

# Metadiscourse Matters: Definitions, Models, and Advantages for ESL/EFL Writing

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## ABSTRACT

Metadiscourse (MD) has emerged as a central concept in understanding how writers organize ideas, engage with readers, and construct meaning beyond the propositional content of texts. Rooted in discourse analysis, MD refers to the linguistic devices that help guide readers through a text, highlight the writer's stance, and signal the intended interaction between writer and audience. This paper explores the multiple dimensions of MD by first clarifying its definitions and theoretical foundations. It then examines influential models, particularly Hyland's (2005) interactive and interactional framework, which has been widely adopted in academic writing research. The discussion highlights how these models provide a systematic lens for analysing writing practices and understanding how writers manage coherence, persuasion, and engagement. Special attention is given to the role of MD in English as a Second Language (ESL) and English for Foreign Language (EFL) contexts, where learners often struggle with producing texts that are both linguistically accurate and rhetorically effective. The paper argues that explicit awareness and instruction of MD markers can significantly enhance ESL learners' ability to produce clear, organized, and reader-friendly writing. Ultimately, this study underscores the importance of MD as both a theoretical construct and a practical pedagogical tool in advancing ESL learners' academic literacy.

**Keywords:** ESL writing, Metadiscourse advantages, Metadiscourse definition, Metadiscourse model

## INTRODUCTION

Metadiscourse (MD) is an interesting area of study that is thought to be important for organising and making speeches and writing. MD is the idea that writing, and speech are about more than just getting ideas across and showing what they mean. Instead, they require interaction between writers, readers, speakers, and viewers.

Writing is an important part of learning a language and is one of the most important tasks they have. ESL learners know that writing is a great skill that is harder to master than speaking (Marandi, 2002). This point is supported by the fact that most people who speak a language as their first language don't find it easy to write in that language. For both L1 and L2 learners, it is important to learn how to write well and to practise it in different types of writing. ESL learners must write papers and theses in English, and their writing skills are usually judged throughout their academic careers. So, it is the job of teachers to teach learners the patterns of information and the rules for writing texts.

MD in written and spoken texts helps writers and viewers understand how important it is. Emphasising MD in the classroom can also help in a number of ways, such as: providing a context for propositional information (Mohamed et al., 2021); increasing persuasiveness; improving understanding and recall (Ekawati and Rosyidah, 2022); supporting coherence and making clear connections between issues; and making readers aware of how truth is subjectively interpreted; showing the writer's attitudes towards the reader and the text, and his attempts to relieve. So, MD does play an important part in the life of a student.

## Problem Statement

It was discovered that ESL or EFL learners had several difficulties employing MD markers. Previous research studies (Asghar, 2015; Mu et al., 2015; Lu, 2011; Dafouz-Milne, 2008; Hyland, 1999; Mohamed et al., 2021) also revealed that learners have limited knowledge of MD markers, in which they preferred to use familiar MD markers like Transition Markers (*in addition, however, but, thus, and etc.*) in their writings. Furthermore, the previous research by Mohamed et al. (2021) and Lee and Deakin (2016) discovered a larger use of MD markers created by good essays. This case may be related to learners' writing performance, as employing the more MD markers used in writing may affect the ESL or EFL student's writing performance.

At the same time, these learners used fewer communicative interactions in their writings (Lo et al, 2020; Mohamed et al, 2021), indicating that the use of MD communicative interactions such as self-mentions (*I, me, mine*) and engagement markers (*we, our*) shows a lower percentage than organisational MD such as hedges, transitional markers, boosters, and so on. According to prior research by Ho and Li (2018) and Lee and Deakin (2016), this problem may arise because ESL or EFL writers in universities have less experience with academic writing. Furthermore, ESL authors, particularly undergraduates, frequently struggle with using MD markers in their writing. Many of them do not correctly apply MD markers in their essay writing (Mohamed et al., 2021) since MD has never been directly taught to undergraduate students as a subject, therefore, this may contribute to a lack of knowledge of MD roles in effective writing (Mohd Noor & Mohamed Alam, 2017). Therefore, this paper aims to discuss the followings objectives:

## Objectives

1. To define the term of MD from the previous researchers.
2. To explore the models of MD.
3. To determine the advantages of implementing MD in ESL or EFL writings.

