

In Other Words: Exploring Student Criticality Through Lexical Bundles

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Abstract

Lexical bundles play a crucial role in conveying evaluations, opinions, and attitudes in both spoken and written communication. These recurring multiword sequences are recognised as essential components of fluent and natural linguistic expression in academic texts. However, although lexical bundles are significant in expressing personal and professional evaluations, their use in the literature review genre remains relatively underexplored. This corpus-based study analyses a self-compiled learner corpus of literature review chapters from Applied Linguistics Master's theses using WordSmith Tools 6.0 (Scott, 2012). A total of 60 four-word lexical bundles were identified and categorised into epistemic and attitudinal functions. The findings reveal a strong reliance on impersonal epistemic bundles such as “*it can be said*” and “*due to the fact*”, indicating learners' tendency to hedge claims and express cautious evaluations. Among attitudinal bundles, those related to ability (e.g., “*to be able to*”, “*can be used to*”) were the most frequent, suggesting an emphasis on potential and capacity rather than assertive critique. Bundles signalling importance and obligation were also common, while those expressing evaluation or contrast appeared less frequently—except “*on the other hand*”, which had the highest overall frequency and distribution. These findings suggest that student writers employ lexical bundles to project a measured and often tentative stance, reflecting a developing sense of criticality. The study offers pedagogical insights for academic writing instruction, particularly in fostering more confident and balanced expressions of evaluation in literature review writing.

Keywords: *expressions of criticality, lexical bundles, literature review, student writers*

Introduction

Academic writing plays a vital role in postgraduate education. Thesis writing, particularly, requires students not only to communicate knowledge effectively but also to demonstrate the ability to critically engage with existing research. Among the various sections of a thesis, the literature review has been considered as one of the most important sections. It allows writers to position their research within the broader academic conversation (Fernandez, 2019; Hart, 1998; Rowle & Slack, 2004) by synthesising prior studies, identifying gaps, and justifying the relevance of their own research or investigations. However, literature review writing often poses a significant challenge for student writers, who may struggle to go beyond summarising existing work to offering evaluative and analytical commentary (Akindele, 2008; Osman, 2012; Shahzavar & Kourepaz, 2020).

A key aspect of producing an effective literature review is the expression of criticality (Bruce, 2014); without it, the review may lack depth and fail to contribute meaningfully to academic discourse. Criticality can be seen as the writer's ability to assess the strengths, limitations, and implications of existing studies, while articulating their own stance (Bruce, 2014, Tarmizi & Aziz Hussin, 2021). As Bruce (2014) and Kwan (2006) observe, criticality is central to literature review writing, enabling writers to question, interpret, and evaluate the literature as they construct a foundation for their own work. Criticality is typically realised through specific linguistic choices, including hedging, attitude markers, boosters, and self-mentions. These strategies not only signal a writer's level of certainty, evaluation, and positioning in relation to cited sources, but also convey personal evaluations and degrees of commitment to the claims being made (Gray & Biber, 2012; Hyland, 2005; Lancaster, 2016).

Despite its importance, expressing criticality in literature review writing poses significant challenges, especially for student writers (Shahzavar & Kourepaz, 2020). Challenges such as limited command of academic language, unfamiliarity with evaluative conventions, and difficulty in articulating a personal stance (Akindele, 2008; Fernandez, 2019; Osman, 2012) often result in literature reviews that are more descriptive than analytical. These limitations hinder students' ability to establish the significance of their research and position their work within the scholarly landscape. Moreover, while numerous studies have addressed rhetorical structures and moves in literature reviews (e.g. Chen & Li, 2019; Gil-Salom & Soler-Monreal, 2014; Kwan, 2006; Kwan et al., 2012; Rabie & Boraie, 2021), less attention has been given to how criticality is expressed at the phrasal level, particularly through recurrent word combinations known as multi-word expressions or lexical bundles.

Lexical bundles can be defined as sequences of words identified through a corpus-driven approach using specified frequency and distribution criteria (Chen & Baker, 2010). Writers who are able to comprehend and produce texts using lexical bundles appropriately are more likely to be perceived as fluent users of the language (Wright, 2019). Furthermore, the use of lexical bundles has been shown to play an important role in constructing academic discourse. Beyond their cohesive function, many lexical bundles convey epistemic and authorial attitude, both of which are essential for demonstrating critical engagement (Hyland, 2008; Wright, 2019). For example, expressions like "*it should be noted that*" or "*this may suggest that*" help writers express caution, judgment, and interpretation. However, little is known about how student writers use these bundles in literature review sections to express criticality when reviewing existing studies.

This study investigates how four-word lexical bundles are used by student writers to show criticality in the literature review chapters of Applied Linguistics Master's theses. By examining how these bundles signal evaluative and interpretive stance, the study aims to provide insights into the ways student writers construct criticality and to contribute to improved guidance for effective literature review writing. Particularly, this study intends to answer the following research questions:

1. What are the most frequently used four-word lexical bundles by student writers in the literature review sections of Applied Linguistics Master's theses?
2. What functions do these four-word lexical bundles serve in expressing criticality in the literature review sections of Applied Linguistics Master's theses?

