that the course type impacts the use of metadiscourse.

The effect of metadiscourse teaching on developing L2 listening comprehension in lectures is controversial. Although Chaudron and Richards (1986) argued against the advantages of metadiscourse, several researchers found evidence that supports the positive impact of metadiscourse markers on lecture comprehension (Perez & Macia, 2002; Jung, 2003; Zare & Keivanloo-Shahrestanaki, 2017). Chaudron and Richards (1986) did not find an effect for discourse organization markers on L2 listening comprehension. They found that the macro-markers, such as '*what I am going to talk about today*', '*First we will look at...*', and '*We will come to that point later*', improved retention and recall in post-listening tests as these expressions inform the listener about how the discourse will be organized. However, they did not find an effect for the micro-markers (e.g., 'Well!', 'Okay!'), which implies that they did not help the learners to improve their listening comprehension. However, Pe'rez and Macia (2002) found contrasting results when they studied the impact of metadiscourse on learners' comprehension of lectures. Thirty-seven engineering students were divided into two groups; one received a scripted lecture containing metadiscourse expressions, while the other group was given the same lecture without metadiscourse expressions. The participants were instructed to take notes and answer a questionnaire. The analysis of the notes showed that the discourse expressions helped the students in the experimental group to comprehend better. The questionnaire results also showed that the subjects expressed their positive attitude towards being taught the metadiscourse expressions, implying that they perceived themselves as having comprehended the overall structure of the lecture.

In a study of 16 Korean high intermediate and advanced-level EFL learners (males and females), Jung (2003) examined the effect of discourse structuring expressions on their comprehension of the main ideas in the lectures. The experimental group was exposed to lectures with organization markers, while the control group was taught by excluding the organization markers. At the end of the experiment, the subjects were asked to summarize important points of the lecture. The findings of the study support those of Pérez and Macia (2002) in showing that organization markers in academic lectures lead to a better comprehension of the important points (e.g., 'Let me give you an example of a norm in different cultures', 'I am going to talk briefly about more complex norms such as rituals', and 'That is all we'll talk about today').

Similarly, Zare and Keivanloo-Shahrestanaki (2017) studied the impact of teaching the importance markers on lecture comprehension. The participants were 100 EFL learners (males and females) studying medicine. They were placed in two groups, i.e., experimental and control. The experimental group was taught importance markers in 15 one-hour lectures, while the control group was not taught these markers. A pre- and posttest was used to assess the participants' comprehension of the important points in English academic lectures. The post-test results showed that the participants' knowledge of the essential markers improved their comprehension of the main points in the lecture. On the other hand, Tang (2017) aimed to explore how metadiscourse helps teachers manage science classroom communication. His findings showed that metadiscourse allows teachers to integrate some pedagogical principles into their classroom talk. Tang suggested that by raising the teachers' metadiscourse awareness, teaching interventions and resources will be developed to support the teachers' effective use of metadiscourse.

Research has shown that the use of metadiscourse might vary according to the type of discourse and genre. In a study that examined three monologic academic genres, namely published academic prose and spoken lectures, Adel (2012) found that metadiscourse was used more frequently in oral discourse (i.e., lectures) than in academic prose or advanced writing. Lee and Subtrirelu (2015) adopted Hyland's model of metadiscourse to study metadiscourse in English for Academic Purposes lessons and lectures. The results showed that content and context significantly affect the teachers' use of metadiscourse. They also revealed that EAP teachers were more explicitly framing their discourse to set up classroom activities and stimulate students' involvement and interaction. Zare and Tavakoli (2017) showed that reference to the audience metadiscourse markers was used more in dialogues than in monologic lectures. It was also found that discourse organization metadiscourse markers were more frequent in academic lectures. Another finding was that speakers used more 'audience interaction' expressions because of the audience's discussions. In investigating metadiscourse in academic lectures, Bouziri's (2021) study revealed that some metadiscourse markers were sometimes organizing and, at times, involving and evaluative. The study also suggested that it was essential to adopt prototypicality when researchers assign a metadiscourse marker to one category or another. Some contextual and individual variables determine how metadiscourse is realized. These variables include mode, genre, context, text producers' preferences and goals, and their assessment of the context.

The literature review has shown that research that examined metadiscourse markers in oral academic discourse, namely online classes, is scant. More so are studies that analyzed metadiscourse in EFL classrooms in the Arab world. Therefore, the present research aims to fill this gap by exploring the metadiscourse used in online teaching conducted at a university in the United Arab Emirates during the COVID-19 pandemic.

Method

Corpus

A corpus of online lectures was compiled and analyzed using Sketch Engine. The corpus consisted of 35 lectures delivered by three English language professors at a university in the UAE. The professors signed a consent form to use their lectures for research purposes. Each lecture was about 60 - 75 minutes long. The analyzed corpus was 2430 minutes long, totalling 303,146 words. Those lectures were downloaded from *Blackboard's* online learning and online teaching *platform*, transcribed using Otter online software and edited by the researchers for any transcription mistakes that could have occurred. Then, the transcriptions of these lectures were classified and analyzed according to Hyland's metadiscourse classification (2004).

Data Analysis

This study adopted both a quantitative and a qualitative approach. Frequencies of metadiscourse markers (interactive & interactional) and their subcategories were tabulated and discussed. The non-parametric Chi-square test was used to find if there were statistically significant differences between the frequencies of the different metadiscourse markers found in virtual classroom discourse. In the qualitative analysis, the selected metadiscourse markers were analyzed by explaining how and why they were used (i.e., for which function).

The data were analyzed employing Hyland's (2004) categorization of metadiscourse in academic discourse (See Table 2). The model is adapted to suit our current study, which concerns oral discourse. Hyland divided metadiscourse resources into two major categories: interactive and interactional, and several other subcategories. The present study focused solely on the use of two

interactive resources (i.e., evidentials and code gloss) and two interactional resources (i.e., attitudinal and engagement markers). The metadiscourse resources in Table 2 and their functions were tagged and appropriately annotated in the corpus.

Table 2
A Model of Metadiscourse Markers (Hyland, 2004)

Category	Function	Examples
Interactive resources	To guide the audience through the discourse	
<i>Evidentials</i>	To refer to sources of information from other discourses	According to Hyland (2004); Richard (1985) states that...
<i>Code gloss</i>	To help the audience grasp the meaning of ideational material	Namely; ; such as; in other words
Interactional resources	To involve the listeners in the argument	
<i>Attitude markers</i>	To express the audience's attitude to a proposition	Unfortunately; I agree; surprisingly
<i>Engagement markers</i>	To explicitly refer to or build a relationship with the audience	Consider, note that, you can see that, Don't you think that...

