Lexical Nouns and Patterning in Thai Disaster News: Implications for EFL Vocabulary Instruction

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Abstract

This study investigates the patterning of lexical nouns and their associated structures—collocations, lexical bundles, and lexical frames—in earthquake-related headlines from Thai online English-language newspapers. It aims to identify prominent noun-based lexical patterns, examine their functions in disaster news discourse, and consider their pedagogical relevance for Thai EFL vocabulary instruction. The dataset consists of 200 English-language headlines related to the March 28, 2025 earthquake in Thailand, collected from *The Bangkok Post* and *The Nation* between March 28 and April 10, 2025. The resulting 2,032-word corpus was analyzed using *AntConc* and *Google Colab*, supplemented by manual analysis and expert review. The findings show that lexical nouns accounted for 863 words (42.5% of the corpus), representing 230 distinct lexical noun lemmas. *Building*, *earthquake*, *collapse*, and *quake* were among the most frequent nouns. The lexical nouns were grouped into eight thematic categories, with Infrastructure & Location and Response & Rescue showing the highest occurrence frequencies and the largest numbers of distinct lexical noun lemmas. The analysis also identified recurring collocations, lexical bundles, and lexical frames that encoded information related to structural damage, geographical location, human impact, emergency response, investigation, and public safety. Recurring bundles included *collapsed Bangkok building*, *collapsed Bangkok tower*, and *death toll rises to*, while lexical frames demonstrated how stable lexical elements combine with variable elements across disaster-reporting contexts. Overall, the findings demonstrate that lexical nouns and their recurring patterns contribute to the compact and information-dense nature of disaster news headlines. The findings also support the use of thematic lexical fields, collocations, lexical bundles, and lexical frames as contextually relevant resources for genre-sensitive vocabulary instruction among Thai EFL learners.

Keywords: Disaster news, EFL, lexical noun, lexical bundles, lexical frames, skill development

Introduction

On March 28, 2025, Thailand experienced a rare and devastating high-magnitude earthquake, prompting extensive media coverage at both national and international levels. English-language news outlets such as The Bangkok Post and The Nation, now operating primarily online, played a central role in disseminating real-time information. Alongside these traditional sources, social media platforms served as key channels for distributing headlines and urgent updates. Many Thai learners of English as a Foreign Language (EFL) increasingly rely on such platforms to engage with English-language content, particularly during emergencies (Kanokpermpoon, 2025). In English news headlines, lexical nouns and recurring lexical patterns, including collocations, lexical bundles, and lexical frames, contribute to the organization and communication of information (Metang & Narathakoon, 2025; Tokhirova, 2025; Yulfi et al., 2019; Zhu, 2025). Recognizing and interpreting these patterns is critical for EFL learners' real-time comprehension of high-stakes, media-driven discourse.

This study focuses on English-language headlines produced by Thai journalists. This scope is intended to examine English as it is used within the local Thai media context, where journalistic language may reflect local communicative practices and cultural conventions (Chaiyasuk & Kheovichai, 2026). Such locally produced English is particularly relevant to Thai EFL learners because it represents language encountered in domestic English-language media and therefore provides a locally situated source of authentic English input (Srinon & White, 2023). At the same time, because the identified patterns arise within a specific Thai media context, their pedagogical use should be understood as context-sensitive rather than as representing universally applicable models of English. From World Englishes and English as an International Language (EIL) perspective, examining locally produced English recognizes that English use in Thailand is situated within a particular sociocultural and linguistic environment (Snodin et al., 2024). An English as a Lingua Franca (ELF) perspective further identifies English as a communicative resource used among speakers from different linguistic and cultural backgrounds (Jenkins, 2007). However, the present study does not seek to identify or classify the lexical patterns found in the corpus as features of Thai English, World Englishes, EIL, or ELF. Rather, these perspectives provide a sociolinguistic context for understanding the corpus and its relevance to Thai EFL learners. The study remains primarily a corpus-based investigation of lexical patterning in English-language disaster headlines.

Lexical patterning has long been regarded as fundamental to second language acquisition (Yusuf, 2020). Research in applied linguistics has consistently emphasized the importance of lexical bundles, collocations, and lexical frames in shaping discourse fluency and comprehension (Nation, 2013; Schmitt, 2010). In particular, English news discourse has been a prominent domain for studying how such patterns function communicatively. Hyland (2008), Ädel and Erman (2012), and Leelasetakul (2025b) highlight how collocational structures and formulaic sequences contribute to clarity, brevity, and cohesion in journalistic texts. As Nation (2013) notes, the ability to process authentic genres—

especially newspaper texts—is now a vital component of second or foreign language literacy. Accordingly, newspapers have become widely recognized as valuable pedagogical tools for language instruction (Nation & Macalister, 2020).

For clarity, the present study distinguishes among several related concepts used in the analysis. Lexical nouns refer to content-bearing nouns that denote people, objects, places, events, processes, or concepts (Rijkhoff, 2023). In this study, noun-based lexical patterns refer to recurring combinations or sequences containing lexical nouns, including collocations, lexical bundles, and lexical frames (Gablasova et al., 2017; Gray & Biber, 2013). Collocations are recurring combinations of words that are conventionally associated with one another, such as *death toll* and *building collapse* (Benson et al., 1986; Lewis, 2000). Lexical bundles are recurrent multi-word sequences that occur frequently in a particular discourse or register (Biber & Conrad, 2009; Biber et al., 2004), such as *building collapse site,* whereas lexical frames are recurring patterns containing relatively stable lexical elements and one or more variable positions (Leelasetakul, 2025b). For example, *death toll + [verb]* represents a lexical frame in which the verb can vary, as in *death toll rises*, *death toll climbs*, and *death toll reaches*. Nominalization refers to the expression of an event, action, or process through a noun form (Halliday & Matthiessen, 2014), such as *collapse*, *rescue*, or *probe*. These distinctions provide the conceptual basis for the analysis of lexical nouns and their recurring patterns in the present corpus.

Lexical nouns are particularly important in headlines because they convey substantial meaning while supporting conciseness and communicative efficiency. Ehineni (2014) and Khorina and Handani (2022) identify lexical nouns as the dominant word class in news headlines, facilitating content compression by reducing reliance on function words. Metang and Narathakoon (2025) likewise report nouns as the most frequent lexical items in online news, highlighting their role in conveying thematic content. Yang and Nenkova (2017) further link lexical nouns to content density, a defining feature of news discourse. These studies collectively indicate that lexical nouns, particularly when used in recurrent patterns such as collocations, lexical bundles, and lexical frames, contribute to the syntactic and semantic economy of headlines.

