



IMAM KHOMEINI
INTERNATIONAL UNIVERSITY



Print ISSN: 2676-5587
Online ISSN: 2676-5985

The Role of Learning-Oriented Language Assessment in Promoting Interactional Metadiscourse in Ectenic and Synoptic EFL Learners

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Article info Abstract

Article type: **Abstract**

Research
article

Received:
31/12/2023

Accepted:
3/3/2024

In recent decades, undivided attention has been drawn to the examination of metadiscourse in different contexts, genres, languages, and disciplines. Nevertheless, a large body of research has been predominantly centred on the qualitative examination of potential metadiscourse markers and their associated functions. In the current study, we drew on an embedded design and followed learning-oriented language assessment (LOLA) in the employment of interactional metadiscourse markers (IMMs) to better understand metadiscourse use by ectenic ($n = 27$) and synoptic ($n = 30$) learners using integrative writing tasks. To that end, 57 intermediate language learners completed Ehrman and Leaver's (2003) learning style questionnaire. We followed Hyland's (2019) interpersonal metadiscourse markers to determine the learners' realisation of metadiscourse in their writing. SPSS (version 25) was run to analyse the quantitative data, and MAXQDA (version 2020) the think-aloud data. The results of chi-square analyses showed that ectenic learners outperformed synoptic ones following LOLA in the employment of IMMs. The results of inductive thematic analyses revealed that synoptic learners benefitted from the utilization of LOLA in employing IMMs in their integrative writing tasks. The findings suggest that the use of LOLA as a pedagogical method can effectively develop the writing proficiency of EFL learners.

Keywords: Individual Differences, Interactional Metadiscourse, Learning-Oriented Language Assessment

Cite this article: Esfandiari, R., & Allaf-Akbary, O. (2024). The Role of learning-oriented language assessment in promoting interactional metadiscourse in ectenic and synoptic EFL learners. *Journal of Modern Research in English Language Studies*, 11(3), 181-206.

DOI: 10.30479/jmrels.2024.19777.2305

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1. Introduction

In any form of communication, it is vital for writers to consider their readers' perspectives in order to achieve their social and rhetorical goals. This involves anticipating and addressing potential objections to their ideas and attempting to establish a connection with readers. In doing so, writers can effectively engage with their audience and tailor their message to meet their needs and expectations. Therefore, writers should predict and address potential objections to their perspectives and attempt to establish a connection with readers. In this respect, metadiscourse encompasses a diverse set of linguistic tools that writers utilise to shape their self-presentation and maintain a positive interpersonal connection. It involves the strategic use of language to manage how others perceive it and to foster a sense of alignment and rapport in communication (Hyland, 2019). By employing metadiscourse, writers can effectively engage their audience and achieve their communicative goals (Chen & Li, 2023; Khatibi & Esfandiari, 2021; Nemtchinova, 2022). Interactional metadiscourse specifically centres on the dynamic interaction between writers and readers. In this context, writers utilise a variety of linguistic resources not only to convey their positions or ideas but also to establish a connection with their readers. By employing interactional metadiscourse, writers aim to actively engage their audience, foster a sense of dialogue, and create a mutually beneficial communication experience (Izquierdo & Pérez Blanco, 2023).

In the current study, the selection of the research article (RA) as a genre is based on its prevalence in academic discourse and its significant role in advancing knowledge within a community. It is important to highlight that the comprehension of interactional metadiscourse use (IMU) has been widely recognised as the most demanding genre of writing for second language learners (Pessoa et al., 2017). Furthermore, despite the challenges that persist, IMU in writing has emerged as the most commonly employed task across various contexts and by many individuals. Additionally, within academic institutions, scholars and researchers frequently use IMU to compose scientific reports and engage in debates regarding research findings (Izquierdo, & Blanco, 2023). Furthermore, previous teaching or learning approaches to metadiscourse use in writing skill has not consistently yielded positive results. Specifically, within the EFL context, serving as the conceptual structure for this research, it has been observed that the communicative language teaching, despite its prominence, has proven ineffective in enhancing EFL learners' writing proficiency. This is primarily because writing is fundamentally a cognitive process. Therefore, addressing the challenges related to IMU in writing may necessitate adopting a cognitive approach.

LOLA is an approach that has been identified to be effective in considering the cognitive process of writing, effectively incorporating

assessment and learning in educational settings. Based on previous studies (e.g., Estaji & Safari, 2023; Jalilzadeh et al., 2023; Turner & Purpura, 2016), this particular methodology has the potential to enhance the overall quality of foreign language classrooms. It is suggested that LOLA can be a suitable method for improving students' IMU skills. This approach focuses on actively involving students in the learning process and offering them structured feedback (Malecka et al., 2022), as well as chances for self-assessment (Fazel & Mohammad Ali, 2021; Yan & Carless, 2022).

It is crucial to emphasise that previous research has suggested that learners with different learning styles may approach writing tasks differently (Li, 2022; Pawlak, 2021). Przybył and Pawlak (2023), for example, argued that personality is a factor influencing language learning strategy use. According to Moslemi and Dastghoshadeh (2017), indirect correction was favoured solely by synoptic learners. Individual differences exist with respect to the basic need each person feels (Ortega, 2014). For example, previous research has shown that ectenic learners are those wanting and needing conscious control over the learning process, whereas synoptic learners are those leaving points more to preconscious or unconscious processing (Leaver, et al., 2021). Nevertheless, there exists a dearth of scholarly study delving into the connection between learning styles, LOLA writing tasks, and the realisation of interactional metadiscourse. Therefore, the present study sought to find whether learners' learning styles influence their use of interactional metadiscourse through the LOLA approach.