Results

The present research aimed to explore interactive and interactional metadiscourse in online lectures delivered by English language instructors at a university in the UAE to find out if there are significant differences in the use of these two major categories and their two subcategories under investigation and to see if these findings are in line with previous research. To address these aims, non-parametric tests were used. Table 3 presents the results of the two major interactive and interactional metadiscourse resources.

Table 3
Results of the Nonparametric Independent Sample Test for Interactive and Interactional Resources

Major Resource	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Sig.
Interactive	1929	1710.54	3299639.00				
Interactional	13016	8327.01	108384346.00	1438154.000	3299639.000	-70.047	.000
Total	14945						

Mann-Whitney test results showed significant differences at α 0.001 (Z value = -70.047, P = .000) between the use of interactional and interactive metadiscourse markers in favor of the interactional resources. This implies that there was no equal distribution in the use of these two major categories of metadiscourse resources in the studied online lectures and that the participants were more inclined to employ interactional resources, such as attitude and engagement markers, than evidentials and code glosses.

Evidentials and Code Glosses

In our context, the term evidentials refers to the lecturers' reference and use of other sources to support their claims. The lecturers in the present research used these textual markers because they

were inclined to seek support from well-known figures in the field of linguistics and language studies, authoritative works, and holy books. Sometimes, the lecturers in the present research were inclined to cite other sources to make their talk more persuasive and to justify their arguments. We observe more evidentials in the corpus than code gloss markers.

Table 4
Results of the Nonparametric Independent Sample Test for Interactive Resources

Marker	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (Sig.)
Evidentials	1040	632.70	658005.00				
Code Gloss	889	1353.75	1203480.00	116685.000	658005.000	-29.321	.000
Total	1929						

As noted, evidentials registered 1,040 instances, while code gloss markers recorded 889. The results of the Mann-Whitney U test showed that there are significant differences at α (0.001 (Z value = -29.321, P = .000)) between the use of evidentials and code gloss markers in favor of evidentials, which implies that the instructors in the online lectures preferred evidential metadiscourse markers more than code glosses.

Evidential Metadiscourse Markers

In Table 5, the observed frequency of the evidential metadiscourse markers, '*say/says/said*', was significantly used more than its expected value at α (0.001). The results also show that the observed frequencies of evidential 'state/states/stated', 'questionnaire', 'prove', 'argue/argues/argued', 'find out/finds out/found out', 'research', 'according to', 'literature', 'believe/believes/believed' and 'indicate/indicates/indicated' were significantly lower than their expected value (74.3). These results imply that the participants in online classrooms preferred the use of 'study/studies/studied, theory, show/shows/showed, and say/says/said' to the other evidentials. The results also indicate that the participants were more inclined to use some evidentials than others.

Table 5
Frequencies, Percentages, and Chi-square Goodness-of-fit Values for evidential metadiscourse markers

Marker	Observed N	Expected N	Residual	%	Df	Chi-Square (χ^2)	Sig.
...state/states/stated that..	6	74.3	-68.3	.58			
Questionnaire	10	74.3	-64.3	.96			
Prove	17	74.3	-57.3	1.63			
Argue/argues/argued....	22	74.3	-52.3	0.0212			
... find that....., finds that....., found that	40	74.3	-34.3	3.85			
Research	43	74.3	-31.3	4.13			
According to	55	74.3	-19.3	5.29			
Literature	58	74.3	-16.3	5.58	13	901.88	.000
...believe/believes/believed	67	74.3	-7.3	6.44			
Indicate /indicates/indicated	72	74.3	-2.3	6.92			
...study....., studies....., studied.... (v)	89	74.3	14.7	8.56			
Theory	110	74.3	35.7	10.58			
...show/shows/showed	193	74.3	118.7	18.56			
...say/says/said that	258	74.3	183.7	24.81			
Total	1040			100%			

The following bold-typed words are illustrative examples of evidentials taken from the corpus of the study.

Instances of evidentials in the corpus

1. It is often **argued** that an extrovert is well-suited for language learning. However, **research** does not always support this conclusion.
2. In general, **research** does not **show** a single clearly defined relationship between personality traits and second language learning.
3. Falling intonation **indicates** that this is a statement, not a question.
4. Boase-Beier (2014) **argued** that literary translation dictates that the translator adheres to the dominant poetics and literary norms of the target language system.
5. Much **research** has proven that introverts are not risk-takers.
6. **According to Douglas Brown**, expecting a reward facilitates converting declarative knowledge to procedural knowledge.

As seen in examples (1-6), evidential metadiscourse markers are linguistic cues that lecturers use to signal the sources and quality of evidence used to support their claims in oral discourse. In lectures, evidential metadiscourse markers, as the bold type words above, play a crucial role in helping lecturers to convey the credibility and reliability of the information being presented. By signaling the sources of evidence used to support their claims (e.g., according to, research shows, Boase-Beier (2014) argued that...), speakers can demonstrate their knowledge and authority on the subject. Speakers can assist the audience to evaluate the material they listen to critically assess it by showing the credibility, applicability, and accuracy of the sources used to support their statements. They can also be utilized to give the listener extra context and background information.

Code Glosses

Table 6 shows the frequencies, percentages, and Chi-square goodness-of-fit values for code gloss metadiscourse markers. The observed frequency of the code gloss marker '*in other words*' was significantly higher than its expected value at α (0.001).

Table 6
Frequencies, percentage, and Chi-square Goodness-of-fit values for code gloss metadiscourse markers

Marker	Observed N	Expected N	Residual	%	Df	Chi-Square (χ^2)	Asymp. Sig. (Sig.)
Namely	3	177.8	-174.8	.34	4	2415.60	.000
For example	3	177.8	-174.8	.34			
For instance	21	177.8	-156.8	2.36			
Such as	47	177.8	-130.8	5.29			
As an example	52	177.8	-125.8	5.85			
In other words	763	177.8	585.2	85.83			
Total	889			100			

The results also show that the observed frequencies of each of the code gloss markers, 'as an example of', 'such as', 'for instance', 'for example', and 'namely' were significantly lower than their expected value. These results imply that the participants in online classrooms preferred the use of 'in other words' to the other code gloss markers. The participants were also more inclined to use such code gloss markers, such as 'as an example of', 'such as', and 'for instance' than others (e.g., 'for example', & 'namely'), which recorded only three instances each. The following are examples taken from the corpus to show how the EFL instructors utilized these textual markers.

