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The Effect of Interactionist versus Interventionist Dynamic Assessment on Metadiscourse Markers in Turkish EFL Students' Argumentative Essays

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Abstract: *This multiple case study investigates whether interactionist or interventionist dynamic assessment (DA) produces different effects on ELT students' use of metadiscourse markers in argumentative essays. 10 first-year ELT students at a state university in Turkey participated and were randomly assigned to interactionist (n=5) and interventionist (n=5) DA groups. Data were collected through individual mediation sessions, and participants' use of metadiscourse markers in both their first and second drafts was analyzed according to Hyland's (2005) metadiscourse framework. A qualitative content analysis using NVivo 12 examined error types, metadiscourse marker categories, responsiveness to mediation, and participants' perceptions of DA sessions. Findings indicate that both interactionist and interventionist DA positively influenced learners' use of metadiscourse markers, though interactionist DA yielded slightly greater improvements in error correction and autonomous problem-solving. Participants reported increased awareness of punctuation, transition markers, and the syntactic placement of metadiscourse markers, and valued the implicit, dialogue-based nature of mediation. These results underscore the potential of DA as a formative tool that supports metadiscursive awareness and enhances L2 academic writing competence. Pedagogical implications include integrating flexible mediation strategies, peer-assisted DA, and self-monitoring activities, while future research could explore DA effects across different genres, language skills, and more diverse learner populations.*

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1. Introduction

Writing is a process in which writers reveal their stance towards their argument or position and interact with their readers by means of language. To this end, writers can benefit from linguistic devices known as metadiscourse markers, which help organize texts, signal stance, and guide readers in following the text structure (Qin & Uccelli, 2019). These markers are of central importance in terms of the sustainability of reader-friendly and comprehensible texts.

L2 learners of English often struggle with the appropriate use of metadiscourse markers due to limited linguistic awareness (Akbas, 2012; Dafouz-Milne, 2008; Gholami et al., 2014; Hyland, 1998a, 1998b, 2004; Simin & Tavangar, 2009). Moreover, their redundant overuse of such

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markers poses another challenge (Hinkel, 2002; Lai, 2008; Meisuo, 2000; Mohamed-Sayidina, 2010). Several suggestions have been made to address these problems. In this respect, dynamic assessment (DA) emerges as a promising tool for improving EFL students' use of metadiscourse markers. DA is rooted in Vygotsky's sociocultural theory (SCT) and the notion of zone of proximal development (ZPD), which allows students to reach their potential development with the help of a more capable peer (Vygotsky, 1978). The developmentally appropriate mediation moves students from what they can actually achieve to what they can achieve further (Nassaji et al., 2020).

Dynamic assessment has been widely studied in recent years and is implemented in two distinct ways: interactionist and interventionist. Concerning interventionist dynamic assessment, students are given pre-determined mediations from implicit to explicit and the step in which students reach the targeted language use is observed. On the other hand, the type of mediation given to students emerges from the dialogic interaction between the student and mediator in interactionist dynamic assessment. The existing body of literature shows that even though there are studies investigating the effects of these two implementations separately, there are not many studies which compare the impact of these two and decide which one is more useful, especially in the Turkish context.

This gap is significant both pedagogically and from a writing development perspective. Pedagogically, understanding the comparative effectiveness of these approaches is crucial for informing curriculum designers to develop instructional strategies. Besides, writing skill does not improve in isolation; rather, it is embedded in socio-cultural and institutional contexts that shape learners' cognitive engagement and responsiveness to different teaching methods.

From a writing development viewpoint, the instructional approach adopted plays a critical role in shaping students' writing proficiency, academic achievement, and capacity for self-expression. In this regard, recent studies on dynamic assessment, which is a formative, interactive and Vygotskian approach, have demonstrated its potential to improve writing skills by mixing instruction and feedback in a learner-responsive way (Al Zangana & Jawad, 2023; Chien, 2024).

Based on this, by adapting to the learner's zone of proximal development, Dynamic Assessment offers an effective alternative to more rigid and summative assessment frameworks, especially in EFL academic writing contexts. Its application has been shown to foster deeper learner engagement and improve the quality of academic writing such as in research proposals and argumentative essays (Al Zangana & Jawad, 2023; Chien, 2024).

Furthermore, comparing the interactionist and interventionist models of dynamic assessment reveals distinct impacts on writing development. While both approaches enhance performance, the interactionist model, with its focus on responsive and dialogic mediation, appears to promote greater cognitive engagement and long-term writing improvement (Kushki et al., 2022; Nouri, 2023). Therefore, comparative studies integrating these models into academic writing instruction are needed to provide empirical insights for educators and policymakers.

Therefore, addressing the lack of comparative research between writing approaches, particularly with the integration of innovative practices like dynamic assessment, is crucial. Such empirical inquiry can provide educators and policymakers with data-driven insights for selecting and tailoring the most effective writing instruction methods suited to specific learner populations, pedagogical needs and educational settings.

Thompson (2003) states that metadiscourse plays a crucial role in terms of text structure as it enables readers to create a schema in their minds to follow and make sense of the written product. Research focusing on written texts has shown that the use of metadiscourse facilitates

communication, support authorial presence and enhance readers' level of comprehension (Dahl, 2004; Lorés-Sanz, 2009; Mur-Duenas, 2007, 2011; Sheldon,2009). However, related literature has revealed that students who are learning English as L2 have difficulty in the appropriate use of these markers as it has been observed that they do not use them because of lack of necessary knowledge or they wrongly use them (Akbas, 2012; Dafouz-Milne, 2008; Hyland, 2004; Hyland, 1998; Gholami et al., 2014; Simin & Tavangar, 2009). Furthermore, they overuse metadiscourse markers even when it is not necessary to use any (Hinkel, 2002; Lai, 2008; Meisuo, 2000; Mohamed-Sayidina, 2010).

Despite recognition of these challenges, most studies on metadiscourse remain descriptive or comparative. Experimental studies addressing solutions are still limited (Dastjerdi & Shirzad, 2010; Kaya & Sofu, 2020; Steffensen & Cheng, 1996; Yaghoubi & Ardestani, 2014). Thus, further experimental inquiry is needed to provide pedagogically meaningful insights into how learners' use of metadiscourse markers can be effectively improved.

With respect to this, the current study aims to find out what aspects of metadiscourse are most challenging for EFL students and whether the implementation of interventionist and interactionist dynamic assessment makes a difference in terms of students' improvement in the use of metadiscourse markers to the best of the researchers' knowledge, no study to date has directly compared these two DA approaches in relation to Turkish EFL learners' academic writing. In this respect, this study contributes to the literature in two ways. First, it explores the use of DA in teaching metadiscourse markers in detail, providing practical pedagogical implications for L2 writing classrooms. Second, as the field of metadiscourse is not a frequently studied area in the Turkish context, the study can contribute to the Turkish context by comparing two different DA approaches in terms of L2 learners' improvement of metadiscourse markers. To this end, the following research questions have arisen:

1. What type of metadiscourse markers are used by Turkish EFL students in argumentative essays?
2. Which error types are mostly observed in the argumentative essays written by Turkish EFL students?
3. Does interactionist DA have any impact on Turkish EFL students' use of metadiscourse markers?
4. Does interventionist DA have any impact on Turkish EFL students' use of metadiscourse markers?
5. Does the choice of interventionist or interaction DA yield different results in terms of the acquisition of metadiscourse markers?
6. What are students' perceptions about DA implementation?