This study aimed to improve the existing corpus of scholarly works on individual differences in metadiscourse realisation by adopting LOLA as a new approach. To achieve this goal, we took an approach towards learning and assessment to identify how ectenic and synoptic learners realise metadiscourse. Ectenic learners are usually described as those who tend to be less influenced by their surroundings, relying more on their own internal thought processes. They tend to be reflective, abstract thinkers who prefer to approach tasks in a sequential, analytical, and deductive manner (Griffiths & Soruç, 2020; Tsagari, 2020). In contrast, synoptic learners are more attuned to their environment, displaying a sensitivity to the context in which they learn. They are field-independent, impulsive thinkers who prefer to engage with concrete information in a random, synthetic, and inductive manner (Leaver et al., 2021). The rationale behind examining LOLA in metadiscourse realisation is that LOLA endeavours to provide learners with increased autonomy in designing their own learning experiences, grounded in trustworthy evidence, and empowering them to establish their personal objectives in employing IMMs in integrative writing performance (Gebril, 2021). Hence, the following research questions are presented.

1. Are there any significant differences between Iranian ectenic vs. synoptic EFL learners with regard to the effect of LOLA on their employment of IMMs in integrative writing performance?
2. How does the perception of Iranian ectenic vs. synoptic EFL learners about LOLA vary in terms of their realisation of IMMs in integrative writing tasks?

2. Literature Review

2.1. Learning-Oriented Language Assessment in L2 Research

LOLA presents a novel perspective to learning and assessment, which was suggested by Carless (2007) in higher education and Gebрил (2021) in L2 assessment, with the aim of potentially integrating assessment, language, and second language acquisition. According to Jones and Saville (2016), LOLA may be regarded as a response to the traditional models of assessment, because it is an assessment process that prioritises learning elements over measurement ones. Three different components, namely “assessment tasks promoting learning”, “peer- and self-assessment”, and “feedback” are examined in LOLA. The approach emphasises a shift in perspective regarding feedback, moving from viewing it as mere information to recognising it as a continuous process. Specifically, it focuses on learners' active engagement with feedback. The LOLA framework is based on the premise that engaging learners in the evaluation procedure helps them improve their evaluative judgment (Reinders & Chong, 2023; Sadeghi & Douglas, 2023).

Leung (2020) conducted a phenomenological study focusing on the experiences of a number of teacher candidates registered in a master's programme in presenting English to speakers of other languages (TESOL), specifically exploring their use of LOLA. He emphasised that while addressing the teaching-learning cycle is essential when incorporating LOLA, it is not adequate on its own, as LOLA is intricately linked to the aspects of the curriculum framework. Drawing on the research findings, he highlighted the need for the greater consideration of contextual dynamics and pedagogic infrastructure that impact the performance of LOLA.

In a study conducted by Fazel and Ali (2022), the focus was on examining the knowledge and practices of a group of EAP (English for academic purposes) teachers regarding LOLA in Malaysia and Canada. The findings of the investigation unveiled that the participants expressed a lack of adequate understanding of the principles and procedures associated with LOLA. Furthermore, when it came to their actual assessment practices, the participants reported that they did not align their implementation with the principles and procedures of LOLA.

Derakhshan and Ghiasvand (2022) explored the perspectives of Iranian EFL teachers on the advantages, obstacles, and professional activities that support the understanding and implementation of LOLA. Forty EFL teachers of both genders participated in a face-to-face semi-structured interview for this purpose. Based on the thematic analysis conducted using MAXQDA, research unveiled that Iranian EFL teachers had diverse opinions on LOLA. They considered it to be a feedback-driven, formative, and alternative approach that places emphasis on feedback and improvement rather than final results. Furthermore, the study revealed that LOLA may be implemented through alternative assessment and dynamic assessment. The findings also indicated that LOLA enhances classroom communication, promotes cooperation and involvement, integrates evaluation, instruction, and learning, and monitors students' advancement.

Ma (2023) investigated the integration of LOLA in three EAP writing classrooms, examining not only the noticed effectiveness but challenges associated with its implementation. The primary sources of data included teacher and student interviews as well as classroom observations. The results of the study revealed diverse perceptions among teachers and students regarding the utilization of different facets of LOLA, and the ways in which these perceptions aligned within the micro-level, meso-level, and macro-level contexts due to various contributing factors.

Jalilzadeh and Coombe (2023) examined the barriers that impede teachers from implementing LOLA in English language classrooms. A phenomenological study approach was employed to determine the constraints related to LOLA. EFL teachers were chosen using purposive sampling, and interviews were conducted to gather data. The interview responses were analysed thematically and categorised into three main groups: Constraints related to teachers, the educational institute, and learners. From the findings, it can be deduced that effective coordination among the various elements of the syllabi is a crucial prerequisite for instructors to successfully incorporate LOLA principles into their classes.

Çakmak et al. (2023) made an attempt to explore the potential interactions between self-assessment, scholastic motivation, pedagogical resilience, test-taking skills, and test anxiety control among EFL learners. To this end, using confirmatory factor analysis and structural equation modeling, the researchers developed a model. The data were collected from 512 participants through online questionnaires given to 15 language institutions utilising telegram-based language learning. The findings demonstrated that self-assessment, academic motivation, and academic resilience could predict EFL learners' test-taking skill. Furthermore, it was confirmed that self-assessment, academic motivation, and academic resilience influenced EFL learners' test anxiety.