Instances of code glosses in the corpus

1. Good! So we can talk about the sense, not only of words but also longer expressions, **such as** phrases and sentences.
2. **Instructor:** In most legends and folktales, repetitions can serve as references. In poetry, they can have multiple functions, **such as** musical, thematic, and symbolic devices.
Student: Sir, I have a question about the first point. When we use reference to refer to one thing. **For example**, "My son is in the Beech tree."... it depends on context. But if "my son" has the property of being deictic and the context is understood, why is it problematic?
Instructor: It is problematic because deictic terms are always context-dependent. Context is time and place.
3. Okay. Now, we come to the term diglossia. The word diglossia actually consists of three-word parts; we have '**di**' meaning two; 'gloss' meaning tongue, and '**ia**' is subject. That means the condition of two tongues, okay. **In other words**, the condition of having two forms of language over acts of language.
4. If you want to cook an omelette, **for example**, you need a recipe.
5. **As an example of** this is fillers. Fillers, for example, are discourse markers that are used for processing the relationship between sentences.
6. The subjects of the study used more positive impoliteness strategies, **namely** being unconcerned, using inappropriate identity markers, and using taboo words.

The recorded lectures in the present research show that code glosses are linguistic cues that are used to provide clarification and understanding for the listener. As noticed in examples (1-7), code glosses are used to clarify unfamiliar terms or jargons (e.g., I mean, in other words). Code glosses are also used to explain technical concepts. For example, when the lecturer mentions an acronym, he/she may explain it by saying 'I mean' or 'This acronym stands for'. Finally, by providing additional information and clarification, code glosses can help ensure that students understand the lecture and may assist in reducing misunderstandings.

Attitude and Engagement Metadiscourse Markers

Table 7 reveals that there are significant differences at α 0.001 (Z value = -36.404, P = .000) between the use of engagement and attitude markers in favor of engagement, implying that instructors and students in their online classes had more preference for engagement than attitude markers, aiming at engaging students in classroom discussions.

Table 7
Results of the Nonparametric Independent Sample Test for the Interactional Resources (Attitude and Engagement)

Interactional	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (Sig.)
Attitude Markers	332	283.98	94280.00				
Engagement Markers	12684	6671.43	84620356.00	39002.000	94280.000	-36.404	.000
Total	13016						

Attitude Metadiscourse Markers

Table 8 indicates the frequencies, percentages, and Chi-square Goodness-of-fit values for attitude markers.

Table 8
Frequencies, percentage, and Chi-square Goodness-of-fit values for attitude metadiscourse markers

Marker	Observed N	Expected N	Residual	%	Df	Chi-Square (χ^2)	Asymp. Sig. (Sig.)
Curiously	2	30.2	-28.2	.60			
Appropriately	3	30.2	-27.2	.90			
Interestingly	5	30.2	-25.2	1.51			
Hopefully	7	30.2	-21.2	2.11			
The easiest	7	30.2	-21.2	2.11			
Easier than	8	30.2	-22.2	2.41			
Correctly	12	30.2	-18.2	3.61			
Necessary	13	30.2	-17.2	3.92	10	690.73	.000
Disagree	15	30.2	-15.2	4.52			
Agree	15	30.2	-15.2	4.52			
Unfortunately	17	30.2	13.2	5.12			
Pleased	17	30.2	13.2	5.12			
Interest	51	30.2	20.8	15.36			
Important	160	30.2	129.8	48.19			
Total	332			100			

The frequency range of the attitude markers was between 2 and 332, while the percentages ranged from around 28% for 'curiously' to slightly more than 48% for 'important'. The observed frequencies of the attitude markers, 'important' and 'interest' were significantly higher than their expected value (30.2) at α (0.001). The results also reveal that the observed frequencies of 'pleased', 'unfortunately', 'I agree', 'disagree', 'necessary', 'correctly', 'easier than', 'the easiest', 'hopefully', 'interestingly', 'appropriately', 'curiously' were significantly lower than their expected value too. This indicates that the participants, in their online lectures, preferred to use 'important' and 'interest' more than any other attitude markers. The results also indicate that the participants did not have a preference for the discourse markers 'pleased', 'unfortunately', 'I agree', 'disagree', 'necessary', 'correctly', 'easier than', 'the easiest', 'hopefully', 'appropriately', and 'curiously'.

Among the four major categories of metadiscourse markers under investigation, attitude markers were the least used since the corpus recorded only 332 instances. Previous research that examined academic genres reported similar results (Abdi, 2002; Hu & Cao, 2015). The occasional use of attitude markers implies that EFL instructors tend to adopt a neutral stance (Ho, 2018). This also implies that academicians should be objective and unbiased towards other researchers' propositions. In academic discourse, there is no space for attitudes; therefore, the participants in the present study were not inclined to "step out of the scientific boundaries" (Farhani, 2019, p.68). The following are examples found in our corpus to illustrate how attitude markers were used.

Instances of attitudinal markers in the corpus

1. **Instructor:** What does it mean for someone to know the meaning of a word? What does it mean?

Student: He can use it **correctly**.

Instructor: Exactly! He can use it **correctly**. What are the components of language? Does anyone know? Let's see if Introduction to Language benefitted you.

2. If motivation is derived from the inside, it is called intrinsic motivation, because the behavior stems from needs, wants, or desires within yourself or oneself. The behaviour is self-rewarding; therefore, no externally controlled reward **is necessary**.

3. I know someone who was, who memorised Al Mawred dictionary, an English-Arabic dictionary. **Unfortunately**, he couldn't communicate well in the target language.

4. **it's necessary** to know its pronunciation and grammatical properties.

5. So, you think that Spanish is **easier than** German. If I ask you to study two languages, you will choose Spanish first.

6. **I agree** with your argument, that we have different types of discourse.

