



Original Research

A corpus analysis of cohesion in World Health Organization speeches by the Director General on Covid-19 vaccination

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Although cohesion and coherence of a speech are significant, and there is an array of studies exploring these elements, particularly political speeches, many still struggle to apply the correct grammar and lexical cohesion as well the correct thematic structure in speech construction. This study aims to investigate the cohesion and coherence of speeches that are constructed through textual metafunction using thematic structures and cohesive devices. The study intends to answer two research questions. 1. What are the thematic structures and cohesive devices used in the speeches delivered by the Director General of the World Health Organization? 2. How are these thematic structures and cohesive devices used to produce cohesion in these speeches? This study used a mixed-method approach, combining corpus analysis with qualitative descriptive analysis. Twelve speeches from the website of the World Health Organization were chosen using a purposive sampling method. Thematic patterns and the distribution of cohesive devices in the speech corpus were analysed and identified. Findings showed that unmarked topical themes were employed the most, whereas interpersonal themes were used the least. The most dominant cohesive device was repetition, followed by reference, conjunction, and collocation. Ellipsis was sparsely employed to avoid redundancy. These mechanisms contributed to constructing cohesion and coherence, which help audiences understand the speeches better. The findings of the study may have significant implications for enhancing communication across a range of fields by offering useful insights on the efficacy of utilising cohesive devices and thematic structures in speeches, particularly those delivered by prominent public figures.

KEYWORDS: cohesion, cohesive device, Covid-19, thematic structure, World Health Organization, speech discourse



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1. INTRODUCTION

Discourse analysis, whether spoken or written, draws the attention of many linguists. Cohesion and coherence are essential elements that influence effective discourse (Mahlberg, 2006). By concentrating on these two key elements, numerous researchers have examined text creation and comprehension (He, 2017). Al-Ghazalli and Majli (2019) contend that coherence and cohesion are distinct concepts, despite the perception that they are related. Tanskanen (2006), who cites Hasan (1984), cohesive harmony, or the interaction of cohesive devices, is the basis for coherence, and the denser the text is, the more coherent it is. Furthermore, Mahlberg (2006) makes it clear that achieving coherence in a discourse depends heavily on cohesion.

The Systemic Functional Linguistic (SFL) framework is often used by researchers who are looking into the coherence of

texts or discourses. As proposed in SFL, there are three semantic systems that interact to produce meaning in language: ideational, interpersonal, and textual (Halliday & Matthiessen, 2014). These metafunctions are distinct but interdependent. Xiang (2022) holds that the textual metafunction focuses on clauses as messages and can be a helpful tool in analysing a text's coherence and thematic structures. Halliday and Hasan (1976) suggest that cohesion is split into grammatical and lexical cohesion because it expresses itself partially through vocabulary and partially through grammar. By using these cohesive techniques, writers can create texts that are coherent and effectively convey their ideas through their writing (Mahlberg, 2006).

Halliday & Hasan (1976) argue that while cohesion analysis frequently focuses on the use of cohesive ties as a part of creating textual cohesion, it is important to note that those devices are

'The textual metafunction deals with cohesion and thematic structures and gives an understanding how the message is structured through coherence and organisation of language. Subsequently, it was stated in the study conducted by He (2020) that the aspects of cohesion and coherence are not widely explored in spoken discourses. It was also mentioned that while the research on speech discourse is small, most of it only consists of political speeches and other types of speeches were given little consideration'

insufficient in producing cohesion. Thematic organisation is crucial for structuring messages and improving the connections between ideas in texts. Thematic structure is crucial for structuring a text and examining its coherence and cohesion (Dejica-Cartis & Cozma, 2013). In a study on the thematic organisation of Barack Obama's press conference, Kuswoyo (2016) found that speakers can structure their speeches effectively using thematic organisation to ensure consistency and coherence. It was explained that a clause's theme directs readers to the message contained within it, and the coherence of the texts grabs their attention. Additionally, it was noted in Arunsirot (2013) that when the information flow from theme to rheme is not properly controlled by inexperienced writers like students, readers will find it difficult to follow the progression of the ideas in the text.