2.2. Interactional Metadiscourse in L2 Writing

Examining learners' perceptions can be a valuable tool in uncovering hidden barriers within the writing process, as stated by Kaliampos (2022). This approach not only helps identify obstacles but also offers language instructors valuable insights. By understanding the specific difficulties and needs of second language learners, instructors can provide meaningful and relevant instructions to enhance their learning experience.

Interactional metadiscourse enables authors to provide commentary on their messages. Hyland (2019) stated that "interactional metadiscourse involves the reader in the text. It includes elements such as self-mentions, hedges, boosters, attitude markers, and engagement markers" (p. 58). By incorporating interactional metadiscourse, authors actively engage readers in the discourse and convey their perspective on the propositional content. Table 1 presents information on the interactional metadiscourse types.

Although metadiscourse lacks a specific theoretical framework that offers a single definition, it is a complex concept that has been extensively studied (Hyland & Jiang, 2022). Consequently, empirical research often lacks a strong methodology that aligns with the understanding of metadiscourse. With regard to this study's objectives, metadiscourse is identified as linguistic elements in written texts that do not add to the main message being conveyed, but instead serve the purpose of helping readers organise, interpret, and evaluate the information that is presented (Hyland, 2019).

Table 1

Interactional Metadiscourse in Hyland's Model (Hyland, 2019, p. 58)

Interactional metadiscourse	Definition	Examples
Hedges	refrain from commitment	perhaps; possible; about
Boosters	emphasize assurance or conclude the conversation	certainly; it is clear
Attitude markers	conveying the writer's stance	unfortunately; I agree
Self-mentions	author mention	I; my
Engagement markers	intentionally foster a connection with the reader	consider; note

Wu and Yang (2022) conducted an investigation into the utilization of three distinct personal metadiscourse markers, namely engaging you, inclusive-we, and self-mentioning I, within the classroom discourse of EAP instructors in the UK. The researchers analysed a total of eight sessions, focusing on the contributions made by the teachers during classroom discussions. Through quantitative analysis, it was evident that that teachers

placed significant importance on encouraging active student participation in classroom lessons. Additionally, qualitative analysis revealed that the functions of metadiscourse in teacher-student interactions encompassed various aspects, including the management of comprehension, students' responses, scenarios, and discipline.

Esfandiari and Allaf-Akbary (2022a) utilised retrospective methods and follow-up interviews to gain a deeper understanding of the use of metadiscourse features in research articles (RAs) written by both apprentice and professional authors in the field of applied linguistics. Their focus was on RAs published in national and international English-medium journals. To analyse the RAs, they adopted Hyland's (2005) interpersonal metadiscourse model and examined three specific sections: introductions, results, and discussions. Descriptive analysis of metadiscourse marker usage was conducted, followed by chi-square tests to explore variations in RAs. Additionally, stimulated recall was conducted through semistructured email interviews to gather further insights. The interview data from the authors were analysed using MAXQDA software. The findings from qualitative and thematic analyses revealed that metadiscourse markers played a crucial role in effectively bearing the writers' message and intention to the discourse community members.

Li et al. (2023) conducted a study in which they utilised the metadiscourse model proposed by Hyland (2005) and Hyland and Tse (2004), as well as D'Angelo's (2016) visual metadiscourse framework, to evaluate the clarity and involvement of medical students' infographics developed during an EAP class. The researchers collected and examined 127 Visme infographics that centred on the prevention of hypertension. Their main focus was on how students employed different metadiscourse resources to inform and engage their audience through both textual and visual elements in their infographics. They categorised and analysed interactive and interactional features of metadiscourse in each poster, identifying overall patterns in the use of metadiscourse by EAP students. Additionally, they investigated illustrative posters in detail to show the diverse metadiscourse resources utilised by the students.

Izquierdo and Pérez Blanco (2023) focused on the analysis of IMMs in informational-persuasive discourse, specifically in the promotional subgenre. Since this subgenre has received limited research attention, they adopted a move analysis approach to address this gap. Recognising the contextual nature of metadiscourse, the researchers conducted a contrastive analysis between English and Spanish, using an ad hoc comparable corpus of online tea descriptions. By leveraging the rhetorical tagging of the corpus, the researchers manually identified and classified interactional markers that establish a direct relationship between the language producer and language receiver as

“commentary” markers, following the framework proposed by Dafouz-Milne (2008). The findings demonstrated that the use of interactional metadiscourse varies within different moves of the genre and across languages. Specifically, moves that were more explicitly persuasive or instructional tended to have a higher occurrence of commentary markers. Additionally, both English and Spanish prominently feature “direct address” and “directives,” but English relies more on “self-mentions” while Spanish utilizes “inclusive we” to a greater extent.

In their research, Yang and Zhang (2023) focused on examining how individuals who regulate their own learning with different levels of skill interacted with written feedback provided by teachers in a Chinese EFL context. Data for this study were obtained from a range of sources, including student texts, teacher feedback, reflective journal entries, and interviews. The findings demonstrated that the correlation between feedback and outcomes was contingent upon the level of engagement displayed by students during the feedback process. It was observed that individuals with different skill levels in self-regulation demonstrated varying degrees of engagement in cognitive, behavioral, and affective aspects. These differences can be attributed to students’ understanding and interpretation of feedback, their ability to translate feedback into action, and their readiness to analyse and respond to feedback using proper strategies.

