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Investigating the impact of explicit and implicit instruction on the use of interactional metadiscourse markers

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Abstract

The current study aimed to compare the influence of explicit versus implicit instruction on EFL learners' use of interactional metadiscourse markers in their writing. The study also aimed to explore the perceptions of EFL learners on the instruction of these markers in their writing classes. 120 female undergraduates who are Arab EFL learners took part in the investigation. A mixed-methods research design was adopted with an explicit instruction group, an implicit instruction group and a control group. The experimental groups were introduced to a set of interactional metadiscourse markers as per Hyland's (2005) interaction model in two 70-minute sessions. Additionally, the experimental groups completed two post-experimental questionnaires. The results of analysis of variance showed a positive, albeit very limited, influence for the explicit/implicit teaching with the markers of self-mentions, appeals to shared knowledge, directives and questions. As for the participants' perception of the instructional intervention, the participants viewed both explicit and implicit instruction as helpful but could not always apply what they had learned due to task demands. The results are discussed in light of the existing literature and the specific context in which the study was implemented. Furthermore, implications for writing pedagogy are proposed.

Keywords Metadiscourse, Interaction, Pragmatics, Writing, EFL

Introduction

Learning to write effectively is an essential skill for university students, who spend a great part of their time writing assignments and research papers. This central role of writing has attracted the interest of numerous researchers and encouraged them to explore the best practices to train students to use language to acknowledge, construct and negotiate social relations with their readers (Hyland, 2005). To construct these social relations, writers use metadiscourse, which can be defined as "aspects of a text which explicitly organize a discourse or the writer's stance towards either its content or the reader" (Hyland, 2005, p. 14). In his model of interaction in academic discourse, Hyland (2005) distinguishes two broad categories of metadiscourse that writers employ

to express their positions and connect with readers (see Appendix A). The first category, which is known as *stance*, refers to writers' textual voice to present themselves and include their judgments, opinions and commitments. The key resources that realize this textual voice are hedges, boosters, attitude markers and self-mentions. The second category is labelled *engagement* and it allows writers to recognize the readers' presence, pull them along with their arguments, draw their attention and guide their interpretations. Engagement resources comprise reader pronouns, personal asides, appeals to shared knowledge, directives and questions.

There have been repeated calls for teaching metadiscourse in writing classes in order to enhance students' ability to effectively manage the interaction between the writer and the reader (e.g., Camiciottoli 2003; Shahriari & Shadloo, 2019; Steffensen & Cheng, 1996; Thompson 2001). These calls have gained additional support from empirical findings showing that novice (e.g., El-Dakhs, 2018a; Jin 2015) and non-native speaking writers (Ament et al., 2020; Egtesadi & Navidinia, 2009; Ghazanfari et al., 2018; Mauranen, 1993; Vassileva, 2001) use metadiscourse differently and less effectively than expert and native-speaking writers. For example, Ament et al. (2020) found that while students who are taught in English as a medium of instruction use causal, contrast, sequential and topic shift/digression markers similarly to native speakers, they produce significantly fewer elaboration and continuation markers, among others. Likewise, Ghazanfari et al., (2018) found that native speakers used both interactive and interactional metadiscourse markers significantly more frequently than nonnative speakers.

In the context of teaching metadiscourse markers, implicit teaching, which does not require overt discussion about the rules and norms associated with pragmatically appropriate behavior (Glaser, 2013; Ishihara, 2010), is often implemented in many language learning environments because it encourages problem-solving, student-teacher and student-student interaction, and a more communicative classroom (Parrish, 2006). This said, explicit teaching, which involves direct explanation of metadiscourse markers (Bu, 2012; Ishihara, 2010; Nguyen, 2013; Rose, 2005; Taguchi, 2015), has also proved beneficial as it helps students make informed pragmatic choices (Bardovi-Harlig & Mahan-Taylor, 2003). Although the two instructional approaches have been frequently compared in the literature (e.g., Hernández 2011; Kapranov, 2018; Moody, 2014; Nguyen et al., 2012; Ziafar, 2020), this has rarely been done in the context of teaching a complete set of interactional markers as presented by Hyland (2005). Such a state of affairs is unfortunate because mastering the use of metadiscourse markers in relation to a model like Hyland's (2005) is likely to greatly help learners to better organize their writing and enhance readers' engagement. This is the gap that the current study attempts to fill. The first section of the paper will summarize earlier studies on the instruction of metadiscourse in writing classes. This will be followed by introducing the research questions, explaining the methodology, presenting and interpreting the results and drawing relevant conclusions, including implications for the teaching of metadiscourse.

Literature review

A number of studies (e.g., Alyousef 2015; Darwish, 2019; Lin, 2005; Lotfi et al., 2019) have analyzed the use of metadiscourse markers in university students' writing and highlighted the need for instructional interventions to enhance writers' effective use of these markers. One group of these studies involves investigations that have focused exclusively

on the teaching of hedges to intermediate/upper-intermediate learners of English. Wishnoff (2000) examined the use of hedging devices in the academic writing of 26 learners of English as a second language (ESL). A pretest-posttest design was employed. The tests were in the form of a research paper (planned academic writing) and a 45-minute online discussion (unplanned writing). After 15-week instruction, the experimental group used significantly more hedging devices than the control group. Sarani and Talati-Baghshahi (2017) employed the same quasi-experimental design, but their participants were 37 Iranian learners of English as a foreign language (EFL). After five weeks of explicit instruction in modal auxiliaries, the experimental group outperformed the control group in using the targeted features to hedge their claims. In a similar vein, Petchkij (2019) focused on 32 Thai EFL learners' use of lexical hedges in their writing. The comparison between the use of the targeted features on a pretest and posttest revealed that the learners employed lexical hedges significantly more frequently and with greater variety in appropriate contexts. Overall, the three studies lend support to the effectiveness of explicit instruction of hedges on the ESL/EFL learners' writing.