## Product Description & Methodology

This study discusses about the MD thoroughly from the aspects of its definition from early 1990s until the current 2000s by famous linguists such as Harris (1959), Vande Kopple (1985), Crismore (1983), Williams (1981) and many more. Next, this study explores the models of MD developed by the past influential researchers like Vande Kopple (1985), Crismore et al. (1993) and Hyland (2005). Lastly, this study revealed the benefits of MD implementation in ESL or EFL writing found by the current studies of MD.

## Potential Findings and Commercialisation

### Definitions of Metadiscourse (MD)

In the early 1990s, MD studies acquired prominence among other revolutionary perspectives. These new perspectives were in opposition to Vande Kopple's (2002) significant emphasis on propositional meaning in text analysis. MD arose as an alternative to more conventional perspectives that viewed language as merely a propositional and expository medium. The term 'metadiscourse' was firstly coined by Harris (1959) to describe textual elements that lacked essential information but commented on information-bearing portions of a text. Researchers such as Williams (1983), VandeKopple (1985), Crismore (1989), and Hyland (2005) have further elaborated and investigated the concept of MD. It has also been referred to as a self-referentiality technique (Ventola & Mauranen, 1991) and a pre-revealing characteristic or metamessage (Johns, 1997). It has also been identified as meta language (Lyons, 1977), non-topical linguistic material (Lautamatti, 1978), meta talk (Schriffin, 1980), discourse about discourse or communication about communication (Vande Kopple, 1985), and 'signaling devices' (Crismore, 2004), among many other definitions. MD is a commonly used term in contemporary discourse analysis and English for Academic Purposes, but it has not always represented the same concept. MD elements have traditionally been divided into textual and interpersonal categories. Early on in its development, MD was envisaged as a means for writers to assist their intended audience in forming their

perception of a text (Harris, 1959). At that time, MD was still beyond the scope of discourse analysis, and its influence was limited.

Beginning in the 1980s, however, the term MD and its concepts have received a growing amount of scientific attention and have been expanded upon in a few seminal works. As an illustration, Williams ([1981] 1990: 40) defined MD as "the language we use when, in writing about some topic, we refer incidentally to the act and context of writing about it." Williams ([1981] 1990) acknowledged that MD is not the primary aspect we refer to in writing; however, the prevalence of MD in language and its significance in written discourse emphasised role, connection, and security statements. Crismore (1983) initially advocated for a closer look at the MD level, as opposed to focusing solely on the primary discourse, or propositional content of the text. She subsequently reviewed her prior research on MD and related topics. She concludes that the appropriate use of MD can assist authors in guiding readers through texts by assisting them in comprehending text structure and author's beliefs. She highlighted the significance of discourse. On the other hand, she reminded readers that excessive and inappropriate use of MD could hinder their comprehension of the text.

Vande Kopple's (1985) influential work provided a firm foundation for conceptualising MD. By referencing Williams' notions ([1981] 1990), Vande Kopple differentiates between two MD levels. At the first level, the author provides background information and expands on the proposition's content. In contrast, at the second level, the author "does not add propositional material, but assists the reader in organising, classifying, and evaluating" (Vande Kopple, 1985:83). Vande Kopple (1985) connected his theory of MD to Halliday's (1973) three metafunctions of language: the ideational metafunction, the interpersonal metafunction, and the textual metafunction, in which the primary discourse (or propositional content) is the ideal way to convey meaning and MD interpersonally or textually. Vande Kopple's central argument is that MD, in a textual and interpersonal sense, significantly influences the interactions between writers, readers, and texts.

In contrast, Mauranen (1993b), an influential researcher in the discipline, identifies MD differently. It is evident that the term "textual reflexivity" also refers to MD, which she employs. It is solely concerned with the connection between reader and text. On the aspect of text composition, rather than author-reader interaction. Following the publication of two influential monographs, Hyland (2005a) and Ädel (2006), the field of MD experienced a significant growth in the twenty-first century. The primary contributions of these two publications have been to provide a clear and systematic explanation of the concept of MD as well as an innovative corpus-based approach to MD.

Hyland's definition places greater emphasis on the interpersonal aspects of MD, emulating Vande Kopple's (1985) emphasis on author-reader interaction. The aristocratic definition, on the other hand, is text-centric and thus conceptually more closely related to Mauranen's (1993b) textual reflexivity. However, according to Ädel's definition, the phenomenon of MD encompasses "his two very important elements of the writing context: the writer and the reader." (Ädel, 2006:178) and transforms our comprehension of MD derived from solely metatextual aspects. This theoretical position also leads to new MD models.