Qiu et al. (2024) focused on the analysis of interactional metadiscourse, using a corpus of 2.64-million words from expert first language-English and first language-Chinese student writing in Agricultural Science. By examining different parts of the genre, they observed that both groups of writers showed significant variations in the use of these metadiscourse categories. First language-English experts used more hedges compared to second language learners, while second language learners employed a large number of boosters and attitude markers. Functionally, both groups exhibited similar patterns of deploying these metadiscourse subtypes across different parts of the genre, with first language-English experts outperforming L2 learners in the function of *stating a goal or purpose* in self-mentions. Qualitative discourse-functional analyses at the genre level shed light on some inappropriate metadiscourse choices made by the students who were not aligned with the disciplinary context. The paper was concluded by providing resources for developing a rigorous coding system and implications for instructing metadiscourse to disciplinary writers, emphasising the use of discipline-specific corpora to understand how functional categorisations of interactional metadiscourse align with socio-rhetorical contexts in disciplinary writing.

A significant point in research is that, thus far, no study has investigated the efficacy of LOA in enhancing the realisation of IMMs in writing performance of EFL eclectic and synoptic learners. In light of this, the study

endeavors to bridge this gap by incorporating the perspectives of EFL learners regarding LOLA and presenting first-hand data on its potential use to enhance their use of IMMs in writing performance.

3. Methodology

3.1. Participants

The current study is comprised of 68 male and female intermediate EFL learners, aged 22-29, who were enrolled at Rezvan and Iranian language institutes in Ardabil, Iran. The participants were selected using convenience sampling from a larger group of 142 learners, regarding their performance on a Preliminary English Test (PET). Additionally, the participants completed an Ehrman and Leaver's (2003) learning style questionnaire that assessed their level of synopsis-ectasis. During the initial phase of the study, 11 participants (specifically, six ectenic and five synoptic individuals) expressed their unwillingness to participate. As a result, they were not included in the sample for the study. The remaining 57 learners in the study were randomly divided into two groups. The first group consisted of 27 ectenic learners who underwent writing instruction through LOLA in metadiscourse use on "integrated writing task". The second group included 30 synoptic learners receiving the same type of instruction as in the first group.

3.2. Instruments

3.2.1. Preliminary English Test (PET)

To select participants for the study, the researchers administered a PET. This test gauges the four language skills through three papers. In this study, only the reading and writing components of the PET were utilised for practical reasons. The reading section was comprised of five parts, each consisting of 35 multiple-choice items. As for the writing section, it consisted of three parts. The first part involved paraphrasing, while the remaining two parts included two productive writing tasks. The first part of the reading section encompassed five texts, each followed by three multiple-choice items. In the second part, descriptions of various TV programs and individuals were provided, and learners were required to assess the suitability of each program for each person. The third part consisted of true or false sentences based on a reading passage. The fourth part presented a reading passage followed by five multiple-choice items. Lastly, the fifth part contained a cloze passage. In the writing section, the first part involved paraphrasing five sentences. The second part required learners to compose an email describing their weekend to their friends. In the third part, learners were given the freedom to choose one of the two topics and write a 100-word composition about it. The time allocated for this test was 90

minutes. Since the research focused on the writing ability of the learners, the speaking part of the PET was not included in the administration. The reliability of the PET was measured to be 0.89, indicating a high level of consistency in the test results. PET has been used mostly in different EFL/ESL contexts and the construct validity of the test has been proven by Cambridge English Language Assessment (Brown et al., 2021)

3.2.2. Ehrman and Leaver's (2003) Learning Style Questionnaire

Ehrman and Leaver's (2003) questionnaire is a tool used in the cognitive style construct. This questionnaire consists of 30 items. Each item presents two sentences with opposing viewpoints, and learners are asked to indicate their learning attitudes by placing themselves on a scale from 1 to 9 between the two poles. The midpoint of the scale is represented by the number 5, and as learners move closer to either pole in their priorities, it indicates a stronger preference for that particular viewpoint and a lesser preference for the opposing viewpoint. The reliability of the questionnaire turned out to be 0.92, suggesting a high level of consistency. The instrument along with its respective model has construct validity and is actively used as part of the battery of questionnaires presented to participants in the Learning Consultation Service at the Foreign Service Institute (FSI) in Canada for several years (Griffiths & Soruç, 2020).

3.2.3. Konstantinidis's (2012) Perceptions of LOLA Questionnaire

In order to evaluate the way in which the participants perceive LOLA, an assessment was conducted using a questionnaire proposed by Konstantinidis (2012). This survey includes three primary elements, specifically assessment tasks, learner engagement, and feedback. It includes nine items that are rated on a 6-point Likert scale which encompasses a range of values from *strongly disagree* to *strongly agree*. Each part of the survey form corresponds to a specific aspect of LOLA, aligning with the goal of the current study. The questionnaire scoring ranges from a minimum of 9 to a maximum of 45. To guarantee the reliability of the instrument, the researchers calculated the Cronbach's alpha coefficient, which yielded an overall reliability of .79, sufficient consistency in the questionnaire responses. Estaji and Safari (2023) confirmed the construct validity of the questionnaire and examined learners' perceptions of LOLA in a sample pool of 200 participants.

3.2.4. Integrated Writing Task

The participants were given two separate integrated writing tasks, one as a pretest and the other as a posttest. The topics for these tests were chosen

from TOEFL iBT. Participants were mandated to engage in the task of reading a concise passage and attentively listening to a brief lecture recorded in the listening section of TOEFL iBT, subsequently composing a written response based on the content they have obtained. Each task had a time limit of 20 minutes, and the participants were expected to compose about 300 words for each task. In their paper, Enright and Tyson (2011) evidently supported integrated writing tasks to be equipped with construct validity along with overall validity. The tasks were supposed to comprise five paragraphs. The proficiency exhibited by the participants in every integrated writing assignment was evaluated using two main assessment criteria: content (accuracy, completeness, and connection between reading and listening) and organization (logical progression, clear introduction, body, and conclusion). A band score ranging from 0 to 5 was taken into account.