Literature Review

Academic writing in higher education requires students to demonstrate not only mastery of disciplinary knowledge but also the ability to engage critically with existing scholarship (Fernandez, 2019). In this context, the literature review plays a central role in positioning a study within its academic field, identifying research gaps, and justifying the need for further investigation (Winchester & Salji, 2016). Effective literature review writing often involves the expression of criticality, which may be described as the writer's ability to articulate their position, evaluation, or attitude toward the literature under review (Boote & Beile, 2005; Fernandez, 2019; Hart, 1998; Hei & David, 2015). This includes both the expression of personal sentiments, attitudes, and evaluations and the degree of certainty, doubt, precision, or limitation they convey regarding the information presented.

Expression of criticality has been examined from multiple perspectives, particularly through analyses of linguistic and rhetorical strategies. Studies such as Hyland (2005) and Lancaster (2016) have explored how features like hedging, boosting, attitude markers, self-mentions, and disclaim markers contribute to the construction of a critical stance in academic writing. This involved linguistic devices like modal verbs (e.g., *can*, *could*, *may*), adjectives (e.g., *important*, *essential*, *crucial*), nouns (e.g., *issue*, *problem*), and pronouns (e.g., *I*, *we*, *our*) to name a few. Since criticality is realised through linguistic choices, it can also be examined through phraseology, as specific combinations of words contribute to the expression of evaluative and interpretive stance, as demonstrated in several prominent studies (see for examples Biber et al.; 2004, Hyland, 2008; Zhang et al., 2021). Although rhetorical moves and evaluation strategies in literature reviews have received considerable attention, less focus has been placed on how criticality is realised through lexical bundles.

Lexical Bundles in Academic Writing

Lexical bundles, also referred to as n-grams, fixed expressions, or formulaic language, are sequences of words that occur frequently and predictably in specific discourse contexts (Biber et al., 2004; Chen & Baker, 2010). These bundles are typically identified using automated, frequency-driven approaches. Their effective use is widely believed to enhance the fluency and coherence of academic writing. Writers who understand and use lexical bundles appropriately are often perceived as more proficient and fluent users of academic English (Wright, 2019). Moreover, the frequent and contextually appropriate use of lexical bundles signals a

writer's command of academic language, reflecting not only linguistic proficiency but also familiarity with disciplinary norms and register-specific conventions (Cortes, 2006; Hyland, 2012).

Beyond their formulaic structure, lexical bundles play a crucial role in fulfilling pragmatic and rhetorical functions in academic discourse. As Hyland (2008) highlights, these bundles are not merely frequent word combinations; they contribute significantly to the organisation of information, the signalling of logical and rhetorical relationships, and the management of reader expectations. More importantly, lexical bundles help writers conform to the communicative norms of specific academic genres. In the context of literature reviews, they are particularly valuable for supporting key rhetorical moves such as establishing research gaps, clarifying results and methods, supporting interpretations, reporting data, and contextualising findings (Wright, 2019). These functions highlight the strategic role of lexical bundles in shaping critical academic discourse, making them especially relevant to the expression of criticality, where precision, stance, and coherence are essential.

Lexical Bundles and Criticality

Research has shown that lexical bundles play distinct functional roles in academic texts, contributing not only to fluency and textual flow but also to the expression of evaluative and interpretive stance. Among the most influential models, Biber et al. (2004) proposed a widely adopted taxonomy that categorises lexical bundles into referential, discourse-organising, and stance bundles. Of particular relevance to criticality are stance bundles, which are further divided into epistemic and attitudinal types. Epistemic bundles comment on the knowledge status of information (e.g., *it can be argued that*), while attitudinal bundles reflect the writer's stance, judgment, or degree of certainty regarding a proposition (e.g., *it is important to, must be considered*).

Building on Biber et al.'s framework, Hyland (2008) introduced an alternative classification based on rhetorical orientation which include research-oriented, text-oriented, and participant-oriented bundles. Especially notable are participant-oriented bundles, which express writer stance and foster reader engagement, helping writers manage the dialogic relationship between themselves and their audience. These bundles play a vital role in constructing a persuasive and critical voice in academic writing.

Subsequent researchers have expanded and refined these frameworks to capture more refined evaluative meanings. For instance, Muslu (2014, 2018) added evaluation as a subcategory to account for writer judgment, while Joharry (2021) introduced importance and emotivity bundles to capture expressions of significance and affect. These refinements underscore the potential of lexical bundles to signal criticality through expressions of obligation, certainty, contrast, and value judgment.

Together, these frameworks provide a robust foundation for analysing how writers, especially student writers, use lexical bundles to express critical engagement in academic discourse. Table 1 below presents a

summary of established functional classifications of lexical bundles, which serve as the analytical foundation for the present study’s examination of criticality in learner literature review texts.