Discourse facilitates transactions, moves information, and builds relationships (Yule & Brown, 1986). Organisation, language choices, and presentation skills are essential for a successful speech because they help to avoid misunderstandings. Likewise, Crossley et al. (2010) assert that cohesion is essential for enhancing comprehension and making speech messages more understandable. Cohesive techniques and thematic organisation help create speeches that are clear and understandable. Also, Slagell (2009) states that speeches delivered by leaders are intended to persuade, uplift, inform, and educate the audiences. Similarly, Kuznetsova (2020) highlights that the lack of effective international tools and guidance in managing the current Covid-19 pandemic has highlighted the need for a standardised and functional global governance system. The World Health Organization (WHO), which emphasises the significance of pandemic prevention and response, plays a crucial role in assisting politicians in their decision-making processes with scientific and technical advice.

WHO plays a significant role in global health governance by leading and coordinating international health efforts through cooperation between countries. International cooperation is essential for controlling the Covid-19 pandemic. WHO promotes universal healthcare, establishes health standards and guidelines for nations to follow when managing the pandemic, and sets legally binding international regulations for pandemic responses. Dr Tedros Adhanom Ghebreyesus, the Director General (DG), speaks at meetings and media briefings to update the public on the pandemic's latest developments and to discuss vaccinations,

guidelines, and the virus itself. Speeches by Dr Tedros must be carefully crafted to prevent confusion and misunderstandings. Concerning the importance of the role of WHO and the speeches presented by the DG, using the SFL analytical framework, this research aims to analyse the coherence of the speeches on the progress of the Covid-19 vaccine by DG of WHO in terms of the use of cohesive devices and thematic structures of the speech given the medium of communication, be it written or spoken will affect the use of cohesion and cohesive (Neumann & Fest, 2016).

Generally, the audience or listeners would be able to understand and relate with the speaker if the speech was well organised (Wu, 2010). However, Forey & Sampson (2017) have claimed that it may not always be true as the speakers may lack context and knowledge on relating and connecting the issues mentioned which causes them to not comprehend and have disagreements with the speaker. Therefore, the concept of textual meta-function was introduced and analysed to help the audience understand the message in the speech (Forey & Sampson, 2017). The textual metafunction deals with cohesion and thematic structures and gives an understanding how the message is structured through coherence and organisation of language. Subsequently, it was stated in the study conducted by He (2020) that the aspects of cohesion and coherence are not widely explored in spoken discourses. It was also mentioned that while the research on speech discourse is small, most of it only consists of political speeches and other types of speeches were given little consideration (Lan, 2020).

Chen (2018) stated that a coherent text is cohesive, unified, and easily understood by readers. Hence, with cohesion only can the text become coherent. In the study conducted by Bello-Osagie et al. (2018), it was stated that cohesion also functions to create semantic links within texts that help to encode meaning which would aid the readers to easier comprehend the text. In addition, Mahlberg (2006) mentioned that the uniformity of the text is usually built up by cohesion, namely grammatical and lexical cohesion. In regard to the significance of cohesion, it has been a popular topic studied by many researchers (He, 2020).

However, it was reported that students still had problems understanding the concept and the use of grammatical cohesion and lexical cohesion which causes them to make errors especially with the use of collocation and repetition (Rostambeik Tafreshi et al., 2017). The researcher has explained that the reason would possibly be that less attention is being paid to both aspects of cohesion. This statement could be supported by researchers such as Al-Ghazalli and Majli (2019), Chen (2018), as their studies focused on only one aspect of cohesion which has seemingly caused an inclination on the analysis of lexical cohesion. Xiang (2022) has suggested future researchers analyse both aspects of cohesion to obtain a more in-depth analysis. Therefore, to grasp the concepts of cohesion, both grammatical cohesion and lexical cohesion should be analysed and studied.

