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Lexical Cohesive Devices in IELTS Reading Exercises: A Corpus-Assisted Study



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Abstract

This research aims to explore the types, frequency, and functions of lexical cohesive devices in IELTS reading passages according to Halliday and Hasan's (1976) model of cohesion. The study focuses on identifying the lexical cohesive devices used in the reading passages, analyzing their frequency, and examining their functions in creating meaningful and unified texts. A descriptive mixed-method research design was employed to analyze selected IELTS reading passages from the Cambridge IELTS Academic Set 1 to 18. To manage the scope of the study, the researcher selected the first ten books and analyzed the first reading passage from each of the selected books. The data were initially identified and highlighted manually and were subsequently counted and analyzed with the help of AntConc software. The analysis focused on repetition, synonymy, antonymy, hyponymy, meronymy, and collocation. The findings show that all the identified types of lexical cohesive devices were used in the selected IELTS reading passages. Across the ten samples, a total of 1,812 lexical cohesive devices were identified. Collocation was the most frequently used lexical cohesive device, with 1,016 instances (56.07%), followed by meronymy with 372 instances (20.53%). Repetition accounted for 115 instances (6.35%), synonymy 116 instances (6.40%), hyponymy 101 instances (5.57%), and antonymy 92 instances (5.08%). The findings further demonstrate that lexical cohesive devices perform different functions in the reading passages. Repetition reinforces key concepts, synonymy provides lexical variation, antonymy creates contrast, hyponymy provides category and conceptual clarity, meronymy establishes part-whole relationships, and collocation contributes to the natural flow and contextual appropriateness of the text. The study concludes that lexical cohesive devices play an important role in connecting ideas and maintaining unity and meaningfulness in IELTS reading passages. The findings may benefit teachers and second language learners by increasing their awareness of lexical cohesion and its functions in IELTS reading comprehension.

Keywords: Lexical Cohesion, Cohesive Devices, IELTS, Reading, Collocation, Halliday and Hasan

INTRODUCTION

According to Halliday model there are two types of Cohesive devices one is "grammatical Cohesive devices" in which references, Conjunctions, Ellipsis, and Substitution all these cohesive devices also have several types that are explored in this study through the study of IELTS reading exercises in which the books were taken from the internet and the second category is Lexical cohesive devices that includes repetition, synonyms, Antonyms and hyponyms.

Halliday and Hasan (1976) defined in their text that cohesion refers to the idea of the text. Cohesion consists of lexical cohesion and grammatical cohesion. Lexical cohesion means the use of vocabulary in the text. By having a strong understanding of lexical cohesion a writer can make their work different from others by using different kinds of vocabulary in his work. Writers also use grammatical cohesion to create connections between words and sentences in any kind of discourse. The researcher chooses Reading exercises of IELTS examination to analyze Cohesive devices with

the perspective of Halliday and Hasan's 1976 model of Cohesive devices in which they presented two types of cohesion "Grammatical cohesive devices such as: References, Conjunction, Ellipsis, and Substitution and "Lexical cohesion" that includes reiteration and collocation. Text structures depend on factors different from those required for individual sentence structures. Cohesion tried to tie the connections within a written discourse (Halliday & Hasan, 1976). It creates meaningful connections for the reader. Cohesion is used when the explanation of one component depends on another, with one presupposing the other (Halliday & Hasan, 1976).

The second type is "Lexical cohesion". The basic function of lexical cohesion is to establish relationships among words. Lexical cohesion has many types. The first one is Repetition, the second is synonyms, the third is antonyms, the fourth includes subordination (hyponymy) and the last is collocation. Repetition involves repeating the same words in the writing (e.g., "Lucy likes reading English. English is very interesting"). The second is synonyms,

Synonymy is also a type of cohesive device that writers use in their texts to make their writing distinct. Synonyms basically have similar meanings in the text and are used to make the writing more varied and effective. The third is antonymy, which deals with contrasting words for example "day" and "night." The fourth is "subordination." These are words within the same category (e.g., "man," "woman," "child," "adult" are hyponyms of "human"). Collocation refers to vocabulary items that frequently co-occur, such as "fast food" or "run out of money." So, the researcher tried to identify all these types of Cohesive devices in the Reading Exercises of the IELTS Examination.

Statement of the Problem

The researcher has observed the difficulties of English language learners who fail to utilize and identify the cohesive devices in IELTS reading exercises. The students often struggle to interpret a text due to their lack of understanding regarding the connections between words, phrases, sentences, paragraphs, and clauses. Many people are unaware of the main functions of the words that connect with each other to connect the ideas in the discourse. ESL students often encounter numerous challenges in text analysis. Additionally, IELTS examinations are meticulously designed, with lexical cohesion expected to function in a unique manner. However, analyzing cohesive devices in the IELTS Examination is particularly challenging, especially for ESL students. The researcher highlighted some problems that provided the foundation for this research the first problem concerns which the cohesive devices that are used in reading passages and which items are the most frequently used and which items that are very often used by the authors and what are the roles or functions of these items in the IELTS reading passages.

Research Objectives

- To identify the lexical devices according to Halliday and Hasan's (1976) model used in English Reading Exercises of IELTS examination
- To analyze the frequently used lexical devices according to Halliday and Hasan's (1976) model
- To analyze the functions of lexical devices used according to Halliday and Hasan (1976) model in English Reading Exercises of IELTS Examination

Research Questions

- 1) What are the lexical devices used in English reading exercises of IELTS examination according to Halliday and Hasan's (1976) model?
- 2) What is the frequently used lexical device in English reading exercises of the IELTS examination?
- 3) What are the functions of lexical devices used in the English reading exercises of the IELTS examination?

Significance of the Study

This study will be beneficial for the teachers because it gives information about cohesive devices used in English reading texts of IELTS papers, so they can teach the EFL learners how to use the cohesion devices and how to analyze it in any discourse. This study gives a clear idea about all types of cohesive devices, its frequency and functions as well. So, the students can improve their IELTS test preparation. This study broadens reading comprehension skills. This study is expected to widen the circle of understanding and knowledge of cohesive devices especially from the perspective of Halliday and Hasan's 1976 theory about cohesive devices. This research tried to give a starting point for further researchers.

Delimitation of the Study

This study aims to identify cohesive devices that are presented in Halliday and Hasan (1976) model of cohesive devices. The researcher has taken English reading exercises for the IELTS Examination. The researcher has just taken the first 10 books from the 18 books and analyzed just the 1st reading passage from every 1st 10 books.

LITERATURE REVIEW

Cohesion is an integral feature to provide meaningfulness and maintain unity of discourse (Halliday & Hasan, 1976). When all the items are interconnected and a reader can easily understand the meaning of a text, it means that a text contains cohesive devices. Cohesion occurs when the interpretation of one element depends on another (Halliday & Hasan, 1976).

There are many cohesive devices that writers use to clarify their work. In this study, the researcher introduces Halliday and Hasan's cohesive devices model. Halliday and Hasan's cohesive devices model. According to Halliday model there are two types of Cohesive devices one is "grammatical Cohesive devices" in which references, Conjunctions, Ellipsis, and Substitution all these cohesive devices also have several types that are explored in this study through the study of IELTS reading exercises in which the books were taken from the internet and the second category is Lexical cohesive devices that includes repetition, Synopses, Antonyms and hyponyms. Halliday and Hasan (1976:4), defined in their text that cohesion refers to the idea of the text. Cohesion consists of lexical cohesion and grammatical cohesion. Lexical cohesion means the use of vocabulary in the text. By having a strong understanding of lexical cohesion a writer can make their work different from others by using different kinds of vocabulary in his work. Writers also use grammatical cohesion to create connections between words and sentences in any kind of discourse

Cohesive devices can be divided into two categories: grammatical cohesion (reference, substitution, ellipsis, conjunction), and lexical cohesion (repetition, synonyms, antonyms, hyponyms, and collocation).