Referring to the research questions, it can be stated that as well as the potential impacts of interventionist or interactionist dynamic assessment on the use of metadiscourse markers, information regarding EFL students' error types, the type of metadiscourse markers they employ and their attitudes towards the implementation of dynamic assessment have also been investigated.

2. Literature Review

2.1. Approaches to Metadiscourse

Writers engage readers and guide them through texts by using specific linguistic tools known as metadiscourse, which shape how audiences perceive and interpret discourse (Hyland, 2005). Various definitions of the term metadiscourse exist in literature, among which the one posited by Mauranen and Ädel (2010) stated as "Discourse about Discourse" has been widely adopted by a group of scholars (p. 1). With regard to the operationalization of the term metadiscourse,

two different approaches can be mentioned. While the former one is called integrative (Mauranen, 1993) also referred to as "Interactive" (Ädel, 2010, p. 70), the latter one is non-integrative (Mauranen, 1993) also referred to as "Reflexive" (Ädel, 2010, p. 70). Integrative/interactive approach, which is also known as the "Broad approach" (Ädel, 2006, p. 168) emphasizes textual interaction (Ädel & Mauranen, 2010, p. 2). In other words, writers' interruptions in the text can be observed clearly by their commentaries or attitudes towards the organization of texts. Therefore, the audience is helped directly in terms of interpretation and evaluation of the information in texts (Ädel, 2006, p. 168). The non-integrative/reflective approach (Ädel, 2006, p. 174), also named as the narrow approach (Ädel & Mauranen, 2010) prioritizes reflexivity, where the author's presence is less directly observable in text organization.

Most well-known metadiscourse frameworks have been most notably developed by Vande Kopple (1985), Crismore et al. (1993) and Hyland (2005), all of them based on Halliday's (1985) Systemic Functional Grammar (SFG) approach. Hallidayan SFG approach is rooted in three functions of language (i.e., ideational, interpersonal, and textual). Ideational function aims to transmit the prepositional content, which is basically the content of the sending message. Interpersonal function refers to the interaction with the speakers/readers by trying to include them into the spoken/written product. Textual function is about the unity in the structure of that product. Halliday (1994) argues that balanced use of these three functions is crucial for producing comprehensive written texts. On the other hand, Ädel (2006, 2010) has suggested other metadiscourse frameworks focusing on the Jakobsanian model based on Jakobson's language functions (1960). In this model, the metalinguistic function of language enables discourse participants to reflect on their own place in the communicative context, setting, and language.

From a pedagogical perspective, distinguishing between these frameworks is particularly relevant for academic writing instruction. The interactive approach, with its explicit organizational and engagement markers, can scaffold novice writers in building clarity and coherence (Hyland, 2005). Conversely, the reflexive approach reflects advanced disciplinary practices, but its subtlety may challenge less experienced writers. In this regard, this study adopts Hyland's (2005) model of metadiscourse which categorizes metadiscourse markers into interactive (organizational) and interactional (engagement) resources. The framework offers a practical tool for analyzing how writers construct meaning and reader relations. The adoption of this framework also is parallel with the study's focus on explicit instructional support in writing and the role of dynamic assessment in facilitating metadiscourse use.

While other models such as Ädel's (2006, 2010) reflexive approach based on Jakobson's (1960) metalinguistic functions offer valuable insights into authorial positioning, the current study prioritizes Hyland's model of metadiscourse thanks to its high feasibility and applicability in the assessment of learners' writing development and its pedagogical practicality in EFL contexts.

2.1.1. Hyland's Framework of Metadiscourse (2005)

Hyland (2005) revised earlier metadiscourse frameworks proposed by Vande Kopple (1985) and Crismore et al. (1993) to reduce categorical overlap and emphasize rhetorical functions (Hyland, 1998). Drawing on his arguments claiming that previous models fragmented textual, propositional, and interpersonal aspects, Hyland proposed an integrated taxonomy rooted in Halliday's systemic functional grammar, where discourse is seen as simultaneously ideational, interpersonal, and textual (Hyland & Tse, 2004). Hyland (2005, 2017) divides metadiscourse into interactive markers (e.g., transitions, frame markers, evidentials, code glosses) and interactional markers (e.g., hedges, boosters, attitude markers, self-mentions, engagement

markers). Together, these reflect both organizational and evaluative aspects of discourse. Although widely applied, the model has faced criticism for overgeneralizing functions across genres and disciplines (Ädel, 2006) and for categorizing features too rigidly, despite their multifunctionality (Ädel & Mauranen, 2010). Nonetheless, Hyland's framework remains the most practical for analyzing academic writing, particularly in EFL contexts where explicit scaffolding of rhetorical development is needed.

2.2. Theoretical Underpinnings of Dynamic Assessment

Dynamic assessment (DA) refers to an interactive approach to evaluating learners' abilities through mediated dialogue between the learner and the tutor, which contrasts with traditional assessments that focus solely on independent performance (Lantolf, 2009). Rooted in Vygotsky's (1978) concept of the Zone of Proximal Development (ZPD), DA emphasizes the developmental potential of learners when supported by guided assistance. Rather than providing static snapshots of learner ability, DA captures learning as a process, focusing on how learners respond to and internalize mediation over time (Lantolf & Poehner, 2005; Luria, 1961, 1967). As Sternberg and Grigorenko (2002) explain, the mediator's role is not merely evaluative but instructionally designed to identify and address learners' needs through continuous support that can be assumed as co-construction of learning. The key distinction lies in DA's process-oriented nature: while traditional (statistical) assessment evaluates final products, DA promotes learning during the assessment itself (Antón, 2018; Lantolf & Poehner, 2010). DA operates diagnostically by revealing learners' responsiveness, which can inform individualized instructional strategies. Responsiveness serves as a core indicator of how close learners are to internalizing specific knowledge or skills (Antón, 2018). Thus, DA is particularly effective for tailoring feedback and tracking emerging competencies through continuous observation and mediation (Lidz & Elliot, 2000; Poehner, 2018).

Sternberg and Grigorenko (2002) distinguish between two primary DA formats: the sandwich and the cake model. The sandwich format involves a pretest, an intervention phase, and a posttest to assess growth. In contrast, the cake format blends assessment and mediation simultaneously, with immediate, layered prompts delivered as learners encounter difficulties known as "successive layers of icing on a cake" (p. 27). This real-time interaction is particularly well-suited to classroom contexts requiring responsive scaffolding (Poehner et al., 2017). Given the study's pedagogical aim of fostering immediate revisions in learners' writing, the cake format was chosen, as it provides flexible, dialogic scaffolding tailored to EFL classroom needs, which fosters deeper learning and engagement in academic writing contexts.