Collocations provide a useful means of examining how lexical nouns combine with adjacent words in news discourse. Such combinations may involve different parts of speech, including nouns, adjectives, and proper nouns, depending on the lexical and grammatical context (Sukman & Tangkiengsirisin, 2024). Lewis (2000) characterizes collocations as habitual word pairings that contribute to natural and predictable language use. Nitsaisook and Dhanesschaiyakupa (2019) note the prevalence of collocations involving nouns in headlines, a trend corroborated by Ray (2022), who found that noun-based collocations dominate texts in *The Jakarta Post*. Lexical bundles—defined by Biber et al. (2004) as frequent multi-word sequences—also feature prominently in news texts. Metang and Narathakoon (2025), for example, found that nearly half of the lexical bundles identified in CNN headlines involved lexical nouns, indicating the prominence of nominal patterning in news discourse. Lexical bundles may vary in length, and three-, four-, and five-word sequences can capture

progressively more extended contextual and syntactic patterns (Biber & Conrad, 2009). Three-word bundles generally provide compact lexical or grammatical patterns, while four-word bundles tend to provide more extended contextual or syntactic information. Five-word bundles can capture still more extended phraseological or propositional patterns. Although four-word bundles have been widely examined in corpus-based research (Biber & Conrad, 2009), the present study includes three- to five-word sequences that meet the established frequency criterion to capture recurring multi-word patterns surrounding lexical nouns in the relatively small headline corpus. Sequences occurring twice are examined separately as lower-frequency recurring sequences. Two-word combinations are excluded from the lexical bundle analysis because they are more appropriately examined as collocations, particularly given the study's focus on immediately adjacent word combinations. Lexical frames, also known as phrase-frames or P-frames, are recurrent word sequences containing relatively stable lexical elements and one or more variable slots (Leelasetakul, 2025b). In this study, lexical frames are examined as recurring patterns associated with lexical nouns. For example, *death toll + [verb]* allows variation in the verb, as in *death toll rises*, *death toll climbs*, and *death toll reaches*.

From a genre perspective, news headlines can be understood as a recognizable form of communicative discourse characterized by conventionalized linguistic and structural features that serve particular communicative purposes (Flowerdew, 2002; Martin & Rose, 2008). Genre-oriented analysis therefore considers linguistic choices in relation to the communicative context and functions of a particular text type. In this analysis, disaster news headlines are treated as part of a specific journalistic genre in which linguistic choices reflect the communicative demands of disaster reporting (Park & An, 2024). This perspective provides a basis for examining how lexical nouns and recurring lexical patterns function within this context.

Disaster news places additional demands on language use due to the urgency, emotional weight, and informational clarity required in crisis communication. Shoemaker and Cohen (2005) describe disaster reporting as a genre marked by the need for precision, speed, and human-centric narratives. Artan Özoran and Yıldız (2026), in their review of empirical research in public relations, note that natural disasters are underexplored compared to organizational crises, signaling a significant gap in disaster communication studies. Vihalemm et al. (2012) emphasize that effective disaster communication depends heavily on linguistic clarity, often achieved through noun-dense constructions. These insights reinforce the need to examine how lexical nouns and patterns function in disaster headlines—not only from a discourse perspective but also in terms of pedagogical applicability.

The pedagogical relevance of lexical nouns extends beyond their informational role in headlines, as their recurrence in authentic contexts can provide useful input for vocabulary and pattern learning. Research on news discourse supports the instructional value of recurring lexical patterns across different forms. Metang and Narathakoon (2025) demonstrate the value of lexical collocations in online news for vocabulary learning, while Leelasetakul (2025a) identifies lexical bundles as formulaic building blocks that can support students in translating and writing English news. Similarly,

Leelasetakul (2025b) highlights lexical frames as useful resources for developing instructional materials in natural disaster news, and Sanmuang and Boonmoh (2024) provide empirical evidence that lexical-frame training can improve Thai university students' reading comprehension and rule-induction skills. These findings, together with Pho-Klang's (2020) emphasis on the linguistic and real-world value of news texts, suggest that authentic news can provide a productive context for teaching recurring lexical patterns and developing learners' ability to recognize and use them.

In relation to specific pattern types, Siengsanoh (2021) finds that verb-noun and adjective-noun collocations are particularly challenging for Thai learners, necessitating explicit instruction. Rujirawan (2021) further demonstrates the value of lexical bundles in ESP instruction, arguing that formulaic expressions support both comprehension and production. Lewis (1996) advocates for raising learners' awareness of such bundles as a means of improving fluency and naturalness in communication. Together, these studies provide strong support for integrating lexical pattern instruction into EFL curricula—especially using genre-relevant materials like news headlines.

Despite these insights, limited research has examined lexical nouns and their recurring patterns in disaster-related English headlines within the Thai English-language media context, particularly from a pedagogical perspective. Analyzing English-language news produced in Thailand can provide insight into how lexical nouns and recurring patterns are used in Thai media and how they can inform contextually relevant vocabulary instruction. Accordingly, this study examines lexical nouns and associated patterns—collocations, lexical bundles, and lexical frames—in English-language headlines reporting on the 2025 earthquake in Thailand. Specifically, it aims to (1) identify and analyze salient noun-based lexical patterns, (2) assess their pedagogical relevance for vocabulary instruction, and (3) propose strategies for integrating these patterns into EFL classrooms. Using authentic media data and a corpus-based approach, the study contributes to both linguistic analysis and contextually relevant vocabulary pedagogy.

Methodology

Research Design

This study employs a corpus-based, genre-oriented descriptive research design to examine lexical nouns and their recurring patterns in English-language disaster news headlines. Focusing on coverage of the March 28, 2025, earthquake in Thailand, the study analyzes lexical nouns and their associated collocations, lexical bundles, and lexical frames. It also considers the pedagogical relevance of these patterns for vocabulary instruction in the Thai EFL context.

Data Collection

The dataset comprises 200 English-language headlines related to the March 2025 earthquake and its aftermath. The headlines were collected from the digital archives of two major Thai English-

language newspapers, *The Bangkok Post* (100 headlines) and *The Nation* (100 headlines). Both publications were selected for their prominence in Thailand's English-language news media and their relevance to English use in academic and professional contexts (Iamlaor, 2018).

Headlines were retrieved manually using the keyword *earthquake* within each publication's search interface. The collection period spanned March 28 to April 10, 2025, covering the immediate impact and subsequent developments surrounding the disaster. Only headlines explicitly referring to the earthquake felt in Thailand or its consequences were included. To maintain a consistent focus on the Thai English-language media context, the dataset was restricted to headlines written by Thai journalists. This criterion reflects the study's focus on English-language news produced within Thailand and encountered by Thai EFL learners, rather than on international English-language disaster reporting more broadly. Headlines written by foreign correspondents were therefore excluded. Duplicate or reworded headlines were also identified and removed to preserve data integrity and minimize frequency distortion. The resulting corpus represents English-language disaster reporting within a specific Thai media context.