As shown above, attitudinal markers are words, phrases, and non-verbal cues that the EFL lecturers use to express their attitudes or emotions towards the topic or the students. They play an important role in communication as they help the speaker to signal the importance of a certain point or idea (e.g., it is more important, Surprisingly). They are also used to express agreement or disagreement. For example, the lecturer may say 'Yes. That is true' to indicate agreement, or 'I am not sure about that' or 'I disagree with...') to indicate disagreement. Attitude markers are used to show politeness or respect to the listener. In an EFL classroom, a lecturer might use "please" or "thank you" to show appreciation for the students' attention. Attitude metadiscourse markers such as "I believe," "in my opinion," and "personally" can be used to hedge or qualify the speaker's claims. Conversely, markers such as "clearly," "obviously," and "undeniably" can be used to boost the strength of the speaker's claims. Overall, attitudinal markers can greatly impact the overall effectiveness of communication.

Engagement Metadiscourse Markers

As can be seen in Table 9, the total number of engagement markers was 12,684 instances.

Table 9
Frequencies, percentage, and Chi-square Goodness-of-fit values for engagement metadiscourse markers

Marker	Observed N	Expected N	Residual	%	Df	Chi-Square (χ^2)	Sig.
Note that	6	1409.3	-1403.3	.05	8	43964.46	.000
you can see that	10	1409.3	-1399.3	.08			
Yourself	50	1409.3	-1359.3	.39			
Consider	147	1409.3	-1262.3	1.16			
You see	180	1409.3	-1229.3	1.42			
Yes/no questions	540	1409.3	-869.3	4.26			
Your	1181	1409.3	-228.3	9.31			
Wh-questions	1951	1409.3	541.7	15.38			
You	8619	1409.3	7209.7	67.95			
Total	12684						

The frequency range was between 6 and 8,619 for 'note that' and 'you', respectively. It is evident that 'your', 'yes/no questions', 'you see', 'consider', 'yourself', 'you can see that', and 'note that' were significantly lower than their expected value. The results also show that the participants preferred to use 'your', 'yes/no questions', 'wh-questions', 'you see' and 'consider' more than other engagement metadiscourse markers. This implies that instructors and students were more inclined to use some engagement metadiscourse markers than others.

Instances of engagement metadiscourse in the corpus

1. **Instructor: What does the first statement mean?** When you said, 'translation requires the translator to be the second author of the source text.'. **What does that mean?**

Student: It means that the translator should render the source text in a way that is acceptable to the target reader and makes the target reader feel that this text is not actually a translation.

Instructor: What is an error? Would you like to answer, Amna?

Student. Yes, doctor. An error is a mistake.

Instructor: Yes, thank you.

2. **Instructor: Which sentence are you reading?**

Student: Six.

Instructor: Okay, read it again. **Where is the mistake?**

Student: Heavy.

Instructor: Heavy? What is the correction?

Student: Heavily.

Instructor: Excellent.

3. Instructor: If someone, for example, took **your** book without your permission, and **you** asked him, 'Why did **you** take it without my permission', he may say 'Sorry'. **What is the function of 'sorry'?**

Student: It's apology.

Instructor: Yes. Very good. He or she is apologizing.

Instructor: Can I ask you a question, Waad?

Student: Yes, I am here.

4. Instructor: When you took the quiz, **did you use the lockdown browser?**

5. Instructor: Ibn Battuta Mall is in Dubai, **isn't it? Did it remind you of a person?**

Student: Yes, Ibn Battuta.

Instructor: Good! Did it remind **you** of the traveler Ibn Battuta?

Students: Yes.

Instructor: Do **you** know who he was? **What did he do?**

Student: He was an Arab traveler.

Instructor: Good! What made **you** recall him?

Students: The mall!

Instructor: Very good! So, **your** knowledge about Ibn Battuta and **your** knowledge about what he did and the mall, which is located in Dubai is called 'schemata'.

6. What is the source domain, the target domain, the mapping? **Can you describe it here? Can you describe mapping here?**

Functions of Metadiscourse Markers

The results of both statistical and descriptive analyses revealed that metadiscourse plays an important role in establishing interrelation among lecturers, learners, and course content. Our study has shown that the lecturers' metadiscourse performs several functions, namely drawing attention to key issues (As you can see) or illustrating material (for example, to illustrate), seeking agreement or support (Do you agree with your classmate?), seeking sound evidence (According to Brown & Levinson, 1989, Nida argues that), predicting a response (I hope you know the answer, What do you think?), mitigating an imposition (Will you...? Can you...?), sharing experiences (This is easier than, It is the easiest), presenting sentential logic (If you agree, we...), appealing to accuracy (correctly, appropriately), illustrating concepts and helping the listener understand some concepts (in other words, this means that..), expressing emotions (I am pleased, curiously), asking questions (Who can tell me? What are the cohesive devices used? Is this correct?), realizing the value of actions (It is important, hopefully), revealing the lecturer's attitude toward the propositional content (unfortunately, interestingly, and surprisingly), and involving students (As you can see..., You will see...).

Evidentials were used to indicate references to sources outside the text. Hyland (2019, p. 58) argues that “evidentials refer to information from other texts”. The analysis presented above shows that evidentials were used to achieve different functions. As can be seen from the examples above, the verb ‘argued that’ was utilized to “refer to the source of textual material” (Hyland, 1999, p. 7). Another example is the use of the preposition ‘according to’; it is used to give credit to the quoted source. All in all, the use of evidentials is important because they give the text more credibility and make it more authentic.

Code glosses are devices that are used to give the reader/listener more details about the meanings that writers/speakers communicate. Vande Kopple (1985, p. 84) argues that these markers function to “help readers grasp the appropriate meanings of elements in texts.” The analysis above shows that code glosses were used to clarify a proposition or a term. The use of ‘in other words’ as a code gloss is a “reformulation” or restatement of the idea presented. As Dehghan and Chalak (2016, p. 24) note code glosses “pinpoint where readers require guidance in interpreting points, where more elaboration or specificity is essential”.

Attitude markers are expressions used by the writer/speaker to express their own attitude towards a proposition. They function, as Crismore et al. (1993, p. 46) point out, to “reveal the writer’s attitude toward propositional content.” The analysis above shows that markers such as ‘unfortunately’ or ‘I agree’ are used to express the attitude of the speaker. Hyland (1999, p. 8) explained that “attitude markers indicate the writer’s affective, rather than epistemic, attitude to textual information, expressing surprise, importance, obligation, and so on.” The examples above show that the speaker expresses his/her feelings towards an idea by using adverbs such as ‘unfortunately’ or clauses such as ‘I agree’.