Based on the definitions provided above, we can infer that MD is a useful but difficult-to-define concept (Dahl, 2004). This concept makes sense since it explains how communication works. However, defining what constitutes MD is challenging. There is an obvious conceptual distinction at this point. According to Ädel & Mauranen (2010), two distinct strands can be recognised. One uses a tighter definition, while the other uses a broader definition. The restricted definition proposed by Mauranen (1993b) and Ädel (2006) bases conceptualising MD on linguistic reflexivity (i.e., introspective use of discourse). Meanwhile, Williams ([1981] 1990), Vande Kopple (1985), Crismore et al. (1993), and Hyland (2005a), among others, emphasise the connection between writers and readers.

Recently, in years 2000s the definition of MD by Hyland (2005a) is acceptable and widely used by recent researchers as well as the authors of this paper. Referring to Hyland, MD is a way how the writers of the essay convey their ideas and also communicate with the potential readers of the essays, in which making the essay becomes more coherent and cohesive.

## MD Models

If MD pervades communication and exists on a different level than propositional content, then there should be a variety of linguistic resources that represent and realise MD. This begs the question of what role MD can have in writing. Similarly, to varied definitions of MD, functional taxonomies of MD resources vary according to researchers' theoretical assumptions.

There have been several suggested MD taxonomies (Crismore, 1989; Vande Kopple, 1985, 2002; Hyland, 2005; Adel, 2006). The taxonomies shown in Tables 1–4 show a possible fine-tuning as time passes. Vande kopple (1985) proposed the initial model (Table 1). He distinguished two types of MD: "textual" and "interpersonal." Textual MD was composed of four strategies: text connectives, code glosses, illocution markers, and narrators, whereas interpersonal MD was composed of three strategies: validity markers, attitude markers, and commentary. Vande Kopple's model was particularly significant since it was the first systematic attempt to create a taxonomy, which sparked several practical research and gave rise to various taxonomies. However, the classifications are hazy and functionally overlap. Citation, for example, can be used to strengthen an argument by claiming the endorsement of an authoritative third party (validity markers). They can also be used to show where the information came from (narrators) (Hyland, 2005).

Table 1 Taxonomy of metadiscourse by Vande Kopple (1985)

| Textual Metadiscourse                                                                                                                            | Interpersonal Metadiscourse                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Text connectives (sequence indicators; logical or temporal relationship indicators; reminders; announcements; topicalizes)<br>2. Code glosses | 1. Illocution markers<br>2. Validity markers (hedges; emphatics; attributors)<br>3. Narrators<br>4. Attitude markers<br>5. Commentaries (moods, views, or reaction; recommendation; expectation; relationship) |

Crismore et al. (1993) introduced the revised model (Table.2). The two basic categories, textual and interpersonal, were retained, but the subclasses were collapsed, split, and reorganised. In an attempt to separate organisational and evaluative roles, the textual MD was further separated into two categories of "textual" and "interpretive" markers. Textual markers are traits that help organise the discourse, whereas interpretive markers help readers better interpret and understand the writer's meaning and writing tactics (Crismore et al., 1993).

Table 2 Revised taxonomy of metadiscourse by Crismore et al. (1993)

| Textual Metadiscourse                                                                                                                                        | Interpersonal Metadiscourse                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| 1. Textual markers (logical connectives; sequencers; reminders; topicalizers)<br>2. Interpretative markers (code glosses; illocution markers; announcements) | 1. Hedges<br>2. Certainty markers<br>3. Attributors<br>4. Attitude markers<br>5. Commentary |

Hyland's (2005) model, on the other hand, is divided into two major categories: "interactive" and "interactional." This model borrows heavily from Thompson and Thetela's (1995) approach, but it broadens its scope by integrating stance and engagement markers. The interactive component of MD is concerned with the writer's awareness of his receiver and his efforts to suit his interests and wants, as well as to make the argument agreeable to him. The interactive resources help the writer to organise propositional content to make it intelligible. These features are transition markers, frame markers, endophoric markers, code glosses and evidential. The interactional component, on the other hand, is concerned with the writer's attempts to make his points clear and to involve the reader by anticipating his objections and replies to the text (Hyland, 2005). The resources that allow for this are self-mention, hedges, boosters, attitude markers and engagement markers.