Lexical cohesion is defined as creating a cohesive effect through the selection of

vocabulary. The primary types of lexical cohesion include reiteration that have repetition, synonymy, antonymy, hyponymy, meronymy, and collocation (Jabeen, Mehmood & Iqbal, 2015).

Cohesion can be elaborated as the chain of lexical, grammatical, items that connect the meaning in the text. The IELTS Writing section is considered one of the most difficult parts of the test. Second language learners often do not know how to complete the task. Therefore, they write without proper direction. Therefore, they face many problems when completing the test. To get to this point the researcher analyzed all the cohesive devices in English Reading Skills of IELTS examination with the hope that this study will be beneficial for all those ESL learners who found difficulty reading IELTS examination paper.

The study focuses on the functions of lexical cohesive devices in IELTS Reading texts. Ngan and Hoa (2017) analyzed 26 Reading Passage 1 texts selected from five IELTS Practice Test books published by Cambridge University Press. The main purpose of the study was to identify and analyze lexical cohesive devices and provide test-takers with strategies for answering different types of questions in IELTS Reading texts. The findings indicated that lexical cohesive devices, including repetition, synonymy, hyponymy, antonymy, and collocation, contribute to cohesion and coherence in IELTS Reading texts and can help test-takers better understand the texts and perform reading tasks effectively.

The study highlights the lack of investigation into the lexical cohesion patterns and pedagogical implications of IELTS reading passages in the field of ESL teaching. It suggests incorporating a lexical cohesion syllabus into the traditional teaching stages to enhance subject matter knowledge (Wang, 2022). The purpose of this research was to investigate the problems of the Pakistani candidates who cannot achieve a high score in the IELTS test. The researcher also identifies specific challenges that are faced by Pakistani students and introduces some proposed targeted pedagogical approaches for English language instruction in Pakistan (Ishaq and Abdulaziz, 2024). The study reveals that cohesion and coherence play a very important role in an English essay. This study investigates whether high school students use cohesive devices in their written discourse, especially conjunctions because, according to the researcher,, conjunctive devices impact the whole written discourse and make the text clear and fluent but the frequency of conjunctions in the written discourse is lower than that of references (Yingle and Xueai, 2019).

The study explored the use of cohesive devices in academic writing. English writing is very challenging for learners, and maintaining coherence is also difficult for Islamia College Peshawar (Rahman, Zaigham, and Umer, 2023).

This research revealed the functions of lexical cohesion in ESL learners native writing. It revealed how all the types of lexical cohesion affect the overall writing quality of the narratives produced by thirty Indian ESL learners (Raman and Mathew,2020).

Lee and Shu (2019), gave the importance of all the elements of discourse on text. The use of cohesive devices in the Formal texts, like hortatory exposition is very important to make a well structured sentence. So, it is very important to use cohesive devices for constructing and are crucial for setting up the coherence of discourse.

Crowhurst (2015), explains that understanding of exposition text is very integral for the success of academic affairs and everyday life. In this way students can easily communicate their ideas. They can use proper lexical items, and reveal writing context. Through utilization of cohesive devices they can make logical or meaningful

sentences This research is just not focused on the types and frequency of cohesive devices but also it examines how the students used the cohesive devices according to Halliday and Hasan (1976) theoretical framework .

According to Karim and Nassaji (2013), transfer of L2 into L1 can be badly affected on L1. Second learners use it badly that affects their writing as well. There can be a variation. It can be a problem in word selections, grammatical errors and structural elements rules. So involvement of native language can cause problems while learning a second language.

Amenorvi (2011), explains that cohesive devices are the chain of lexical and grammatical relations in the writing structure of the text. It is very crucial for the reader how all the paragraphs and sentences are connected with each other. However, cohesion plays an arch to connect the sentences.

In this study, the writer emphasized the importance of Cohesive devices in academic settings. By using these cohesive devices a writer can easily comprehend the intended idea to the reader (Saleh and Bharati, 2022).

This study examines how the children and even regular literature used lexical and conjunctive cohesive devices. They conducted this research from the children's novel, "Danny the champion of the World" by Roald Dahl and fiction novel "Coming up for Air" by George Orwell. The researchers concluded their study by revealing that children's as well as adults' literary work is also saturated with just two cohesive devices, one is "synonyms" and the other is "repetition". They are the most dominant devices in children's and adults' literary works as well. The researchers proved that synonyms and repetitions are the most important cohesive devices Therefore, the results show that these are the most prominent devices in the children's as well as adults' textbooks. Their frequency is higher than the others. Basically, the main aim of this study is to find out the difference between children's and adults' literary works and examined that which cohesive devices are most frequently used like lexical and conjunctions are used in children's and adults' literary works and what is the difference between the children and adults literary work (Moini and Kheirkhah, 2016). Sari et al. (2022) tried to explore cohesive devices from reading texts of English textbooks. The main focus of this research is to analyze grammatical cohesive devices (that are very essential in any text that is the very crucial part of ant text) in the research articles. The researchers limited their study by analyzing only the findings and discussions of the papers that are the conclusion of any article. The researcher worked on the research papers of students who were graduates in English Education. This study is very useful for students because it provides information about the use of cohesive devices in the research articles. The researchers also found from this study that grammatical cohesive devices are frequently used in these research papers that are written by the graduate students. This research also provides information to teachers who guide their students how to use cohesive devices in their research papers.

RESEARCH METHODOLOGY

This study employs a descriptive mixed-method research design to investigate lexical cohesive devices in IELTS reading passages, guided by Halliday and Hasan's (1976) model of cohesion. The research focuses on analyzing the frequency and function of cohesive devices in a corpus derived from the Cambridge IELTS Academic series, specifically books 1 to 18, accessed via <https://wisegot.com/cambridge-ielts->

academic-set-1-to-18/. To manage the scope, the researcher selected the first passage from each of the first 10 books, resulting in a total of 10 passages. The data was analyzed using the AntConc software to identify and quantify cohesive devices, including “lexical cohesion,” which has the following categories: repetition, synonyms, antonyms, hyponyms or subordinate and collocation.

A descriptive research design was chosen to address “what” cohesive devices are used and “how” they function in the text, providing a comprehensive understanding of their application. The analysis involved calculating the frequency of each cohesive device, presenting the results in individual tables, and summarizing the total counts and percentages in a consolidated table to highlight their prevalence and significance. The study is grounded in Halliday and Hasan’s (1976) theoretical framework of cohesion, as outlined in their seminal work, *Cohesion in English*. This framework categorizes cohesive devices into two main types: grammatical cohesion, encompassing references, conjunctions, ellipsis, and substitution, and lexical cohesion, including reiteration (repetition, synonyms, antonyms, hyponyms) and collocation.

DATA ANALYSIS

In this section, the researcher identified and analyzed lexical cohesive devices according to Halliday and Hasan (1976) model of cohesive devices in IELTS reading exercises. The researcher also identified and analyzed what are the most frequently used lexical cohesive devices and functions in the reading passages of IELTS selected reading passages.

Data from the Book 1

The researcher used all the cohesive devices that are used in the 1st reading passage of the book in which the researcher also drew a table to identify the frequency of the cohesive devices.