The dataset size was determined by the study's genre-specific and event-specific scope rather than by an attempt to construct a large general-purpose news corpus. The study focuses on English-language headlines reporting a single earthquake event within a defined 14-day period, allowing the corpus to capture different stages of disaster coverage, including the immediate impact, emergency response, investigation, and early recovery. A total of 200 headlines were selected to provide balanced representation across the two newspapers, with 100 headlines from each source, while allowing for detailed examination of recurring noun-based lexical patterns within the specific discourse context. Because the study examines a narrowly defined genre, topic, event, and time period, the corpus is intended to support detailed analysis of lexical patterning within this specific discourse context rather than broad statistical generalization to English disaster news as a whole.

Before analysis, the corpus was prepared and standardized to ensure consistency in AntConc-based frequency and lexical-pattern analysis. The text was checked for formatting inconsistencies, and duplicate or reworded headlines were removed. The finalized corpus contained 2,032 words.

Data Analysis

The analysis was conducted in five stages: (1) corpus preparation and frequency analysis, (2) identification and classification of lexical nouns, (3) identification and analysis of collocations, lexical bundles, and lexical frames, (4) expert validation and refinement, and (5) qualitative evaluation of pedagogical relevance.

Lexical Noun Identification

The corpus comprised 2,032 words. The identification of lexical nouns proceeded in three steps. First, *AntConc* (Anthony, 2022) was used to generate a word-frequency list from the corpus. The list

was then examined manually to distinguish lexical nouns from other word classes. Common nouns conveying content meaning in the headline context were retained, whereas proper nouns and non-lexical or grammatical words were excluded from the lexical noun analysis. Proper nouns were recorded separately as a distinct lexical category and excluded from the lexical noun count. Nominalized forms such as *collapse*, *probe*, and *rescue* were retained when they functioned as nouns in the headlines. Words that can function as other word classes were included when they functioned as nouns in the headline context. Singular and plural forms of the same noun were grouped under the same lemma and counted together in the frequency analysis.

Of the 2,032 word occurrences, 863 were lexical nouns, 475 were other lexical words, 216 were proper nouns, and 478 were non-lexical words. These categories were treated separately during the analysis. The 216 proper-noun occurrences were retained when they functioned as meaningful collocates of lexical nouns.

Second, the identified nouns were examined in their original headline contexts to verify their grammatical and semantic functions. *Google Colab* (Google LLC, 2024) was used to assist with corpus preprocessing, frequency calculation, sorting of lexical items, and organization of extracted patterns. The computational results were then verified through manual examination of the original headlines.

Third, the verified lexical nouns were grouped into thematic categories according to their meanings and discourse functions in the disaster-news context, following Cruse's (1986) lexical-field approach. Each noun was assigned to the category that best represented its primary meaning and discourse function. This normalization and categorization were applied consistently across the corpus.

Pattern Identification

Following lexical noun identification, the corpus was examined for recurring word combinations associated with the identified nouns. Three types of lexical patterns were examined: collocations, lexical bundles, and lexical frames.

For the collocation analysis, *AntConc*'s concordance function was configured to examine the word immediately before and after each lexical noun. The resulting concordance lines were manually examined to identify recurrent and contextually meaningful word combinations. Collocates were classified according to their part of speech (POS), including nouns, verbs, adjectives, prepositions, and proper nouns. Proper nouns were excluded from the lexical noun frequency analysis but retained as collocates when they formed meaningful associations with the lexical nouns analyzed in the study. Combinations occurring at least twice in the corpus were treated as recurring collocations, whereas combinations occurring only once were excluded because they did not provide sufficient evidence of recurrence.

For lexical bundles, three- to five-word sequences were examined. Sequences occurring three or more times were included as recurring lexical bundles, whereas sequences occurring twice were classified as lower-frequency recurring sequences and reported separately when contextually relevant.

Sequences occurring only once were excluded from the lexical bundle analysis because a single occurrence did not provide sufficient evidence of recurrence.

For lexical frames, recurring sequences were examined for stable lexical components and variable slots. A slot was considered variable when different lexical items occurred in the same structural position across related expressions. Only frames supported by recurring realizations were retained for analysis. For example, *collapsed Bangkok + [N]* was identified as a lexical frame, with *building*, *tower*, and *skyscraper* occurring in the variable position.

For each identified pattern, its frequency, constituent words, variable elements, and headline contexts were recorded. Only recurring combinations demonstrating a clear lexical or structural relationship with the lexical nouns were retained for analysis. Representative examples from the corpus were then selected to illustrate the identified collocations, lexical bundles, and lexical frames.

Validation and Refinement

The preliminary lexical noun list and identified patterns were independently reviewed by two language experts with backgrounds in EFL education and corpus linguistics. Each expert reviewed the classification of lexical nouns, thematic categorization, collocations, lexical bundles, and lexical frames. Disagreements mainly concerned borderline lexical items and the interpretation of variable slots in lexical frames. Inter-rater agreement was approximately 92%. Disagreements were discussed until consensus was reached, and the dataset was revised accordingly. This procedure provided an additional check on the consistency of the manual classification and interpretation of corpus patterns.

Pedagogical Evaluation

The pedagogical relevance of the identified lexical nouns and recurring patterns was considered qualitatively based on their frequency, recurrence in authentic headlines, and potential usefulness for EFL vocabulary learning. Frequently occurring nouns and recurring collocations, lexical bundles, and lexical frames were considered particularly relevant for instruction because they provide repeated and contextualized exposure to vocabulary and recurring language patterns. Their potential for supporting comprehension and productive language use was also considered. This interpretation informed the pedagogical implications and instructional suggestions presented in the final section.

Ethical Considerations

All headlines were obtained from the official online platforms of The Bangkok Post and The Nation and were accessed through publicly available digital archives. Because the study used publicly available news texts and did not involve human participants or personally identifiable research data, no direct participant recruitment or intervention was involved. The headlines were used solely for academic analysis.

Results and Findings

Lexical Nouns in the Corpus

This section examines the distribution and thematic characteristics of single-word lexical nouns in English-language earthquake news headlines. To ensure semantic consistency, the lexical nouns were categorized using a lexical-field approach adapted from Cruse (1986), grouping them into conceptual domains relevant to disaster discourse.