To ensure scoring reliability, the researchers followed the same TOEFL iBT scoring rubric to rate the tasks. The highest score of five is awarded to integrated writing when learners proficiently combine information from readings and lectures, skillfully identify the significant details, and present them in a coherent and accurate manner. When an examinee attains a score of four on the integrated essay, it signifies a commendable ability to generally fulfil the aforementioned criteria. However, the essay may exhibit minor omissions, vagueness, or imprecision in its content. Conversely, a score of three encompasses certain significant information and establishes some relevant connections, yet it overlooks essential points and frequently contains errors. Level 2 essays distort key points from the lecture and reading, and they hinder the comprehension of connections due to inadequate language usage. An essay that lacks meaningful or relevant content is assigned a score of 1, while test-takers who merely replicate sentences from the reading or demonstrate an extremely low-level of language proficiency receive a score of 0.

3.3. Procedure

As proposed by Jones and Saville (2016), after the selection of the participants, a reflective discussion was conducted to make the participants aware of the objectives, wants, needs, and assumptions of the researchers conducting the study. During this session, the participants were asked about their specific objectives, enabling the selection of appropriate writing lessons tailored to their individual needs. Moreover, within the same session, the participants were administered a pre-test, specifically a TOEFL iBT integrated writing task. This pretest, evaluating IMU, served as a criterion to assess and judge the participants' performance at the end of the course, allowing for a differentiation of their progress. The participants were instructed to compose an integrated writing task including at least 250 words.

Both ectenic and synoptic participants in two different experimental groups, receiving the same LOLA instruction, were supposed to follow an integrated writing task at the beginning of each session. Through this task, the researchers assessed the participants' writing ability. The topics for the writing tasks were selected from the book Duane's (2018) *Cracking TOEFL IBT Writing Tasks* book. The participants were asked to read a short passage and listen to a short presentation. It took 40 minutes. Then, they were supposed to write what they read and listened to. It took 20 minutes to write. During the course, the participants were actively engaged in a kind of alternative assessment, taking responsibility for evaluating their own writing tasks. The participants were encouraged to identify and measure their improvement. Following each session, the course instructor gave ongoing and systematic feedback with different forms. As a peer-assessment technique, the participants listened to each other's responses and edited content. The instructions given were tailored to address specific writing problems identified in each class. This instruction spanned four weeks, consisting of eight instruction sessions. It should be noted that there were two introductory and final exam sessions, during which the participants took pretest and posttest assessments, respectively. It is worth noting that the posttest was implemented in the same way as the pretest was. Moreover, the participants, in the last session, completed an LOLA questionnaire, manifesting their perceptions by filling out the questionnaire.

The embedded design (Creswell & Plano Clark, 2011) as a form of mixed methods design was used to gain how learners approach the treatment while doing their tasks. In the qualitative phase of the study, the participants in the two groups were familiarised with the think-aloud methodology. The participants were not required to give reasons while revising content and organisation, but they were supposed to simply verbalise their thoughts and ideas while editing their writing tasks. After each session, the process of think aloud was recorded to be analysed, and all the strategies employed by the participants were listed. The participants' strengths and weaknesses in doing the writing tasks, as focused in LOLA, were taken into account. To keep on talking while doing tasks, the participants answered such questions as:

- Do I understand what I just listen to?
- How do I think of the topic?
- How do I think about the topic right now?
- What made I do that?
- Why am I using this grammatical structure?

3.4. Data Analysis

As for the first research question, two chi-square analysis procedures were conducted to compare the utilization of IMM in the pretest and posttest stages for both participant groups. Regarding the second research question, the viewpoints of EFL ectenic and synoptic learners on LOLA were investigated. Through this, the responses provided by the participants on LOLA questionnaire were analysed by assigning scores to each item. Comprising assessment tasks, student involvement, and feedback, this questionnaire was divided into three distinct components. It consisted of nine items that were rated on a 6-point Likert scale, spanning from *strongly disagree* to *strongly agree*. Each part of the survey form focused on a subscale of LOLA, aligning perfectly with the aim of the current investigation. In terms of scoring, the maximum score attainable is 45, while the lowest score possible is 9. These scores were calculated using a scale proposed by Konstantinidis (2012). We used MAXQDA to analyse the qualitative data, i.e., think-aloud protocol.

4. Results and Discussion

4.1. Results

Initially, the analyses were carried out to come to a decision on the similarity of participants' proficiency in two groups classified as ectenic and synoptic learners, specifically in relation to their proficiency in the English language. The participants' mean scores in PET for ectenic learners ($M = 20$, $SD = 1.64$) and synoptic learners ($M = 21$, $SD = 2.11$) were remarkably similar. In addition, an independent samples t-test was run to make sure whether or not the difference between the two groups of ectenic and synoptic learners was significantly different. The t-test findings demonstrated that there were no noteworthy variation between the two groups concerning PET ($t(55) = 1.58$, $p = 0.56$).

Employing Hyland's (2019) metadiscourse model, the researchers analysed the participants' pretest regarding IMU. Since IMM encompass hedges, boosters, attitude markers, engagement markers, and self-mentions, integrative writing task in each group, ectenic and synoptic, was examined based on the above-mentioned five IMM. The study's research questions were thoroughly examined and evaluated by the researchers. A colleague in EFL was asked to rerate the participants' writing pretests to guarantee the reliability. The inter-rater reliability was estimated, and it turned out to be .88. Table 2 indicates the frequency (F) and percentages (P) of IMM in the writing pretest.