Table 3 Metadiscourse Model by Hyland (2005)

| Category                  | Function                                     | Examples                                                                                                   |
|---------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <b>Interactive</b>        | Help to guide the reader through the text    |                                                                                                            |
| <b>Transition Markers</b> | Express relations between main clauses       | In addition, but, thus, and, because                                                                       |
| <b>Frame Markers</b>      | Refer to discourse acts, sequences or stages | Finally, to conclude, my purpose is                                                                        |
| <b>Endophoric Markers</b> | Refer to information in other parts of texts | (in) (this) Chapter; see Section X, Figure X, page X; as noted earlier                                     |
| <b>Evidentials</b>        | Refer to the information from other texts    | (to) quote X, according to X                                                                               |
| <b>Code Glosses</b>       | Elaborate propositional meanings             | called, defined as, e.g., in other words, specifically                                                     |
| <b>Interactional</b>      | Involve the reader in the text               |                                                                                                            |
| <b>Hedges</b>             | Withhold commitment and open dialogue        | Apparently, assume, doubt, estimate, from my perspective, in most cases, in my opinion, probably, suggests |
| <b>Boosters</b>           | Emphasize certainty or close dialogue        | Beyond doubt, clearly, definitely, we found, we proved, it is an established fact.                         |
| <b>Attitude Markers</b>   | Express writer's attitude or proposition     | I agree, I am amazed, appropriate, correctly, dramatic, hopefully, unfortunately.                          |
| <b>Self-mentions</b>      | Explicit reference to authors                | I, we, the author                                                                                          |
| <b>Engagement Markers</b> | Explicitly build relationship with reader    | We, our (inclusive), imperative mood.                                                                      |

The Hyland's (2005) interpersonal model is described as a "more theoretically robust and analytically reliable model of MD" (Hyland, 2005a: 37) among the models examined thus far. So far, it has been widely adopted by numerous studies (Abdi, 2002; Heng and Tan, 2010; Ariannejad et. al, 2019; Lotfi et. al, 2019; Mat Zali et al, 2019, 2024; Zali et al, 2020; Shafqat et al, 2020; Rahmat et al, 2020; Zahro et al, 2021; Lo et al, 2021; Ekawati and Rosyidah, 2022; Goltaji and Hooshmand, 2022.).



Advantages of Implementing MD to ESL or EFL Writings from the Lens of Past Studies Hyland (2005) says that there are three main reasons why students should learn MD markers. First, they can figure out how texts ask readers to use their thinking and how that can help them with their writing tasks. Second, it gives them a lot of ways to stand up for their ideas. Third, it lets them talk with their readers about where they stand. Even though MD is not formally taught in ESL classroom, some researchers have underlined the importance of MD for ESL or EFL learners. Therefore, there are a few studies conducted by the past researchers to highlight the importance of MD instruction in ESL or EFL writing.

Currently, Shafqat et al. (2020) have conducted a corpus analysis of MD markers used in argumentative essays by Pakistani undergraduates. The study was done to identify the types of MD markers and the highest and lowest number of frequencies of MD markers in argumentative essays. The findings revealed that the use of interactive MD markers was higher than interactional markers. The highest MD features used is transition markers meanwhile the least is endophoric markers. This study emphasises the significance of MD devices in learning and teaching writing skills in the context of English Language Teaching (ELT) and helps to clarify the norm of discourse markers. By having this information, students can improve their writing skills and produce more coherent and effective writings.

Mohamed et al. (2021) have done a MD study on 195 good persuasive essays produced by Malaysian undergraduate writers. The study looked on the frequencies of MD markers use in both organisational and interpersonal discourse markers in good undergraduate writers' essays. The findings showed that the undergraduate students use more organisational discourse markers. Meanwhile, the use of interpersonal discourse markers in the corpus is lower because it involves customs the writer interacts with the readers by attracting them into the discussion in the text. In this case, these inexperienced undergraduates would use fewer hedges. The study indicates that understanding MD and its application will make undergraduate writers more aware of its value in assisting readers in the text by clearly communicating their ideas and messages. As a result, the message represented in the writing is easily understood by the readers.