In the 2,032-word corpus, lexical nouns accounted for 863 occurrences (tokens), representing approximately 42.5% of the corpus. These occurrences represented 230 different lexical nouns (types), as presented in Figure 1. The high proportion of lexical nouns reflects the content-rich nature of headline language, where concise expression is essential. The nouns represented key aspects of disaster reporting, including the natural event, its effects on infrastructure and human lives, and subsequent emergency response actions. A further 216 proper-noun occurrences were identified but excluded from the lexical noun analysis because they were treated as a separate lexical category.

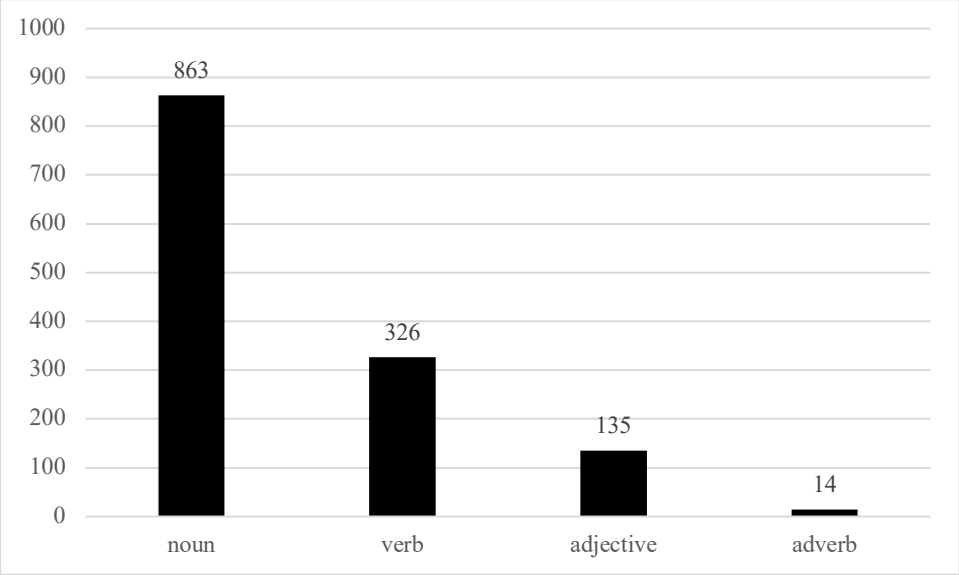


Figure 1. *Lexical Composition of the Corpus*

Figure 1 presents the overall lexical composition of the 2,032-word corpus. Lexical nouns accounted for 863 occurrences (42.5%), while other lexical words, including verbs, adjectives, and adverbs, accounted for 475 occurrences. Proper nouns accounted for a further 216 occurrences and were treated separately from lexical nouns. The remaining 478 words comprised non-lexical items, including articles, prepositions, conjunctions, pronouns, determiners, and auxiliary verbs.

The most frequent lexical nouns, measured by their number of occurrences (tokens), are presented in Table 1. *Building, earthquake, collapse,* and *quake* are among the most frequent nouns in the corpus.

Table 1.
High-Frequency Lexical Nouns by Number of Occurrences

Lexical Noun	***f***	**Lexical Noun**	***f***
building	67	office	15
earthquake	39	probe	15
collapse	36	steel	13
quake	25	body	11
site	16	rescue	10

Note. *f refers to* frequency.

The noun *building* topped the list, appearing 67 times in the corpus, suggesting that infrastructure was a prominent focus in the disaster news headlines, particularly those related to the earthquake, as illustrated in (1). The co-occurrence of earthquake and quake in (2) and (3) illustrates variation in register, reflecting a mix of formal and colloquial usage within the genre.

(1) Chatuchak *building* collapse claims three lives—The Nation Headline 5 (TN H5)
(2) Thai parliament reports no real *earthquake* damage, just 'minor cracks'—The Bangkok Post Headline 23 (TBP H23)
(3) *Quake* forces suspension of 4 government buildings—TBP H88

Notably, several high-frequency items such as *collapse, probe*, and *rescue* are examples of nominalization—verbs that have been converted into nouns. Nominalizations contribute to the lexical density typical of disaster news headlines. As illustrated in (4), (5), and (6), these forms linguistically foreground processes and outcomes rather than agents, reinforcing the event-centered focus characteristic of disaster reporting.

(4) Chatuchak building *collapse* due to unstable structure: Bangkok dept—TN H6
(5) *Probe* into State Audit Office collapse to conclude in 7 Days: Anutin—TN H55
(6) *Rescue* work going slowly as rubble is still very unstable—TBP H32

Similarly, *body*, used in place of *fatalities*, provides a more concrete and human-centered representation of loss. In (7), it emphasizes the recovery and return of physical remains, reflecting the event-centered and impersonal style of disaster reporting.

(7) Workers' *bodies* from Bangkok collapse site returned to relatives—TBP H21

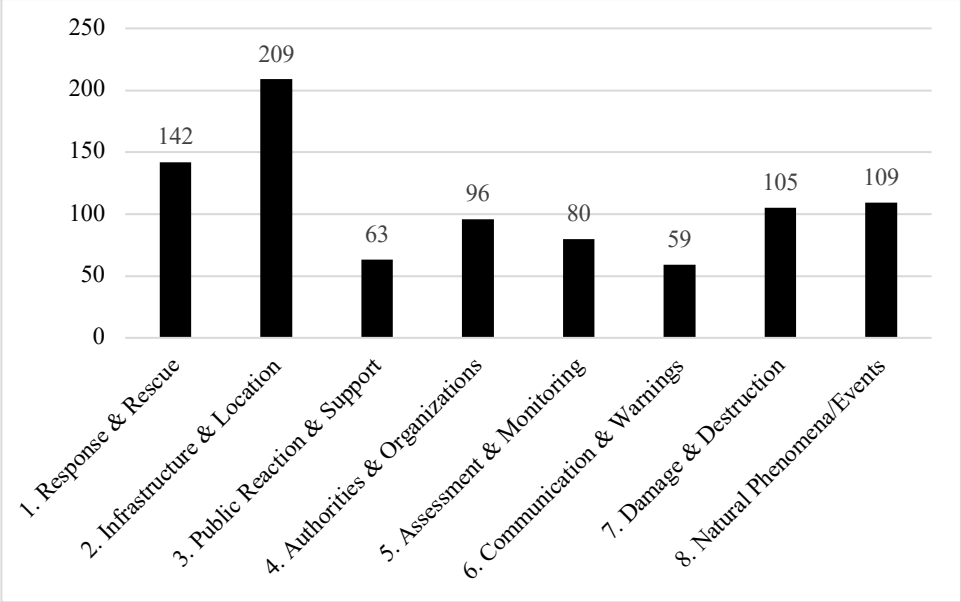


Figure 2. *Total Occurrences of Lexical Nouns by Thematic Category*

Other categories, such as *Natural Phenomena/Events* (109) and *Damage & Destruction* (105), focus on the earthquake itself and its harmful effects. *Authorities & Organizations* (96) and *Assessment & Monitoring* (80) highlight the roles of government and ongoing crisis management. Meanwhile, *Public Reaction & Support* (63) and *Communication & Warnings* (59) emphasize social responses and information dissemination. Within the present corpus, these frequencies suggest a relatively broad narrative covering physical impact, emergency response, scientific explanation, institutional roles, and community reactions.