Table 2
Frequency and Percentages of IMMs in Pretest across Groups

IMMs	Ectenic		Synoptic	
	F	P%	F	P%
Hedges	148	31.02	146	29.97
Boosters	99	20.75	102	20.94
Attitude markers	45	9.43	49	10.06
Engagement markers	81	16.98	79	16.22
Self-mentions	104	21.80	111	22.79
Total	477	100	487	100

4.1.1. Investigation of the First Research Question

The first research question sought to examine whether there is any significant difference between Iranian ectenic vs. synoptic EFL learners' integrative writing performance regarding LOLA approach. Regarding this research question, two chi-square analyses were performed to compare the results of the employment of IMMs in pretest and posttest for both groups, namely ectenic and synoptic participants.

A chi-square analysis was run, the results of which showed that the groups (ectenic/synoptic) did not use IMMs statistically differently ($\chi (4) = 0.372, p = .985$) (Table 3) prior to the treatment sessions. That is, IMMs were similarly used by both groups.

Table 3
Chi-square Test Results for the Use of IMMs Across Groups in the Pretest

	Value	df	Asymptotic significance (2-sided)
Pearson chi-square	.372	4	.985
Likelihood ratio	.372	4	.985
Linear-by-linear association	.093	1	.751
N of valid cases	97		

On the other hand, having made sure of the similar use of IMMs by the participant in the pretest phase of the study and having given the treatment, the researchers gave a posttest to the participants in two groups. As in the pretest, the inter-rater reliability was estimated, indicating an index of .91. Table 4 displays the frequency (F) and percentages (P) of IMMs in the writing posttest.

Table 4
Frequency and Percentages of IMMs in Posttest across Groups

IMMs	Ectenic		Synoptic	
	F	P%	F	P%
Hedges	223	34.20	145	26.95
Boosters	101	15.49	99	18.40
Attitude markers	65	9.96	99	18.40
Engagement markers	98	15.03	87	16.17
Self-mentions	165	25.30	108	20.07
Total	652	100	538	100

Another chi-square analysis was run for the posttest. The results indicated that there was a significant difference between the groups regarding employing IMMs ($\chi(4) = 24.56, p = .00$) (Table 5). Overall, except for attitude markers, the ectenic group employed much more IMMs than the synoptic one in integrative writing task performance.

Table 5
Chi-square Test Results for the Use of IMMs Across Groups in the Posttest

	Value	df	Asymptotic Significance (2-sided)
Pearson chi-square	24.56	4	.00
Likelihood ratio	24.57	4	.00
Linear-by-linear association	.04	1	.83
N of valid cases	1192		

4.1.2. Investigation of the Second Research Question

To address the second research question of the study, the LOLA questionnaire items, answered by the participants, were analysed based on scores assigned for each item. The weighted scores were computed considering a scale proposed by Konstantinidis (2012). This scale assigns a score of 1 to *not applicable/I don't know*, 2 to *strongly disagree*, 3 to *disagree*, 4 to *neither agree nor disagree*, 5 to *agree*, and 6 to *strongly agree*. These scores were used to examine how the participants answer the questionnaire items. As demonstrated in Table 6, the ectenic participants' answers on questionnaire items were examined, indicating that ectenic participants held a highly favorable view of the IMMs employment through LOLA. This is evident from the positive ratings assigned to all the items. While the extent of the answers varied for each item, and there were some inconsistencies in the scores, the ectenic learners in the study showed a positive perception of learning the employment of IMMs through LOA.

As for the synoptic participants' perception of LOLA in employing IMMs, it was shown that they, compared to the ectenic participants, were not so interested in learning the employment of IMMs through LOLA.

Table 6

Descriptive Statistics on the Ectenic Participants' Answers to the LOA Questionnaire

	N	Mean	SD
The tutor offered valuable feedback throughout the course of discussions and individual interactions.	27	5.4	1.1
The feedback provided by the tutor on my initial assignment proved instrumental in enabling me to successfully accomplish the subsequent assignment.	27	4.8	.5
The discussions helped me develop self-evaluation competence.	27	5.8	.4
The course material caught my attention due to the assignments.	27	4.1	.4
The deliberations facilitated my comprehension of the circumstances under which an educational endeavor can achieve success.	27	4.9	.3
The completion of the assignments necessitated profound and analytical thinking, as opposed to mere rote memorization.	27	4.9	.5
The comments provided by other participants greatly aided me in enhancing my suggestions.	27	4.3	.7
The course assignments have significantly enhanced my comprehension of the subject matter.	27	5.5	.8
The evaluation of two peer assignments in the second task has significantly contributed to the enhancement of my self-evaluation competence.	27	4.1	.3
N	27	43.8	5

Furthermore, both groups held approximately identical perceptions on question seven of the questionnaire meaning that peer-assessment in LOLA can contribute to the learning process of employing IMMs in writing tasks (Table 7). To guarantee the reliability of the questionnaire in the current study, the researchers used Cronbach's alpha, the result of which turned out to be .88.

To determine whether the difference between the perceptions of the participants in both groups were significant, an independent samples t-test was run. The results showed a statistically significant difference between the two groups regarding the perception of LOLA in the employment of IMMS ($t(16) = 5.60, p < 0.005$).