2.3. Interventionist and Interactionist DA

Dynamic assessment (DA) has been divided into two approaches known as interactionist and interventionist depending on the type of mediation strategies employed during assessment sessions (Lantolf & Poehner, 2010). The interventionist approach consists of mediations that range from implicit to explicit, such as hints, prompts, and questions designed to guide learners' attention (Lantolf, 2009). Poehner (2008) asserts that the main focus of interventionist DA is to administer a fixed number of mediations until learners reach the intended response. In this vein, the mediations used in interventionist DA are standardized and scripted, progressing from implicit to explicit depending on learners' responsiveness (Nassaji et al., 2020). Studies indicate that interventionist DA can effectively support learners' writing performance by providing consistent scaffolding and facilitating the internalization of writing strategies (Alavi & Taghizadeh, 2014). In brief, it is a structured procedure in which predetermined mediations are systematically delivered to learners.

On the other hand, Lantolf and Poehner (2010) point out that interactionist DA differs in that there are no restrictions on the form or sequence of mediation. Mediators are not bound to

predetermined steps; instead, they adapt their support dynamically in response to ongoing dialogue with learners. Unlike interventionist DA, learners' questions are welcomed and addressed in line with their emerging needs, which allows for a more flexible and reciprocal learning process in interactionist DA (Ulu, 2020). In this sense, interactionist DA is closely related to Vygotsky's concept of the Zone of Proximal Development (ZPD) and sociocultural theory (SCT).

Previous research suggests that these two models can differently shape the use of metadiscourse markers in writing, which are central to organizing arguments and ensuring rhetorical clarity.

The interventionist approach, with its explicit and structured mediations, may lead to a more immediate integration of metadiscourse markers, which fosters clarity and coherence in learners' writing. By contrast, the interactionist approach promotes deeper cognitive engagement through collaborative dialogue, which may result in a more nuanced and contextually appropriate use of metadiscourse markers (Kushki et al., 2022; Lantolf & Poehner, 2010). Furthermore, because this model emphasizes dialogic teaching and reciprocal negotiation of meaning, it supports the development of broader cognitive skills such as critical thinking and problem-solving, which are indispensable for academic writing (Nouri, 2023). Empirical evidence has shown that interactionist DA can lead to substantial and sustainable improvements in writing abilities by encouraging active participation, self-regulation, and reflective engagement with language use (Kushki et al., 2022).

In summary, interventionist DA provides structured, targeted support that may accelerate the immediate use of metadiscourse markers, whereas interactionist DA fosters a collaborative, dialogic learning environment that encourages deeper cognitive engagement and long-term development in academic writing. This distinction informs the present study's design by enabling a comparative analysis of how each approach shapes ELT students' metadiscursive practices in argumentative essays.

2.4. Studies on Dynamic Assessment in L2 Writing

Several studies have examined the role of DA in L2 writing. The study conducted by Aljaafreh and Lantolf (1994) is one of the earliest DA-oriented case studies investigating the impact of negative feedback on writing in L2. Although the term "dynamic assessment" was not explicitly used, the provision of feedback within learners' ZPD positioned the study within a DA framework (Nassaji et al., 2020). In a similar vein, Nassaji and Swain (2000) compared 'ZPD-sensitive' feedback' with 'non-ZPD-sensitive' one in their case study focusing on two intermediate-level Persian ESL learners. They found that ZPD-sensitive mediation led to continuous improvement in learners' writing skills.

Antón (2009) investigated the impact of interventionist DA on beginner level Spanish EFL learners' essay structuring and found students benefited from mediations while the mediator also gained valuable insight into learners' strategies, which generated useful pedagogical implications. Another study regarding interventionist dynamic assessment was conducted by Alavi and Taghizadeh (2014). They examined the effect of three different levels of (i.e., from implicit to explicit) mediation on 32 intermediate-level Iranian university students' writing ability. Their posttest results revealed notable gains in targeted strategies and abilities, though such gains were not equally distributed across all writing sub-skills.

Concerning interactionist DA, Shrestha and Coffin (2012) conducted a study in which they examined the role of mediation in two intermediate-level students' improvement in L2 writing in department of business administration. They observed that interactionist DA procedures enabled learners to more readily identify areas requiring support. Similarly, Nassaji et al. (2015) investigated three advanced-level EFL learners' essays over a 10-week period and concluded

that interactionist DA was particularly useful for diagnosing students' errors and developmental needs.

In the mixed-method study done by Ebadi and Rahimi (2019) in which the effect of online DA on essays written by three advanced-level EFL students, learners' level of responsiveness to mediations during DA sessions were scrutinized. They reported that learners' responsiveness to mediation decreased as their writing competence improved, highlighting the adaptive nature of DA.

In the study conducted by Nassaji et al. (2020), the effect of interactionist and interventionist DA on advanced-level students' argumentative essays was examined. It was found out that interactionist DA was more effective for diagnosing students' needs and gaining deeper insights into their ZPDs.

Masrul et al. (2022) examined the implementation of DA in 100 intermediate-level Indonesian EFL learners' writing by employing both quantitative and qualitative methods to assess the impact of DA on students' writing skills. The results demonstrated that DA significantly enhanced learners' writing abilities across various dimensions, including content, vocabulary, language, organization, and mechanics. The study favors the adoption of DA in academic EFL writing programs.

Zhang and Xi (2022) investigated the application of DA in fostering self-regulated writing among secondary school EFL learners whose level of proficiency ranges from beginner to intermediate. Their findings indicated significant improvements not only in students' writing performance but also in their metacognitive competence, attitudes, and confidence toward writing.

A recent study by Kumar et al. (2023) discovered the impact of DA on grammatical writing difficulties among ESL learners. Adopting interactionist DA, the study focuses on mediational moves by the teacher during the writing assessment process. The findings indicated that the interactionist DA was influential in terms of improving the grammatical accuracy of learners, particularly in aspects such as tenses, pronouns, and subject-verb agreement. This study underscores the potential of DA in enhancing specific aspects of writing mechanics. Although not limited to writing, Rezai (2023) investigated online peer-DA in listening comprehension and anxiety reduction among Iranian EFL learners. While outside the scope of writing, the study illustrates the adaptability of DA in fostering engagement and language development in digital contexts.

Overall, these studies collectively suggest that both interactionist and interventionist DA approaches foster learner awareness, metalinguistic understanding, and improved writing performance. The diagnostic and formative nature of DA enables mediation tailored to learners' ZPD, which facilitates the gradual internalization of writing skills and strategies. Importantly, this body of research informs the present study by demonstrating not only the effectiveness of DA across diverse contexts and proficiency levels but also the distinct ways in which interactionist and interventionist approaches may shape learners' writing development. Such insights provide the rationale for examining how these two DA approaches impact ELT students' use of metadiscourse markers in argumentative essays.