A second group of relevant studies has targeted hedges and/or other interactional metadiscourse markers along with other pragmatic features. One example is Nguyen et al.'s (2012) investigation into the relative effectiveness of explicit and implicit form-focused instruction on the acquisition of the speech act of constructive criticism by 69 high-intermediate Vietnamese learners of English. A 10-week treatment provided to the experimental groups focused on two major criticism realization strategies, three types of external modifiers and six types of internal modifiers, including hedges, expressions of uncertainty and understaters. The explicit group participated in consciousness-raising activities, received explicit meta-pragmatic explanations and corrective feedback on errors in form and meaning, while the implicit group benefited from pragmalinguistic input enhancement and recast activities. The performance of the participants on a discourse completion task, a role play, and an oral feedback task used as pretests and posttests revealed that the two experimental groups outperformed the control group. However, the explicit group performed significantly better than the implicit group on all the outcome measures. Another study was undertaken by Escobar and Fernández (2017), who trained 33 Costa Rican undergraduates majoring in TESOL and EFL for 5 months on the use of lexical bundles, boosters/hedges and stance-taking strategies to help them build a strong discursual and authorial voice. The learners' performance on posttest compositions showed significant progress in their effective use of the targeted features, although participants' responses to surveys administered towards the end of the study testify to the tension and struggles they faced along the way.

A third and final group of studies has focused on the teaching of a set of metadiscourse features, including some interactional markers. Cheng and Steffensen (1996) examined how the use of metadiscourse is related to the quality of the texts produced by 46 university-level native speakers. Using a quasi-experimental design, the researchers compared the performance of an experimental class who were taught metadiscourse with the performance of a control class who were taught through the process approach only. The results showed that the experimental group's effective use of metadiscourse markers made the texts more accommodating towards readers, also strengthening ideational as well as interpersonal and textual meanings of the text. In the same vein, Dastjerdi and Shirzad (2010), Asadi (2018), and Farahani (2019) examined the effect of teaching a set

of metadiscourse markers on the writing of 94, 38 and 40 Iranian EFL university students, respectively, using a quasi-experimental research design. The results of the three studies lend support to the positive effect of the explicit instruction of metadiscourse markers.

The present study

The present overview highlights the fact that while previous research has either targeted hedges or some interactional markers along with other metadiscourse markers, no earlier empirical investigation has focused on the exclusive teaching of a whole set of interactional metadiscourse markers to EFL learners. This represents an important gap in the literature since the teaching of metadiscourse markers in writing classes enables students to signal their communicative intentions effectively, highlight their authorial stances and thus influence how readers engage with the text (Hyland, 1998, 2005). The study reported below seeks to address the existing gap by comparing the effect of two types of instruction on enhancing the effective use of interactional markers in writing by EFL learners. More specifically, the investigation compared the effect of implicit teaching versus explicit teaching on the use of relevant metadiscourse markers as in Hyland's (2005) model of interactional markers. The study was implemented among Arab EFL learners, a population that has thus far been underrepresented in the instructional pragmatic literature and which is known to apply different rhetorical and argumentation traditions than the Western/Anglo-Saxon norms that typify English writing (e.g., Alharbi & Swales, 2011; El-Dakhs, 2020). In addition, the study also explored the participants' perceptions of the two instructional approaches to help interpret the effects of the intervention. Such a decision was based on the assumption that exploring the students' perceptions would help us achieve a more comprehensive understanding of how the different teaching approaches impact students' writing.

In other words, the study is timely for several reasons. First, earlier studies have not yet presented conclusive findings concerning the efficacy of implicit and explicit approaches to the teaching/learning of metadiscourse. As illustrated in the literature overview presented above, while some studies have lent support to one approach or the other, the existing empirical evidence is inconclusive. Second, while previous studies have focused on a limited set of metadiscursive strategies/resources, the current study considers a whole set of stance and engagement markers. Third, prior studies have mainly targeted discourse marker use in the case of non-Arabic speaking EFL learners whereas the current study focused on a sample of Arab learners, a population that has evidently been neglected by researchers. Finally, the current study draws on both quantitative and qualitative data, which has the potential to provide more valuable insights into the use of discourse markers.

The following research questions were addressed in the empirical investigation reported below:

1. Does instruction type (explicit, implicit, no instruction) have any significant effects on enhancing EFL learners' use of interactional metadiscourse markers in their writing?
2. What are the participants' perceptions concerning explicit and implicit instruction targeting interactional metadiscourse markers?

Methodology

In order to answer these research questions, a mixed methods research design was adopted. The following subsections provide details concerning participants, materials, instructional and testing procedures, as well as data analysis.

Participants

A total of 130 female undergraduates at an English language and translation department of a Saudi public university were initially recruited for the purpose of the study. The inclusion of only female participants was because we could only access the female campus of the university. All the participants were native speakers of Arabic and had not lived in an English-speaking country for more than 6 continuous months. The students were enrolled in the second year of a four-year BA program. During the first year, the courses mainly focused on enhancing the students' language skills in English. In the second year, emphasis started to be shifted to some of the specialized courses in their major, including linguistics, and some skills courses such as advanced writing and reading. The participants were recruited from three intact classes that were studying a course called "Readings in Language and Culture," which was designed to enhance academic reading and writing skills within a content-based instruction framework with a focus on culture. The three classes were randomly designated as two experimental groups, which received explicit or implicit instruction on metadiscourse markers. The third class was a control group, which followed their regular course syllabus without any explicit/implicit instruction on the use of metadiscourse markers, but completed the same pre-/post/delayed-post tests as the other two groups.

The students' proficiency level was assessed using the Oxford Quick Placement Test (OQPT), which is designed by Oxford University Press and University of Cambridge local examinations syndicate and is widely used in research to measure general language proficiency because it gives information about students' language ability in relation to the Common European Framework of Reference for Languages (CEFR) (e.g., Lemhöfer & Broersma, 2012; Wang & Trefflers-Daller, 2017). The test includes 60 multiple-choice questions and assesses reading skills, vocabulary knowledge and structural competence. The students' performance showed that their proficiency ranged from A2 to C2, with the mean level of B1 across the three classes. The results of one-way ANOVA demonstrated that there were no statistically significant differences in this respect between the groups ($F=1.830$, $p=0.165$). The data collected from ten students had to be excluded from the study because the students either missed one of the tests or were absent during one or two of the treatment sessions. Thus, the total number of participants was 120; 33 in the control group (CG), 46 in the implicit group (IG) and 41 in the explicit group (EG).