Table 1: Summary of Functional Classifications of Lexical Bundles in Existing Frameworks

Biber et al. (2004)	Hyland (2008)	Muslu (2014, 2018)	Joharry (2021)
Referential Bundles	Research Oriented Bundles	Discourse Organizer	Referential Bundles
<ul style="list-style-type: none"> ● Imprecision bundles ● Bundles specifying attributes ● Time/place/text-deixis bundles 	<ul style="list-style-type: none"> ● Location ● Procedure ● Quantification ● Description ● Topic 	<p>Referential Expressions</p> <p>Stance Bundles</p> <ul style="list-style-type: none"> ● Epistemic stance bundles <ul style="list-style-type: none"> - Personal (certain, uncertain) - Impersonal (certain, uncertain) ● Attitudinal stance bundles <ul style="list-style-type: none"> - Desire - Obligation - Ability - Evaluation 	<ul style="list-style-type: none"> ● Identification/focus bundles ● Bundles specifying attributes of following nouns/entities Time/place/text-deixis bundles ● Bundles specifying attributes of preceding nouns/entities ● Time/place/text-deixis bundles ● Imprecision bundles ● Other referential bundles
Discourse Organizing Bundles	Text Oriented Bundles		
<ul style="list-style-type: none"> ● Topic introduction bundles ● Topic elaboration/clarification bundles ● Identification/focus bundles 	<ul style="list-style-type: none"> ● Transition signals ● Inferential signals ● Causative signals ● Structuring signals ● Framing signals ● Relationship signals ● Objective signals 		
Stance Bundles	Participant Oriented Bundles		
<ul style="list-style-type: none"> ● Epistemic lexical bundles <ul style="list-style-type: none"> - Personal - Impersonal ● Attitudinal lexical bundles <ul style="list-style-type: none"> - Desire - Intention - Obligation - Ability 	<ul style="list-style-type: none"> ● Stance features ● Engagement features 		<p>Discourse Organizing Bundles</p> <ul style="list-style-type: none"> ● Topic introduction bundles ● Topic elaboration/clarification bundles ● Inferential bundles <p>Stance Bundles</p> <ul style="list-style-type: none"> ● Epistemic stance bundles ● Attitudinal/modality stance bundles <ul style="list-style-type: none"> - Desire - Obligation - Ability - Importance - Emotivity

To reflect the complexity of critical stance, the present study adopts Biber et al.'s (2004) framework, incorporating relevant subcategories including contrastive bundles to allow a more comprehensive analysis of how lexical bundles contribute to the expression of criticality in academic writing. It also incorporated elements of evaluative and importance from Muslu (2018) and Joharry (2021). The adapted model in analysing lexical bundles is presented in the following table:

Table 2: Categories of Lexical Bundles as Expressions of Criticality Taxonomy

Criticality Bundles	
Criticality bundles are lexical bundles that reflect the writer's position, careful evaluation, and attitude toward a subject or proposition.	
Epistemic	Attitudinal
Comments on the knowledge status of the information in the following proposition	Expresses attitudes (self or other) towards the actions or events
Personal: Personal epistemic stance bundles are multi-word expressions that explicitly convey the writer's thoughts, beliefs, or feelings as personal viewpoints. Examples: <i>I think that, in my opinion, as we know</i>	Desire: Desire bundles are multi-word expressions that articulate the writer's personal wishes, preferences, or aspirations regarding actions, events, or outcomes. Examples: <i>I wish that, I want to, we want to</i>
Impersonal: Impersonal epistemic stance bundles are multi-word expressions that avoid directly attributing statements to the speaker. Examples: <i>the fact that, are more likely to</i>	Obligation: Obligation bundles are multi-word expressions used to convey obligations, duties, or directives. Examples: <i>we have to, you need to</i>
	Ability: Ability bundles are multi-word expressions that indicate the capability or potential of an individual or group to perform a specific action or task. Examples: <i>with the help of, us the opportunity to, you can use</i>
	Importance: Importance bundles are multi-word expressions that convey a sense of significance regarding the information presented. Examples: <i>important part of our</i>
	Evaluation – Evaluative bundles are multi-word expressions that convey the writer's assessment, opinion, or judgment on a particular subject or topic. Examples: <i>is the best way, the advantages of</i>

Contrastive – Contrastive bundles are multi-word expressions that indicate counter-expectancy and highlight contrasts between different elements, often incorporating conjunctions such as '*but*,' '*however*,' and '*nevertheless*'.

Examples: *on the other hand*, *but at the same time*

Gaps in Research on Learner Use of Lexical Bundles for Criticality

While extensive work has been done on lexical bundles and stance expression in academic writing, most studies have focused on expert texts (e.g., Bruce, 2014; Hyland, 2008; Walkova, 2019; Wright, 2019), rhetorical structures (e.g., Gil-Salom & Soler-Monreal, 2014; Kwan, 2006; Rabie & Boraie, 2021), or broad categories of stance (e.g., Biber et al., 2004; Byrd & Coxhead, 2010; Chen & Baker, 2010; Hyland, 2012; Zhang et al., 2021). Comparatively little attention has been paid to how four-word lexical bundles function specifically to express criticality in learner corpora, particularly within the literature review sections of Master's theses.

Moreover, many prior investigations have prioritised textual or rhetorical models (e.g., the CARS model) without incorporating corpus-based approaches that can uncover phraseological patterns across a broader dataset (e.g., Gil-Salom & Soler-Monreal, 2014; Kwan, 2006). Even when learner writing is examined, the focus tends to be on structural or referential functions of bundles (Biber et al., 2004; Chen & Baker, 2010; Hyland, 2012), rather than their specific role in conveying evaluative stance or interpretive judgment.