Engagement markers are linguistic expressions that are used to construct a relationship with the reader/listener. Hyland (2019) argues that “engagement markers are devices that explicitly address readers, either to focus their attention or include them as discourse participants” (p. 63). They play a role in engaging and involving readers/listeners to participate in the discourse. As Hyland (2005) notes, engagement markers allow writers/speakers “to either highlight or downplay the presence of their readers/[listeners] in the text” (p. 188). The examples above show that the speakers engaged their listeners using markers such as the question ‘what does that mean?’ and the pronoun ‘you’ which clearly shows the interactional nature of classroom discourse which is generally based on questioning techniques.

Discussion

It should be recollected that the first research question asked about the type of metadiscourse markers (interactive vs. interactional) that is more frequently used by university instructors in EFL virtual classrooms. The results presented above showed that the three EFL lecturers used a variety of metadiscourse markers in their online lectures. They also revealed that the selected interactional resources were used more than the interactive ones. However, engagement markers (e.g., yes/no questions and Wh-questions) were used much more than attitude markers (e.g., it is important). It is evident in research that teachers use engagement strategies to interact with the online audience, trying to connect to their students, focus their attention, and engage them in their arguments. On the other hand, they use attitudinal (stance) markers as stated by Hyland to “present themselves and convey their judgements, opinions and commitments” (2005, p. 5). Strauss and Feiz (2014) refer to the expressions of stance (attitude metadiscourse markers) as the speaker’s or hearer’s feelings and attitudes in the produced discourse. The study also revealed that evidentials, as an interactive resource, (e.g., research indicates, according to, etc.) have been employed more than code gloss markers (e.g., as an example, for instance, such as). Evidentials

are used to attribute the information the lecturers state to a trustworthy authority in an effort to be more persuasive. Code glosses are used to support, exemplify, and illustrate ideas, to make them more persuasive.

As for the second research question which asked about differences in the use of metadiscourse markers, these findings showed that there are differences between the interactional and interactive resources. These differences can be interpreted in light of many factors which affect the use of metadiscourse. Some differences in the use of these markers may arise because of the status of the participants as EFL lecturers who are nonnative speakers of English. The literature abounds with studies on the differences in the use of metadiscourse markers between native and nonnative speakers. Liao (2020, p. 1), for example, argues that "writing [and speaking for that matter] in an L2 involves not only an effort to monitor linguistic quality, such as linguistic accuracy or complexity, but also an effort to make metadiscourse choices that will result in cohesive written [or spoken] discourse." This position implies that the choices speakers make differ and may not be well-mastered by L2 speakers such as the EFL lecturers in this study.

As for the differences between the interactional and the interactive resources used by the EFL lecturers, we notice that the use of the interactional devices is interpreted by the speaker's need to construct his voice and position his views (Hyland, 2005). They are used by the participants to deliver their intended beliefs and views about the topic in question to the student audience. With respect to the interactive resources, we re-establish a fact about EFL teaching broadly and EFL teaching in the Arab world specifically: interaction with the teacher is rare and students spend most of class time listening to the teacher. Here appears the role of engagement markers in creating an interactive avenue by engaging students in the discourse.

In relation to the third research question which asked about the functions of using metadiscourse markers in online classes, the results demonstrated that the inclusion of metadiscourse in online lectures significantly affects their effectiveness. Metadiscourse aims to connect the lecturer and the students, to underline and explain key themes, to communicate attitudes and assessments, and to organize the discourse. This is crucial in online lectures, as instructors may find it difficult to establish rapport with their students due to a lack of physical contact and face-to-face engagement. According to research (e.g., Aoki & Mochizuki, 2019; Yang & Li, 2018), effective use of metadiscourse in online lectures can boost engagement, improve understanding, and retention of knowledge, and enhance perceptions of the lecturer. This finding is in line with those of Zhang and Sheng (2021), which showed that the metadiscourse used by lecturers in MOOCs performed 19 functions. The results of Zhang and Sheng's (2021) study showed that the teachers' metadiscourse plays an important role in establishing a synchronized interconnection among lecturers, imagined learners, and course materials. These findings also lend support to those of Hyland and Tse (2004), and Vande Kopple (1997).

Persuasiveness is a vital function that metadiscourse plays in virtual classrooms. In support of Zhang and Sheng's (2021) findings, the analysis also showed that these functions aimed for the enhancement of intelligibility, reliability, interactivity, and persuasiveness. Since the learners were invisible in the Covid-19 context, lecturers were expected to use all metadiscourse resources to make their talk intelligible and to avoid the creation of obstacles in the learning process. In our case, they resorted to engagement markers (e.g., use of the personal pronoun 'you', yes/no questions, and wh-questions) and attitude markers (e.g., interestingly, it is easier than, unfortunately). Lecturers also were inclined to project reliability by expressing their own affective attitude towards the content or by sharing their experiences. Lecturers used both engagement markers and attitude markers, but this could be at the expense of learners' interactivity.

Similarly, interactivity is achieved by using engagement markers, transition markers, and attitude markers. As shown above, due to the physical absence of the audience, lecturers used a variety of metadiscourse markers to be more convincing. Hyland (2004) argues that metadiscourse markers are persuasive in nature as they have a rhetorical impact on the reader. Thus, lecturers must attract the learners' attention by using these metadiscourse markers. Virtual classrooms require lecturers to enhance intelligibility, reliability, interactivity, and persuasiveness by using engagement markers, attitude markers, code gloss and evidentials. Hyland (2007) reported that code glosses are used to increase the persuasiveness of a text. Our corpus showed that the EFL instructors were more persuasive, and they used reformulation, restatement, and exemplification to discuss some elements in the oral discourse because they felt that their statements or arguments were unclear and that they needed further illustration. It was found that these textual markers were the least used of all the interactive categories. This finding differs from previous studies that found code glosses to be the most frequent (Ho, 2018).

The corpus showed that engagement markers were the most heavily used. Instructors, in this research, used interactional metadiscourse markers to build a relationship with their students. They built this relationship through the use of such involvement markers, as 'note that', 'you', 'as you can see', 'wh-questions' and 'yes/no questions'. The results showed that the most frequently used engagement marker was 'you', followed by 'wh-questions' and 'your'. As can be seen in the following examples, 'wh-questions', and 'you and your', whose purpose is to engage the recipient in the interaction taking place in online lectures, are very frequent.