Materials

The materials used in the current study comprised two types: (1) samples of city reviews and tasks on the texts as well as (2) post-experiment questionnaires. We decided to use the genre of city reviews, which are critical reports on cities including information on their geography, history, tourist attractions and the like, along with the writer's opinion and recommendations, because the course the students were enrolled in was concerned with cultural studies. Thus, writing city reviews seemed to be highly relevant to the learning outcomes of this course. We also decided to use sample city reviews to

familiarize students with this genre, particularly the structure of the reviews and the type of language used, and also to introduce them to the use of interactional metadiscourse markers. Since the pretest, immediate posttest and delayed posttest involved the students in writing city reviews, using the sample reviews was particularly helpful. It is widely acknowledged that using sample writing helps novice writers learn the conventions of a new genre, including its target rhetorical conventions (e.g., Hyland 2003, 2004; Macbeth, 2010).

The sample city reviews were written by one of the researchers. One review was about Alexandria, Egypt. while the other was about Antalya, Turkey (see Appendix B). These two reviews, which consisted of 436 words and 388 words, respectively, were subsequently revised by the two other researchers to make sure that they suited the students' proficiency and that they included a variety of the target interactional metadiscourse markers. The revision mainly included replacing infrequent words with more frequent words and simplifying sentence structure. This was done because we aimed to have city reviews that were easy to read since our focus was on the metadiscourse markers, not reading skills. The revision also ensured that all the interactional metadiscourse features listed in Hyland's (2005) taxonomy were represented in the city reviews. It is also worth noting that the city reviews were later read by 5 teachers who taught other subjects to the students participating in the study to ensure that the reviews matched the students' proficiency level. Additionally, a list of comprehension questions and cloze activities¹ was created based on the city reviews. These questions aimed to provide a purpose for the participants to read the reviews.

In addition to the sample city reviews, two questionnaires (see Appendix C), were developed to tap students' perceptions concerning the instructional treatment. One was used with the EG and the other with the IG. The participants were requested to state whether they had learned how to write city reviews before and in what context, if the training they received on the use of metadiscourse was helpful, and if the teacher could have taken additional measures to enhance their learning of the metadiscourse markers. The questionnaire for the EG also included questions about how easy and useful the learning of the metadiscourse markers was. The questionnaire for the IG, in turn, sought to determine if the participants paid special attention to particular things in the sample city reviews. The questions, which consisted of a 5-point Likert-scale as well as some open-ended items, were written up by the second researcher who was involved in teaching the students and thus formed the questions based on her observations of the students' learning process and writing production. The questions were designed to elicit the students' feedback on the effectiveness of the explicit/implicit instruction on metadiscourse markers. Using open-ended questions alongside the Likert-scale items allowed the students to express their opinions and voice their concerns freely. It is worth noting that two university professors read the questionnaires before their implementation to ensure that they align with the aim of the study and match the participants' English proficiency level.

¹ The comprehension questions and cloze activities can be made available upon request from the authors.

Procedures

The study was conducted during class time, and it spanned a period of 8 weeks, including the completion of the questionnaires in Week 8. In the first week, the students took the placement test. In the second week, they were asked to write a review of a city they had visited, which constituted the pretest. In weeks 3 and 4, the treatment was delivered in the experimental groups, while the control group followed the regular syllabus of reading the assigned course materials. In week 4, the participants in the three groups wrote another city review, which served as an immediate posttest, and in week 7 they composed one more review, intended as a delayed posttest. On each of the tests the students were allowed one hour to complete the writing assignment. During the tests, the participants did not have access to dictionaries or other educational resources. As dictated by the design of the study, the treatment for the EG instruction group was different from that delivered in the IG. Each treatment session lasted approximately 70 min in both experimental groups, which totals 140 min in each case.

Treatment procedure in the EG

The instructor started the treatment session by explaining that the students were going to learn how to make their city reviews more interactional by being familiarized with relevant metadiscourse markers. Then, she introduced the stance markers from Hyland's model (2005). The students learned the terms and definitions of the markers (i.e., hedges, boosters, attitude markers and self-mentions) explicitly along with illustrative examples. This was followed by students reading through a sample city review and underlining the stance markers in the text in small groups and then reviewing the markers they identified with the instructor as a whole class, pointing out the type of markers they found (e.g., *may* as an example of *hedges*). The introduction and practice of engagement markers followed the same stages. Thus, the students had again the opportunity to learn the definitions and terms of the target markers (i.e., reader pronouns, personal asides, appeals to shared knowledge, questions and directives) along with illustrative examples. Finally, students completed a cloze activity that summarized the city reviews they had read, using the targeted interactional markers. While reviewing the answers with the teacher in a whole-class setting, the students identified the types of markers they had used, such as hedges, boosters, attitude markers, etc.

Treatment procedure in the IG

Also in this case, the instructor explained to the students that they were going to learn how to make their city reviews more interactional by examining relevant sample texts. Then, she asked the participants to share what they knew about the city they were going to read about. Afterwards, the instructor provided the sample city review in a jumbled format and asked the students to work in groups to put the different paragraphs in the correct order, subsequently providing feedback to the whole class. This was followed by a brief discussion of the landmarks the students would like to visit in the city. Then, they were asked to read the sample review one more time and answer comprehension questions in groups. Finally, the students completed the same cloze activity as their counterparts in the EG, but without having to identify the types of discourse markers used. The students were not introduced explicitly to Hyland's (2005) model and were not taught the terms/definitions of the interactional markers.