Nonetheless, a number of studies have begun to explore how students use lexical bundles to convey stance. For instance, Kim and Kessler (2022) found that high-scoring Chinese EFL learners demonstrated greater variety and strategic use of stance bundles in response to academic prompts, suggesting heightened awareness of discourse conventions. Muslu (2018) similarly observed cross-cultural differences in the use of epistemic and attitudinal bundles among Turkish and Japanese EFL learners. In the Malaysian context, Joharry (2021) found that learners often used stance bundles repetitively and tied closely to content, with limited evaluative depth. Whereas Zhang et al. (2021) reported that Chinese Master's students tended to use bundles marked by strong certainty and first-person stance, suggesting a risk of over-assertiveness and limited hedging.

Collectively, these findings point to both the developmental nature and contextual variability of lexical bundle use in learner writing. They highlight key pedagogical concerns, such as learners' limited awareness of collocational norms, over-reliance on rigid formulaic expressions, and difficulties in hedging or modulating claims (Joharry, 2021; Lee & Chen, 2009). These issues can impair clarity, fluency, and the

expression of a critical stance—particularly in literature review writing, where evaluative and interpretive functions are essential.

Despite growing recognition of these challenges, focused research on how student writers use lexical bundles to construct criticality remains limited. This is particularly notable given the central role of the literature review in demonstrating evaluative engagement. To address this gap, the present study adopts a corpus-based approach to investigate the frequency and functions of four-word lexical bundles in a self-compiled learner corpus of literature review chapters from Applied Linguistics Master’s theses. By classifying these bundles according to their epistemic and attitudinal functions, the study aims to provide insights into how student writers express criticality in academic discourse. The next section outlines the methodology adopted for corpus compilation and analysis.

Methodology

This study adopts a corpus-based approach to investigate how four-word lexical bundles function as expressions of criticality in literature review chapters written by student writers. The learner corpus, known as the Malaysian Literature Review Corpus (MLRC), was self-compiled to suit the specific objectives of the study. It consists of 90 literature review texts from Applied Linguistics Master’s theses authored by Malaysian postgraduate students across three public universities: Universiti Teknologi MARA (UiTM), Universiti Kebangsaan Malaysia (UKM), and Universiti Putra Malaysia (UPM). Table 3 summarises the details about the corpus:

Table 3: Corpus Used for the Study

Malaysian Literature Review Corpus (MLRC)	Number of Texts	Number of Words
Universiti Teknologi MARA	30	260,660
Universiti Kebangsaan Malaysia	30	181,078
Universiti Putra Malaysia	30	254,756
Total Number of Text / Words	90	696,494

The theses were selected using purposive sampling based on the following criteria: the text must be authored by a Malaysian student, focused on language or applied linguistics, accessible in hard or soft copy form, and written between January 2010 and December 2020. All texts were processed to remove non-linguistic elements such as tables, figures, and equations to ensure consistency and facilitate accurate textual analysis. The final corpus comprises 696,494 words (UiTM: 260,660; UKM: 181,078; UPM: 254,756).

Given the absence of an existing corpus that represents this specific genre and demographic, a self-compiled corpus was necessary. This allowed for stricter control over corpus design and ensured

alignment with the study's focus on how student writers in a local academic context express criticality. As noted by Granger (2008), a well-constructed smaller corpus—if tailored to specific research questions—can yield valuable insights despite its size. Similar corpus sizes have been used in prior studies such as Zhang et al. (2021) and Chen and Baker (2010), supporting the appropriateness of this approach.

To identify lexical bundles, the corpus was analysed using WordSmith Tools 6.0 (Scott, 2012), a software suite designed for analysing large bodies of text through tools such as *WordList*, *KeyWords*, and *Concord*. The *WordList* tool was used to generate an index of four-word lexical bundles based on set frequency parameters. The software allows users to define parameters for how many words each bundle should contain and how often they must appear. In line with Cortes (2004) and Chen and Baker (2010), this study focused exclusively on four-word lexical bundles, as this length has been shown to be frequent and functionally significant in academic writing.

A cut-off frequency was applied due to the relatively small size of the learner corpus. Following Chen and Baker's (2010) recommendation, a lexical bundle had to occur at least five times and appear in a minimum of five different texts to be retained. This threshold helps eliminate idiosyncratic usage from individual writers and ensures broader relevance within the learner population. Additionally, the tool was configured to stop counting bundles at sentence boundaries, as bundles spanning across two sentences often lack coherence (Scott, 2015).