Table 1: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	14	9.59%
Synonymy	10	6.85%
Antonymys	10	6.85%
Hyponymy	3	2.05%
Collocation	102	69.86%
Meronymy	7	4.79%
Total	146	100%

The researcher has analyzed the second type of the cohesive device that is presented by Halliday and Hasan is Lexical cohesive devices. The researcher has analyzed and then presented its result through the following table in a very lucid way. The above table explored that the most frequent Lexical cohesion used by the author is Collocation. While the remaining devices like synonyms, Antonyms, homonyms are less than the repetition

Repetition

The most frequent uses of repetition that the author use in the reading exercise are following, Fires(10), Flame(2), Spark(2), Light(3), Method(3), Glass(3),

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Phosphorus(6), Potassium(6),Chlorate
(3),Marker(2),Technology(2),American(2),Book(3),Match(13)

Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 1 and its 1st reading passage. There are almost **(10)** Synonyms that the writer used in the passage; these are described as following: Fire (Flame, Combust, Burning, Spark,) Produce (Make, Manufacture, Generate) Light (Ignite, Strike, Kindle) Early man (Primitive societies, earliest peoples, Discovered (Learnt, Found, Invented). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

Antonyms

The writer has also used a number of Antonyms in the text. The researcher also identifies each of them deeply. All of the antonyms are described here: Make (Destroy, Extinguish) Divine (Mundane) Early (Late) Primitive (Modern) Slow-burning (Instantaneous) First (Last). These antonyms create contrast and enhance the narrative flow by comparing different aspects of fire control, fire-making techniques, and the evolution of fire-lighting technology.

Hyponyms

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy In the paragraph” On the control of fire and the evaluation of fore-lightning method” the author has used hyponymy to the aim of add more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 1. Fire (Flame, Spark), Combustion , Anti-afterglow solution ,Waterproof matches).The above detail of almost all the types of lexical cohesive devices shows that the writer has widely used all these types of cohesive devices. Because the main function of all the types of lexical cohesion in the passage.

Collocation

Collocations, totaling 102, are natural and idiomatic combinations of words, including 51 noun + noun pairs (e.g., "control of fire," "humanity's steps," "life-enhancing technology," "divine gift," "lightning, forest fire, or burning lava," "earliest peoples," "slow burning logs," "secondary invention," "tool-making operations," "primitive societies," "waterproof match"), 34 verb + noun pairs (e.g., "delivered in the form of," "make flame," "storing fire," "carrying charcoal," "prevent the match from smoldering," "lights after eight hours"), and 17 adjective + noun pairs (e.g., "life-enhancing technology," "earliest peoples," "slow burning logs," "secondary invention," "Instantaneous Light Box," "different climatic conditions," "match technology and marketing," "anti-afterglow solution," "waterproof match"). These collocations, involving common combinations of verbs, nouns, adjectives, and other parts of speech, play an integral role in providing natural language, making speech and writing sound more native and less awkward, as native speakers instinctively use specific pairs like "make a decision" rather than less natural alternatives like "do a decision," enhancing fluency and contextual appropriateness.

Meronymy

Fire (Spark, Flame), Tree (Wooden Drill), Stone (Flints), Fire Making Tools (Cord, drill), Safety Matches (Red Phosphorus, Match Tip), Fire Lightning Devices

(Sulphuric Acids, Splint), Carrying Charcoal (Pot). The writer has used all the lexical cohesion in the text because it has various functions. For example, the writer has used repetition to make his text different from others. The function of synonyms is to avoid repeated words, similarly the writer has used antonyms to make difference in the meanings, The writer has used hyponyms and meronyms in the text for the assistance of the readers, because in this way a reader can get a knowledge of all subclass of the words. For example, the writer explained through the use of meronymy that wooden drill is also the part of the tree.

Data from the Book 2

The researcher has analyzed all the cohesive devices that are used in this passage, and to analyze its frequency the researcher found the following results.

Table 2: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	10	5.88%
Synonymy	19	11.18%
Antonymy	15	8.82%
Hyponymy	15	8.82%
Collocation	106	62.35%
Meronymy	5	2.94%
Total	170	100%

The above table shows that the most frequent Lexical cohesive device used by authors is Collocation (106), while the remaining devices like Repetition, Antonyms, and hyponyms are less than the synonyms. Repetition that the author has used in the reading passage is as follows:

Repetition

Island (12) Sand (6) Seabed (3) Settlement (2) Meters (9) Mud (5) Water (5) Pillars (2) Dredged (3) Foundation (3) Synonyms: The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 1 and its 1st reading passage. There are almost 10 Synonyms that the writer used in the passage; these are described as following: Reclaim (Strengthen) Seabed (Riverland), Pile (Build up) Wears (Erodes) Settle (Cope with settlement) Engineer (Design, Construct), Capping (covering) Unyielding (Firm) Completed (Finalized). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

Antonyms

The writer has also used a number of Antonyms in the text. The researcher also identifies each of them deeply. All of the antonyms are described in the following: Difficult (Easier), Wears (Builds up) Dramatic(subtle) Sinking (Rising), Dredged(Filled) Deep(Shallow) Bare(Covered) Limited (Extensive) Above(Below). These antonyms create contrast and enhance the narrative flow by comparing different aspects of fire control, fire-making techniques, and the evolution of fire-lighting technology.

Hyponyms

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy the author has used hyponymy to the

aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 1. River deltas (Landforms), seabed (River land) Pile (Heap), Performance (Efficiency) Fluctuation (Variations) Delta(River mouth).

Collocations

Collocations, totaling 106, are essential for conveying the technical and logistical complexities of creating and maintaining man-made islands for airports, encompassing 31 noun + noun pairs (e.g., "river deltas," "sea wears," "island creation," "motorway construction," "dump-trucks," "raised area"), 37 verb + noun pairs (e.g., "reclaim the seabed," "strengthen the land," "pile sand," "ooze with mud," "place buildings," "support foundations," "move material," "reach resting place," "carry dump-trucks," "raise an area"), 20 adjective + noun pairs (e.g., "difficult places," "natural fluctuations," "new island," "seabed settlement," "softer areas," "completed island," "final resting place," "raised area"), 5 verb + adverb pairs (e.g., "sink back," "rumble across," "finish by," "construct quickly," "deal with effectively"), 3 adverb + adjective pairs (e.g., "rather like," "quite solid," "rather effective"), and 10 other collocations (e.g., "build them up," "wear them down," "outlines changing," "below the reclaimed land," "settlement by," "overload moved," "several times"), collectively enhancing the naturalness and precision of language in describing complex engineering processes.

Meronymy

Components of island (Land surface, Seabed, Outcrops, Layer of mud, and foundations), Construction Materials (Sand, Clay, Mud, Granite, Boulders, Rock, Geotextile). Airport parts (Runways, Taxiways, Terminal buildings, sea defenses, motorway, construction, worker area), Geological elements (Mud deposits, Glacial deposit), Environmental Factor (Sea Walls).

Data from the Book 3

The researcher has explored all the types of cohesion of the third book and its 1st passage.

Table 3: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	9	4.27%
Synonymy	13	6.16%
Antonymys	20	9.48%
Hyponymy	43	20.38%
Collocation	120	56.87%
Meronymy	6	2.84%
Total	211	100%

The above table revealed that in Lexical cohesive devices used by the author is Collocation (120), while the terms like synonyms, Antonyms, homonyms are less than the repetition. The most frequent uses of repetition that the author use in the reading exercise are following: Rocket (16) Reaction Principle (4) Exploration (2) Technology (2) Bullet (2) powder (4) Arrows (4) British (3) Fire (3).

Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 3 and its 1st reading passage. There are almost 13 Synonyms that the writer used in the passage; these are described as following: Rocket (technology) propelling, mechanism, device Discovery (milestone, breakthrough, realization), Results (outcomes, consequences, effects). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

Antonyms

The writer has also used a number of Antonyms in the text. The researcher also identifies each of them deeply. All of the antonyms are described in the following: Develop Antonym remains, Discovery Antonym is problem, Open Antonym is closed, Theory Antonym is practice, Minor Antonym is major, Primitive: Antonym is sophisticated, Ignored: Humble Antonym is grand. These antonyms create contrast and enhance the narrative flow by comparing different aspects of fire control, fire-making techniques, and the evolution of fire-lighting technology.