The 863 lexical noun occurrences were represented by 230 distinct lexical noun lemmas (types), which were systematically categorized into eight thematic groups, as summarized in Table 2. In contrast to Figure 2, which presents occurrence frequencies, Table 2 reports the number of distinct lexical noun lemmas within each category.

Table 2.

Number of Distinct Lexical Noun Lemmas by Thematic Category

Category	**Number of Distinct Lexical Lemmas**	**Examples**
1. Response & Rescue	47	aid, evacuation, hotline, operation, recovery, response, rescue, rescuer, search, team
2. Infrastructure & Location	45	airport, bridge, building, center, city, hospital, mall, office, rail, tower

Category	Number of Distinct Lexical Lemmas	Examples
3. Public Reaction & Support	38	anxiety, calm, complaint, condolence, cooperation, donation, help, hope, panic, solidarity
4. Authorities & Organizations	35	agency, ambassador, committee, department, embassy, government, ministry, police, senator, military
5. Assessment & Monitoring	24	analysis, inspection, investigation, level, probe, sample, scanner, seismograph, testing
6. Communication & Warnings	18	alert, announcement, message, notification, poll, rumor, sign, statement, warning
7. Damage & Destruction	13	casualty, collapse, crack, death, debris, damage, fatality, rubble, tragedy
8. Natural Phenomena/Events	10	aftershock, earthquake, fire, flood, quake, shake, storm, temblor, tremor

The number of distinct lexical noun lemmas within each category reflects the lexical diversity and thematic scope of the disaster news corpus. *Response & Rescue* (47) and *Infrastructure & Location* (45) contained the largest numbers of distinct lexical noun lemmas, indicating broad lexical coverage of emergency operations and the physical environment. In terms of occurrence frequency, however, *Infrastructure & Location* (209) and *Response & Rescue* (142) were the most prominent categories in the corpus. Overall, the 863 lexical noun occurrences represented 230 distinct lexical noun lemmas (types), covering eight thematic domains. This distribution highlights key lexical areas in the disaster news discourse and identifies potentially useful vocabulary domains for EFL instruction.

Collocations in the Corpus

The collocational analysis reveals several recurring patterns involving the identified lexical nouns and their collocates, which include nouns, adjectives, and proper nouns. These patterns represent several semantic domains, particularly structural damage, geographical location, the earthquake event, emergency response, and disaster assessment. The most prominent patterns involve the lexical nouns building, collapse, and tower, which occur in different grammatical configurations to specify the nature, location, and consequences of structural damage.

Table 3.

Collocations and Their Part-of-Speech (POS) Patterns

Lexical Noun	**Collocates (*f*; POS)**
building	collapsed (21; Adj), collapse (20; N), Bangkok (18; PN), government (3; N)
collapse	building (20; N), tower (11; N), site (8; N)
tower	collapsed (11; Adj), Bangkok (7; PN)
death	toll (8; N)
earthquake	Myanmar (7; PN), victim (4; N), damage (2; N)
quake	Myanmar (3; PN), damage (2; N), victim (2; N), Bangkok (2; PN)
rescue	effort (4; N), operation (3; N)
steel	sample (4; N), substandard (3; Adj)
alert	system (3; N)
health	mental (3; Adj)
disaster	management (2; N), zone (2; N)
victim	quake (2; N), earthquake (2; N)
government	complex (2; N), office (2; N)
shaft	lift (2; N), elevator (2; N)

The noun building, the most frequent lexical noun in the corpus, shows particularly strong associations with collapsed, collapse, and Bangkok. The frequent combinations collapsed building and building collapse foreground structural damage as a central concern of the disaster coverage. The proper noun Bangkok further specifies the geographical location of the reported damage. The noun collocate government extends this pattern toward issues of infrastructure, institutional responsibility, and structural conditions.

(8) Man arrested for fake story about pregnant wife in collapsed building —TBP H6

(9) Chatuchak building collapse claims three lives —TN H39

(10) Panic over possible aftershock prompts evacuations at several Bangkok buildings —TN H58

These examples illustrate different part-of-speech patterns involving building. In collapsed building (8), the head noun is modified by an adjective; in building collapse (9), building functions as a noun modifier in a noun–noun combination; and in Bangkok buildings (10), buildings is preceded by the proper noun Bangkok, which specifies the location. This variation demonstrates how building participates in different grammatical and semantic patterns within the disaster headlines.

The nouns collapse and tower also show recurring noun-centered combinations related to structural damage. Collapse occurs with building, tower, and site, linking structural failure to specific structures and locations. Similarly, tower occurs with collapsed and Bangkok, as illustrated in collapsed tower and Bangkok tower. Together, these combinations reinforce the prominence of structural damage in the headlines and connect the reported event with its geographical setting.

(11) Official death toll reaches 44 at Bangkok collapse site—TBP 72
(12) Proxy probe into collapsed Bangkok tower constructor 50% complete—TBP H69

These examples illustrate several part-of-speech patterns involving collapse and tower. In collapse site (11), collapse functions as a noun modifying the head noun site, forming a noun–noun combination. In Bangkok tower (12), tower is the head noun, modified by proper noun Bangkok, specifying the geographical location. These patterns demonstrate how nouns can combine with different lexical and grammatical elements to convey structural damage and its location concisely in disaster headlines.

The collocational patterns of earthquake and quake show both semantic overlap and some differences in their immediate lexical environments. Both nouns occur with Myanmar, victim, and damage, linking the seismic event to its geographical origin and human and material consequences.

(13) Sagaing fault: Myanmar earthquake triggers Bangkok collapse, region on high alert—TN H13
(14) Contractor pledges B120M; SAO builder vows to help quake victims —TBP H88
(15) Authorities rush to inspect quake damage to historical sites —TN H32

These examples illustrate different part-of-speech patterns involving earthquake and quake. In Myanmar earthquake (13), the proper noun Myanmar functions as a premodifier specifying the geographical origin of the earthquake. In quake victims (14) and quake damage (15), quake functions as a noun modifier in noun–noun combinations, specifying the victims and effects associated with the seismic event. Thus, earthquake and quake participate in proper noun + noun and noun + noun constructions, demonstrating how different lexical combinations provide geographical, human-impact, and damage-related information in disaster headlines.