The identified four-word bundles were then categorised based on their functions using the developed taxonomy (See: Table 2). The analysis focused on epistemic and attitudinal bundles, which were further divided into subcategories as outlined in the earlier section. Personal epistemic bundles included first-person expressions such as "*I think that*", while impersonal epistemic bundles featured phrases like "*it is possible that*". Within the attitudinal category, desire bundles expressed the writer's personal wishes, preferences, or aspirations regarding actions, events, or outcomes, as in "*I wish that*", whereas obligation bundles conveyed duties, directives, or necessity, such as "*you need to*". Other attitudinal subcategories included ability bundles, which indicate the capability or potential of an individual or group to perform a specific action (e.g., "*you can use*"), and importance bundles, which highlight the significance of the information presented (e.g., "*important part of our*"). Additionally, evaluative bundles conveyed the writer's assessment, opinion, or judgment on a particular subject or topic (e.g., "*is the best way*"), while contrastive bundles signalled counter-expectancy or contrast between elements, often using conjunctions such as "*but*", "*however*", or "*nevertheless*", as seen in "*but at the same time*".

Following the initial categorisation of four-word lexical bundles into epistemic and attitudinal functions, a more detailed qualitative analysis was carried out to investigate how these bundles functioned as expressions of criticality. Using the Concord function in WordSmith Tools 6.0, concordance lines were generated for each lexical bundle to examine the immediate textual context in which they occurred. This

enabled close reading and functional interpretation of how the bundles were employed by student writers to articulate degrees of certainty, evaluate cited literature, or signal a personal or impersonal stance.

While the taxonomy provided the structural basis for classification, the operationalisation of criticality involved examining how each lexical bundle functioned within its specific syntactic and discourse context. Bundles were only considered to express criticality if they contributed to evaluation, interpretation, stance-taking, or contrast in relation to cited literature or conceptual claims. For instance, “*it is important to*” was only coded under *importance* when it functioned as an evaluative marker, and not when it was used to explain grammatical constructions or appeared as part of illustrative examples that did not fulfil a clearly evaluative role. This interpretive layer ensured that functional categorisation was context-sensitive and aligned with the study’s working definition of criticality. The analytical process was guided by functional definitions and examples from Biber et al. (2004), Muslu (2014, 2018), and Joharry (2021), particularly in identifying bundles related to importance, evaluation, and contrastiveness—key elements associated with critical academic engagement.

To ensure accuracy and consistency in classification, a two-stage inter-rater reliability procedure was employed. In the first stage, the taxonomy developed for identifying lexical bundles as expressions of criticality was reviewed by a senior English language lecturer with over fifteen years of experience in academic writing instruction. This expert examined the categories to ensure they were mutually exclusive and exhaustive, validating their definitions and accompanying examples. Following this validation, the finalised taxonomy was used to train a second independent rater. In the second stage, 70 items representing various lexical bundles from both expert and student texts were independently coded by the researcher and the second rater. To assess the level of agreement, Cohen’s Kappa statistic was calculated. The results showed a Kappa value 0.782 for the lexical bundle subcategories, indicating substantial agreement. These results confirm a high level of consistency and reliability in the classification process, supporting the validity of the qualitative analysis.

Findings and Discussion

The findings of this study are presented based on the Categories of Lexical Bundles as Expressions of Criticality taxonomy, as outlined in Table 2. Epistemic bundles and attitudinal bundles found MLRC were normalised per million words to ensure consistent interpretation across texts of varying lengths within the learner corpus and to facilitate clearer reporting of lexical bundle usage. This approach also supports potential future comparisons with other corpora and aligns with standard practice in corpus-based research (Biber et al., 2004; Hyland, 2008; Chen & Baker, 2010). Table 4 shows the frequency, normalised frequency and distribution across corpus for epistemic four – word lexical bundles found in MLRC:

Table 4: Frequency, Normalised Frequency and Distribution Across Corpus for Epistemic Four – Word Lexical

Bundles Found in MLRC

	Lexical Bundles	Freq.	Range	Norm'd Freq	Prop (%)
Personal (0)	-				
Impersonal (12)	due to the fact	47	20	67.48	22.22
	are more likely to	38	17	54.56	18.89
	it can be said	26	17	37.33	18.89
	can be said that	24	16	34.46	17.78
	can be seen as	25	14	35.89	15.56
	it is believed that	19	14	27.28	15.56
	the fact that the	18	14	25.84	15.56
	can be considered as	15	14	21.54	15.56
	it is possible to	12	10	17.23	11.11
	more likely to be	12	9	17.23	10.00
	could be said that	11	6	15.79	6.67
	it could be said	11	6	15.79	6.67

The analysis of epistemic four-word lexical bundles revealed a total of 12 impersonal bundles, with no personal epistemic bundles identified in the learner corpus. This suggests that student writers overwhelmingly favoured impersonal expressions when articulating knowledge claims or evaluations. High-frequency bundles such as “*due to the fact*”, “*it can be said*”, and “*it is believed that*” exemplify this trend. These expressions reflect a cautious and detached stance, often associated with hedging or minimising personal involvement in claims. Such bundles were typically used by student writers to interpret or explain existing knowledge, express possibility or capability, present claims, and synthesise key findings, concepts, or patterns in the literature review chapters. The following excerpts illustrate how these linguistic devices and lexical bundles were employed in context.

From the explanation given, it seems that *it is possible to* learn a language informally and at the same time, the students can enhance on the English skills as well.

MLRC_UKM29

Furthermore, teachers need to encourage speaking and using the language because it would motivate them to study autonomously and at the same time they would consider different ideas of spoken communication after they read more upon it (López, 2011). *It is believed that* by giving some freedom to the students in learning process, it would help them to be more critical in whatever they do such as they could use the same strategies they have learn and apply it in different situations that they think suitable.