Hyponyms

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is "Hyponymy". In the paragraph the author has used hyponymy to the aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 3. Rocket (space shuttle, missile.) Rocket technology: Hyponyms include aerospace engineering, propulsion systems. Space programs: Hyponyms include NASA missions, space exploration projects. Foundations, Hyponyms include principles, bases. Future Hyponyms include prospects, advancements. So, the researcher identified a lot of hyponyms from this book.

Collocations

Collocations, totaling 159, are vital for creating natural and idiomatic language in contexts like fire control and rocketry, encompassing 51 noun + noun collocations (e.g., "control of fire," "humanity's steps," "life-enhancing technology," "divine gift," "lightning, forest fire, or burning lava," "earliest peoples," "slow burning logs," "secondary invention," "tool-making operations," "primitive societies," "waterproof match"), 36 additional noun + noun collocations (e.g., "reaction principle," "space travel," "scientific thought," "rocket technology," "intellectual breakthrough," "conical head," "modern day," "space programs," "humble beginnings"), 34 verb + noun collocations (e.g., "delivered in the form of," "make flame," "storing fire," "carrying charcoal," "prevent the match from smoldering," "lights after eight hours"), 24 additional verb + noun collocations (e.g., "propelling an object," "solve a problem," "opened the door," "used sporadically," "used against the British," "experiment with incendiary rockets," "inserted and lit"), 17 adjective + noun collocations (e.g., "life-enhancing technology," "earliest peoples," "slow burning logs," "secondary invention," "wooden drill," "round hole," "ancient Greeks," "sealed glass tube," "self-combust," "Instantaneous Light Box," "different climatic conditions," "match technology and marketing," "anti-afterglow solution," "waterproof match"), 26 additional adjective + noun collocations (e.g., "great milestones," "relatively minor artifact," "prodigious efforts," "sophisticated astronauts," "primitive rocketry," "simple

analogy," "modern day space programs," "humble beginnings," "devastating results"), and meronyms like "black powder (saltpetre, charcoal, sulphur)," "cylindrical tube," "two sticks (part of American rocket launcher)," "iron cylinder," "stick almost five meters long (part of British rocket)," "iron envelope," "bamboo guiding stick (part of Indian rocket)," "arrow as a flying sabre (rocket propelled arrows)," "basket of fire (part of weapon system)," which collectively enhance fluency and precision in speech and writing, making it sound more native and less awkward, as seen in natural phrases like "make a decision" versus "do a decision."

Data from Book 4

The researcher explored all the cohesion from book four and its first reading passage.

Table 4: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	12	5.53%
Synonymy	17	7.83%
Antonymy	5	2.3%
Hyponymy	5	2.3%
Meronymy	3	1.38%
Collocation	175	80.65%
Total	217	100%

The above table displayed that the most widely used term in Lexical cohesion is Collocation, and the others cohesions like synonyms, Antonyms, homonyms are less than the repetition. The most frequent uses of repetition that the author uses in the reading exercise are following,

Repetition

Rainforest (18) Ideas (8) Children (4) Destruction (6) Misconceptions (6) Important/Importance (5) Activities (4) Media (3) Habitats (3) Knowledge (3) Scientific (3) Environmental (3),

Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage of the IELTS book. There are almost (10) synonyms that the writer used in the passage. These are described as following: "Rainforests" ("tropical forests," "forests", "discussion", protection, "preservation," "safeguarding". These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

Antonyms

The writer has also used a number of antonyms in the text. The researcher also identifies each of them deeply. All of the antonyms are described in the following: Correct vs Incorrect, Formal vs Informal, Complex vs Simple, Frequent vs Rare, Acquisition vs Misconception. These antonyms create contrast and enhance the narrative flow by comparing different aspects of fire control, fire-making techniques, and the evolution of fire-lighting technology.

Hyponymy

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy. The author has used hyponymy to the aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 1, damp (wet, hot), acid rain (pollution, reduced atmosphere oxygen), Africa, (South America, Brazil), near the Equator

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(animal habitats, plant habitats, human habitats,), normal tuition (questionnaire)

Collocation

Collocations, totaling 175, enrich the text by providing specific and meaningful word pairings that clarify children's misconceptions and nuances in their understanding of rainforests, comprising 45 noun + noun collocations (e.g., "tropical rainforests," "alarming rate," "graphic illustration," "older children," "conflicting views," "future decision-makers," "complex factors," "climatic change," "environmental education"), 38 verb + noun collocations (e.g., "confronted with statements," "form ideas," "provide habitats," "develop skills," "conduct study," "plan programs," "build upon ideas," "survey knowledge," "complete questionnaire," "harbor misconceptions"), 39 adjective + noun collocations (e.g., "alarming rate," "graphic illustration," "normal classroom period," "frequent media coverage," "vivid media coverage," "popular media," "basic scientific knowledge," "rainforest ecosystems," "intrinsic value," "specific responses," "significant differences"), 23 adverb + adjective collocations (e.g., "frequently confronted," "readily relate," "often vivid," "independently formed," "commonly confused," "more sympathetic," "directly related," "readily absorbed," "acquired ability," "occasionally erroneous," "frequently evident," "more robust," "highly organized," "more accessible," "not important"), and 30 prepositional collocations (e.g., "in the face of," "about the duration," "at a rate," "by the use of," "in the thinking of," "about rainforests," "in terms of," "in some cases," "with their peers," "by absorbing ideas," "at a lower level," "with the use," "to make decisions," "with the popular media," "to build upon"), collectively enhancing the clarity, specificity, and natural flow of language to effectively convey complex environmental concepts and educational insights.

Meronyms

Damp, wet, or hot (part of Climate), Africans, South America, Brazil (Part of geographical distribution of rainforests), Animal habitat, Plant habitats, human habitants (part of ecological functions).

Data from the Book 5

The researcher has identified all the cohesions from book four and its 1st passage.

Table 5: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	13	10.74%
Synonymy	15	12.4%
Antonymys	7	5.79%
Hyponymy	3	2.48%
Meronymy	3	2.48%
Collocation	80	66.12%
Total	121	100%

The researcher explored that the most widely used Lexical cohesion is "Collocation", while the other terms like synonyms, Antonyms, homonyms and meronyms are less than the repetition. The most frequent uses of repetition that the author use in the reading exercise are following:

Repetition

Dictionary (14) English (9) Chaos (3) Middle (3) Class 2) Language (4) Landmark (2) Words (8) Published (2) French (2) Century (3) Work (4) Dr Johnson (8).

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Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 5 and its 1st reading passage. There are almost 10 Synonyms that the writer used in the passage; these are described as following: Dictionary (two volume work) Practical (Intensively Practical), Order (Settled) Masterpiece (Landmark) Rivalled (Compete with) Originality (Complete originality). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

Antonyms

The writer has also used a number of Antonyms in the text. The researcher also identifies each of them deeply. All of the antonyms are described in the following: Order (Chaos) Beginning (Previous) Borrowed (Own) Originality (Precedent) Soft (Distraction and Inconvenience) Eccentricities (masterpiece). These antonyms create contrast and enhance the narrative flow by comparing different aspects of fire control, fire-making techniques, and the evolution of fire-lighting technology.

Hyponymy

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy. In the paragraph Johns Dictionary the author has used hyponymy to the aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 5. Dictionary (refers to Johnson's monumental work), Middle class (Refers to a specific socio-economic group within society), Poet and critic (These are specific roles or occupations of Samuel Johnson)

So, the researcher identified a lot of hyponyms from this book.