2.5. Dynamic Assessment and Metadiscourse

In academic writing, metadiscourse markers enable writers to structure arguments, convey stance, and engage readers, which allows them to transform writing into a socially situated communicative act (Hyland, 2005; Snow & Uccelli, 2009). However, their accurate use remains a challenge for L2 learners, which reveals itself through incoherent and poorly contextualized texts (Hyland, 2005; Simin & Tavangar, 2009). As metadiscourse use is closely tied to

proficiency, L2 writers may underuse or misuse categories such as hedges and boosters, leading to writing that is either overly assertive or lacking in engagement (Hryniuk, 2018; Ningrum et al., 2024).

While explicit instruction has been the conventional approach to address this issue, dynamic assessment (DA) offers a promising alternative by targeting learners' Zone of Proximal Development (ZPD) through scaffolded, dialogic mediation (Lantolf & Poehner, 2014). Despite its potential, the application of DA to metadiscourse instruction in academic writing remains underexplored (Taghizadeh, 2017). DA is particularly well-suited for fostering both interactional (e.g., stance-taking through hedges, boosters, and attitude markers) and interactive (e.g., textual cohesion through transitions and frame markers) dimensions of metadiscourse. For instance, transitions and frame markers, which are vital for textual cohesion, can be better internalized through timely, individualized mediation (Bax et al., 2019; Liao, 2020).

By addressing learners' immediate developmental needs and gradually fostering metalinguistic awareness, DA enables the internalization of metadiscourse strategies that are often neglected in product-oriented approaches to writing instruction. This study therefore investigates the role of DA in enhancing Turkish EFL learners' metadiscourse use in academic writing, responding to a notable gap in both the DA and metadiscourse literature.

3. Method

This section presents the research design, settings and participants, data collection instruments and methods of analysis adopted in the study. The inclusion of qualitative data collected from interviews supports the corpus-informed design of the study. This research was conducted with the permission obtained by the Hacettepe University Social and Human Sciences Research Ethics Committee dated 11/01/2022 and numbered E-66777842-300-00003203804.

3.1. Research Design

This study employed a multiple case study design adopting a qualitative design to explore the comparative impact of interactionist and interventionist dynamic assessment (DA) on Turkish EFL students' use of metadiscourse markers in argumentative writing. Participants were purposefully selected based on their writing proficiency and were assigned to either interactionist or interventionist DA groups. Following Hyland's (2005) metadiscourse framework, the analysis was based on corpus-based discourse analysis and qualitative content analysis through NVivo 12 software to identify metadiscourse categories and error types across pre- and post-intervention writing samples together with participants' own comments in the semi-structured interviews. DA sessions were individually administered and differentiated by mediation style: the interactionist group engaged in dialogic, emergent scaffolding, while the interventionist group received structured, pre-planned prompts ranging from implicit to explicit (Lantolf & Poehner, 2010; Nassaji et al., 2020).

3.2. Settings and Participants

This study was conducted at a state university in Turkey. The participants were 10 first-year EFL students enrolled in the Department of Foreign Language Education. Upon receiving ethical approval from the Hacettepe University Social and Human Sciences Research Ethics Committee the researchers contacted the instructor of the first-year Writing Skills course and asked him to recommend students whose performance in the course was relatively lower than that of their peers. The instructor identified 19 students, of whom 10 volunteered to participate in the study. In this vein, purposive sampling was adopted. The participants were between 19 and 20 years old, and their overall English proficiency levels ranged from B1 to B2 according to the CEFR, as determined by the departmental proficiency exam taken at the beginning of their studies. However, their proficiency in academic writing was comparatively lower than that

of their classmates, as indicated by their instructor. In addition, all participants reported that they found L2 writing challenging, particularly with regard to paragraph organization, which suggests a shared difficulty that might have influenced their engagement with the tasks. It should also be noted that the participant selection process may involve certain biases, as students were nominated by their course instructor based on relative performance. While this ensured access to learners with weaker academic writing skills, it may limit the representativeness of the sample and introduce an instructor-based selection bias. Nonetheless, the purposive sampling design was appropriate given the study's focus on students struggling with academic writing in English.

3.3. Data Collection

Ellis and Barkhuizen (2005) state "Rich, thick and deep data" (p. 253) can ideally be acquired through qualitative data collection methods. In line with the demands of research questions of this study, qualitative data collection methods, observation and interviews, were employed. Participants were given a demographic information form by which the researcher could gain necessary information about participants' age, English proficiency level and familiarity with different types of writing activities in the first week. In the second week, participants were assigned argumentative essays in three different topics among which they could choose. After participants completed their first drafts, they were randomly divided into two groups. One of them was interactionist DA group and the other one was interventionist DA group. As the next step, each student was provided with a DA session individually. In the last week, participants brought their final drafts and worked on them together with the researcher. Then, semi-structured interviews lasting about 10 minutes were held with each participant regarding their attitudes towards DA sessions.

3.4. Data Collection Tools

In the scope of this study, multiple qualitative data collection methods were utilized including a background questionnaire, observations in DA sessions, participants' writing tasks and semi-structured interviews at the end.

3.4.1. Demographic Information Form

Demographic information form was used for gaining necessary demographic information about the participants. Questions regarding age, English proficiency level, and attitudes/ opinions towards writing in L2 were included in the questionnaire.

3.4.2. Corpus (Argumentative Essays)

The topics of argumentative essays were chosen by the researcher from the topics of essays included in found in The Louvain Corpus of Native English Essays (LOCNESS). The researcher chose three topics which are not offensive or too sensitive for Turkish participants as Broome (1993) indicates that intercultural empathy needs to be kept for a healthy communication which cannot take place without considering others' experiences and values. Hence, topics which would also be appropriate for Turkish EFL learners were selected which are 'Euthanasia', 'Feminism' and 'Stereotyped Colors'.

For the Turkish corpus, Turkish participants were asked to write one argumentative essay about one of the given topics. In total, 10 argumentative essays were collected. As for the word count, the researcher requested the participants to write essays consisting of more than 500 words. At the end, a corpus consisting of 5446 words was compiled.

3.4.3. Dynamic Assessment (DA) Sessions

As for DA sessions, no pre-planned mediation was given for interactionist DA group. Mediations emerged from the learner-tutor dialogues in accordance with the learner's ZPD and their level of responsiveness. For example, if a participant struggled with using the transition "However" correctly, the tutor asked, "Can you think of another way to contrast these ideas?" or provide a hint such as, "Look at the relationship between these two sentences, how could you show contrast?". On the other hand, for interventionist DA group, the following fixed mediation pattern from implicit to explicit suggested by Nassaji et al. (2020) was referred.

1. collaboratively reading a problematic section
2. asking if there is anything wrong/missing
3. limiting focus to a problematic part and asking if there is anything wrong/missing
4. indicating that there is something wrong/missing
5. identifying wrong/missing part and explain it

The participants were given mediations from implicit to explicit till they found the correct answer to realize their mistakes. For interventionist DA group, the steps in which participants reached the desirable answer or corrected themselves were noted down. Both interactionist and interventionist DA sessions lasted between 30-40 minutes. As for the language of mediations, students' mother tongue (i.e., Turkish) was preferred as language barrier could hinder the participants responsiveness and activate their affective filters which may have a negative influence on the quality of collected data (Mackey & Gass, 2012).