MLRC_UiTM29

Another study by Leung (2006) investigated the syntactic elements observed in the print advertisements in Hong Kong and Sweden. Based on the results, code-mixing was the most dominant type and noun phrase was the most code-mixed item. The globalizing of the English language is obvious and reflected in print advertisements. *It can be said* that English is the most favorable foreign language used in the print media not only in Malaysia, but also in Hong Kong and Sweden.

MLRC_UPM18

By mitigating the certainty of their assertions, student writers make their claims less definitive and, consequently, more acceptable within academic discourse. This finding supports the observations of Gray and Biber (2017) and Wright (2019), who emphasise the function of hedged expressions in framing tentative, non-categorical claims in scholarly texts—a strategy often realised through impersonal lexical bundles. Similarly, Hyland (1998) underscores the centrality of hedging in academic argumentation, highlighting its role in conveying appropriate levels of caution and accuracy in the presentation of knowledge.

The observed preference for impersonal epistemic constructions among student writers may reflect their efforts to conform to disciplinary norms that prioritise objectivity and restraint. Through the use of such bundles, learners hedge their claims, express possibility rather than certainty, and avoid overt self-reference—strategies that suggest an emerging awareness of academic stance-taking. However, the absence of personal epistemic markers (e.g., “*I believe that*”, “*we suggest that*”) may also indicate a degree of hesitancy or underdeveloped confidence in adopting a more explicit authorial voice. Overall, the reliance on impersonal epistemic bundles reveals a cautious and indirect rhetorical style, characteristic of novice academic writers who are still developing their critical voice.

In Table 5, the frequency, normalised frequency and distribution across corpus for attitudinal four – word lexical bundles found in MLRC are summarised:

Table 5: Frequency, Normalised Frequency and Distribution Across Corpus for Attitudinal Four – Word Lexical Bundles

Found in MLRC

	Lexical Bundles	Freq.	Range	Norm'd Freq	Prop (%)
Desire (0)	-			0.00	
Obligation (5)	there is a need	22	14	31.59	15.56
	that need to be	19	14	27.28	15.56
	should be taken into	13	10	18.66	11.11
	should be able to	11	8	15.79	8.89
	it needs to be	10	6	14.36	6.67
Ability (23)	to be able to	51	28	73.22	31.11
	can be used to	46	29	66.05	32.22

	can be seen that	32	16	45.94	17.78
	will be able to	30	17	43.07	18.89
	can be defined as	27	15	38.77	16.67
	that can be used	26	17	37.33	18.89
	have the ability to	22	14	31.59	15.56
	can be seen in	22	12	31.59	13.33
	would be able to	21	13	30.15	14.44
	students are able to	20	10	28.72	11.11
	can be used in	19	15	27.28	16.67
	can be found in	17	12	24.41	13.33
	learners are able to	17	9	24.41	10.00
	it can also be	16	12	22.97	13.33
	they are able to	15	14	21.54	15.56
	can be viewed as	15	11	21.54	12.22
	that can be found	14	9	20.10	10.00
	must be able to	13	7	18.66	7.78
	can also be used	12	11	17.23	12.22
	can be used as	12	11	17.23	12.22
	has the ability to	12	8	17.23	8.89
	can be referred to	11	10	15.79	11.11
	students will be able	10	5	14.36	5.56
Importance (13)	it is important to	68	41	97.63	45.56
	it is important for	28	23	40.20	25.56
	there is a significant	18	12	25.84	13.33
	it is essential to	16	14	22.97	15.56
	a significant role in	14	12	20.10	13.33
	an integral part of	13	12	18.66	13.33
	is very important for	12	11	17.23	12.22
	significant difference in the	12	7	17.23	7.78
	one of the important	11	9	15.79	10.00
	play a significant role	11	8	15.79	8.89
	is important to understand	10	7	14.36	7.78
	is very important in	10	8	14.36	8.89
	it is very important	10	9	14.36	10.00
Evaluation (5)	it is clear that	23	15	33.02	16.67
	it is difficult to	16	15	22.97	16.67
	a positive impact on	10	9	14.36	10.00
	have positive attitudes towards	10	5	14.36	5.56
	is similar to the	10	10	14.36	11.11
Contrastive (2)	on the other hand	209	57	300.07	75.56
	as compared to the	17	13	24.41	14.44

The analysis of attitudinal four-word lexical bundles yielded a total of 48 distinct bundles, which were further categorised into obligation, ability, importance, evaluation, and contrastive functions. Among

these, ability bundles emerged as the most frequent subcategory, with 23 unique instances. High-frequency examples such as “*to be able to*” and “*can be used to*” indicate that student writers frequently relied on expressions of possibility or potential when reviewing existing literature. This finding contrasts with the research of Jalali (2013), who found that *Ability* bundles were the least used in both the expert and student corpora of graduate-level theses and dissertations in the field of applied linguistics.