Data analysis

The first step in the data analysis was data coding. Based on the list of metadiscourse markers highlighted in Hyland's (2005) taxonomy and later studies (e.g., El-Dakhs, 2018b) and also relying on their understanding of the students' city reviews, two of the researchers, who have doctorate degrees in Applied Linguistics, read through all the students' reviews independently and identified all the instances of the targeted metadiscourse markers. These markers were then classified into different types, representing the stance and engagement categories. As shown in Appendix (A), the stance markers included hedges, boosters, attitude markers and self-mentions while the engagement markers included reader pronouns, personal asides, appeals to shared knowledge, directives and questions. The number of metadiscourse markers that the students used in their city reviews was entered into an Excel sheet that had a separate column for each type of stance and engagement markers. As a result, for each participant, the number of markers they used was computed for each of the three tests (i.e., pretest, immediate posttest and delayed posttest), classified by the type they represented (i.e., stance and engagement). It should be noted that we disregarded the markers that were not used correctly in the text as per the standard English grammatical rules and lexical restrictions, as shown in the sample erroneous sentences below:

** It is very wonderful.*

** I highly love to eat meat and their food.*

** I am not that interesting in geography.*

Two steps were taken in the statistical analysis. First, the number of metadiscourse markers was normalized because the city reviews varied in length. This means that the analysis relied on the ratios of the total number of markers to the total number of words in the city reviews. Second, inter-coder reliability was determined for each test separately using the intraclass Correlation Coefficient (ICC). The ICC was above 90% for the three tests. Hence, we used the first coder's numbers as the basis for statistical comparisons. Second, statistical comparisons were run for the tests. The statistical significance of the differences in the use of interactional metadiscourse markers in the pretests and posttests in the three groups was established by using mixed ANOVA, which examined performance across instructional type (i.e., explicit, implicit and control) as a between-subject factor and time of test (i.e., pretest, immediate posttest and delayed posttest) as a within-subject factor. The ANOVA results were also supplemented with Tukey post-hoc pairwise comparisons whenever statistically significant differences between groups were identified. In the questionnaires, percentages were calculated for each option included in the Likert-scale items. The responses to the open-ended questions were carefully examined and the main themes that the students touched upon were identified.

5. Results

The findings of the study are reported in two subsections, corresponding to the two research questions:

Table 1 Descriptive statistics for self-mentions (normalized values)

	Group	Mean	Standard deviation
Pre-test	EG	0.0264	0.0241
	IG	0.0259	0.0222
	CG	0.0225	0.0237
Immediate post-test	EG	0.0250	0.0259
	IG	0.0108	0.0159
	CG	0.0301	0.0278
Delayed post-test	EG	0.0215	0.0233
	IG	0.0098	0.0145
	CG	0.0204	0.0181

Table 2 Mixed ANOVA for self-mentions (normalized values)

Comparison between groups				Comparison within subjects			
		Mean Difference	Standard Error	Sig.	Mean Square	F	Sig.
Overall	EG vs. IG	0.009	0.004	0.049*	0.002	3.331	0.039*
Mixed ANOVA Results	EG vs. CG	-3.75E-005	0.004	1.000			
	IG vs. CG	-0.009	0.004	0.069			

Does instruction type (explicit, implicit, no instruction) have any significant effect on enhancing EFL learners' use of interactional metadiscourse markers in their writing?

We compared the results of the pretest, immediate posttest and delayed posttest across the three groups. The use of metadiscourse markers by the three groups in the pretest was compared by using one-way ANOVA. The comparisons showed that there were no statistically significant differences among the three groups across all the metadiscourse markers. Additionally, the mixed ANOVA comparisons that were run to examine the effect of the instructional intervention showed no significant differences between groups or within subjects on immediate and delayed posttests for five types of markers, namely, hedges, boosters, attitude markers, reader pronouns and personal asides. In other words, the pedagogical intervention targeting these discourse markers did not lead to improved performance in the EG and IG groups in comparison to the control group nor did it result in significant gains over time (i.e., from one test to the next).

However, a few cases of significant differences were identified for the other metadiscourse markers, both between the three groups and over time. As illustrated in Tables 1 and 2, this was the case for the use of self-mentions. Specifically, the Tukey post-hoc pairwise comparisons showed that the EG outperformed the IG in the immediate post-test ($M=0.0250$ vs. $M=0.0108$; MD: 0.0142; SE: 0.0050; Sig 0.015; Eta2: 0.00009) and in the delayed post-test (MD: 0.0117; SE: 0.0041; Sig: 0.014; Eta2: 0.00004). Interestingly, no significant differences were observed between the two experimental groups and the control group. Additionally, the IG used fewer self-mentions in the immediate post-test ($M=0.0108$; MD: 0.015; SE: 0.004; Sig: 0.001; Eta2: 0.256) and the delayed post-test ($M=0.0098$; MD: 0.016; SE: 0.004; Sig:<0.001; Eta2: 0.256) than the pre-test ($M=0.0259$). No significant gains over time were observed for the other two groups (i.e., EG and CG).

Mixed ANOVA also revealed significant differences in the case of appeals to shared knowledge but this only applied to between-group comparisons. As shown in Tables 3 and 4 the Tukey post-hoc pairwise comparisons showed that the EG outperformed the IG ($M=0.0013$ vs. $M=0.0001$; MD: 0.0012; SE: 0.0004; P : 0.003; Eta2: <0.001) and the CG ($M=0.0013$ vs. $M=0.0000$; MD: 0.0013; SE: 0.0004; P : 0.003; Eta2: <0.001) in the

Table 3 Descriptive statistics for appeals to shared knowledge (normalized values)

	Group	Mean	Standard deviation
Pre-test	EG	0.0007	0.0022
	IG	0.0003	0.0013
	CG	0.0003	0.0011
Immediate post-test	EG	0.0013	0.0028
	IG	0.0001	0.0006
	CG	0.0000	0.0000
Delayed post-test	EG	0.0005	0.0015
	IG	0.0002	0.0011
	CG	0.0003	0.0013

Table 4 Mixed ANOVA results for appeals to shared knowledge (normalized values)

Comparison between groups					Comparison within subjects		
		Mean Difference	Standard Error	Sig.	Mean Square	F	Sig.
Overall	EG vs. IG	0.001	0.000	0.008*	5.52E-007	4.476*	0.013*
Mixed ANOVA Results	EG vs. CG	0.001	0.000	0.023*			
	IG vs. CG	-2.33E-005	0.000	1.000			

Table 5 Descriptive statistics for directives (normalized values)

	Group	Mean	Standard deviation
Pre-test	EG	0.0039	0.0051
	IG	0.0055	0.0087
	CG	0.0025	0.0037
Immediate post-test	EG	0.0042	0.0046
	IG	0.0060	0.0083
	CG	0.0021	0.0062
Delayed post-test	EG	0.0047	0.0053
	IG	0.0057	0.0063
	CG	0.0030	0.0045

Table 6 Mixed ANOVA results for directives (normalized values)

Comparison between groups					Comparison within subjects		
		Mean Difference	Standard Error	Sig.	Mean Square	F	Sig.
Overall	EG vs. IG	-0.001	0.001	0.401	8.94E-006	0.296	0.726
Mixed ANOVA Results	EG vs. CG	0.002	0.001	0.305			
	IG vs. CG	0.003	0.001	0.007*			

immediate post-test. This advantage, however, was not carried over to the delayed post-test. In addition, no significant gains were found over time in any of the three groups. Notably, most students used one and the same structure for the appeals of shared knowledge, which is “as you may know.”