On a different note, the SFL framework has been employed in numerous studies to analyse the construction, meaning and

functions of texts. However, Lan (2020) states that there is still a gap present or in other words, there are little studies conducted to investigate the thematic structures and progression patterns of texts, specifically discourses of speech (Harman, 2013; Lan, 2020). Moreover, Kuswoyo (2016) suggested that a similar analysis can be conducted in another spoken genre. Therefore, this SFL framework is employed in this study and put forth the following research questions.

1. What are the thematic structures and cohesive devices used in the speeches delivered by the Director General of the World Health Organization?

2. How are the thematic structure and cohesive devices used to produce cohesion in the speeches delivered by the Director General of the World Health Organization?

2. LITERATURE REVIEW

2.1. Thematic structure

Understanding and constructing messages through spoken or written text are crucial components of communication (McLeod & McCormack, 2015). Speeches are typically delivered in a formal setting in front of an audience (Wu, 2010) to persuade them to accept certain points of view or ideologies (Xiang, 2022). Researchers in the field frequently examine political speeches, such as inaugural or presidential addresses (Lan, 2020). Whatever the speech type, it can be used to inspire, share an experience, tell a story, or provide information (Khoo & Abidin, 2014). Speeches should be carefully planned out and delivered with sincerity if they are to effectively convey knowledge. Therefore, when constructing a speech, cohesion, and coherence are crucial factors to consider (Xiang, 2022).

Halliday (1985) argues that the textual function of the clause is to construct a message, and the thematic structure is the basic form of the clause's organisation as a message. In the similar vein, Halliday and Matthiessen (2014) point out that a clause has the character of a message and the flow of discourse that is presented through thematic structures. The thematic structure, which consists of theme and rheme, aids the clause in realising its textual meaning. The theme is the focal point of the message, making it stand out, while the rheme that follows it provides new information (Xiang, 2022). These elements are used to help readers interpret the message's meaning.

2.2. Classification of themes

Simple theme is a structural element that consists of a single topical element (Halliday, 1985). It's also known as a *topical theme* and is divided into unmarked and marked topical themes. When the subject is in the theme position, an unmarked topical theme occurs, whereas a marked topical theme highlights the adjunct or complement as the theme. When a clause contains more than one theme, it is said to have multiple thematic structure (Halliday, 1994). *Textual theme* is identified when continuity adjuncts or conjunctions are used, whereas *interpersonal theme* is established when interpersonal elements such as modal adjuncts occupy the thematic position (Eggin, 2004). When the ele-

ments of transitivity are positioned as the theme, the *topical theme* is realised. Unmarked topical themes are more likely to have multiple themes than marked topical themes. From the perspective of Systemic Functional Linguistics (SFL), these thematic choices play a significant role in determining the text's coherence.

2.3. Cohesive devices

SFL views language as a vast network of choices that are intertwined within the language system, which functions as a toolbox for creating meaning through grammatical and lexical choices (Halliday, 2007). Cohesion is an internal element that assists readers in connecting meaning within a text and creates a sense of connectedness. Cohesive devices, which can be classified as grammatical or lexical cohesion, are used to achieve this connectedness (Wu, 2010).

2.4. Grammatical cohesion

The relationship between grammatical elements, such as references, substitutions, ellipsis, and conjunctions, is referred to as grammatical cohesion. Personal, demonstrative, and comparative references are defined by Halliday and Hasan (1976) as any association between an element and its source. Personal reference employs pronouns to refer to a specific individual, whereas demonstrative reference employs articles or adverbs to identify the reference. Indirectly, comparative reference refers to similar referential devices such as adjectives and adverbs. Conjunctions, on the other hand, are features that connect sentences and establish semantic relationships. Rostambeik Tafreshi et al. (2017) divides conjunctions into additive, adversative, causal, and temporal categories. Substitution is the process of replacing one element with another in a noun phrase, verb phrase, or clause. Nominal substitution is the process of replacing a noun phrase with *one*, *ones*, or *same*. Verbal substitution involves replacing a verb phrase with various forms of *do*, whereas clausal substitution involves replacing a clause with *so* or *not*. Ellipsis is the omission of words or clauses in a sentence without changing the meaning of the text. Halliday & Matthiessen (2014) divide ellipsis into three types: nominal, verbal, and clausal.