This pattern suggests a tendency to highlight what could be done or achieved, rather than to make assertive evaluative judgments, a possible reflection of learners’ cautious stance or developing confidence in academic argumentation. These ability bundles were typically employed to interpret or explain existing knowledge, suggest possibilities, present claims, and synthesise key findings, concepts, or patterns within the literature review sections. The following excerpts illustrate how these linguistic devices and lexical bundles were used by student writers to construct meaning and express a developing sense of criticality.

The attention of using mobile applications for learning focused on learning vocabulary and drill on the quiz (Joseph & tither 2009). Drilling helps the students to remember the way to use the language correctly and the learners *would be able to* avoid making the same mistakes during the time of learning. The students' achievement of learning a language using mobile devices differs from each other based on the understanding about the language.

MLRC_UKM29

They also concluded that the reading component can be a salient predictor of students’ success at the tertiary level in the first and sixth semesters due to the Malaysian education system which focuses more on reading. Presumably, students who are competent in reading *would be able to* read better at the tertiary level and thus would manage to score well in their CGPA.

MLRC_UPM30

Obligation bundles, such as “*there is a need*” and “*that need to be*”, appeared frequently in the corpus, indicating a moderate use of directive or necessity-based expressions. These bundles reflect student writers’ attempts to convey urgency or justify the need for specific actions, often in the context of proposing further research. In literature review writing, obligation bundles help emphasise shared understanding between writers and readers, thereby enhancing the persuasiveness and acceptability of the writers’ arguments. Student writers commonly employed these expressions when evaluating and synthesising existing literature, reinforcing the claims of previous authors, or promoting particular viewpoints. The use of obligation bundles in this way enables learners to highlight the strengths and weaknesses of previous studies, identify research gaps, and establish the relevance or necessity of their own investigations - key features in expressing criticality in literature review writing.

Briefly, these studies only focus on Philip's marginalised identity, which is the portrayal of his identity at the beginning of the story and during the Japanese occupation. The changes in Philip's cultural practices and identity after fifty years the Japanese occupation ends have not been thoroughly investigated by scholars. Hence, *there is a need* for this study to address this issue.

MLRC_UPM19

In this study, they selected eleven internal medical faculty members to view seventeen recorded presentations independently. Results showed that the contents in OCP should be presented in three styles only which are economy, fluency and precision in language. This shows that *there is a need* to use proper language in OCP as it can make communication more effective between teachers and students.

MLRC_UPM20

Importance bundles, such as "*it is important to*" and "*a significant role in*", were used to highlight the perceived value or relevance of specific concepts, findings, or perspectives. Their presence indicates an awareness of the need to emphasise evaluative meaning, although such expressions were often employed in relatively formulaic ways. A closer analysis of these bundles suggests that student writers use them to strengthen their evaluations in literature review texts by signalling the significance of particular ideas or arguments. Rather than conveying personal attitudes or emotions, these bundles help emphasise the importance of certain reviewed points, thereby contributing to the development of a critical stance. This strategic use of lexical bundles that convey significance plays a key role in shaping the evaluative dimension of student writing.

After thorough reviews, it can be summarized that *it is important to* know the definition of the term "vocabulary" and to understand its importance to L2 learning. Without the proper acquisition of vocabulary, L2 learners will have difficulties in learning English and unable to practice it in other language competencies such as speaking, writing, reading and listening. Furthermore, it is also important for the learners to understand the importance of vocabulary in second language acquisition.

MLRC_UKM15

In visual images, the position, size, and composition of the contents of the image play *a significant role in* the meaning making (Liu., J, 2013). Kress and Van Leeuwen (2006) claimed that image and other visual modes can represent objects and their relations in a world outside the representational system, so there are many ideational choices available for visual sign-making in visual communication.

MLRC_UKM8

Evaluation bundles, such as “*it is clear that*” and “*a positive impact on*”, were less frequently used in the corpus, yet they represent more direct attempts by student writers to engage critically with the literature. These bundles allow writers to articulate judgments, signal approval or critique, and draw attention to the implications or outcomes of previous studies. Their presence, albeit limited, suggests that while learners are beginning to adopt a more evaluative stance, they may still be hesitant to fully assert their own interpretations or challenge existing claims. The relatively infrequent use of evaluation bundles may reflect a developing confidence in academic judgment, as students appear more comfortable summarising findings than interrogating them. Nevertheless, when employed, these bundles contribute meaningfully to the expression of criticality by enabling students to identify strengths and weaknesses, expose gaps, and underscore the complexity of the issues discussed in the reviewed literature - a pattern also observed by Azar and Hashim (2019) in their analysis of review genre.

Looking at the research on apologies in the Malaysian context, *it is clear that* there is a significant lack of research studies on apologies using politeness and naturally occurring data. The lack of focus on apologies using politeness as well as naturally occurring data has prompted the researcher to examine apologies using this type of data with reference to pragmatic politeness strategies practiced.

MLRC_UiTM11

Although there are many types of needs analysis highlighted by Songhori (2008) in his Jigsaw puzzle, this study will only be focusing on three types of needs analysis; Target Situation Analysis, Present Situation Analysis and Learning Needs Analysis or Strategy Analysis. These types keep the learner in view, for example, what the learner needs to do, what skills they need to have, and how they perceive their own abilities. They are close to the stance taken by this study, which puts the learner at the centre. Whereas types such as genre analysis and discourse analysis focus on the language and structure of the product. However, *it is difficult to* put a clear boundary between types of needs analysis, as there are often overlaps and they are complementary to each other.