As demonstrated in Tables 5, 6, 7 and 8, some statistically significant differences were also identified in the case of directives and questions. When it comes to between-group comparisons, the Tukey post-hoc pairwise comparisons showed that the IG used significantly more directives ($M=0.0060$; MD: 0.0039; SE: 0.0015; P : 0.035; Eta2: 0.001) than the CG ($M=0.0021$; MD: 0.0039; SE: 0.0015; P : 0.035; Eta2: 0.001) in the immediate post-test. The IG also used significantly more questions than the CG in the immediate post-test ($M=0.0027$ vs. $M=0.0005$; MD: 0.0022; SE: 0.0007; P : 0.010; Eta2: <0.001) as well

Table 7 Descriptive statistics for questions (normalized values)

	Group	Mean	Standard deviation
Pre-test	EG	0.0001	0.0008
	IG	0.0001	0.0008
	CG	0.0000	0.0000
Immediate post-test	EG	0.0023	0.0038
	IG	0.0027	0.0028
	CG	0.0005	0.0029
Delayed post-test	EG	0.0009	0.0025
	IG	0.0029	0.0034
	CG	0.0000	0.0000

Table 8 Mixed ANOVA results for questions (normalized values)

Comparison between groups					Comparison within subjects		
		Mean Difference	Standard Error	Sig.	Mean Square	F	Sig.
Overall	EG vs. IG	-0.001	0.000	0.056	0.000	18.313*	<0.001*
Mixed ANOVA Results	EG vs. CG	0.001	0.000	0.028*			
	IG vs. CG	0.002	0.000	<0.001*			

as more questions than the CG ($M=0.0029$ vs. $M=0.0000$; MD: 0.0029; SE: 0.0006; P : 0.001; η^2 : <0.001) and the EG ($M=0.0029$ vs. $M=0.0009$; MD: 0.0020; SE: 0.0005; P : 0.001; η^2 : <0.001) in the delayed post-test. With respect to within-group comparisons, significant gains were observed in the use of questions from the pretest to the immediate posttest in the EG, but the improvement was not carried over to the delayed post-test. (MD: 0.002; SE: 0.001; P : 0.002; η^2 : 0.163). This tendency was mirrored in the IG, where an increase in the use of questions was also found on the immediate post-test in comparison with the pretest (MD: 0.003; SE: 0.000; Sig: <0.001; η^2 : 0.300), but in this case, the instructional gains were retained on the delayed post-test (MD: 0.003; SE: 0.001; P : <0.001; η^2 : 0.300) for the IG.

What are the participants' perceptions concerning explicit and implicit instruction targeting interactional metadiscourse markers?

Questionnaires containing Likert-scale and open-ended questions were used to tap into participants' perceptions of the instructional treatment. All the students in the EG who completed the questionnaires ($N=37$) mentioned that they had not been taught how to write city reviews before the treatment. As a result, they were not familiar with the generic structure of city reviews, potential content as well as relevant metadiscourse markers. Hence, when writing their city reviews, they found it difficult to focus on all of these aspects and they mainly concentrated on the generic structure and appropriate content of the reviews rather than on the inclusion of relevant metadiscourse markers. Most of the participants in the EG (81%) found the training extremely helpful or helpful, while the remainder were neutral. Most of them could not explain why the training was helpful, but a few students referred to its relevance to improving their choice of words and style of writing. Only one student mentioned that the training helped her build a good relationship with readers. Around 60% of the students found the training easy to follow, while the rest were neutral. The ease of learning was explained in terms of learning new terms, definitions and examples, benefiting from the teacher's clear explanation and having taken an earlier course in Pragmatics. The majority of the students

(81%) found the training useful because it helped them notice important markers. Only one student commented on the importance of having a good rapport with the reader. Finally, the students thought that the teacher could have helped them more if she had offered them more opportunities to practice writing and provided them with feedback on their errors. One student, for example, wrote, "We did not get to see our papers after the teacher checked to know our mistakes. We are basically repeating the same mistakes with no guidance."

Similar to the EG, the participants in the IG (N=43) mentioned that they had not learned how to write city reviews before the intervention. The majority of the students (84%) found the training extremely helpful or helpful, while the remainder were neutral. Most of them explained that the treatment helped them better organize their ideas and learn what to include in every paragraph of the city review. Only three students commented on the interactional aspect of writing through referring to learning to express one's opinions, using questions to engage the reader or writing an interesting and catchy review. When asked what things they paid special attention to in the texts, the majority of students referred to the organization/structure of the texts. Only two students mentioned that they had learned how to draw the reader's attention. As for the question concerning what additional steps the teacher could have taken to improve their city reviews, the students requested more practice sessions and regular feedback on their errors, which was in line with the findings in the EG.

Discussion

The current study addressed two research questions, the first regarding the effectiveness of three types of pedagogic intervention (i.e., explicit, implicit, no instruction) targeting interactional discourse markers in written target language production (RQ1) and the other concerning participants' opinions about the two types of intervention (RQ2).