Furthermore, a study has been demonstrated by Ekawati and Rosyidah (2022) to look on MD markers in English essays written by Indonesian students in EFL setting. The study aimed to identify and explain interactive and interactional MD markers used by male and female students and their roles in the essays. The results showed that each gender utilizes interactive MD markers in the essays that consist of transitions, frame markers, and code glosses, while interactional MD markers consist of hedges, boosters, attitude markers, self-mention, and engagement markers. Besides that, male writers tend to use MD markers lower than female writers, but they use similar pattern of the markers. Only for self-mention items that is used higher by male writers. The study suggests that the utilisation of MD markers plays an important part in the process of organising and generating written essays for the purpose of accomplishing a variety of communicative goals.

Pham (2024) examined ESL students' source-based writing by comparing higher- and lower-rated essays using computational analysis to identify MD marker patterns. The study found that higher-rated essays employed a wider variety of MD devices, improving coherence and reader engagement. While both groups favoured imperative directives for direct reader interaction, higher-rated essays more effectively utilized hedges, boosters, and self-mentions to modulate certainty and integrate sources. Conversely, excessive self-mentions in lower-rated essays suggested difficulties in synthesizing source material. The findings underscore MD's role in enhancing L2 writing quality, offering pedagogical insights and avenues for further research.

Reyes et al. (2024) have conducted a study on selected writing sample of eight students enrolled in social sciences and humanities programs at a Chilean university who participated in a three-year study to analyse the emergence of voice and positioning. The results show that almost all types of MD studied increase or become more refined over time, but few do so in a statistically significant way. This study highlighted the importance of teaching MD as a way to enhance learners' understanding of language use and support increased control and personal expression in academic writing.

Thus, the past studies show that teaching MD is crucial in ESL or EFL writing instruction because it directly enhances the quality, coherence, and persuasiveness of student writing. Research across diverse contexts (Pakistan, Malaysia, Indonesia, and Chile) consistently shows that a command of MD markers allows writers to better organize their texts (interactive markers) and effectively engage with their readers (interactional markers). Specifically, MD instruction helps students to improve their textual coherence (Mohamed et al., 2021), for example it teaches students how to use transitions and other interactive devices to structure their arguments logically, making their writing easier to follow. Next, it helps students to enhance reader engagement which it empowers writers to guide readers through their text, signal their stance, modulate certainty with hedges and boosters, and create a more persuasive and interactive experience (Ekawati and Rosyidah, 2022). Furthermore, MD instruction in writing can help to develop student's authorial voice and positioning. As seen in the longitudinal study by Reyes et al. (2024), MD mastery supports learners in developing a more refined and confident academic voice, allowing for greater personal expression and control over their messages. Lastly, it is crucial to insert MD instruction in ESL or EFL writing to help the learners to produce higher-rated writing (Pham, 2024) since studies indicate that higher-quality essays are characterized by a more sophisticated and varied use of MD, particularly in integrating sources and interacting with the reader effectively. In conclusion, explicit MD instruction moves beyond grammar and vocabulary to provide ESL or EFL learners with the essential rhetorical tools to communicate their ideas clearly, coherently, and persuasively, ultimately leading to more successful academic writing.

### Teaching Protocol & Rubrics

As aligned to Hyland (2005), below is the suggested teaching protocol and rubrics imparting MD in teaching writing for ESL learners which consists of three-session lessons with each 90 minutes per session.

#### Learning outcomes

By the end of the module, learners will be able to:

1. Identify interactive MD (transition, frame, endophoric, evidential, code glosses) and interactional MD (hedges, boosters, attitude, self-mention, engagement) in academic texts;
2. Deploy MD appropriately to improve coherence, stance, and reader engagement in their own essays;
3. Revise drafts using an MD checklist and corpus evidence (AntConc/automated tags) to increase range and rhetorical fit.

#### Session 1: Noticing & Diagnosis (Interactive MD focus)

Materials: two short model essays, MD quick-reference sheet.

#### Activities:

1. Guided noticing (25 mins): Students highlight transitions, frame markers, endophorics, evidentials, code glosses in a model text; compare patterns in pairs.
2. Mini-lecture (15 mins): Why interactive MD improves logical flow and navigation ("As shown in Table 3...", "see Section X"); pitfalls (overuse of "and", "but", "however").
3. Micro-task (20 mins): "Coherence surgery": reorder jumbled paragraphs and supply frame markers ("In contrast... Finally...").
4. Exit ticket (5 mins): Each student lists two MD items they will try in their next draft.