As mentioned above, the use of metadiscourse in virtual teaching is considered one of the key devices to make language teaching more effective and engaging. In addition, the use of the metadiscourse features (especially the interactional ones) assists in reducing the drawbacks of online teaching. No one denies the role technology plays in language learning and teaching. It promotes accessibility to resources and engages learners in language resources more easily and effectively. However, it creates inequity and is often seen as a detriment to the promotion of fairness and social justice. Nieto (2010) defines social justice as “a philosophy, an approach, and actions that embody treating all people with fairness, respect, dignity, and generosity” (p. 46). In many EFL contexts, technology has intensified feelings of social injustice. For example, Yılmaz and Söğüt (2022) found that “technology was perceived both to exacerbate and to ameliorate the digital divide and unequal learning opportunities among students” (p. 1). Thus, many scholars call for ensuring that all learners take equitable chances at language education and make use of technology to learn language because they view the language classroom as a place to promote social awareness and empathy with other people. Ortega (2017) argues that researchers have to focus on issues of inclusivity, equity, and social injustice when dealing with research on the use of technology in language learning and teaching. Similarly, Gleason and Suvorov (2019) stress the need to reconsider how technology is used in language education and note that it is crucial that language teachers leverage virtual teaching through technology to make it more socially inclusive and promote social equity.

Based on the foregoing discussion, we realize the importance of making virtual teaching more effective because the world is undergoing changes in digital learning and technological advancement. The use of virtual teaching during the Covid-19 pandemic led educators and policymakers to reconsider the use of technology in language education. Therefore, many institutions, including those in the UAE, have continued to use online teaching and to develop tools to evaluate existing technological tools and train teachers to be innovative in engaging students to make virtual teaching more successful. This necessitates dealing with issues of social equity and inclusivity. In language virtual classes, such as the ones analyzed in this study, teachers are requested to make use of available linguistic and non-linguistic tools to promote equity among learners. In this study, we highlight the role metadiscourse can play in achieving this. Our results have shown that interactional metadiscourse devices have the potential to engage all students in

the content of language classes. In particular, engagement strategies are used to include all students in language classroom discussions which promotes inclusivity and leads to fairness in taking virtual classes.

Conclusion

The present research aimed at exploring metadiscourse in EFL online lectures that were delivered by English language lecturers in the UAE. More specifically, it aimed to explore the use of evidential and code gloss interactive resources and attitudinal and engagement interactional resources. The results of this study provide insights into the pedagogical implications of metadiscourse in the context of online EFL during the Covid-19 pandemic and after. Teachers, learners, and syllabus designers would all benefit from having a greater awareness and better understanding of the many metadiscourse markers used and how they affect coherence, cohesion, interaction, and student engagement. This will help them use the most effective markers to facilitate virtual EFL classrooms with greater efficacy. Moreover, this research offers recommendations based on evidence and some pedagogical implications that can improve the quality of EFL education in virtual environments, guaranteeing students' active engagement, understanding, and academic achievement despite the obstacles brought about by the epidemic.

The findings of the present research enhance online teaching practices by providing insights into the significance of metadiscourse resources in online EFL classrooms. Teachers can improve their online teaching techniques by learning which resources are used more often, what functions they perform, and how they work. With this understanding, teachers may design more effective and interesting online learning material that will increase student participation, engagement, and learning experiences. In addition, the insights obtained from this research may also guide the design and development of EFL syllabi. Syllabus designers should incorporate metadiscourse into their syllabi to equip EFL students, whether they study online or in-person, with these resources to effectively engage, participate and learn better. Besides, by aligning course materials with the identified functions of metadiscourse markers, syllabus designers can enhance students' online learning experiences. In online EFL classrooms, using the right metadiscourse markers can increase student engagement and comprehension. With their understanding of what functions these metadiscourse markers perform, teachers can equip their students with the appropriate resources that help them better understand new material, clarify ideas, and provide evidence for their claims.

By strategically incorporating metadiscourse, instructors establish inclusive and equitable virtual classrooms, prioritizing student engagement, understanding, and retention of knowledge. This will foster social justice and fairness in the online learning environment, ensuring all students feel valued and empowered in their educational journey. In other words, educators should also be made aware of the role metadiscourse plays in achieving learner engagement and inclusivity. This allows them to make online teaching more effective because they can overcome the drawbacks of virtual teaching in terms of student participation, equity, fairness and social justice.

Moreover, the findings contribute to our understanding of how metadiscourse markers function in online learning environments by examining the use of metadiscourse markers in the context of virtual classrooms. This study contributes to discourse analysis research. Future research should investigate the employment of metadiscourse in various online lecture types, as well as the language and cultural factors that may affect how metadiscourse markers are used and interpreted. The findings of this study may provide implications to EFL teachers about the role of metadiscourse markers as a powerful tool of interaction and persuasion in online and offline

classes. Therefore, teachers, especially in EFL contexts, should raise awareness of their students of the use of metadiscourse devices because they were found to aid comprehension.

References

- Abusalim, N., Zidouni, S., Alghazo, S. M., Rabab'ah, G. & Rayyan, M. (2022). Textual and interpersonal metadiscourse markers in political discourse: A case study. *Cogent Arts & Humanities*, 9(1), 2124683. DOI: 10.1080/23311983.2022.2124683
- Ädel, A. (2012). "'What I want you to remember is ...': Audience orientation in monologic academic discourse.' *English Text Construction*, 5, 101–127. <https://doi.org/10.1075/etc.5.1.06ade>.
- Al-Anbar, K., Alghazo, S. M., Jarrah, M., & Altakhaineh, A. (2023). First language and second language English editorialists' use of interactional metadiscourse. *Discourse and Interaction*, 16(2), 5-28.
- Alavinia, P., & Zarza, S. (2011). Metadiscourse markers revisited in EFL context: The case of Iranian academic learners' perceptions of written texts. *Iranian Journal of Applied Language Studies*, 3(2), 51-84.
- Alghazo, S. M., Al Salem, M.N., Alrashdan, I., & Rabab'ah, G. (2021). Grammatical devices of stance in written academic English. *Heliyon*, 7(11), e08463. <https://doi.org/10.1016/j.heliyon.2021.e08463>
- Alghazo, S. M., Al-Anbar, K., Altakhaineh, A., & Jarrah, M. (2023). Interactive metadiscourse in L1 and L2 English: Evidence from editorials. *Topics in Linguistics*, 24(1), 55-66.
- Aoki, K., & Mochizuki, T. (2019). The effects of metadiscourse on comprehension and retention in online video lectures. *International Journal of Emerging Technologies in Learning*, 14(20), 63-75.
- Basturkmen, H. & Randow, J. (2014). Guiding the reader (or not) to re-create coherence: Observations on postgraduate student writing in an academic argumentative writing task. *Journal of English for Academic Purposes*, 16, 14-22. <https://doi.org/10.1016/j.jeap.2014.07.005>
- Bolliger, D. L. (2009). Use of patterns of visual cues in computer-mediated communication. *The Quarterly Review of Distance Education*, 10(2), 95-108. Retrieved from: <https://eric.ed.gov/?id=EJ864046>.
- Bouziri, B. (2021). A tripartite interpersonal model for investigating metadiscourse in academic lectures. *Applied Linguistics*, 42(5), 970–989. <https://doi.org/10.1093/applin/amab001>.
- Buttny, R., (2010). Citizen participation, metadiscourse, and accountability -- a public hearing on a zoning change for Wal-Mart. *Journal of Communication*. 60, 636-659.
- Camiciottoli, B. (2004). Interactive discourse structuring in L2 guest lectures: Some insights from a comparative corpus-based study. *Journal of English for Academic Purposes*, 3(1), 39-54. [https://doi.org/10.1016/S1475-1585\(03\)00044-4](https://doi.org/10.1016/S1475-1585(03)00044-4).