Collocations

Collocations, totaling 80, play a crucial role in illustrating the development and standardization of the English language, particularly through the creation of dictionaries, with 24 noun + noun collocations (e.g., "state of the English language," "standard way," "chaos of English spelling," "practical need," "rise of dictionaries," "rise of the English middle class," "shelter of academic bowers," "two-volume work," "masterpiece," "cornerstone of Standard English"), 17 verb + noun collocations (e.g., "provided the solution," "adopted his definitions," "worked for nine years," "conferred stability"), 13 adjective + noun collocations (e.g., "practical need," "famous in his own time," "heroic synthesis," "living language," "many different shades," "leading Italian lexicographer," "national dictionary," "English celebration," "learned assistance," "great patronage," "soft obscurities," "academic bowers," "two-volume work"), 7 adverb + adjective collocations (e.g., "highly appropriate," "intensely practical," "seriously rivaled," "instantly recognized," "very noble work," "very much more," "finally published"), 3 adverb + verb collocations (e.g., "anxious to define," "seriously rivaled," "universally recognized"), and 16 prepositional collocations (e.g., "in his own time," "out of chaos," "without the establishment," "amidst inconvenience and distraction," "in sickness and in sorrow"), collectively enhancing the clarity and natural flow of language to describe the monumental effort of standardizing English lexicography.

Meronymy

Dictionary (Volume, definitions, words), General terminologies related to the

dictionary (Orthography, Structure, Analogy), John's Garret (Rickety chair, Long desk, Copying clerk, borrowed books, old crazy deal table).

Data from the Book 6

For examining the cohesive devices, the researcher found the following results.

Table 6: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	5	2.78%
Synonymy	6	3.33%
Antonymyys	0	0%
Hyponymy	9	5%
Meronymy	5	2.78%
Collocation	155	86.11%
Total	180	100%

The above table revealed that the widely used Lexical cohesive device by the author is Collocation, on the other hand the other cohesion like synonyms, Antonyms, homonyms are less than the repetition. The most frequent uses of repetition that the author use in the reading exercise are following:

Repetition

Sports (12) Scientists (6) Australians Institute of Sports (12) Performance (8) Athletes (10).

Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 6 and its 1st reading passage. There are almost (7) Synonyms that the writer used in the passage; these are described as following: Academies (Sporting academies) Scientists (sports scientists, doctors, technicians) Improvements (tweaks, tiny gradual improvement) Analysis (measurements, biomechanical profile, Swan system data, competition model) Performance (improve performance, target, hit those targets, Wring improvement out of athletes, Training, competition mode) Development (development of the swan system). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence. The writer did not use any kind of Antonyms in the text.

Hyponyms

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy. In the paragraph the author has used hyponymy to the aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 6. Swimmers (Athletes who are involving in swimming events) Champion swimmers(The swimmers who exceled at their sports). So, the researcher identified a lot of hyponyms from this book

Collocations

Collocations, totaling 155, are instrumental in conveying the systematic and detailed approach to sports training and performance improvement in Australia, emphasizing the integration of science and technology to achieve athletic success, with 50 noun + noun collocations (e.g., "fair share," "sporting academies," "titles," "Australian Institute of Sport (AIS)," "Australian Sports Commission (ASC)," "turn times," "training is geared," "altitude tent," "altitude training," "technological fixes," "success

story"), 48 verb + noun collocations (e.g., "play hard," "play often," "play to win," "win more than their fair share," "demolishing rivals," "provides intensive coaching," "takes center stage "replicate its all-encompassing system"), 22 adjective + noun collocations (e.g., "fair share," "sporting academies," "programs of excellence," "intensive coaching," "nutritional advice," "world-beating results," "success story," "altitude training," "ethereal scientific questions"), 8 adverb + adjective collocations (e.g., "fair share," "seeming ease," "remarkably successful," "extra hundredth of a second," "extensive and expensive," "easily copied," "up to now," "gradual improvements"), 7 adverb + verb collocations (e.g., "demolish rivals," "apply skills," "improve performance," "wring improvements," "spit out data," "developing a competition model," "preparing the athlete"), and 20 prepositional collocations (e.g., "under the eyes," "across a number of sports," "towards making the athlete hit those targets"), collectively enhancing the precision and natural flow of language to describe the sophisticated, science-driven methodologies behind Australia's athletic achievements.

Meronymy

Sporting academies, Science, Medicine, Doctors, sports scientists, universities, technicians, (part of sports training), Youngsters, Coaches, Digital cameras, frames, stroke length, stroke frequency, average duration, velocity, start and finish times, lap times (part of factors analyzed by Swan).

Data from Book 7

The researcher has analyzed all the cohesive devices that are used by the writer of the seventh book from its first passage.

Table 7: Lexical Cohesive Devices Usage

Lexical Cohesive Device	Number Used	Percentage
Repetition	10	6.76%
Synonymy	18	12.16%
Antonymys	12	8.11%
Hyponymy	3	2.03%
Meronymy	6	4.05%
Collocation	99	66.89%
Total	148	100%

The above revealed that in Lexical cohesive devices the most prominent cohesion used by author is Collocation, The other cohesion like synonyms, Antonyms ,homonyms are less than the repetition .The most frequent uses of repetition that the author use in the reading exercise are following:

Repetition

Bats (10) Night (8) Light (8) Dark (7) Eyes (6) Day (6) Way (5) Vision (5) Engineer or Engineering (5) Sonar (5).

Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 7 and its 1st reading passage. There are almost (18) Synonyms that the writer used in the passage; these are described as following: Darkness (Absence of light) Night (daylight) Nocturnal (Active at night), Rader (Detection system using radio waves) Echolocation (Biological sonar or radar). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

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Antonyms

The writer also used Antonyms in the text to make his work more attractive and unique than others Dark(light) Night (Day) Heavily (lightly) Absent (present) Exposed (Obstructed) Manufacture (use) Tiny (Immense) Possible (Impossible) Natural (Artificial) Aware (Unaware) Natural (Man-made) Before (After).

Hyponyms

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy. In the paragraph the author has used hyponymy to the aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 7. Bullying (Physical bullying, Headlights, Echolocation and Sonar/Radar (Facial version, echoes, Asdic, Sonar, Rader, RDF, Echolocation).

Collocations

Collocations, totaling 99, vividly illustrate the adaptations and behaviors of nocturnal animals, particularly bats, in navigating and thriving in their environments, with 30 noun + noun collocations (e.g., "bats problem," "way dark," "light mates," "pinprick light," "distance night," "light source," "fraction light," "part scene"), 5 adverb + adjective collocations (e.g., "already heavily," "thoroughly occupied," "probably only," "extremely muddy," "vastly more"), 14 verb + noun collocations (e.g., "find a way," "hunt at night," "dominate the economy," "face difficulty," "obstruct dirt," "manufacture light," "attract mates," "detect fractions"), 15 adjective + noun collocations (e.g., "daytime economy," "alternative trades," "nocturnal trades," "mammalian ancestors," "prohibitive amounts," "tiny pinprick," "dark night," "tiny fraction," "immense source"), 9 adverb + verb collocations (e.g., "simply avoid," "heavily exploited," "probably managed," "probably only," "only managed," "thoroughly occupied," "already heavily," "directly exposed," "vastly more"), 9 pronoun collocations (e.g., "their way," "they hunt," "their prey," "their habits," "their ancestors," "they prey," "themselves," "one's way"), and 12 prepositional collocations (e.g., "around in," "at night," "by changing," "about 65 million years ago," "in the absence," "by day," "by night," "from some distance," "of light," "around requires," "off each part"), collectively enhancing the natural flow and precision of language to describe the complex ecological and behavioral strategies of nocturnal creatures.

Meronymy

Bats (Bats utilize navigation, echolocation system, and hunting abilities), Humans (facial vision, ears, and sensation of touch on face), Sonar, and Radar systems (measurements of depth, detection of submarines, echo detection), Fireflies (light production, signaling), Deep-sea fish (light-producing capabilities and navigating in the dark, Dinosaurs (Daytime dominance).

Data from Book 8

To explore all types of cohesion that is used in the first passage of the eighth book the researcher finds some results.