Formative check: tutor tallies each student's interactive MD range (types present) on a 0–5 scale.

## Session 2: Stance & Engagement (Interactional MD focus)

Materials: sentence bank with weak/strong stance lines; peer-review checklist.

### Activities:

1. Contrastive rewriting (20 mins): Convert over-assertive claims → hedged variants (“This proves” → “This suggests”); discuss when a booster is warranted.
2. Voice lab (20 mins): Calibrate self-mention and engagement (“we/you/imperatives”) for academic tone; avoid excessive self-reference.
3. Targeted practice (25 mins): Insert attitude markers judiciously to signal evaluation without bias.
4. Peer-review (15 mins): Use the MD checklist to label at least 10 instances in a partner’s draft and comment on rhetorical fit.

Formative check: tutor samples 3 paragraphs per student and codes hedges/boosters balance.

## Session 3: Evidence Integration & Revision

Materials: short source pack; AntConc (or simple search); MD tagging sheet.

### Activities:

1. Evidence weaving (20 mins): Add evidentials (“according to X”) + code glosses (“in other words...”) to integrate sources smoothly.
2. Corpus quick-check (25 mins): Students use AntConc (or document search) to count MD items; compare range and density across drafts.
3. Revision sprint (30 mins): Guided rewrite with personalized goals (e.g., “+3 hedges; replace 2 boosters; add 1 frame marker per section”).
4. Reflective memo (10 mins): Students justify MD choices referencing reader needs and stance.

Summative task: submit revised 600–800-word mini-essay + MD-choice memo (200 words).

### Analytic Rubric (100 points)

| Criterion                     | What we’re looking for                                                                          | Pts |
|-------------------------------|-------------------------------------------------------------------------------------------------|-----|
| A. Range of MD                | Breadth of both interactive & interactional resources; variety beyond “and/however/therefore”.  | 20  |
| B. Appropriateness & Accuracy | Items used correctly (function/form); no misuse (e.g., booster where hedge is needed).          | 15  |
| C. Rhetorical Fit & Coherence | Markers genuinely scaffold logic (signposting, sectioning, endophoric links) and improve flow.  | 20  |
| D. Stance & Engagement        | Calibrated hedging/boosting; reader-orientation through engagement markers without informality. | 20  |
| E. Evidence Integration       | Clear evidentials; smooth reformulations via code glosses; avoidance of patchwriting.           | 15  |



|                              |                                                                                  |    |
|------------------------------|----------------------------------------------------------------------------------|----|
| F. Metalinguistic Reflection | 200-word memo justifies MD choices with audience awareness and self-corrections. | 10 |
|------------------------------|----------------------------------------------------------------------------------|----|

### Methodological Appendix (Blueprint for a Classroom MD Intervention)

#### A. Design & Sampling

1. Design: quasi-experimental, pretest–posttest with Treatment (explicit MD instruction) vs Control (business-as-usual).
2. Participants: ~60 students (e.g., 2 intact classes;  $n \approx 30$  per group), aligning with typical ESL cohorts and your existing corpus volume (120 essays).
3. Texts: Each student produces two timed expository essays (Pre, Post; 600–800 words recommended).
4. Ethics & admin: informed consent; anonymise IDs; keep a key file separately; obtain institutional ethics approval (note approval code if applicable).

#### B. Instruments & Materials

1. Writing prompts (two parallel forms; counter-balance across groups/time).
2. MD coding manual (operational definitions + positive/negative examples for each subcategory; 2–3 borderline cases per category).
3. Rubric (the analytic rubric in your paper for stance/engagement/coherence).
4. Software: AntConc (token counts, KWIC checks); spreadsheet for logs.
5. Reference tables: include the MD taxonomy tables already presented in the manuscript to anchor coder training.