2.5. Lexical cohesion

Lexical cohesion is the strategic use of lexis to create cohesion in a text. Reiteration and collocation are the devices at work. Halliday and Hasan (1976) also assert that reiteration includes repetition, synonyms, superordinate, and general nouns. Repetition is the most common lexical cohesion device (Helfer et al., 2018). A synonym is a type of reiteration in which other words with similar meanings replace or repeat the preceding word. Finally, superordinate and general nouns group words into more inclusive or general categories. Furthermore, Dejica-Cartis & Cozma (2013), states that collocation achieves cohesion through the association and relationship between lexical items that co-occur frequently. Collocation can be achieved by using words from the same series, such as colours, numbers, months, and more,

'The descriptive qualitative research design was used in this study to examine the use of cohesive devices in a text. Descriptive qualitative research generates descriptive data such as words or sentences to explain the research findings. Inductively, the research problem was investigated and explained. Zainuddin (2018) used this research design to examine text cohesion in previous studies. In addition, the study employed corpus analysis with the AntConc software to generate and calculate the occurrences of cohesive devices'

proximity, such as *doctor* and *ill*, or even antonyms. There is also activity-related collocation, in which the lexical items are related or known as 'natural language' (Dejica-Cartis & Cozma, 2013).

As explained by Klebanov et al. (2007), cohesion is an important aspect to consider in both written and spoken materials because it aids in achieving clear comprehension. In a study of language use in radio interviews, Bello-Osagie et al. (2018) discovered that grammatical and lexical cohesion were used to make connections in texts, with the latter being used more frequently. As cohesion devices, demonstrative references, conjunctions, and repetitions were frequently used to present arguments logically and systematically. The study also discovered that the interviewer used simple linear themes to make his speech coherent, whereas the interviewees tended to use derivative themes in their utterances. Overall, the use of cohesive devices and thematic structures aided in the creation of a coherent discourse from the radio interviews.

2.6. Thematic structure and progression patterns

Lan (2020) used the thematic structure and progression patterns theory to study Queen Elizabeth II's speech during the Covid-19 pandemic. Findings of the study showed that unmarked themes were commonly used because they assisted the audience in easily comprehending the main idea. The pronouns *I* and *we* were frequently used as themes, with *I* emphasising the Queen's authority and responsibility and *we* instilling in the audience a sense of solidarity with the Queen in the fight against the virus. Furthermore, the speech contained marked themes, with time-marked themes being the most frequently used. The background focus of the clause was provided by marked themes, which improved coherence and audience engagement. The speech focused primarily on ideational themes, followed by textual themes, with only a few instances of interpersonal themes. Likewise, Liu and Zhang (2018) examined President Trump's victory speech and found that the president employed simple and unmarked themes frequently by using pronouns as the Themes to establish a connection with the audience and highlight the sense of unity while not neglecting his identity as the president.

On a different note, Dou and Zhao (2018) examined Ivanka Trump's speech and discovered that simple themes dominated half of it, and the rest of the speech was made up of multiple

themes that were a mix of interpersonal, textual, and topical themes. AlAfnan (2022) examined Trump's and Biden's inauguration speech and discovered that repetition was used to emphasise messages, collocation was used to make the speech more dynamic, and lexical devices were used to emphasise feelings and expression for clarity. Klebanov et al. (2007) examined political speeches and discovered that personal references and additive conjunctions were the most used cohesive devices, with comparative references used to compare situations. Dummy subjects, such as *it*, *there*, or *this* helped emphasise themes and manage semantic meanings of the text (Alwan, 2018). Olajoke (2015) examined an inaugural speech and discovered that key word repetition, synonyms, superordination, and collocation were used to highlight key issues, add impactful meanings, and ensure cohesion. Abdeen (2018) discovered that collocation assisted in identifying recurring themes in the text.

3. METHODOLOGY

3.1. Research design

The descriptive qualitative research design was used in this study to examine the use of cohesive devices in a text. Descriptive qualitative research generates descriptive data such as words or sentences to explain the research findings. Inductively, the research problem was investigated and explained. Zainuddin (2018) used this research design to examine text cohesion in previous studies. In addition, the study employed corpus analysis with the AntConc software to generate and calculate the occurrences of cohesive devices.