With regard to RQ1, the analyses showed that the two types of instruction had a limited positive influence on the use of some markers, namely, self-mentions, appeals to shared knowledge, directives and questions. With respect to between-group comparisons, the analysis demonstrated that the EG used significantly more self-mentions than the IG, but not the CG, in the immediate and delayed posttests. The EG also used significantly more appeals to shared knowledge than the other two groups in the immediate posttest. The advantage of implicit teaching was revealed in the case of directives and questions. This is because the IG used significantly more directives than the CG in the immediate posttest, and significantly more questions than the CG in the immediate posttest as well as more questions than both the CG and EG in the delayed posttest. Interestingly, the within-subject comparisons revealed progress over time in the use of only one metadiscourse marker, namely, questions, with the caveat that the instructional gains were not always maintained. The EG used significantly more questions in the immediate posttest than in the pretest while the IG produced more questions in the immediate and delayed posttests than in the pre-test.

The results of the present study differ to a large extent from the findings of previous empirical investigations (e.g., Asadi 2018; Farahani, 2019), which have provided clear evidence for the positive influence of explicit instruction in metadiscourse markers on EFL learners' writing. The effect of explicit instruction in the current study was extremely limited, since the EG outperformed the CG only in the use of appeals

to shared knowledge in the immediate post-test. Additionally, even when instructional gains in this group became immediately apparent, as was the case with questions, such gains failed to be maintained over time. This difference could be due to the fact that explicit instruction in the current study was not combined with production practice. As Taguchi (2015) indicated, the combination of explicit instruction and production practice seems to work most effectively in pragmatic instruction. This explanation is also supported by the post-study questionnaire, in which students stated that they needed more time for practice and feedback to master the use of the target markers while writing city reviews.

The results of the current study also stand in contrast to the findings of earlier studies (e.g., Nguyen et al., 2012) that highlighted the advantage of explicit over implicit teaching. More precisely, it was shown that the IG outperformed the CG under three conditions, namely, the use of directives in the immediate posttest and the use of questions in the immediate and the delayed posttests. The IG even outperformed the EG in the use of questions in the delayed posttest. What is more, the instructional gains in this group were carried over to the delayed post-test, which was not the case for the EG. Hence, the current study suggests that there could be room for implicit instruction in the teaching of metadiscourse markers.

In interpreting the results in relation to RQ1, three factors need to be considered. First, the proficiency level of the participants oscillated around B1, which roughly represents the pre-intermediate level. This level is lower than the proficiency level represented by the participants in prior studies which demonstrated a strong influence of explicit instruction (e.g., Petchkij 2019; Sarani et al., 2017; Wishnoff 2000). In fact, Dastjerdi and Shirzad (2010) specifically pointed out that intermediate students benefit more from explicit instruction than students at lower levels of proficiency, such as those involved in the present investigation. Second, the treatment in the current study lasted a total of 140 min in the course of the two sessions. This stands in stark contrast to earlier studies (e.g., Escobar et al., 2017; Nguyen et al., 2012) where the intervention sometimes spanned an entire semester. In fact, earlier studies on pragmatic instruction (e.g., Jeon & Kaya, 2006; Taguchi 2015) indicate that pragmatics requires more time than other areas of language learning to be acquired. Third, the participants completed most of the treatment activities collaboratively, which may have prevented some individual students from actually noticing the targeted features. In contrast, the majority of earlier studies that lend strong support to explicit instruction engaged students in individual writing tasks (e.g., Escobar et al., 2017; Farahani 2019).

Nevertheless, it is important to observe that some of the target markers were positively influenced by explicit/implicit instruction, even if this influence was limited. These markers were self-mentions, directives, questions and appeals to shared knowledge. Apart from appeals to shared knowledge, the remaining three types of markers can be classified as grammatical categories that are regularly taught in grammar classes, namely, pronouns, imperatives and questions. The fact that these markers are well-defined grammatically, they have more transparent pragmatic functions than other markers, such as hedges, boosters or attitude markers, and that they are frequently the focus of instruction, may have facilitated the students' learning and were, hence, easy to use in the city reviews. Among the appeals for shared knowledge, the most frequently used one by all the students was "as you may know". This shows that the students did not really master

the different markers that can represent appeals to shared knowledge, but only picked up one structure which could have been familiar to them.

It would thus appear that metadiscourse markers that follow well-defined grammatical rules, have transparent pragmatic functions and do not require great lexical variation may be easier to learn than others, particularly for EFL learners who are used to formal language teaching in a classroom context. This may also explain why the literature has focused on particular markers in earlier studies, such as hedging, which has often proved to be challenging for EFL and ESL learners (Burrough-Boenisch, 2004; Hyland & Milton 1997,; Prasithrathsint 2015; Vassileva, 1997, 2001; Ventola, 1997).

As regards RQ2, the responses to the questionnaires provide insights into why the positive influence of explicit instruction was limited in the current study. First, since city reviews represented a new genre for the students, most of them reported that they focused on learning the structure/organization of the genre. Perhaps the participants could have focused more on learning the targeted markers if they had been engaged in writing a genre that they were familiar with. In addition, the EG was more concerned with learning the new terms and definitions. They even thought that the treatment sessions were similar to instruction in the course they had taken in pragmatics. Focusing on the theoretical part of the sessions definitely detracted from their focus on the effective use of the targeted features in actual practice. Finally, the students expressed a need to receive feedback on their writing before submitting more city reviews. They did not know that the researchers deliberately refrained from providing such feedback because the researchers wanted to assess the relative utility of explicit and implicit instruction rather than different types of feedback. However, this seemed to have influenced the students' learning, since they were used to receiving feedback to improve their written production.

Based on the results of the study, it is possible to present some implications for writing pedagogy. First, it is important to introduce the teaching of metadiscourse markers into writing classes for EFL learners to help them better express their stance and enhance readers' engagement (Hyland, 1998, 2005). However, it is highly recommended to combine explicit instruction with production practice (Taguchi, 2015). This said, there is also surely room for implicit approaches to teaching metadiscourse markers in the writing classroom and perhaps the best solution would be to combine the two approaches over time (e.g., initial instruction could be explicit but later students could be exposed to the targeted features more implicitly). Second, students may pick up the markers that are grammatically well-defined and pragmatically transparent. So, the teaching of metadiscourse markers should allocate more time for the markers that cause more difficulty to the students. Third, it is recommended to allow students to practice the target markers over a long period of time while providing them with ample feedback. This will enhance their ability to use the markers accurately and appropriately. Finally, it is advisable to use genres that are known to the students while presenting new metadiscourse markers. Otherwise, students may be distracted by the structural and lexical features of the new genre, which will inevitably detract their attention from the targeted features.