Table 8: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	25	10.87%
Synonymy	5	2.17%

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Antonymys	19	8.26%
Hyponymy	8	3.48%
Meronymy	15	6.52%
Collocation	158	68.7%
Total	230	100%

The above table revealed that in “Lexical cohesive devices” the most used cohesion in the passage is “Collocation”, and the other cohesion like synonyms, Antonyms, hyponyms are less than the repetition. The most frequent uses of repetition that the author use in the reading exercise are following:

Repetition

Time (13) Calendar (7) Hours (7) Clock (6) Solar (6) Sun (5) Lunar (4) Year (4) Pendulum (4) Babylonians 3 Babylonians (3) Mechanical (3) Days (3) Egyptians (3) Moon (3) Equator (2) Nile (2) Orbit (2) Planet (2) Revolution (2) Season (2) Shadow (2) Star (2) Sunrise (2) Water (2).

Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 7 and its last reading passage. There are almost (5) Synonyms that the writer used in the passage; these are described as following: Solar day (Period of light and darkness) Lunar month (phases of the moon) Solar year (Changing season) Temporal hours (Intervals of darkness and daylight) Calendar (Municipal Calendar or activity chart). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

Antonyms

The writer also used Antonyms in the text to make his work more attractive and unique than others Solar day (Night , darkness) Summer hours (Winter hours) Past (Present) Dependent (Independent) Descending weight (Coiled spring) Large arc (Small arc) Great clock (Small clock), Dividing into 24 parts (Two 12-hour periods)

Hyponyms

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy. In the paragraph the author has used hyponymy to the aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some hyponyms that the writer has used in book 8. Timekeeping Methods (Sun’s shadow, Gear Wheels (Components of mechanical clocks), Escapement (Regulates the gear wheels), Coiled Spring (Fusee), Fusee (Maintains constant force to the gear wheels).

Collocation

Collocations, totaling 154, vividly capture the evolution and significance of timekeeping across civilizations, integrating 40 noun + noun collocations (e.g., "archaeological evidence," "quartz-crystal clock," "time signals," "precision navigation," "time-based technologies"), 5 adverb + adjective collocations (e.g., "particularly conspicuous," "highly accurate," "quite efficient," "naturally suited," "equally annoying"), 17 verb + noun collocations (e.g., "measure time," "regulate planting," "regulate operation," "calibrate functions," "recognize dependency"), 24 adjective + noun collocations (e.g., "archaeological evidence," "natural cycles," "social impact," "seasonal agriculture," "municipal calendar," "annual flooding,"

"cosmic significance," "equal parts," "temporal hours," "falling water," "mechanical clock," "changing length," "cloudy weather," "freezing weather," "weight-driven mechanical clock," "descending weight," "gear wheels," "constant force," "large arc," "small arc," "highly accurate," "time-based technologies," "electronic devices," "precision navigation," "day-to-day existence"), 7 adverb + adjective collocations (e.g., "initially too," "naturally suited," "equally annoying," "highly accurate," "more conspicuous," "later equal," "nearly all"), 16 pronoun collocations (e.g., "they based," "its waxing," "those living," "it organized," "who disseminated," "each period," "they became," "it could," "when they," "one of," "which had," "which was," "this invention," "that our," "it catches," "so integral"), and 23 prepositional collocations (e.g., "before the," "around the," "during the," "at least," "from Global," "for mobile," "in the," "into two," "of time," "to the," "near the," "across the," "by the"), alongside conjunctions (e.g., "and long," "and harvesting," "and thus," "or the," "nor the," "and later," "as it," "because their," "while it," "and its," "but there," "and hence," "so that," "and so," "which split," "before the," "although it," "which occurred"), collectively enhancing the clarity and natural flow of language to describe the intricate history and technological advancements in timekeeping.

Meronymy

Natural cycle (Lunar month, solar year, solar day), Solar day (periods of light and darkness), Lunar cycle (waxing and waning phases of the moon), Babylonian calendar (Lunar month, solar year and day), Solar year (changing seasons), GPS and Time-based technologies (Mobile phones, stock-trading system, time signals, power distribution grids).

Data from Book 9

The researcher has identified all the types of cohesion that are used in book 9th and its 1st passage.

Table 9: *Lexical Cohesive Devices Usage*

Lexical Cohesive Device	Number Used	Percentage
Repetition	11	7.69%
Synonymy	13	9.09%
Antonymys	4	2.8%
Hyponymy	12	8.39%
Meronymy	8	5.59%
Collocation	95	66.43%
Total	143	100%

The above findings reveal that in Lexical cohesive devices Collocation is the most frequent, while the remaining devices like synonyms, Antonyms, homonyms are less than repetition. The most frequent uses of repetition that the author use in the reading exercise are following:

Repetition

Perkin (16) Dye (10) Synthetic (4) Chemistry/Chemist (4) Aniline (3) Quinine (3) Color (3) Solution (3) Factory (2) Discovery (2) Search (2).

Synonyms

The researcher also identifies all the synonyms that the writer used in the reading passage that is taken from book 8 and its last reading passage. There are almost (6) Synonyms that the writer used in the passage; these are described as following: Synthetic substitute (Artificial replacement) Attending (Going to) Stumbling upon

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(Discovering) Inexpensive (Cheap) Color (Dye) Solution (Mixture) Set up (Established) Flattered (Enhanced) Immersed (Engaged) Recognized (Realized) Manufacturing (Producing) Medical treatment (Remedy) Commercial possibilities (Market potential). These synonyms enrich the text by providing variety in language while maintaining clarity and coherence.

Antonyms

The writer also used Antonyms in the text to make his work more attractive and unique than others Variable (Non-Variable) Early (late) Functional (nonfunctional) Surpassing (Lagging behind).

Hyponyms

The researcher also identifies the most important and interesting cohesive device that is used in IELTS Reading Exercise is Hyponymy. In the paragraph the author has used hyponymy to the aim of adding more clarity to the concept. The reader can easily understand what the writer is trying to convey or what he has written in the passage. Here are some homonyms that the writer has used in book 9 1st Reading Passage. Fields of Study(Arts, Sciences, Photography, Engineering) Plants (Cinchona Tree), Synthetic Dyes (Tyrian Purple, Mauve, Aniline Red, Aniline Black, Perkin's Green) Dye Works Owners (Robert Pullar) Diseases (Tuberculosis, Cholera, Anthrax, Malaria)

Collocation

Collocations, totaling 95, vividly capture the historical and scientific significance of advancements in chemistry, particularly in dyes and medical research, comprising 28 noun + noun collocations (e.g., "man dies," "cholera anthrax," "role vaccine," "malaria"), 27 adverb + adjective collocations (e.g., "early functional," "late run-down," "grand young," "prominent eminent," "young scientific," "deep lucky," "scientific unexpected," "historical natural," "muddy important," "commercial original," "fierce fashionable," "bold fast," "late crucial," "current"), 19 verb + noun collocations (e.g., "prompted attended," "fired entered," "headed caught," "became produced," "manufactured received," "decided flattered," "clamored continued," "developed introduced," "was played," "would have"), 18 adjective + noun collocations (e.g., "synthetic dyes," "royal college," "German chemist," "scientific training," "commercial boost," "necessary shade," "medical research," "artificial dyes," "crucial role"), and 3 adverb + adjective collocations (e.g., "so cheap," "readily," "now rich"), collectively enhancing the natural flow and precision of language to describe the transformative impact of chemical innovations on industry and medicine.

Meronyms

William Henry (early interest in the arts, Sciences, photography, and engineering is the part of Henry's personality), Perkins Laboratory (Functional laboratory), Medical research impact (staining microbes and bacteria, identification of tuberculosis, and cholera and anthrax, Subsequent developments (aniline red, aniline black)

Data from Book 10

To explore every type of cohesive device from the book 10th and his 1st reading passage the researcher identified the following results.