3.4.4. Semi-structured Interviews

As the last step of data collection period, semi-structured interviews were organized for each participant. They were asked questions regarding their attitudes towards DA sessions to find out whether they thought that the sessions were beneficial for them or in what ways they were beneficial or not. The interviews have also been carried out in the participants' mother tongue in order not to intervene in collected data (Mackey & Gass, 2012).

3.5. Data Analysis

For the analysis of participants' argumentative essays, a corpus-based discourse analysis, a branch of corpus linguistics (CL), was conducted based on two main focuses: i) the type of metadiscourse markers and ii) error types. Corpus linguistics studies are fruitful since they give detailed information about the target lexicogrammatical structure Mackiewicz and Thompson (2016).

In the first place, the type of metadiscourse markers used in the collected essays were analyzed by referring to the metadiscourse framework suggested by Hyland (2005). The metadiscursive categories in the metadiscourse framework of Hyland (2005) (i.e., Logical connectives, frame markers, endophoric markers, evidentials, code glosses, hedges, boosters, attitude markers, relational markers, and personal markers) were coded through the software NVivo 12. The frequencies the metadiscursive categories used by participants both in the first and second drafts have been provided.

Besides, Turkish ELT students' error types (i.e., *overuse, missing marker, wrong marker, punctuation and syntax*) while using metadiscourse markers were also coded through NVivo 12 and presented in frequency tables (see Table 2-3-4-5).

Content analysis was done through the software NVivo 12 for the transcriptions of DA sessions and semi-structured interviews. For DA sessions, participants' level of responsiveness with regard to the mediation they were given was investigated. Moreover, common themes in students' perceptions/attitudes towards DA sessions were identified as for the analysis of the

semi-structured interviews. Common themes have been coded through NVivo 12 and the reached patterns were qualitatively interpreted by the author.

3.6. Reliability

Interrater reliability was calculated in the scope of this study, which is an important aspect to ensure the reliability of the data analysis procedure (Friedman, 2012). To establish reliability, an external coder, who holds both B.A. and M.A. degrees in English language education, was invited to analyze four essays corresponding to 20% of the collected data, which is considered an optimal ratio (Loewen & Philp, 2012).

Prior to the coding process, the external coder was provided with a detailed coding manual. For metadiscourse categories, she was introduced to Hyland's (2005) taxonomy, which was explained in depth to ensure consistent application across texts. Regarding error types, the researcher initially developed a categorization scheme, which was then clearly defined and communicated to the external coder. Specifically, "Overuse" referred to instances when participants employed a metadiscourse marker unnecessarily; "Wrong marker" denoted the use of an inaccurate marker; "Missing marker" captured cases where a marker was omitted although required; "Punctuation" included both unnecessary punctuation and omission errors; and "Syntax" was used when a marker was placed incorrectly within the sentence structure. The external coder was asked to apply these definitions consistently when analyzing the selected essays. Both metadiscursive categories and error types were then re-coded by the external coder according to these guidelines, thereby ensuring procedural transparency and coding validity.

For the types of metadiscourse, all the categories coded by both the author and the external coder matched, resulting in 100% agreement. The agreement ratios between the author and external coder for error types were 100%, 98%, 96%, 100%, and 98% for "Overuse," "Wrong marker," "Missing marker," "Punctuation," and "Syntax," respectively. These results demonstrate a high level of consistency between coders. In line with Mackey and Gass (2005), agreement ratios above 90% are considered ideal, which confirms the reliability of the coding procedure in this study.

4. Findings

Findings of the study are revealed in accordance with the order of research questions. Findings regarding the type of metadiscourse markers and error types of the first drafts are given through tables. The potential impacts of interactionist and interventionist DA are conveyed through excerpts from DA sessions. The difference between the two groups is tabulated based on the type of metadiscourse markers and error types of the second drafts. Lastly, participants' attitudes towards DA sessions are shown through excerpts. Pseudonyms were used to ensure anonymity of the participants (i.e., Ayşe, Buse, Canan, Derya, Ece, Figen, Gül, Hale, İrem, Kemal).

4.1. The Type of Metadiscourse Markers Used by Turkish EFL Learners

Regarding participants' first drafts, whereas some metadiscursive categories were not observed at all, some other categories were frequently observed. The Table 1 shows the numbers of each different metadiscursive category employed by participants.

Table 1. *The Number of Metadiscourse Markers (MDMs) Used by the Participants*

MDMs		A	B	C	D	E	F	G	H	İ	K	Total
Interactive	Logical connectives	8	16	15	12	25	16	15	7	20	7	141
	Frame markers	1	3	6	4	1	3	3	1	5	4	31
	Endophoric markers	0	0	0	0	0	0	0	0	0	0	0
	Evidentials	2	0	1	3	4	3	2	2	3	0	20
	Code glosses	2	3	4	2	3	7	2	1	1	4	29
Interactional	Hedges	1	0	1	0	0	2	1	0	1	2	8
	Boosters	0	1	1	0	0	1	0	0	2	1	6
	Attitude markers	1	3	3	0	0	1	0	3	1	0	12
	Relational markers	0	0	0	0	0	0	0	0	0	0	0
	Personal markers	3	3	8	17	4	7	4	2	6	4	58
TOTAL		18	29	39	38	37	40	27	16	39	22	305

Logical connectives were found to be dominant in participants' first drafts as 46.2% of all metadiscourse markers belonged to that category. Contrarily, no endophoric markers and relational markers were found in participants' essays. Endophoric markers are used to refer to information in the other parts of the text such as tables, figures or previously mentioned studied. However, the reason why endophoric markers were not observed at all may be that the analyzed products are argumentative essays, not research papers in which tables or figures can be included. Likewise, there was no instance of relational markers as well.

4.2. The Type of Errors in Participants' Argumentative Essays

There were 98 mistakes in terms of participants' errors regarding the use of metadiscourse in the first drafts. The types of errors are not equally distributed, which means that some aspects are more challenging than others for students. The Table 2 illustrates participants' error types in their first drafts. The names in bold refer to interactionist DA group.

Table 2. *The Type of Errors in Participants' Argumentative Essays*

Error Types	A	B	C	D	E	F	G	H	İ	K	Total
Wrong marker	1	1	1	0	1	1	2	1	2	3	13
Overuse	1	2	1	0	0	3	1	0	1	1	10
Missing marker	3	1	1	3	5	8	2	4	5	2	34
Punctuation	3	9	2	1	2	6	2	7	6	1	39
Syntax	0	1	0	0	0	1	0	0	0	0	2
TOTAL	8	14	5	4	8	19	7	12	14	7	98

In general, punctuation' was found to be the most prevalent error type when it is proportioned to total number of errors. However, it can be seen that its distribution changes based on the person since it is not the most frequent error type for Elif and Figen, which is not the case for the rest of the participants. Together with punctuation errors, missing marker errors constitute more than half of the total errors. As for the least observed error type, errors regarding 'syntax' were not that common. Only two of the participants made an error related to syntax in their first drafts.