Rescue and steel contribute to the representation of emergency response and post-disaster investigation. Rescue occurs repeatedly with nouns such as effort and operation, highlighting organized emergency activities. The noun steel occurs with sample and substandard, connecting structural materials with investigation and quality assessment. These recurring combinations show how noun-centered patterns extend beyond descriptions of physical damage to include emergency response and post-disaster investigation.

(16) Building collapse traps dozens after Bangkok earthquake; military mobilises for rescue efforts—TN H3

(17) Some steel samples fail to meet standard in State Audit Office building—TBP H71

These examples illustrate noun–noun patterns involving the target nouns. In rescue efforts (16), rescue functions as a noun modifying the head noun efforts, while in steel samples (17), steel functions as a noun modifying the head noun samples. Both combinations demonstrate how nouns can function as modifiers within compact recurring patterns that convey emergency response and investigation-related information in disaster headlines.

Collocations such as death toll, mental health, and alert system demonstrate how these combinations condense complex aspects of the disaster into compact, semantically rich expressions. Death toll represents human loss, mental health represents psychological consequences, and alert system refers to institutional preparedness and emergency communication. These combinations therefore extend the lexical representation of the earthquake beyond physical destruction to include human, psychological, and institutional dimensions.

(18) Five more bodies found under collapsed Bangkok building, death toll rises to 13—TN H75

(19) Earthquake aftermath: experts warn of ‘earthquake drunk’ and anxiety, urge mental health support—TN 73

(20) Myanmar quake raises alarm over nation’s alert system—TBP H4

These examples illustrate noun–noun and adjective–noun patterns involving the target nouns. In death toll (18), death functions as a noun modifying the head noun toll, forming a noun–noun combination. Similarly, mental health (19) consists of the adjective mental modifying the head noun health, forming an adjective–noun pattern. In alert system (20), alert functions as a noun modifying the head noun system, forming another noun–noun combination. These patterns demonstrate how lexical nouns participate in different grammatical structures while efficiently expressing human, psychological, and institutional dimensions of the disaster.

Overall, the collocational patterns identified in the corpus reveal several interconnected semantic domains, particularly structural damage, geographical location, emergency response, investigation, human impact, and public safety. Patterns such as building collapse, collapsed tower, rescue effort, death toll, mental health, and alert system demonstrate how lexical nouns combine with other lexical items to convey complex disaster-related meanings in compact headline expressions. Because these combinations recur in authentic news contexts and represent recognizable semantic relationships, they also provide potentially useful lexical units for EFL vocabulary instruction.

Lexical Bundles in the Corpus

The analysis of lexical bundles containing the identified lexical nouns revealed recurring patterns of language use that serve both structural and communicative functions in disaster news discourse. The bundles exhibit thematic and syntactic regularities characteristic of the compressed and information-dense nature of headline language. Several bundles also contain proper nouns, particularly place names, highlighting the role of nominal constructions in conveying information about structural damage, geographical location, human impact, and emergency response.

Based on the frequency criterion established in the methodology, the analysis identified several recurring bundles occurring three or more times in the corpus.

Table 4.

High-Frequency Lexical Bundles (≥3 Occurrences)

Length	Discourse Function	Bundle (*f*)
4-word	Extended contextual or syntactic pattern	death toll rises to (5)
3-word	Compact lexical or grammatical pattern	collapsed Bangkok building (9), collapsed Bangkok tower (6), Bangkok building collapse (4), after Myanmar earthquake (4), after Myanmar quake (4),

The recurring lexical bundles identified in the corpus, particularly collapsed Bangkok building, collapsed Bangkok tower, and death toll rises to, function as recurring linguistic units that combine multiple elements of disaster reporting within compact expressions. These bundles bring together information about structural damage, geographical location, and human consequences, allowing complex information to be conveyed efficiently within the restricted space of a headline. Their recurrence indicates that certain combinations of lexical items were repeatedly used to frame and report the earthquake and its consequences.

The three-word bundles collapsed Bangkok building and collapsed Bangkok tower combine a description of structural damage with geographical specification. In these bundles, collapsed functions as an adjective modifying the head nouns building and tower, while Bangkok specifies the location. Similarly, Bangkok building collapse combines a proper noun, a lexical noun, and a noun denoting the event, providing a concise representation of both location and structural damage. The four-word bundle death toll rises to extends the expression beyond a simple noun–noun combination by incorporating a verb and preposition, creating a recurring pattern used to report changes in the number of fatalities. Sentences (21) to (23) exemplify how these bundles operate within headlines to condense information about structural damage, geographical location, and human impact into concise and recurring linguistic patterns.

(21) Rescuers find no survivors in basement of collapsed Bangkok building—TN H56

(22) Workers to reach first floor of collapsed Bangkok tower Monday—TBP H90

(23) Earthquake death toll rises to 2,886 as rescue efforts continue—TN H100

Although over half of the lexical bundles in the corpus occur only twice (Table 5), they remain discursively significant rather than incidental.

Table 5.

Lower-Frequency Recurring Sequences (2 Occurrences)

Length	Discourse Function	Bundle
5-word	More extended contextual and syntactic pattern	probe into Bangkok collapsed tower
3-word	Compact recurring lexical or grammatical pattern	Chatuchak building collapse, building collapse probe, SAO building collapse, alert system test, Bangkok collapse site (2), as fatalities rise, building collapse site, building scanner detects, collapse site recovery, aftershocks following earthquake, collapsed SAO tower, earthquake in Myanmar, after Myanmar quake, signs of life, death toll reaches, search for survivors, to check safety, assures power supply

The twice-occurring sequences capture several context-specific aspects of the disaster discourse, including structural damage, rescue operations, investigation, public safety, and institutional response. For example, search for survivors in (24) represents rescue activity, whereas building collapse probe represents post-disaster investigation. Other sequences, such as signs of life in (25), foreground the human consequences of the disaster, while checking safety in (26) relates to preparedness and public safety.

(24) Foreign and local emergency response teams search for survivors buried in 75,000 tonnes of fallen concrete and steel—TBP H44

(25) No signs of life, more bodies expected at collapsed tower: Bangkok governor—TBP H52

(26) BMA asks owners of large buildings to check safety following quake —TN H44

From a pedagogical perspective, the distinction between lexical bundles occurring three or more times and those occurring twice is useful for vocabulary instruction. Bundles occurring three or

more times, such as collapsed Bangkok building, collapsed Bangkok tower, and death toll rises to, can provide learners with recurring patterns that support recognition and production of language commonly associated with disaster reporting. The twice-occurring sequences can complement these patterns by introducing more context-specific expressions related to rescue, investigation, safety, and human impact. Together, these patterns can provide authentic language for developing learners' awareness of lexical combinations, grammatical patterning, and genre-specific vocabulary in news reporting.