Table 7*Descriptive Statistics the Synoptic Participants' Answers to the Questionnaire*

	N	Mean	SD
The tutor offered valuable feedback throughout the course of discussions and individual interactions.	30	3.1	1.2
The feedback provided by the tutor on my initial assignment proved instrumental in enabling me to successfully accomplish the subsequent assignment.	30	3.8	.4
The discussions helped me develop self-evaluation competence.	30	3.1	.4
The course material caught my attention due to the assignments.	30	3.8	.3
The deliberations facilitated my comprehension of the circumstances under which an educational endeavor can achieve success.	30	2.9	.4
The completion of the assignments necessitated profound and analytical thinking, as opposed to mere rote memorization.	30	3.1	.6
The comments provided by other participants greatly aided me in enhancing my suggestions.	30	4.0	.5
The course assignments have significantly enhanced my comprehension of the subject matter.	30	2.4	1.0
The evaluation of two peer assignments in the second task has significantly contributed to the enhancement of my self-evaluation competence.	30	3.8	.3
N	30	30	5.1

Following think-aloud technique, the researchers informed the participants in both groups of being stopped every now and then to ask them what they are thinking about while writing the integrated writing task. They received a clear explanation of the think-aloud procedure. The think-aloud technique was employed to explore the participants' level of awareness of employment of IMMs through LOA. The participants were required to think aloud all the techniques used in the writing performance. The participants' verbalisations were recorded, and then transcribed using MAXQDA 2020

software to detect patterns of recurring themes turning into categories. Open coding, as the process of data analysis, was used (Table 8).

Table 8

Thematic Analysis of Ectenic vs Synoptic Learners' Think Aloud Data

Learning style	Category	Subcategory	Code
Ectenic	Learning-oriented assessment	Productive learning tasks	Appropriate contextual application of meta-discourse markers in dialogues Distinguishing a wide range of functions for meta-discourse markers across various contexts Other regulation along with error correction in the use of meta-discourse markers across different texts Designing educational texts and dialogues across different contexts
		Learner involvement in assessment	Enjoying a different task resulting in improved learning Learners' self-assessment and peer-assessment Learners' task awareness Conscious proceeding of task stages Approaching tasks reflectively Positive and impulsive task initiation High tendency toward monitoring
		Receiving dialectic feedback	Willing to apply all received feedbacks Intense observed peer-feedback Observed peer collaboration and feedback exchange Elaboration on instructions and feedbacks throughout performance
		Productive learning tasks	Appropriate contextual application of meta-discourse markers in dialogues Distinguishing a wide range of functions for meta-discourse markers across various contexts
Synoptic	Learning-oriented assessment	Learner involvement in assessment	Enjoying a different task resulting in improved learning Learners' self-assessment and peer-assessment Approaching tasks intuitively
		Receiving dialectic feedback	Observed peer collaboration and feedback exchange Elaboration on instructions and feedbacks throughout performance
		Productive learning tasks	Appropriate contextual application of meta-discourse markers in dialogues Distinguishing a wide range of functions for meta-discourse markers across various contexts

4.2. Discussion

The present investigation aimed to determine the impact of LOLA on the employment of IMMs employed by ectenic and synoptic EFL language learners regarding an integrative writing task. Moreover, the study attempted to investigate the perceptions of ectenic and synoptic EFL learners about LOLA regarding the employment of IMMs in the integrative writing task. Firstly, as the findings show, in terms of integrative writing task performance, the ectenic group utilised IMMs, except for attitude markers, more frequently than the synoptic group did. It implies that personality factors play a vital role in the employment of IMMs in language production. Ectenic learners would be more analysis oriented in nature than their synoptic counterparts (Przybył & Pawlak, 2023). This finding partially supports that of Esfandiari and Allaf-Akbary (2022b), arguing that field-dependent learners, compared to field-independent ones, had a better performance in linguistic complexity using IMMs. Furthermore, ectenic learners and field-dependent learners are related in the sense that both refer to the individuals who exhibit certain cognitive characteristics. Ectenic learners are individuals who tend to have a more global cognitive style, meaning they focus on the overall context and relationships between information. Similarly, synoptic learners are the individuals who rely heavily on the context and surrounding information to make sense of new concepts or tasks (Ortega, 2014). Further, the results of the current study confirm those of Sun et al. (2023), claiming that the strategies used by language learners in academic writing performance are influenced by individual differences. Similarly, Yang and Zhang (2023) found that individual differences affect learners' sentence processing in writing performance.

The finding of the study is also in accordance with that of Nemtchinova (2022), claiming that LOLA enhances metacognitive, motivational, and affective factors and focuses on collaborative interaction between teachers and learners. The interaction is analytic and curricular. Attitude markers, signaling the writer's confidence in the argument, were slightly ignored by ectenic learners while performing the integrative writing task. This is not in line with Leaver et al. (2021), stating that ectenic learners examine the learning process consciously. It should be noted that following LOLA, the researchers explicitly focused on the IMMs in the class.