4.3. The impact of Interactionist DA on Students' Acquisition of Metadiscourse Markers

Ayla, Canan, Figen, Gül and İrem were included in interactionist DA group. In this group, no pre-planned mediation pattern was followed. The mediation emerged from the learner-tutor interaction and the mediator was free to give answers to learners' questions as opposed to interventionist DA group. Therefore, the mediations given in interactionist DA group were more flexible than those of interventionist DA group.

In general, it can be argued that there is a decrease in the number of errors in all participants' second drafts. The Table 3 shows the distribution and number of error types in participants second drafts after interactionist DA sessions.

Table 3. *The Type and Number of Errors in Participants' Essays After Interactionist DA Sessions*

Error Types	A	C	F	G	İ	Total
Wrong marker	0	0	2	0	0	2
Overuse	0	0	1	0	0	1
Missing marker	0	2	2	1	0	5
Punctuation	3	0	4	0	2	9
Syntax	0	0	0	0	0	0
TOTAL	3	2	9	1	2	17

In their first drafts, there were 53 mistakes in total. When compared to their first drafts, the number of errors decreased up to 67.9% after interactionist DA sessions. It can be observed that *punctuation* is still the most prevalent type of error. The improvement of students has been presented through the following excerpts taken from interactionist DA sessions. The letter M symbolizes the *Mediator*.

Interactionist DA

Excerpt 1 - #İrem

11. M: Now, I am reading again from there. They think it suits the baby's gender and suppose that it is just a color…One sentence. Actually, two, but independent clauses. I am going on. …, the baby can choose whatever color s/he wants. One more sentence, right? In total, one sentence in the first part, I am counting it as a one sentence. The next part starting with baby is another sentence. How did you connect these two?
12. İ: I just put a comma but… I am not sure.
13. M: Can we connect them through a comma?
14. İ: With commas, it is too loaded, and too long. It looks like an inverted sentence.
15. M: Namely, you cannot connect two independent clauses with a comma in English. If you do this, it is called a run-on sentence, which is a grammatical mistake. If you have two independent clauses and you want to connect them, what should you use?
16. İ: A conjunction?
17. M: Yes, a conjunction.

In interactionist DA sessions, no pre-organized mediation was given to the learners. Instead, learners' attention was tried to be directed to the problematic parts. By asking, "How did you connect these two?', the mediator tries to make İrem realize her own mistake. In line 12, İrem stated that she had used a comma, but she seemed unsure. Then, by asking "Can we connect them through a comma?" the mediator aimed to ensure that the use of comma was a real problem. This aim seemed to be reached as İrem said the sentences were too 'loaded and long' and also looked like 'an inverted sentence' with commas, in line 14. But still, İrem did not offer any alternative usage or solution to that problem which meant that she still needed some help from the mediator. Therefore, the mediator straightly explained why the use of a comma was wrong there and asked for any other ways to connect two independent sentences. At that point, İrem started to think about alternative options and came up with the response which was 'conjunctions', the desired answer. In brief, it can be stated that DA functioned as a diagnostic tool in this excerpt as İrem was able to realize that she had experiencing problems regarding punctuation and transition between sentences.

Excerpt 2 - #Gül

23. M: According to an empirical study; more than 70% of…. Now, I want you to look at the punctuation mark that you used over here. Is that correct?
24. G: Semi-colon?
25. M: Yes. Why did you use that? Is it because you gave an explanation?
26. G: Yes. And... I felt that I used commas too much.
27. M: Do not worry. You can use as many commas as possible when necessary. Because the word is 'according to' over there…
28. G: I used semi colon because there is an explanation after 'according to'.
29. M: Is that an explanation? Is that the explanation of a word or term?
30. G: Actually, no. Yes, it is not like the explanation of something.
31. M: or is it the declaration of the result of the experiment?
32. G: Yes. It is the result.
33. M: So, semi colon…
34. G: It should be comma.

In Excerpt 2, the learner's problem is again about punctuation of metadiscourse markers. The mediator constantly tried to make Gül realized that she made a mistake by using a semi colon. In line 27, the mediator tried to emphasize that no commas are used after the phrase 'according to'. In the following line, Gül tried to defend her point of view by stating that there was an explanation after the phrase 'according to'. Therefore, it was diagnosed that she was capable of using the right punctuation marks if she had not assumed that the rest of the sentence was an explanation. The mediator told her that it was not an explanation, instead, it was just the presentation of the results of the study. After this, it can be observed that Gül made a self-correction in line 34.

4.4. The Impact of Interventionist DA on Students' Acquisition of Metadiscourse Markers

Buse, Derya, Ece, Hale and Kemal were the ones who were in interactionist DA group. In interventionist DA sessions, there was a pre-planned mediation pattern to be followed. The mediations were given from explicit to implicit in line with the learner's level of responsiveness.

It can be stated that there is again decrease in the number of errors in all participants' second drafts just like it happened in interactionist DA group. The Table 4 shows the distribution and number of error types in participants second drafts after interventionist DA sessions.

Table 4. *The Type and Number of Errors in Participants' Essays After Interventionist DA Sessions*

Error Types	B	D	E	H	K	Total
Wrong marker	0	0	1	0	0	1
Overuse	0	0	0	0	0	0
Missing marker	2	2	5	0	0	9
Punctuation	1	1	2	0	0	4
Structure	1	0	0	0	0	1
TOTAL	4	3	8	0	0	15

In their first drafts, there were 45 mistakes in total. When compared to their first drafts, the number of errors went down to 66.7% after interventionist DA sessions. It seems that 'missing marker' is the most common type of error in the second drafts. The improvement in learners' writing performance has been demonstrated through the following excerpts taken from interventionists DA sessions.

Interventionist DA

Excerpt 3 - #Buse

4.M: Can you look at the sentence starting with "however"? Let's read it together. (Reading the problematic part) However, euthanasia is legalized in some countries. So, the real question is… (1st step)
5.B: (++)
6.M: Do you see any mistake here? Anything problematic? (2nd step)
7.B: (++) Not really.
8.M: Especially concerning the use of the conjunction. (3rd step)
9.B: I cannot recognize.
10.M: Do we use 'so' like this? There is a problem with the use of 'so' over there. (4th step)
11.B: *(Seems conflicted)*
12.M: We cannot use 'so' without a comma. You should put a comma after that. (5th step)
13.B: Ok. I got it.
After 13 minutes…
14.M: Can you look at here? (Reading the problematic part together with Buse) Hence euthanasia seems much more sensible. (1st step)
15.B: Comma…Again, there is no comma. (Correct answer)
16.M: Super! You have this completely down cold.

As opposed to interactionist DA, there was a pre-planned mediation pattern for interventionist DA sessions. The mediator gave mediations from implicit to explicit depending on the participants' responsiveness level. In Excerpt 3, it can be seen that the mediator had to give mediation up to 5th step which was the most explicit one because the participant did not show any remarkable responsiveness. However, it is apparent that when she got familiar with the feedback pattern, she showed a more active responsiveness and reached the correct answer more easily without even going to the second step.