#### C. AntConc / Tagging Workflow (replicable in low-resource settings)

1. Corpus prep: Save essays as UTF-8 .txt. Strip headers/IDs into a metadata CSV (ID, group, time, wordcount, score).
2. Token baseline: Use AntConc Word List to record total tokens per essay (for density).
3. Dictionary pass: Build initial category lexicons (e.g., transitions: however, therefore, in addition; code-glosses: i.e., e.g., in other words; hedges: may, might, suggest(s), appears; boosters: clearly, definitely, we found).
4. Regex search: Run Concordance with regex for multiword markers (e.g., in other words|on the other hand|as noted earlier).
5. Function check: Inspect KWIC windows to confirm function, not just form (e.g., we as self-mention vs. inclusive reference). Ambiguous hits → manual decision guided by the coding manual.
6. Log counts: Enter raw counts per category in a sheet; add density =  $(\text{count} / \text{total tokens}) \times 1,000$ .
7. Note: if essay lengths are tightly banded (e.g., 250–300 words), raw counts are acceptable for pedagogy; for research reporting, prefer normalised counts.
8. Quality control: Two raters independently code a 20% sample before full coding; reconcile disagreements; update the manual.

#### D. Variables & Measures

Primary MD outcomes (per essay):

1. Range: number of distinct MD subcategories used (0–10).
2. Density: per-1,000-token counts for each subcategory and for Interactive vs Interactional totals.
3. Balance indices:  $(\text{Hedges} \div \text{Boosters})$ ;  $(\text{Interactional} \div \text{Interactive})$ .
4. Writing quality: rubric totals/subscales (stance/engagement/coherence).
5. Process (optional): revision memo quality (0–10).

## E. Reliability

1. Category decisions (nominal): Cohen's  $\kappa$  per subcategory; target  $\kappa \geq .70$ .
2. Counts (continuous): ICC(2,1) two-way random, absolute agreement for rater-coded totals; target ICC  $\geq .75$ .
3. Rubric scores: ICC(2,1) by criterion and total; brief rater calibration with anchors.

## F. Statistical Analysis & Effect Sizes

1. Pre–Post within group: Paired t-tests (or Wilcoxon for non-normal).
2. Cohen's  $d_z = (\text{Mean}\Delta / \text{SD}\Delta)$ .
3. Between groups (gain scores): Independent t-test on  $\Delta$  (Post–Pre).
4. Hedges'  $g = (d \times \sqrt{1 - \frac{3}{4N-9}})$  with pooled SD.
5. ANCOVA (preferred): Posttest as DV; Group as factor; Pretest as covariate  $\rightarrow$  report partial  $\eta^2$ .
6. Counts (over-dispersion likely): Negative binomial regression on MD density with Group, Time, and their interaction; report rate ratios (RR) and 95% CIs.
7. Correlational link: Pearson/Spearman between MD indices (e.g., Range, H/B balance) and rubric scores.
8. Minimum reporting set: means (SD), 95% CI, test statistic, p, effect size ( $d_z$ ,  $g$ , partial  $\eta^2$ , or RR), and a small practical interpretation.

## G. Threats to Validity & Mitigations

1. Prompt effects: use parallel prompts, counter-balance across groups/time.
2. Instructor effects: same teacher for both groups or include Instructor as a random effect (if using mixed models).
3. Dictionary bias: require KWIC function checks for multi-function items (e.g., we).
4. Length confounds: use density (per 1,000 tokens) if length variance  $>10\%$ .
5. Rater drift: mid-coding calibration on a small set

## Novelty and Recommendations

MD is founded on a concept of writing as a social interaction, and it reveals how writers and readers interact inside the text. We negotiate with people when we talk or write, deciding what kinds of consequences we wish to create on our readers and listeners (Hyland and Tse, 2004). In the literature, there are various MD taxonomies and classifications practise, these taxonomies have improved theoretically and functionally. However, the one given by Hyland is the most generally used by various researchers.

Despite a vast literature, MD has received little attention and interest from instructors and applied linguists. Until recently, teachers were preoccupied with analysing and instructing linguistic aspects and grammatical rules to their students as separate points, devoting little attention to rhetorical parts of speech and texts. The importance of MD is rapidly becoming recognised in ESL classrooms. This study demonstrates the importance of using MD markers to students in improving their communication talents in writing.

For the future research, it is suggested that to conduct an experimental study of comparing two groups of learners: treatment group and control group using MD in their essay writings. This is to see clearer the awareness of using MD in essays and the effectiveness of using MD in essays by ESL learners whether MD can help ESL writers to perform better in their essay or not.

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