- Chaudron, C., & Richards, J. C. (1986). The effect of discourse markers on the comprehension of lectures. *Applied linguistics*, 7(2), 113-127. <https://doi.org/10.1093/applin/7.2.113>.
- Crismore, A., & Hill, K.T. (1988). The interaction of metadiscourse and anxiety in determining children's learning of social studies textbook materials. *Journal of Reading Behavior*, XX (3), 249-268.
- Crismore, A. & Farnsworth, R. (1990). Metadiscourse in popular and professional science discourse. In W. Nash (ed.), *The Writing Scholar: Studies in Academic Discourse*. Newbury Park, CA: Sage, 118–36.
- Crismore, A., Markkanen, R. & Steffensen, M. (1993). Metadiscourse in persuasive writing: a study of texts written by American and Finnish university students. *Written Communication*, 10(1), 39–71.
- Dehghan, M., & Chalak, A. (2016). Code Glosses in Academic Writing: The Comparison of Iranian and Native Authors. *Research in English Language Pedagogy*, 3(2), 21-29.
- Farghal, M., & Kalakh, B. (2020). Engagement in translation: interactional metadiscourse markers in American Presidential Debates. *Jordan Journal of Modern Languages and Literatures*, 12(1), 103-122.
- Gleason, J., & Suvorov, R. (2019). Promoting social justice with CALL. *CALICO Journal*, 36(1), 1–7.
- Harris, Z. (1959). The transformational model of language structure. *Anthropological Linguistics*, 1, 27–29. <https://www.jstor.org/stable/30022172>.
- Hinkel, E. (2003). Adverbial markers and tone of L1 and L2 students' writing. *Journal of Pragmatics*, 35, 1049-1068. [https://doi.org/10.1016/S0378-2166\(02\)00133-9](https://doi.org/10.1016/S0378-2166(02)00133-9).
- Ho, V., & Li, C. (2018). The use of metadiscourse and persuasion: An analysis of first year university students' timed argumentative essays. *Journal of English for Academic Purposes*, 33, 53-68. <https://doi.org/10.1016/j.jeap.2018.02.001>.
- Hyland, K. (1999). Talking to students: Metadiscourse in introductory coursebooks. *English for Specific Purposes*, 18(1), 3-26.
- Hyland, K. (2004). Disciplinary interactions: Metadiscourse in L2 postgraduate writing. *Journal of Second Language Writing*, 13, 133e151. <https://doi.org/10.1016/j.jslw.2004.02.001>
- Hyland, K. (2005). *Metadiscourse: Exploring interaction in writing*. London: Continuum
- Hyland, K (2007). Applying a gloss: Exemplifying and reformulating in academic discourse. *Applied Linguistics*, 28(2), 266–285. <https://doi.org/10.1093/applin/amm011>.
- Hyland, K. (2019). *Metadiscourse: Exploring interaction in writing* (2nd edn). Bloomsbury London: Publishing.

- Hyland, K., & Tse, P. (2004). Metadiscourse in academic writing: A reappraisal. *Applied Linguistics*, 25(2), 156e177. <https://doi.org/10.1093/applin/25.2.156>.
- Ilie, C., (2003). Discourse and metadiscourse in parliamentary debates. *Journal of Language and Politics*, 2(1), 71--92.
- Jiang, K. F., & Hyland, K. (2015). The fact that': Stance nouns in disciplinary writing. *Discourse Studies*, 17(5), 529–550. <https://doi.org/10.1177/1461445615590719>.
- Jiang, K. F., & Hyland, K. (2016). Nouns and academic interactions: A neglected feature of metadiscourse. *Applied Linguistics*, 39(4), 508–31, <https://doi.org/10.1093/applin/amw023>.
- Jung, S. (2003). The effects of organization markers on ESL learners' text understanding. *TESOL Quarterly*, 37(4), 749e760. <http://dx.doi.org/10.2307/3588223>.
- Khedri, M, Ebrahimi, S.J., & Chan, S.H. (2013). Patterning of interactive metadiscourse markers in result and discussion sections of academic research articles across disciplines. *Pertanika: Journal of Social Sciences and Humanities*, 21(S), 1-12. [http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2021%20\(S\)%20Nov.%202013/01%20Page%201-12%20\(JSSH-0902-2013\).pdf](http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2021%20(S)%20Nov.%202013/01%20Page%201-12%20(JSSH-0902-2013).pdf).
- Khuwaileh, A. A, (1999). The role of chunks, phrases and body language in understanding co-ordinated academic lectures. *System*, 27 (2), 249-260. [https://doi.org/10.1016/S0346-251X\(99\)00019-6](https://doi.org/10.1016/S0346-251X(99)00019-6).
- Lee, J. J., & Deakin, L. (2016). Interactions in L1 and L2 undergraduate student writing: Interactional metadiscourse in successful and less-successful argumentative essays. *Journal of Second Language Writing*, 33, 21-34. <https://doi.org/10.1016/j.jslw.2016.06.004>.
- Lee, J.J., & Subtirelu, N. (2015). Metadiscourse in the classroom: A comparative analysis of EAP lessons and university lectures. *English for Specific Purposes*, 37(1), 52–62. <https://doi.org/10.1016/j.esp.2014.06.005>
- Lemke, J. L. (1990). *Talking science: Language, learning, and values*. NJ: Ablex Publishing Corporation.
- Liao, J. (2020). Metadiscourse, cohesion, and engagement in L2 written discourse. *Languages*, 5(2), 1-21.
- Mauranen, A. (2010). Discourse reflexivity - a discourse universal? The case of ELF. *Nordic Journal of English Studies*, 9, 13–40. <http://doi.org/10.35360/njes.216>.
- Nieto, S. (2010). *Language, culture, and teaching: Critical perspectives*. Routledge.
- Ortega, L. (2017). New CALL-SLA research interfaces for the 21st century: Towards equitable multilingualism. *Calico journal*, 34(3), 283–316.
- Pe'rez, M. A. & Macia, I. A. (2002). Metadiscourse in lecture comprehension: Does it really help foreign language learners? *Allantis*, 14(2), 3-21. <https://www.jstor.org/stable/41055042>.