Table 10: Lexical Cohesive Devices Usage

Lexical Cohesive Device	Number Used	Percentage
Repetition	6	2.44%

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Synonymy	0	0%
Antonymys	0	0%
Hyponymy	0	0%
Meronymy	4	1.63%
Collocation	236	95.93
Total	246	100%

The above table disclosed the most consistently used cohesion in “Lexical cohesion” is collocation. And the other devices like synonyms, Antonyms, homonyms are less than the collocation. The most frequent uses of repetition that the author use in the reading exercise are following:

Repetition

Step wells (13), wells (9), ancient (3), built (3) deep (3), (6), structure (4)

Collections

Collocations, totaling 236, vividly illustrate the historical and cultural significance of stepwells in India, blending architectural ingenuity with utilitarian function, comprising 148 noun + noun collocations (e.g., "millennium stepwells," "civilizations value," "water existence"), 48 adverb + adjective collocations (e.g., "fundamental driest," "spectacular bygone," "sixth clean," "decorative recent," "dry eight-year," "ancient fine," "pristine ancient," "surviving monumental," "northern next," "stunning fourth," "ornate public," "recent medieval," "saved rich"), 33 verb + noun collocations (e.g., "traveled documented," "developed gaining," "recognized flock," "gaze serve," "remind"), and 7 adjective + noun collocations (e.g., "public," "important," "major," "recent," "pristine," "architectural," "other"), collectively enhancing the clarity and natural flow of language to describe the intricate design, historical importance, and enduring legacy of India's stepwells as architectural and cultural marvels.

Meronymy

Series of stone steps (part of structure of stepwell), Regional Variation (Gujrat, Rajasthan) Pacific Stepwells, Rani ki Vav (Queen Udayamati), 500 sculptures carved into niches, parts of the stepwells decorations, 20 meters wide, 40 meters long, Chand baori, (zigzagging steps on three sides), Historical aspects (resting places for travelers, places of gathering, leisure and relaxation, places of worship, tourists visiting)

FINDINGS AND DISCUSSIONS

In this Section, the researcher presented the findings of the data that the researcher analyzed. In reading passages of IELTS Academic Set 1 to 18 Books from download, there are 18 reading books, but analyzed just all the very first reading passages from the 1st ten books. All of them are discussed here by using the cohesive devices theory presented by Halliday and Hasan (1976).

Findings

The researcher analyzed the data and found some results from the “The Reading Passages of Cambridge IELTS Academic Set 1 to 18 books”. The researcher has taken the 1st 10 books to explore cohesions in the Reading passage then selected just 1st and the last reading passage of each book. The researcher has selected reading passages because through reading passages the researcher can analyze the data in a more intense way. From the data source, the cohesive device was analyzed by Halliday and Hasan. According to Halliday and Hasan there are 2 types of cohesive devices one is grammatical cohesion and the other is Lexical cohesion. In the findings, the researcher concludes some results, the researcher concludes that in grammatical

cohesion the most repeated cohesion is “Reference” and lowest is “ellipsis. And in “Lexical cohesion” the most prominent device is “Collocation” and lowest is meronymy throughout the study. This table is the summary of whole data from 1 to 10 reading passages.

Table 11: Overall Usage of Lexical Cohesive Devices

Devices	1	2	3	4	5	6	7	8	9	10		%
Repetition	14	10	09	12	13	5	10	25	11	6	115	6.35
Synonyms	10	19	13	17	15	6	18	5	13	0	116	6.4
Antonyms	10	15	20	5	7	0	12	19	4	0	92	5.08
Hyponymy	3	15	43	5	3	9	3	8	12	0	101	5.57
Meronymy	102	106	120	3	3	5	6	15	8	4	372	20.53
Collocation	7	5	6	175	80	155	99	158	95	236	1016	56.07
Total											1812	100

The table presents data from a corpus-assisted study on lexical cohesive devices in IELTS reading exercises, based on Halliday and Hasan’s (1976) model, which categorizes devices into repetition (Rep.), synonymy (Syn.), antonymy (Ant.), hyponymy (Hyp.), meronymy (Mer.), and collocation (Col.). Across 10 samples, 1,812 devices were identified, with collocation dominating (1,016 instances, 56.07%) and meronymy following (372 instances, 20.53%), indicating their prominence in creating coherent, academic-style texts. Repetition (115, 6.35%), synonymy (116, 6.40%), hyponymy (101, 5.57%), and antonymy (92, 5.08%) are less frequent but contribute to variety and clarity. Sample 10 has the highest device count (246, 13.58%), driven by collocation, while Sample 5 has the lowest (121, 6.68%), suggesting variations in text complexity or type.

These findings align with the research objectives of identifying and analyzing lexical devices and their functions in IELTS texts. Collocation ensures fluency through natural word pairings (e.g., “economic growth”), aiding comprehension, while meronymy clarifies complex ideas via part-whole relationships (e.g., “leaf” to “tree”). Repetition reinforces key concepts, synonymy adds variety, hyponymy specifies categories, and antonymy highlights contrasts, collectively testing candidates’ ability to navigate cohesive, nuanced texts. The distribution reflects IELTS’s focus on academic language, with collocation and meronymy playing central roles in maintaining coherence and supporting detailed understanding.

Discussion

According to the findings of this research, both cohesive devices like grammatical and lexical have the same importance in the IELTS reading passages. So, both types of cohesive devices were examined in the IELTS reading passages. It was noted that the authors of the books used all the types of cohesive items that were based on Halliday and Hasan’s (1976) model of cohesion. The grammatical cohesion includes references, substitutions, ellipsis, and conjunction and the lexical cohesion includes reiterations that have repetition, synonyms, hyponyms, meronyms, and the other type of lexical cohesion is collocation. The researcher also analyzed the functions of cohesive devices in reading passages. Each cohesive item has its own function in the reading passages. In this research, the researcher provided examples from the IELTS reading passages. The researcher has found out all the types of cohesive devices by using the

“Antconc” software and analyzed the most frequently used cohesive device by the authors and then presented it through tables. This study concluded that the authors of these books have used all kinds of cohesive devices but references in grammatical cohesion are more frequent than the others and collocations in lexical cohesion are more frequent than the others. So, collocation and references play a dominant role in all the reading passages. These findings are highly relevant to the research conducted by Afzaal et al., (2019) their study found that the frequency of references in grammatical cohesion is higher than the others. And in lexical cohesion repetition and collocation are more frequent than the other lexical devices. This study is also similar to the research conducted by Faizah et al., (2020), the study concluded that UNNES graduate students applied all the types of cohesive devices: collocation, conjunction, ellipsis, repetition, and reiteration. Compared to the other coherent devices, references appeared more frequently. However, substitution and ellipsis were rarely utilized by UNNES undergraduate students to improve their writing.

In addition, the findings of Tampubolon et al. (2023) explored all the types of cohesive devices. The main purpose of this research is to analyze lexical cohesion that is used in the text. The types of lexical cohesion are Repetition, Synonym, Antonym, Hyponym, Meronym, and Collocation. This is also similar to the present study because the first objective of the study is to explore all the types of cohesive devices that are used in reading passages.

The findings of Nunan (1993) revealed that every sentence of the text must be well structured in both written and oral forms. Cohesive devices deal with lexical cohesion and grammatical cohesion, they are interlinked. The writer further explored that the main purpose of cohesive devices is to develop clarification in syntax and provide clear information without any ambiguity. So, the first and foremost function of cohesion is to sustain coherence in a sentence. The next research was conducted with Vietnamese EFL students who used cohesive devices in paragraph writing. The findings of this research explored that the percentage of grammatical cohesive devices was higher than the lexical cohesion. References and conjunctions were used more frequently than substitution and ellipsis (Trang et al., 2023).

Therefore, according to the research results presented, the use of grammatical cohesion (such as reference, ellipsis, substitution, and conjunction) and lexical cohesion (such as reiteration and collocation) play an important role to creating a structured and meaningful text. Therefore the authors of these IELTS books used all the cohesive items in frequent ways, especially references and collocations, in the IELTS reading passages.