Overall, the corpus reveals a group of lexical bundles occurring three or more times alongside a broader group of recurring three-word sequences occurring twice. The bundles occurring three or more times contribute to recurring patterns of cohesion and information framing, while the twice-occurring sequences add lexical variety and represent more event-specific aspects of disaster discourse. Together, these patterns demonstrate how recurring combinations of lexical nouns and surrounding words contribute to the compact, information-dense style of earthquake news headlines and provide potentially useful material for contextually relevant vocabulary instruction.

Lexical Frames in the Corpus

The analysis of lexical frames in earthquake headlines reveals semi-fixed expressions with slots for variation that efficiently convey key disaster information. These lexical frames mainly cluster around core themes like location, damage, human impact, and institutional response, reflecting the concise style of news headlines.

Table 6.

Lexical Frames with One Open Slot

Frame	**Slot Fillers**
collapsed Bangkok + [N]	building, tower, skyscraper
building collapse + [N]	design, claims, probe, site, inspection, proxy, scan, victims
death toll + [V]	rises, climbs, reaches
PM/Prime Minister orders + [N]	committee, team, management
more bodies + [V]	recovered, retrieved, spotted, found, expected, emerged
search for + [N]	survivors, evidence, signs
quake-hit + [N]	area, residents, provinces
bodies found + [Prep]	in, under
substandard steel + [N]	samples, bars
earthquake in + [PN]	Myanmar, Bangkok
steel samples + [V]	fail, linked
death toll rises to + [number]	7, 13, 14, 2886

Table 6 shows how disaster news uses noun-based frames with one open slot, such as collapsed Bangkok + [N], which is filled by nouns such as building, tower, and skyscraper. Similarly, the frame building collapse + [N] contains a variable noun slot filled by items such as design, claims, probe, site, inspection, proxy, scan, and victims.

(27) Scanner detects six more bodies under collapsed Bangkok building—TN H82

(28) Chinese Embassy pledges cooperation in Thailand building collapse probe, stresses 'fair' investigation—TBP H61

In (27), collapsed Bangkok forms the fixed sequence, while building, tower, and skyscraper fill the open noun slot to specify the type of structure. Similarly, building collapse + [N] in (28) accommodates nouns such as probe, site, and victims, representing investigation, location, and human impact. These frames show how fixed sequences accommodate variable elements while maintaining a recognizable structure in disaster reporting.

Lexical frames also occur in death toll + [V], with rises, climbs, and reaches filling the variable verb slot (29–31). The expanded pattern death toll rises to + [number] incorporates casualty figures. These frames demonstrate how recurring lexical patterns convey human loss and changes in casualty figures in disaster headlines.

(29) Earthquake death toll rises to 2,886 as rescue efforts continue—TN H100

(30) Death toll climbs to 22 at collapse site—TBP H53

(31) Thai quake death toll reaches 17 with 77 missing, monorail still halted—TN H75

The frame steel samples + [V] is realized through the verbs fail and linked, as illustrated in (32) and (33). This pattern shows how a stable noun sequence can accommodate different verbal forms to report technical information related to structural materials.

(32) Some steel samples fail to meet standard in State Audit Office building—TN H74

(33) Two substandard steel samples linked to collapsed Bangkok building—TN H80

Collectively, these one-slot lexical frames demonstrate the semi-fixed yet flexible nature of disaster news language, providing EFL learners with practical and adaptable templates for vocabulary development and genre familiarity.

Table 7.

Lexical Frames with Two or More Open Slots

Frame	Slot Fillers / Examples
[N] + [V] + alarm	cracks cause alarm; quake raises alarm
body + [V] + [Prep]	body recovered from; body retrieved from; body spotted at
[V] answers [Prep]	seeks answers from; demands answers over; expects answers about
[Adj] investigation [Prep]	special investigation to; strict investigation into; fair investigations in
[V] safety [N]	awaits safety checks; assures safety standards; faces safety scrutiny
[N] services [V]	health services mobilized; subway services resume; train services suspended

Table 7 presents lexical frames featuring two or more open slots, illustrating greater lexical flexibility and productivity typical of disaster news discourse. For instance, the frame [N] + [V] + alarm, realized as cracks cause alarm and quake raises alarm, allows variation in both the noun and verb slots as shown in (34) and (35).

(34) Old cracks cause alarm, evacuation of Bangkok buildings—TBP H19

(35) Myanmar quake raises alarm over nation's alert system—TBP H4

Similarly, the frame body + [V] + [Prep] allows variation in both the verb and preposition, as in body recovered from, body retrieved from, and body spotted at in (36) and (37).

(36) Another body retrieved from collapsed building—TBP H33

(37) Another body spotted at building collapse site—TBP H57

Administrative and political language is represented by frames such as seeks answers from, demands answers over, and expects answers about, which combine answers with reporting verbs and prepositional phrases to express inquiry and accountability (38). The frame [N] services + [V] in (39) varies in both the noun modifier and following verb, as in health services mobilized, subway services resume, and train services suspended. Similarly, awaits safety checks, assures safety standards, and faces safety scrutiny show recurring patterns around safety, with variation in the surrounding verbs and nouns (40).

(38) PM demands answers over delayed earthquake alerts, questions infrastructure response—TN H29

(39) Subway services resume post-quake, bar two lines awaiting safety checks—TN H25

(40) AOT assures safety standards at all six airports—TBP H7

Additional multi-slot patterns in (41)–(43) include rescue teams cling to, response teams search for, and foreign teams start to. These sequences combine noun phrases and verbal constructions to represent actors and actions in disaster response. Because they vary in both lexical and grammatical structure, they are better treated as separate recurring constructions rather than a single lexical frame.

(41) Bangkok rescue teams cling to hope as foreign experts find air pockets in collapsed building—TN H90

(42) Foreign and local emergency response teams search for survivors buried in 75,000 tonnes of fallen concrete and steel—TBP H44

(43) Foreign teams start to withdraw from the collapse site—TBP H41

Together, the lexical frames identified in Tables 6 and 7 demonstrate the patterned yet adaptable nature of disaster-related English. One-slot frames provide relatively stable and reusable patterns, while multi-slot frames allow greater lexical and grammatical variation. The additional recurring constructions further illustrate how disaster headlines adapt noun-centered patterns to different reporting contexts.