Excerpt 4 - #Kemal

6. M: Let's read this part together. (Reading the problematic part together with Kemal) Accepting some colors for boys and doing the same thing for girls can affect their mental development. Babies can comprehend what is going on around them. (1st step)
7. M: (++)
8. M: Do you see any problem here, in this part? (2nd step)
9. I should have connected them. Right? (Correct answer)
10. Yes, exactly.

In Excerpt 3, Buse developed some kind of familiarity towards the fixed pattern of mediations and her responsiveness level gradually increased as the session went on. On the other hand, Kemal seemed much more responsive to the interventionist DA mediations even though he was not familiar with them since he could reach the desired answer or correct himself in the very first steps of mediations in Excerpt 4. This may be related to participants' own competence and background knowledge regarding writing in L2. Interestingly, some participants (e.g., Kemal) responded correctly at early steps of the mediation sequence, despite not being familiar with the pre-planned prompts. This unexpected responsiveness suggests that individual differences in prior writing knowledge may influence the effectiveness of interventionist DA

4.5. The Comparison between Interventionist and Interactionist DA in terms of the Use of Metadiscourse Markers

As a preliminary result, it can be stated that both types of dynamic assessment have improved participants' use of metadiscourse markers in their argumentative essays. The Table 5 shows

the type and number of errors made by participants in their second drafts after DA sessions. The names in bold refer to the interactionist DA group.

Table 5. *The Type and Number of Errors Made by Participants in Their Second Drafts*

Error Types	A	B	C	D	E	F	G	H	İ	K	Total
Wrong marker	0	0	0	0	1	2	0	0	0	0	4
Overuse	0	0	0	0	0	1	0	0	0	0	2
Missing marker	0	2	2	2	5	2	1	0	0	0	17
Punctuation	3	1	0	1	2	4	0	0	0	2	13
Structure	0	1	0	0	0	0	0	0	0	0	1
TOTAL	3	4	2	3	8	9	1	0	0	2	32

In total participants' mistakes decreased to 67.4% after both interactionist and interventionist DA sessions as there were 98 mistakes in all of the first drafts. While 53.1% of this decrease came from interactionist DA group, 46.8% of it belonged to interventionist group (i.e., the names in bold). Thus, it can be stated that interactionist DA has a slightly more positive impact on the participants' use of metadiscourse markers although it was not a big difference. An unanticipated finding was that, although interactionist DA overall led to slightly higher error reduction, some learners in the interventionist group exhibited faster correction of specific errors than peers in the interactionist group. This indicates that the fixed mediation pattern can be immediately effective for learners with certain prior competencies.

When it comes to the type of metadiscourse markers used in the second drafts after DA sessions, it can be concluded that there is an increase up to 12.7% in the number of metadiscourse markers used by the participants. It was revealed that logical connectives were the most frequently employed category, with a total of 172 instances. Frame markers (*n*=35) and code glosses (*n*=38) were used to a lesser extent, while no instances of endophoric or relational markers were observed in any participant's essay. Evidentials were detected but sparsely distributed (*n*=27), which signals restricted citation or source integration skills. Regarding interactional resources, personal markers (*n*=44) were the most frequently used, which indicates a moderate level of authorial presence. Hedges (*n*=11), boosters (*n*=8), and attitude markers (*n*=14) were employed more selectively. Overall, the total number of metadiscourse markers was 349, with the highest contributions from participants E and F, which reflected varied levels of metadiscursive competence and development across individuals.

4.6. The Participants' Perceptions about DA Implementation

The participants were included in a semi-structured interview after DA sessions had been completed. Their answers were analyzed through content analysis and common patterns were detected.

4.6.1. Awareness of Mistakes

The majority of participants stated that they were ignoring punctuation, or they thought that they had no problem with punctuation. However, they said that they realized the fact that punctuation was, indeed, an important aspect of writing, especially while using MDMs. Therefore, punctuation also needs attention just like any other components of writing in L2.

Some of the participants stated that they had no idea regarding the possibility of using MDMs as parenthetical sentences, which was something they recognized during DA sessions.

Furthermore, six of the participants stated that they tended to use MDMs almost in every sentence in an essay and they learned that it was a mistake called 'overuse'.

Lastly, more than half of the participants pointed out that they were repeatedly using the same conjunctions. They realized that they needed to diversify their use of conjunctions after DA sessions.

4.6.2. The Implicit Nature of Mediations

In both DA sessions, mediations started from implicit, and they gradually became explicit. The only difference between interventionist and interactionist DA was that there was a fixed mediation pattern in the former one while it was not the case for the latter. The implicit nature of mediation was appreciated by all of the participants as they particularly emphasized this issue. As Ece says:

> *"It is better for me to find my mistakes on my own rather than being explicitly stated by someone else. This is what you did in the DA session as you tried to make me find my own mistake by giving some prompts. In this case, the chance of repeating the same mistake decreases as I remember the time when I found my own mistake because I made an effort to recognize it. That really works."*

Likewise, Kemal posits another point of view:

> *"When the teacher guides me, I monitor myself in my mind and it develops my self-evaluation skills and make me remember things more easily."*

In brief, it can be stated that all participants made use of the implicit nature of mediations given in both DA sessions.

4.6.3. The Knowledge of Metadiscourse Markers

Participants stated that they realized and learned some aspects related to MDMs after DA sessions. For instance, they stated that they learned a variety of different metadiscourse markers when they were given mediations regarding transitions between sentences. Those mediations encouraged them to find different transition words.

Besides, participants pointed out that they had the chance to see the fact that MDMs could be used a variety of places within a sentence in terms of syntax. Most of them stated that they assumed most MDMs could only be used in the beginning of sentences, which was not the case in reality.

5. Discussion, Conclusion, and Suggestions

This study set out to investigate the comparative effects of interactionist and interventionist dynamic assessment on Turkish EFL learners' use of metadiscourse markers in argumentative writing. Drawing on Hyland's (2005) framework, the analysis focused on both the frequency and accuracy of metadiscourse use before and after DA sessions. The findings provide insight into how different mediation approaches influence learners' rhetorical choices and writing development. In this section, the results are interpreted in light of existing literature, with emphasis on their pedagogical relevance and theoretical implications.

5.1. Discussion

Regarding the first and second research questions, participants' use of metadiscourse markers (MDMs) showed a predominance of interactive markers over interactional ones. In their first drafts, 72.4% of MDMs were interactive and 27.6% were interactional, whereas in the second drafts the proportion of interactive MDMs increased to 77.1%, and interactional decreased to 22.9%. This pattern partly contrasts with Gholami et al. (2014), who reported an almost equal distribution of textual (interactive) and interpersonal (interactional) markers. In terms of errors, participants' mistakes accounted for 32.13% of MDM usage in the first drafts, decreasing to 9.16% in the second drafts. While this is parallel with the findings (28.1%) of the study conducted by Gholami et al. (2014), the distribution of error types differed: overuse errors in the current study were lower (10.2% vs. 6.25%) whereas punctuation errors were higher (e.g.,

40%) compared to their study (<20%). These unexpected findings suggest that L2 punctuation, particularly in MDM contexts, remains a persistent challenge, highlighting the need for targeted mediation in this area.