MLRC_UPM28

Finally, contrastive bundles, particularly “*on the other hand*” and “*as compared to the*”, played a significant role in helping student writers balance perspectives and introduce alternative viewpoints which are essential features of effective literature review writing. Among these, “*on the other hand*” was the most frequently occurring bundle in the entire corpus, both in raw and normalised frequency, underscoring its importance in learners’ attempts to signal contrast and engage with differing perspectives. This finding is in line with previous research by Cortes (2004), Hyland (2008), Byrd and Coxhead (2010), Wright (2019), and Zhang et al. (2021), who identified this bundle as a frequent and significant expression in academic texts.

However, the use of contrastive bundles in the corpus often reflected straightforward comparisons, with student writers frequently summarising opposing ideas rather than offering in-depth critical evaluations.

This is the act of switching to a new topic agenda in an attempt to distract the participants away from the confrontational frame. This may have even less face-threatening acts than compromising as both sides' faces are maintained. *On the other hand*, it could completely backfire as Gunther (2007) explains that frame breaks are only successful for a short while.

MLRC_UPM15

The findings of the study showed that first, in the 60 minutes of speech from both groups of speakers, the native speakers of English used lexical hedges more than the ELF-speaker group. Native speakers used approximately 4.44 lexical hedges per minute whereas ELF-speakers used 3.85 lexical hedges per minute. This shows that Native speakers used more negative politeness strategy *as compared to the* ELF speakers through the use of lexical hedges.

MLRC_UiTM12

In literature review writing, contrastive bundles serve important rhetorical purposes: they allow writers to highlight contradictions or tensions in the literature, evaluate unexpected findings or conflicting evidence, and draw attention to opposing viewpoints. Moreover, these bundles can be strategically used to discuss the strengths and limitations of prior research, identify gaps in the literature, and ultimately justify the rationale for the current study. While their frequent use suggests an awareness of the need to contrast sources, the findings indicate that student writers may still be developing the ability to fully exploit these bundles for deeper critical engagement. Additionally, a high frequency of such bundles may indicate an overreliance on familiar expressions.

Overall, the quantitative data show that student writers employed a range of attitudinal bundles, but with a strong emphasis on potential (ability), importance, and contrast. While this pattern reflects an emerging capacity to engage evaluatively, the limited use of more assertive evaluative bundles suggests that learners may still be developing confidence in articulating stronger critical judgments.

Conclusion

The findings of this study highlight several key patterns in how student writers use four-word lexical bundles to express criticality in literature review writing. The dominance of impersonal epistemic bundles suggests a cautious stance and a clear preference for hedging, reflecting learners' tendency to distance themselves from claims and avoid strong personal assertions. Similarly, the high frequency of ability

bundles indicates that student writers often frame their arguments in terms of potential or capability, rather than making assertive or definitive evaluative statements.

The use of importance and obligation bundles further demonstrates an emerging evaluative stance in learners' writing, although this is often employed in a relatively limited and formulaic manner. Notably, the absence of desire bundles may reflect a reluctance or lack of confidence in expressing strong personal preferences, possibly due to learners' perceptions of what constitutes appropriate academic tone. Conversely, the frequent use of contrastive bundles, particularly "*on the other hand*", suggests that student writers are beginning to develop a more balanced and dialogic approach to positioning sources and viewpoints, which is an important aspect of criticality.

These findings offer insights into the developmental nature of stance expression in student academic writing. While the MLRC provides valuable insights into Malaysian postgraduate writing practices, it is limited in scope to the field of Applied Linguistics. As such, the findings may not generalise across disciplines or cultural-linguistic contexts. Future research could incorporate cross-cultural corpora or examine novice and expert writing across subject areas to explore how expressions of criticality vary by genre, proficiency level, or academic convention.

This study also offers three key pedagogical implications for academic writing instruction. First, it highlights the importance of explicitly teaching lexical bundles and associated strategies for expressing criticality in literature reviews. Understanding the distinctions between expert and student usage can help instructors target common challenges, particularly in evaluating, synthesising, and positioning sources. Second, the taxonomy developed in this study can inform curriculum design. The identified strategies and linguistic devices may be integrated into research writing modules and adapted into instructional materials that guide students toward more expert-like evaluative practices. Third, the study supports the use of corpus-based approaches in writing instruction. By exposing students to authentic examples of how lexical bundles function in context, educators can raise learners' awareness of evaluative language and stance. Incorporating corpus-informed activities encourages more reflective and critical academic writing.

Overall, the taxonomy and findings provide practical tools for instructors and curriculum developers seeking to enhance students' critical engagement with literature and improve the overall quality of literature review writing.

Author contributions

The content Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Writing - Original Draft, Project Administration, M.L.M.T.

Validation, Writing - Review & Editing, A.H.A.A.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, M.L.M.T., upon reasonable request.

Conflicts of interest

The authors declare they have no competing interests.

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