Considering three different components in LOLA, namely, productive learning tasks, learner involvement in assessment, and receiving dialectic feedback, ectenic learners exhibited superior performance compared to synoptic learners in utilising metadiscourse within the context of LOLA. This

is in conflict with Moslemi and Dastghoshadeh (2017), stating that only synoptic learners preferred indirect correction. Besides, ectenic learners actively engaged in the assessment processes, particularly in peer-, and self-assessment, surpassing the involvement of synoptic learners. The ectenic learners exhibited a greater willingness to receive feedback on their performance, actively engaged in peer feedback, collaborated with peers in feedback exchanges, and provided elaboration on the instructions and feedback received throughout the treatment. This is due to the conscious control they have over the details (Erhamn & Leaver, 2003). The findings of the current investigation revealed that ectenic learners enjoying conscious control can realise IMMs better. The finding of the study supports that of Sadeghi and Douglas (2023), pointing out that since in LOLA, learners are actively involved in assessment and engaged with feedback, the learning tasks in the class are clear to them. Ectenic learners exhibit a strong aversion towards tasks and assignments that are ambiguous, or unfamiliar. On the other hand, as argued by Tzagari (2020), ectenic learners follow analytic learning style, so the current study demonstrated that ectenic learners could analyse and determine the IMMs much better than did synoptic learners. It is worth noting that synoptic learners prefer comparison-based techniques meaning that these learners can make a comparison between the IMMs through writing tasks (Pawlak, 2021). This idea is not supported by the outcomes of the present study, though. That is, synoptic learners were not highly successful in employing the IMMs in the integrative writing tasks.

Furthermore, the findings of this study, which revealed learners' perceptions regarding LOLA interventions, hold significance. As argued by Kalampos (2022), examining learners' perceptions can assist in identifying hidden obstacles in the writing process. Moreover, it can provide language instructors with valuable insights to offer meaningful and relevant instructions addressing the specific difficulties and needs of second language learners. This research on Iranian EFL learners' perceptions enhances the current pool of knowledge by complementing previous findings focusing on how Iranian EFL teachers perceive LOLA (e.g., Jalilizadeh & Coombe, 2023). This broader view enhances our insights into the implementation and fruitfulness of LOLA strategies in this specific context.

The findings suggest that ectenic learners enjoy the advantages of LOLA more than synoptic learners do. Ectenic learners outperformed synoptic learners in the use of metadiscourse through learning-oriented assessment concerning all the three components as exhibited in Table 7. Ectenic learners functioned more successfully in a wide range of activities upon using

metadiscourse markers across different contexts and texts as well as distinguishing between different markers and their function suitability. Furthermore, ectenic learners involved more actively in the processes of assessment regarding peer-, and self-assessment compared to synoptic learners. This might be due to the point that ectenic learners tend to act consciously and take the control in the process of learning while synoptic learners have an inclination toward impulsive and intuitive performance (Erham & Leaver, 2003). Eventually, regarding the last component of learning-oriented assessment, receiving dialectic feedback, ectenic learners demonstrated far significant performance in terms of willingness to receive feedback on their performance, peer feedback, peer collaboration and feedback exchanges, and elaboration on the given instructions and feedback upon their performance throughout the treatment.

Thus, it may be inferred that the ectenic group, compared to the synoptic one, expressed positive recognition of the valuable impact that classroom discussions in the form of feedback and peer-assessment had on their writing development. These elements were seen as beneficial and instrumental in enhancing their writing skills and overall progress. Ectenic learners particularly appreciated the effect of LOLA tasks in promoting group work, personal interaction, following assignments and fostering self-assessment confidence. They recognised the value of these tasks in encouraging deeper reflection and enhancing their ability to assess their own learning progress.

5. Conclusion and Implications

While acknowledging the limitations of the study, the findings still indicate that LOLA acts as a basis for expectations in a learning approach. It can be used as a suitable framework for various language programmes in academic centres in Iran. Additionally, this study contributes to the limited existing practical research on the enhancement of integrative writing skills. By incorporating LOLA, educators can create a more integrated and cohesive approach that aligns teaching and assessment practices. This shift can lead to more positive and beneficial learning experiences for students, as it focuses on their progress, understanding, and individual needs rather than solely on rigid evaluation criteria.

Following LOLA, learners can be supported in conducting self-assessment and monitoring their own learning progress. The present study utilised alternative assessments for improving students' performance in real-life tasks. Through these assessments, learners get multiple opportunities to provide feedback on their classmates' language production and reconsider their

own performances, leading to enhanced learning outcomes. LOLA actively supports learners to take part in the learning process by providing feedback on their classmates.

This study acknowledges certain limitations that should be considered. Firstly, the number of participants in the sample size may have been relatively small, which can affect the transferability of the findings. Furthermore, the research makes more sense in a particular setting which may limit the applicability of the results to other settings or groups. Furthermore, the data collection methods employed in the study, think-aloud procedures, may have inherent biases, or limitations, in capturing the full range of participants' experiences, or perspectives. Although there are certain constraints, this research offers significant perspectives and enhances the current understanding in this field. Furthermore, LOLA can provide an advantage in terms of education for learners. By engaging in structured cycles of creating and receiving feedback, learners are able to determine their individual areas of weakness and, subsequently, seek effective solutions to address them. Consequently, within these educational initiatives, learners undergo a transformation wherein the focus shifts from traditional assessment to assessment as a means of language achievement.

By implementing LOLA approach, educators can support students in engaging in self-assessment and monitoring their own learning progress. In the present study, alternative assessment methods were utilised, allowing participants to demonstrate improved performance in their realisation of IMMs. Facilitating this achievement was made possible by offering them multiple opportunities to provide feedback on their peers' speaking or writing and to reflect on their own production. In contrast to customary assessment models that exclude students from the evaluation process, LOLA motivates students to actively contribute constructive feedback to their peers. By engaging in this collaborative endeavor, EFL students have the opportunity to cultivate a deeper understanding and knowledge of how the assessment criteria are linked to their metadiscourse realisation.

Acknowledgements

We extend our heartfelt gratitude to those at Rezvan and Iranian language institutes for helping us to conduct some parts of the research.

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