Conclusion

The current study aimed to compare the influence of explicit versus implicit instruction on students' effective use of interactional metadiscourse markers when writing city reviews as well as tapping their perceptions of the two types of pedagogic intervention. The results showed an admittedly limited positive influence for the explicit/implicit teaching with the markers of self-mentions, appeals to shared knowledge, directives and questions. Based on previous studies and the data obtained through follow-up questionnaires, a number of factors were identified that can explain why the current study did not corroborate the findings of previous research showing the beneficial effects of explicit intervention targeting interactional discourse markers. These factors included the low proficiency level of the participants, the short duration of the treatment, the introduction of a genre with which the participants were unfamiliar (i.e., city reviews), and the lack of sufficient production practice as well as feedback. Additionally, the findings suggest that markers that represent well-defined grammatical categories, have transparent pragmatic functions and require little lexical variation (e.g., pronouns, directives and questions) may be easier to learn.

Based on the results of the present empirical investigation, some pedagogical recommendations can be made. In the first place, it is important to teach interactional metadiscourse markers to university students in order to enhance the effectiveness of their writing. It is advisable, however, to provide students with sufficient exposure to the targeted markers over a long period and to focus on a genre with which the students are already familiar to some extent (e.g., academic paragraphs or essays). It is also important to enhance students' learning through individualized practice and provision of regular feedback.

The results of the present study also indicate that further empirical investigations are needed into effective ways of enhancing students' ability to express their voice and engage the reader with their writing. Specifically, more research into the learning of interactional metadiscourse markers by participants representing different language backgrounds and different levels of proficiency is indispensable. It would also be intriguing to explore the relation between learners' effective use of these markers and instructors' evaluation of the quality of their writing. Additionally, it is recommended to extend research in this direction to the use of interactive metadiscourse markers (e.g., logical connectives and frame markers) which play a significant role in the organization of texts.

Finally, we need to acknowledge a few limitations to the current study. First, we recruited only female participants because we had access only to the female campus of the university in which the study was implemented. It would be interesting to replicate the study with a gender-balanced sample. Second, our experiment involved relatively short treatment duration (a total of 140 min in both groups) and the participants were not provided with feedback. While such limited intervention may be reflective of what is feasible in most classrooms due to time constraints, future studies should perhaps use longer treatments and devise ways of providing feedback to students. Finally, the results of our study are confined to the genre of city reviews. It is important to replicate the study with different genres since the use of metadiscourse is highly genre dependent.

Appendix (A) – Hyland’s (2005) model of interaction

(1) Stance	Expresses a textual ‘voice’ or community recognized personality
Hedges	Devices which indicate the writer’s decision to withhold complete commitment to a proposition (e.g., possible, might, perhaps)
Boosters	Words which allow writers to express their certainty in what they say (e.g., clearly, obviously, demonstrate)
Attitude Markers	Indicate the writer’s effective attitude to propositions (e.g., extraordinary, fascinating, should, important)
Self-mentions	Refer to the use of first person pronouns & possessive adjectives to present propositional, affective and interpersonal information (e.g., I, our, we)
(2) Engagement	Relates writers to readers with respect to the positions advanced in the text
Reader Pronouns	Refer to the use of second person pronouns and possessive adjectives to acknowledge the reader’s presence (e.g., you, your)
Personal Asides	Allow writers to address readers directly by briefly interrupting the argument to offer a comment on what has been said
Appeal to Shared Knowledge	Refers to the presence of explicit markers where readers are asked to recognize something as familiar or accepted
Directives	Instruct the reader to perform an action or to see things in a way determined by the writer (e.g., consider, it is important to note, see)
Questions	The use of questions to invite engagement and bring the interlocutor into an area where they can be led to the writer’s viewpoint

Appendix (B) – treatment City Reviews

Treatment Session (1)

Note: Stance markers are bolded while engagement markers are underlined.

City Review: Alexandria, Egypt

Not sure where to go for your next vacation? [*question*] **Perhaps** [*hedge*], you **may** [*hedge*] wish to visit Alexandria, the second **largest** [*booster*] city in Egypt. The city extends about 32 km along the coast of the Mediterranean Sea in the north central part of Egypt. It is **obviously** [*booster*] a **major** [*attitude marker*] economic center, **important** [*attitude marker*] industrial hub and **popular** [*attitude marker*] tourist attraction.

As you may know [*appeal to shared knowledge*], Alexandria has an **exceptionally** [*booster*] long and rich history. As school students, **we** [*self-mention*] all learned about Alexander the Great, the **extremely** [*booster*] **famous** [*attitude marker*] military leader who founded the city in 332BC. Ever since, the city has been a **major** [*attitude marker*] center of economic, political and cultural activities during the Greek, Roman and Islamic civilizations as well as the modern world.

For most of the year, the weather in Alexandria is mild and **pleasant** [*attitude marker*]. As the city overlooks the Mediterranean [*appeal to shared knowledge*], its climate is less severe than the desert hinterland. The sea moderates the city’s temperatures, causing rainy winters and **moderately** [*hedge*] hot summers. If you [*reader pronoun*] wish to **enjoy** [*attitude marker*] a moderate weather - not too cold or hot - **try** [*directive*] to avoid visiting Alexandria in January, February, July and August.

You [*reader pronoun*] can **enjoy** [*attitude marker*] visiting many sites and attractions in Alexandria – although many monuments have disappeared underneath the sea [*personal aside*]. **I** [*self-mention*] have **enjoyed** [*attitude marker*] sightseeing at the Roman monuments of Pompey’s Pillar and the catacombs of Kom El Shoqafa, the religious sites of Abu al-Abbas al-Mursi Mosque and Saint Mark Cathedral. **I** [*self-mention*] also spent a **great**

[*attitude marker*] time at a number of museums, including the Graeco-Roman Museum and the Royal Jewelry Museum. You [*reader pronoun*] can also spend an **extraordinary** [*attitude marker*] time at cinemas, theaters and Alexandria Opera House. You [*reader pronoun*] shouldn't miss [*directive*] Bibliotheca Alexandrina if you're [*reader pronoun*] into reading, or Montaza Garden & Palace if you [*reader pronoun*] like the greenery and the sea.