The present study confirms prior evidence that dynamic assessment (DA) can positively influence learners' acquisition of MDMs. Consistent with Taghizadeh (2017), feedback, whether from the teacher or peers, enhanced participants' awareness and correct usage of transition markers, frame markers, code glosses, hedges, and boosters. Both interactionist and interventionist DA sessions resulted in decreased errors and increased MDM frequency, demonstrating the efficacy of scaffolded support tailored to learners' ZPDs. In particular, interactionist DA appeared slightly more effective, likely due to its flexible, dialogic nature that allows learners to actively engage in writing and self-correction.

In the Turkish context, previous studies also support the value of interactionist DA. Ulu (2020) reported significant gains in learners' accurate use of interactive MDMs after interactionist DA, a pattern mirrored in the current study. Similarly, Rahimi et al. (2015), along with recent research by Kushki et al. (2022) and Nouri (2023), emphasized that interactionist DA promotes active cognitive engagement and longer-term improvements in writing skills. These findings suggest that flexible mediation not only enhances immediate error correction but may also contribute to learners' self-regulation and autonomous learning in L2 writing.

Comparing the two DA approaches, the current study confirms the findings of the study conducted by Nassaji et al. (2020), who argued that interactionist DA offers a more nuanced understanding of learners' ZPDs than interventionist DA. In this study, learners reported that interactionist DA felt more conversational, reduced anxiety, and encouraged self-monitoring. Interventionist DA was also beneficial, particularly for students with less familiarity with MDMs, yet it followed a fixed pattern that limited immediate responsiveness. Variations in individual responsiveness, as seen with participants Buse and Kemal, highlight that learners' prior competence and background knowledge mediate the effectiveness of DA interventions. Therefore, while both approaches improved MDM use, interactionist DA's dialogic and adaptive nature likely accounts for its slightly greater impact.

Learner feedback collected through semi-structured interviews provided critical insights into interpretation and practical implications. Participants indicated increased awareness of punctuation, overuse, and syntactic placement of MDMs. Many realized that MDMs can appear in various sentence positions, rather than only at sentence beginnings. They also recognized the value of implicit, scaffolded mediation, suggesting that DA fosters not only corrective outcomes but also reflective writing practices. These insights reinforce the pedagogical significance of incorporating both flexible and structured DA in L2 writing instruction while attending to individual learner needs.

5.2. Conclusion

In the scope of the current study, both types of dynamic assessment (DA) sessions were effective in improving students' use of metadiscourse markers (MDMs) in their argumentative essays. Across both interactionist and interventionist DA groups, participants did not use endophoric or relational markers, likely due to the genre of the text. The most common errors were punctuation and missing markers, which are the areas that require focused attention in writing instruction. Overall, DA sessions increased the number of correctly used MDMs while reducing errors. Interactionist DA yielded slightly greater improvements, as learners received more flexible, context-sensitive mediations, which allows them to actively identify and correct their mistakes. Interventionist DA was also beneficial, especially in directing learners' attention to problematic areas and guiding them toward correct usage, although the fixed mediation sequence limited immediate responsiveness.

Participants reported positive attitudes toward the DA sessions. They emphasized that implicit, scaffolded feedback encouraged self-monitoring, enhanced awareness of punctuation and MDM usage, and supported retention of correct forms for future writing. Furthermore, learners expressed increased motivation to explore MDMs and experiment with their syntactic placement within sentences.

Some limitations of the study should be acknowledged. The small sample size and purposive selection of lower-proficiency students limit the generalizability of the findings. Additionally, the focus on argumentative essays may not fully capture the range of contexts in which MDMs occur. Individual differences, such as writing motivation or prior exposure to English texts, might also have influenced outcomes. Future research could address these limitations by including larger, more diverse samples and examining DA effects across multiple genres and proficiency levels. Based on the findings, several practical recommendations can be offered:

1. Teachers should incorporate both interactionist and interventionist DA strategies, adapting mediation based on students' responsiveness and proficiency levels.

2. Explicit attention to punctuation and missing markers is crucial, as these remain persistent challenges for L2 writers.

3. Encouraging learners to engage in self-correction through implicit mediations can enhance autonomy, metacognitive awareness, and long-term retention.

4. Integrating MDM instruction across different genres can help learners generalize their knowledge beyond argumentative writing.

In conclusion, DA serves as a powerful tool for developing L2 learners' metadiscursive competence. Flexible, responsive mediation not only improves accuracy but also fosters reflective writing practices, self-regulation, and motivation, which provides meaningful implications for EFL instruction in higher education contexts.

5.3. Pedagogical Implications

The diagnostic nature of dynamic assessment (DA) makes it a powerful tool not only for evaluating students' performance but also for actively promoting learning (Antón, 2018). In particular, DA can be effectively integrated into the teaching of metadiscourse markers (MDMs), which are essential for EFL learners to structure paragraphs and maintain reader-friendly texts in L2 writing. By providing tailored, scaffolded feedback, DA helps learners identify and correct their mistakes in real time, enhancing both their writing accuracy and self-regulatory skills. DA also mitigates the negative washback often associated with traditional assessment methods. As shown in this study, students felt more comfortable when engaged in interactive dialogues with their teacher, reducing affective filters and encouraging reflective learning. Moreover, because DA does not rely on numerical scores, learners can focus on individual progress rather than exam performance, fostering intrinsic motivation and sustained engagement.

For classroom integration, teachers can adopt several strategies to effectively implement dynamic assessment. They can provide flexible, responsive mediation by guiding learners through problematic metadiscourse marker usage with prompts that gradually move from implicit to explicit feedback. Peer-assisted DA can also be encouraged, allowing students to engage in collaborative problem-solving in pairs or small groups, which promotes interaction and discussion of metadiscursive choices. Additionally, genre-based scaffolding can be applied by incorporating DA activities across different writing genres, such as argumentative, narrative, or descriptive essays, to help learners generalize their use of metadiscourse markers. Finally,

progressive self-monitoring activities can be designed to enable learners to track their own errors and corrections over time, fostering autonomy and enhancing metacognitive awareness.

Future research can extend these findings by exploring DA's effects across other language skills such as speaking, listening, reading, or grammar. For instance, Ädel's (2010) metadiscourse framework could guide DA-based interventions for speaking, while Hyland's (2005) framework remains suitable for written corpora. Studies could also examine diverse learner populations, proficiency levels, and educational contexts to validate and broaden the applicability of DA in EFL instruction.

Finally, potential challenges in implementing DA, such as increased time requirements or the need for teacher training in scaffolding techniques, can be addressed through careful curriculum design, structured training programs, and gradual integration into existing courses. Overall, incorporating DA into EFL instruction offers a practical, learner-centered approach to improving metadiscursive competence and fostering more effective, autonomous writers.

Ethics Committee Approval

This research was conducted with the permission obtained by the Hacettepe University Social and Human Sciences Research Ethics Committee dated 11/01/2022 and numbered E-66777842-300-00003203804.

Conflict of Interest

The authors declare that they have no conflict of interest.

Author Contribution

Cansu Aykut Kolay: *Designing and writing the study, analyzing the data, reporting the results.*
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