Discussion

This study demonstrates the importance of lexical nouns, collocations, lexical bundles, and lexical frames in the linguistic structure of the disaster news headlines examined in the present corpus. This finding aligns with established research on news discourse (Biber et al., 2004; Hunston, 2002), which has highlighted the prominent role of nouns in conveying information efficiently in news texts. In the present corpus, lexical nouns accounted for 42.5% of all words. This numerical prominence highlights their function in efficiently encoding key actors, locations, and events. Findings by Napu (2018) and Husna (2025) similarly emphasize nouns as a prominent word class in English headlines, supporting their role in delivering dense, high-impact content.

Within the present corpus, prominent nouns like *building, collapse, earthquake,* and *rescue* reflect an emphasis on physical destruction and emergency response. This observation is consistent with Stubbs (2001) and Houston et al. (2012), who found that disaster news commonly foregrounds infrastructure damage and loss, reinforcing the communicative significance of concrete nouns in constructing public narratives around crisis events.

The analysis of collocations further illustrates how lexical nouns combine with different types of adjacent lexical items to construct compact meanings in disaster headlines. The collocations involved

nouns, adjectives, and proper nouns, reflecting the lexical and grammatical variation found in word combinations (Benson et al., 1986). Similar POS-based collocational patterns have also been identified in corpus-based studies of news discourse, including English-language newspaper headlines (Nitsaisook & Dhanesschaiyakupa, 2019; Sukman & Tangkiengsirisin, 2024). The findings show that lexical nouns can participate in different grammatical configurations to convey information about structural damage, geographical location, the disaster event, and emergency response. These patterns contribute to the information density and semantic specificity of disaster news headlines.

The lexical-bundle findings demonstrate that recurring multi-word sequences contribute to the compact and information-dense style of disaster news headlines. This finding is consistent with Leelasetakul (2025a), who identified lexical bundles serving primarily news-specific and referential functions in vehicular accident news. The predominance of three-word bundles in the present corpus is also comparable to Yousaf et al. (2019), whose analysis of journalistic discourse identified three-word bundles as a prominent pattern. More broadly, the recurring structural and functional patterns identified in news discourse by Wang (2017) support the view that lexical bundles are characteristic resources for organizing and condensing information in news writing. The present findings extend these observations to earthquake headlines, showing how short recurring sequences efficiently package information about structural damage, location, the earthquake event, and human impact.

The lexical-frame analysis highlights a balance between formulaicity and adaptability in disaster news headlines. The single- and multi-slot frames allow lexical substitution while maintaining recognizable structural patterns, enabling reporters to adapt recurring constructions to different aspects of the disaster. This finding is broadly consistent with Leelasetakul's (2025b) observation that content-word-based frames are prominent in disaster reporting. The present findings further show how these frames operate within the compressed structure of earthquake headlines, where variable slots accommodate information about damage, response, investigation, and human impact.

Overall, the findings indicate that lexical nouns and their associated collocations, lexical bundles, and lexical frames form interconnected patterns that contribute to the compact and information-dense style of earthquake news headlines. Rather than occurring as isolated vocabulary items, disaster-related nouns participate in recurring lexical and grammatical patterns that convey structural damage, geographical location, emergency response, and human impact. These findings demonstrate how lexical patterning contributes to the linguistic organization of disaster news discourse.

Limitations and Future Research

The present study has several limitations. First, the corpus comprised 200 headlines and 2,032 words from two Thai English-language newspapers covering a single earthquake event. Although appropriate for the event- and genre-specific focus of the study, this relatively small and event-specific corpus limits generalization to English-language disaster news more broadly and may affect the stability

of less frequent collocations, lexical bundles, and lexical frames. The findings should therefore be interpreted as descriptive evidence of lexical patterning within the present corpus rather than as statistically generalizable characteristics of disaster news as a whole.

Second, the corpus was restricted to headlines produced by Thai journalists and published in two Thai English-language newspapers. While this provides a consistent representation of English used in the Thai media context and is relevant to Thai EFL learners, the identified patterns may reflect localized journalistic and sociocultural practices. They should therefore not be assumed to represent international English-language disaster reporting.

Future research could expand the dataset by examining multiple disaster events, longer collection periods, additional news sources, and different English-using contexts. Comparative studies could also investigate whether particular lexical nouns and patterns are shared across disaster types and media contexts or are more locally and genre-specific.

Conclusion and Pedagogical Implications

This study examined lexical nouns and their associated collocations, lexical bundles, and lexical frames in English-language disaster headlines from two Thai newspapers. The findings show that lexical nouns play a central role in conveying information efficiently within the compressed discourse of disaster headlines, while recurring lexical patterns provide additional semantic, grammatical, and contextual information. Together, these findings demonstrate that disaster headlines can serve as a useful source of pattern-based lexical input for Thai EFL learners.

The Thai media context of the corpus also contributes to its pedagogical value. Because the headlines were produced by Thai journalists and published in Thai English-language newspapers, they provide learners with exposure to English used within a familiar media context. At the same time, the identified patterns are specific to the disaster-news genre and the Thai media context and should therefore be treated as context-sensitive learning resources rather than universal models of English. Used alongside international news materials, they can help learners recognize both context-specific and shared patterns of English use across different linguistic and cultural contexts (Jenkins, 2007; McKay, 2002).

The findings have practical implications for vocabulary instruction. Teachers can organize disaster-related vocabulary into thematic fields and present lexical items together with recurring patterns rather than as isolated words (Nation, 2013). Classroom activities can include identifying and interpreting collocations, completing and extending lexical patterns, reconstructing headlines, and using lexical frames to create new headlines or short news reports. Such activities can help learners develop not only knowledge of individual words but also awareness of how vocabulary functions within recurring grammatical and semantic relationships. This pattern-based approach is consistent with

lexical approaches to language teaching that emphasize multi-word units and recurring combinations (Lewis, 1996; Nation, 2013).

The findings can also support corpus-based and task-based learning. In Data-Driven Learning (DDL) activities, learners can use a concordancer to examine how target nouns occur across multiple headlines, identify recurring collocations and patterns, and formulate their own examples (Boulton & Cobb, 2017; Johns, 1991). Task-based activities can extend this analysis through headline reconstruction, short news-report writing, or emergency-briefing tasks in which learners apply the target vocabulary and patterns in communicative contexts (Ellis, 2003). These activities provide opportunities for learners to engage with authentic language while developing lexical, grammatical, and genre awareness.

Overall, the study demonstrates the value of combining corpus-based lexical analysis with genre-sensitive vocabulary instruction. The findings provide a basis for using authentic disaster news headlines as contextually relevant materials for Thai EFL learners and suggest that instruction focusing on recurring lexical patterns can extend vocabulary learning beyond individual words to include collocational, grammatical, and discourse-level knowledge. The approach may also contribute to the development of context-sensitive materials for disaster-related communication.

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