Finally, don't worry [*directive*] about travelling to Alexandria. The city has an international airport and four seaports. It is also **well connected** [*attitude marker*] with other parts of Egypt through **good** [*attitude marker*] highways and railways. And what about going around the city? [*question*] Well, you [*reader pronoun*] can **easily** [*attitude marker*] go around the city by trams, buses or taxis. Uber and Careem are available too – they are a bit [*hedge*] expensive though [*personal aside*].

Certainly [*booster*], your [*reader pronoun*] time in Alexandria will be an **unforgettable** [*attitude marker*] experience.

Treatment Session (2)

Note: Stance markers are bolded while engagement markers are underlined.

City Review: Antalya, Turkey

Haven't picked a place for the summer vacation yet? [*question*] You [*reader pronoun*] can **possibly** [*hedge*] consider Antalya, the **largest** [*booster*] Turkish city on the Mediterranean coast. With **approximately** [*hedge*] one million people, Antalya is the eighth **most** [*booster*] populous city in Turkey. It is located on the **extraordinary** [*attitude marker*] southwest coast of Anatolia Province and is bordered by the **magnificent** [*attitude marker*] Taurus Mountains.

Antalya was first settled **around** [*hedge*] 200BC by the Attalid Dynasty of Pergamon. Since then, the city changed rulers several times, including the Romans, the Seljuk Sultanate and the Ottoman Empire – the last of which brought [*relative*] peace and stability [*personal aside*] to the city over five hundred years [*personal aside*]. In the modern world, as you [*reader pronoun*] know [*appeal to shared knowledge*], Antalya has become part of a newly independent Turkey, and is **flourishing** [*attitude marker*] with a **booming** [*attitude marker*] tourism industry, **outstanding** [*attitude marker*] agricultural production and **superb** [*attitude marker*] shipyards.

You [*reader pronoun*] also must visit [*directive*] Antalya for its hot and dry summers and mild and rainy winters – which is the typical Mediterranean weather [*self-mention*] we [*self-mention*] know [*appeal to shared knowledge*]. The average sea temperature ranges between 16 °C in winter and 27 °C in summer, so you [*reader pronoun*] can **enjoy** [*attitude marker*] a **good** [*attitude marker*] sea swim all year round.

Antalya has a **wide** [*booster*] variety of activities. For example, the city boasts **incredible** [*attitude marker*] architectural heritage of the Hellenistic and Ottoman times. You [*reader pronoun*] shouldn't miss [*directive*] the City Walls, Hadrian's Gate, the Clock Tower and the **large** [*booster*] variety of mosques, madrasahs and Turkish baths. As for green areas and recreational places, I [*self-mention*] **recommend** [*attitude marker*] the Antalya City Forest, Atatürk Park, Aktur Park and the National Park. And don't miss [*directive*] the shopping malls in the city center – which, I [*self-mention*] must add [*personal aside*], con-

tain some products of **excellent** [*attitude marker*] quality at **reasonable** [*attitude marker*] rates.

How about travelling to the city? [*question*] Antalya Airport has two international terminals and one domestic terminal – **very**[*booster*]**convenient**[*attitude marker*]**terminals**[*self-mention*] would say [*personal aside*]. It also has an **excellent** [*attitude marker*] network of minibuses and **well-operated** [*attitude marker*] public bus and tram systems. So, enjoy [*directive*] the **beautiful** [*attitude marker*] rides and the **magnificent** [*attitude marker*] city.

Appendix (c) – the questionnaires

Questionnaire for the Explicit Group

Circle the correct answer to the multiple choice questions, and provide a full answer to the wh-questions.

1- Did you study how to write city reviews before this class?

- a) Yes
- b) No

If yes, explain the context (when? where? How?)

2- How helpful were the two training sessions on writing city reviews?

- a) Extremely helpful
- b) Helpful
- c) Neutral
- d) Not helpful
- e) Not helpful at all

Explain why

3- How easy was learning the interactional metadiscourse markers?

- a) Extremely easy
- b) Easy
- c) Neutral
- d) Not easy
- e) Not easy at all

Explain why

4- How useful was learning the interactional metadiscourse markers?

- a) Extremely useful
- b) Useful
- c) Neutral
- d) Not useful
- e) Not useful at all

Explain why

5- What else could the teacher have done to help you improve your city reviews?

Questionnaire for the Implicit Group

Circle the correct answer to the multiple choice questions, and provide a full answer to the wh-questions

1-Did you study how to write city reviews before this class?

- a) Yes
- b) No

If yes, explain the context (when? where? How?)

2-How helpful were the two training sessions on writing city reviews?

- a) Extremely helpful
- b) Helpful
- c) Neutral
- d) Not helpful
- e) Not helpful at all

Explain why

3- Was there anything you paid special attention to in the sample reviews provided?

4- What else could the teacher have done to help you improve your city reviews?

Acknowledgements

The authors thank Prince Sultan University for funding this research project under the Applied Linguistics Research Lab grant [RL-CH-2019/9/1].

The authors thank the Research Centre for the Humanities, Deanship of Scientific Research, King Saud University for funding this project.

Authors' contributions

Dina Abdel Salam El-Dakhs conceptualization – design – data coding – data analysis – writing.

Noorchaya Yahya – design – data collection – data coding – reviewing the paper.

Mirosław Pawlak – design – reviewing the paper.

All authors read and approved the final manuscript.

Funding

This study was funded as part of a grant to the Applied Linguistics Research Lab [RL-CH-2019/9/1] by Prince Sultan University.

This research project was also supported by a grant from the Research Centre for the Humanities, Deanship of Scientific Research, King Saud University.

Data availability

Data and materials will be available upon request.

Declarations

Ethics statement

This study complies with all standard research ethics standard. Approval to conduct the study was sought from the College of Languages and Translation at King Saud University. Written consents from participants were collected prior to conducting the study.

Consent for publication

This article does not contain any materials that require special consent for publication.

Competing interests

The authors declare that they have no competing interests with respect to the concerned article.

Received: 28 May 2022 / Accepted: 19 September 2022

Published online: 08 December 2022

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