CONCLUSION

The researcher examined the use of cohesive devices in IELTS reading exercises with a focus on identifying the devices, analyzing their frequency, and examining their functions in the selected reading passages. The findings demonstrate that cohesive devices play an important role in connecting ideas between sentences, phrases, and clauses and in maintaining unity and meaningfulness in the text. Guided by Halliday and Hasan’s (1976) model of cohesion, the study identified the use of different types of lexical cohesive devices in the selected IELTS reading passages.

The analysis of lexical cohesion revealed the presence of repetition, synonymy, antonymy, hyponymy, meronymy, and collocation across the ten selected reading

passages. The corrected overall findings show that 1,812 lexical cohesive devices were identified. Collocation was the most frequently used lexical cohesive device, accounting for 1,016 instances (56.07%), while meronymy accounted for 372 instances (20.53%). Repetition occurred 115 times (6.35%), synonymy 116 times (6.40%), hyponymy 101 times (5.57%), and antonymy 92 times (5.08%). These findings indicate that collocation plays a particularly prominent role in maintaining lexical cohesion in the selected IELTS reading passages.

The study further demonstrates that each lexical cohesive device performs its own function in the text. Repetition reinforces important concepts, synonymy provides variation in vocabulary, antonymy establishes contrast, hyponymy adds specificity and conceptual clarity, meronymy establishes part-whole relationships, and collocation contributes to the natural flow, clarity, and contextual appropriateness of the reading passages. Therefore, lexical cohesive devices contribute significantly to the construction of structured and meaningful IELTS reading texts and assist readers in establishing relationships among ideas and vocabulary items.

The study is limited to the lexical cohesive devices presented in Halliday and Hasan's (1976) model and to the first reading passages of the first ten books selected from the Cambridge IELTS Academic Set 1 to 18. Within this scope, the findings highlight the importance of lexical cohesion in IELTS reading passages and suggest that greater awareness of cohesive devices may assist second language learners and teachers in understanding and teaching reading texts more effectively.

RECOMMENDATIONS

Based on the findings of the study, it is recommended that IELTS teachers explicitly incorporate lexical cohesion into reading instruction to help learners recognize relationships among vocabulary items and understand how ideas are connected within texts. Particular attention should be given to collocation, as it was the most frequently occurring lexical cohesive device in the selected IELTS reading passages. Teachers should also provide learners with activities focusing on repetition, synonymy, antonymy, hyponymy, and meronymy to develop their awareness of different lexical relationships and improve reading comprehension. IELTS learners should be encouraged to identify cohesive relationships while reading and use contextual and lexical clues to interpret unfamiliar vocabulary and connect ideas across sentences and paragraphs. Future researchers may extend this study by analyzing a larger number of IELTS reading passages, comparing different IELTS test sets, or investigating lexical cohesion in other sections of the IELTS examination to provide a broader understanding of the role of cohesive devices in English language assessment.

REFERENCES

- Afzaal, M., Hu, K., Chishti, M. I., & Imran, M. (2019). A study of Pakistani English newspaper texts: An application of Halliday and Hasan's model of cohesion: A discourse analysis. *International Journal of English Linguistics*, 9(5), 78–88. <https://doi.org/10.5539/ijel.v9n5p78>
- Amenorvi, C. R. (2011). *A comparative study of cohesion in English and Ewe: A case study of some written texts* [Doctoral dissertation, University of Cape Coast]. University of Cape Coast Institutional Repository. <http://hdl.handle.net/123456789/1650>
- Crowhurst, M. (1990). Teaching and learning the writing of persuasive/argumentative

- discourse. *Canadian Journal of Education*, 15(4), 348–359.
- Faza, F., Sutopo, D., & Faridi, A. (2020). The use of cohesive devices in English education journal articles written by graduate students of UNNES. *English Education Journal*, 10(2), 208–213. <https://doi.org/10.15294/eej.v10i1.34209>
- Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English*. Longman.
- Ishaq, T., & Abdulaziz, M. (2023). A corpus-based analysis of cohesion and coherence in IELTS test essays in Pakistan. *Linguistic Forum: A Journal of Linguistics*, 5(4), 30–56. <https://doi.org/10.53057/linfo/2023.5.4.2>
- Jabeen, I., Mehmood, A., & Iqbal, M. (2013). Ellipsis, reference & substitution as cohesive devices: The Bear by Anton Chekhov. *Academic Research International*, 4(6), 123–131.
- Karim, K., & Nassaji, H. (2013). First language transfer in second language writing: An examination of current research. *Iranian Journal of Language Teaching Research*, 1(1), 117–134.
- Lee, E. Y. C., & Sim, T. S. (2019). Written corrective feedback on the use of conjunctions among Malaysian ESL learners. *AJELP: Asian Journal of English Language and Pedagogy*, 7(1), 15–24. <https://doi.org/10.37134/ajelp.vol7.1.2.2019>
- Moini, M. R., & Kheirkhah, F. (2016). Use of cohesive devices in children and regular literature: Conjunctions and lexical cohesion. *International Journal of Comparative Literature and Translation Studies*, 4(4), 12–23. <https://doi.org/10.7575/aiac.ijclts.v.4n.4p.12>
- Nguyen, T. T. N., & Nguyen, T. Q. H. (2017). An investigation into lexical cohesive devices in IELTS reading texts. *Tạp chí Khoa học và Công nghệ - Đại học Đà Nẵng*, 8(117), 35–39.
- Nunan, D. (1993). *Introducing discourse analysis*. Penguin English.
- Rahman, G., Zaigham, M. S., & Umer, M. (2023). A study of cohesive devices in students' academic writing. *Qlantic Journal of Social Sciences and Humanities*, 4(4), 372–384. <https://doi.org/10.55737/qjssh.897009451>
- Raman, M. G., & Mathew, S. E. (2020). Lexical cohesion in ESL writing. *Research Journal of English Language and Literature*, 8(2), 185–194. <https://doi.org/10.33329/rjelal.8.2.185>
- Saleh, M., & Bharati, D. A. L. (2022). The use of cohesive devices in descriptive text by English training participants at PST. *English Education Journal*, 12(1), 96–103. <https://doi.org/10.15294/eej.v12i1.49052>
- Sari, A. J. C., Mujiyanto, J., & Rukmini, D. (2022). Assessing the use of cohesive devices in reading texts of English textbooks. *English Education Journal*, 12(2), 264–273. <https://doi.org/10.15294/eej.v12i2.56996>
- Tampubolon, S., Saragi, C. N., Nahampun, L. K. G., & Situmorang, A. S. (2023). The analysis of lexical cohesion on academic text of IELTS reading passages and its implication for English teaching. *Journal on Teacher Education*, 4(4). <https://doi.org/10.31004/jote.v4i4.14013>
- Trang, N. T. B., Nhu, N. V. Q., & Tuan, N. Q. (2023). Use of cohesive devices in paragraph writing by EFL students at English language centers in Vietnam. *VNU Journal of Foreign Studies*, 39(3), 152–169. <https://doi.org/10.63023/2525-2445/jfs.ulis.5099>
- Wang, Y. (2022). Lexical cohesion patterns of natural science academic text and implications for lexical teaching: Textual analysis of IELTS reading passages.

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Theory and Practice in Language Studies, 12(5), 836–845.
<https://doi.org/10.17507/tpls.1205.03>

Yang, W., & Sun, Y. (2012). The use of cohesive devices in argumentative writing by Chinese EFL learners at different proficiency levels. *Linguistics and Education*, 23(1), 31–48. <https://doi.org/10.1016/j.linged.2011.09.004>

Yingle, L., & Xueai, Z. (2019). An analysis of conjunctions as cohesive devices in high school students' English writing. *International Journal of Languages, Literature and Linguistics*, 5(4), 226–230.
<https://doi.org/10.18178/IJLL.2019.5.4.232>