- Rabab'ah, G. (2015). An analysis of conjunctive discourse markers in the EFL classroom: A case study of EFL teachers in Saudi Arabia. *International Journal of Innovation and Learning*, 17(3), 307–325
- Rabab'ah, G. & Khawaldeh, M. (2016). Persuasive appeals in English and Arabic TV advertisements: Implications for EFL learners and teachers. *Dirasat: Human and Social Sciences*, 43, 2259–2271.
- Rabab'ah, G., Idir, L., & Alghazo, S. M. (2020). Persuasive appeals in Jordanian and Algerian telecommunication television commercials. *Open Linguistics*, 6(1), 307–321. <https://doi.org/10.1515/opli-2020-0021>
- Rabab'ah, G., Ma'touq, A., & Alghazo, S. M. (2022). Discourse markers in narrative essays: A case study of Jordanian high school EFL learners. *Jordan Journal of Modern Languages and Literatures*, 14(1), 203–217. <https://doi.org/10.47012/jjml.14.1.11>
- Stansberry, S. L. (2006). Effective assessment of online discourse in LIS courses. *Journal of Education for Library and Information Science*, 47(1), 27-37. <https://doi.org/10.2307/40324335>.
- Strauss, S. & Fieze, P. (2014). *Discourse Analysis: Putting our Worlds into Words*. New York: Routledge.
- Tang, K. (2017). Analyzing teachers' use of metadiscourse: The missing element in classroom discourse analysis. *Science Education*, 101(4), 548-583. Doi:10.1002/sc.21275
- Thompson, S.E., (2003). Text-structuring metadiscourse, intonation and the signalling of organization in academic lectures. *Journal of English for Academic Purposes*, 2, 5-20.
- Vande Kopple, W. (1985). Some exploratory discourse on metadiscourse. *College Composition and Communication*, 36 (1), 82-93. <https://doi.org/10.2307/357609>
- Vande Kopple, W. (2002). Metadiscourse, discourse, and issues in composition and rhetoric. In E. Barton & G. Stygall (Eds.), *Discourse studies in composition* (pp. 91-113). Cresskill, New Jersey: Hampton Press
- Wu, S. M. (2007). The use of engagement resources in high- and low-rated undergraduate geography essays. *Journal of English for Academic Purposes*, 6, 254-271. doi:10.1016/j.jeap.2007.09.006.
- Yang, Y., & Li, Y. (2018). Exploring the effect of metadiscourse on student engagement in online learning environments. *Journal of Educational Technology & Society*, 21(4), 111-123.
- Yang, W., & Sun, Y. (2012). The use of cohesive devices in argumentative writing by Chinese EFL learners at different proficiency levels. *Linguistics and Education*, 23(1), 31-48. <https://doi.org/10.1016/j.linged.2011.09.004>
- Yılmaz, A., & Söğüt, S. (2022). Language education for social justice: Reproductions or disruptions through technology. *Computers & Education*, 187, 104535.

Zare, J., & Keivanloo-Shahrestanaki, Z. (2017). The language of English academic lectures: The case of field of study in highlighting importance. *Lingua*, 193, 36–50. <https://doi.org/10.1016/j.lingua.2017.04.005>.

Zare, J., & Tavakoli, M. (2017). The use of personal metadiscourse over monologic and dialogic modes of academic speech. *Discourse Processes*, 54(2), 163-175. <https://doi.org/10.1080/0163853X.2015.1116342>.

Zhang, D., & Sheng, D. (2021). EFL lecturers' metadiscourse in Chinese University MOOCs across course types. *Corpus Pragmatics*, 5, 243–270. <https://doi.org/10.1007/s41701-021-000980>.

Zhang, M., Sun, W., Peng, H., Gan, Q., & Yu, B. (2017). A multidimensional analysis of metadiscourse markers across spoken registers. *Journal of Pragmatics*, 117, 106-118.

Ghaleb Rabab'ah is Professor of Linguistics at the University of Sharjah, United Arab Emirates, and the University of Jordan, Jordan. His research interests are pragmatics, discourse analysis and critical discourse analysis, and TESL. He published many papers in several international journals. He supervised and examined many MA theses and PhD dissertations. **ORCID:** <https://orcid.org/0000-0003-1804-5859>.

Sane Yagi is Professor of Computational Linguistics at the University of Sharjah, United Arab Emirates. His areas of research interest include linguistics, corpus linguistics and computational linguistics. He published many papers in international journals. **ORCID:** <https://orcid.org/0000-0002-0594-3230>.

Sharif Alghazo is Associate Professor of Applied Linguistics at the University of Sharjah and the University of Jordan. His research has appeared in journals such as *System*, *Journal of Politeness Research*, *Journal of Pragmatics*, *European Journal of Applied Linguistics*, *Journal of Psycholinguistic Research*, *Discourse and Interaction*, *Sage Open*, *Ampersand*, and *Open Linguistics* and edited books. His editorial service includes serving as Associate Editor for *Humanities & Social Sciences Communications* (Springer Nature) and Reviewer for international book publishers, journals, and conferences.

¹ This research has been funded by the University of Sharjah (Research Fund ID: 2103020121). Date of approval 11 April 2021.