3.2. Sample

The sample chosen and analysed are speech texts of WHO DG Dr Tedros Adhanom, which are accessible on the WHO's official website. To keep the samples homogeneous, only speeches titled '*Director General's opening remarks at the Covid-19 media briefing*' were chosen for analysis. Another reason for choosing this speech is that it discusses the Covid-19 vaccine, which is the subject of this study. WHO plays an important role in coordinating global health governance (Hope, 2010), so the speeches delivered by their DG are informative and beneficial to the public, which is one of the main reasons the researcher chose these speech texts (AlAfnan, 2022). The researchers retrieved and analysed a total of 12 speech texts ranging in date from December 4th to January 29th, 2021.

To justify the time frame for the speeches, the researcher discovered that since the first day of administration of Covid-19 vaccination began on December 3rd in the United Kingdom, the 12 speeches within the time frame determined to focus more on vaccine updates and progress. In terms of the number of speeches, Mahlberg (2006), and Wu (2010) who conducted cohesion analysis on speech texts only focused on and analysed one speech text. This study aimed to retrieve insightful data to sufficiently discover and answer the research problem and to achieve data saturation (Creswell, 2014), so the researchers analysed 12 speech texts.

3.3. Sampling method

Purposive sampling was used to select the 12 speech texts because they are relevant to the research topic and fall within a specific time frame (Creswell, 2014). As samples are better matched to the research aims and objectives, this method improves the trustworthiness of the data and results (Campbell et al., 2020). This ensures that the data in the study is valid. Sam-sudin (2020), for example, used the same sampling method to answer their research questions.

3.4. Research instruments

Google Sheets was used to analyse thematic structures in this study, while AntConc was employed to analyse grammatical and lexical cohesion. Google Sheets is a good platform for categorising themes and calculating occurrences, whereas AntConc is a free

and user-friendly software for analysing large amounts of text data. Fischer-Starcke (2010) emphasised AntConc's utility in detecting patterns and frequencies between textual objects. Ant-Conc's Word List and Collocates tools were used to calculate the occurrences of each cohesive device.

3.5. Data collection

The researchers obtained the speech texts for analysis from the WHO official website. The researcher searched the website archives for speeches within the specified time frame. The researcher then used the keyword *vaccine* to find speeches related to the research topic. The text of the speeches was downloaded and converted to Microsoft Word documents.

The total number of words of each speech is presented in Table 1 below.

Table 1
Word count of the 12 speeches

SPEACH No.	WORD COUNT
1	988
2	1126
3	902
4	744
5	1333
6	1395
7	904
8	919
9	674
10	802
11	852
12	976
Total	11615

3.6. Data analysis

To address the research objectives and questions, the researcher used Halliday and Hasan's (1976) theoretical framework to analyse thematic structures and cohesive devices in the 12 speeches. AntConc was used to determine the frequencies and occurrences of cohesive devices, while Google Sheets was used analyse thematic organisation. The sentences of each speech are arranged accordingly, line-by-line for a more convenient analysis and to illustrate a clearer presentation. The themes were classified into interpersonal, textual, marked

topical, and unmarked topical themes, and tabulated the frequency distributions in a table. Also, cohesive devices were classified and AntConc was used to attain the occurrences of the devices, as well as Google Sheets to list and tabulate the findings. We read the speeches repeatedly to carefully identify each cohesive device used, and the analysis of each device was listed down in the respective column.

The researcher used Abdeen's (2018) collocation analysis method to categorise the most frequently repeated nouns into relevant themes.

4. THEORETICAL BACKGROUND

Halliday and Matthiessen (2014) propose that SFL is a theoretical perspective that denotes language as a 'semiotic system' and examines the connections between linguistic features and

social contexts. When analysing social contexts, the approach is also used to learn how language is used to achieve objectives. The theoretical framework that was modified for this study is shown below (Figure 1).

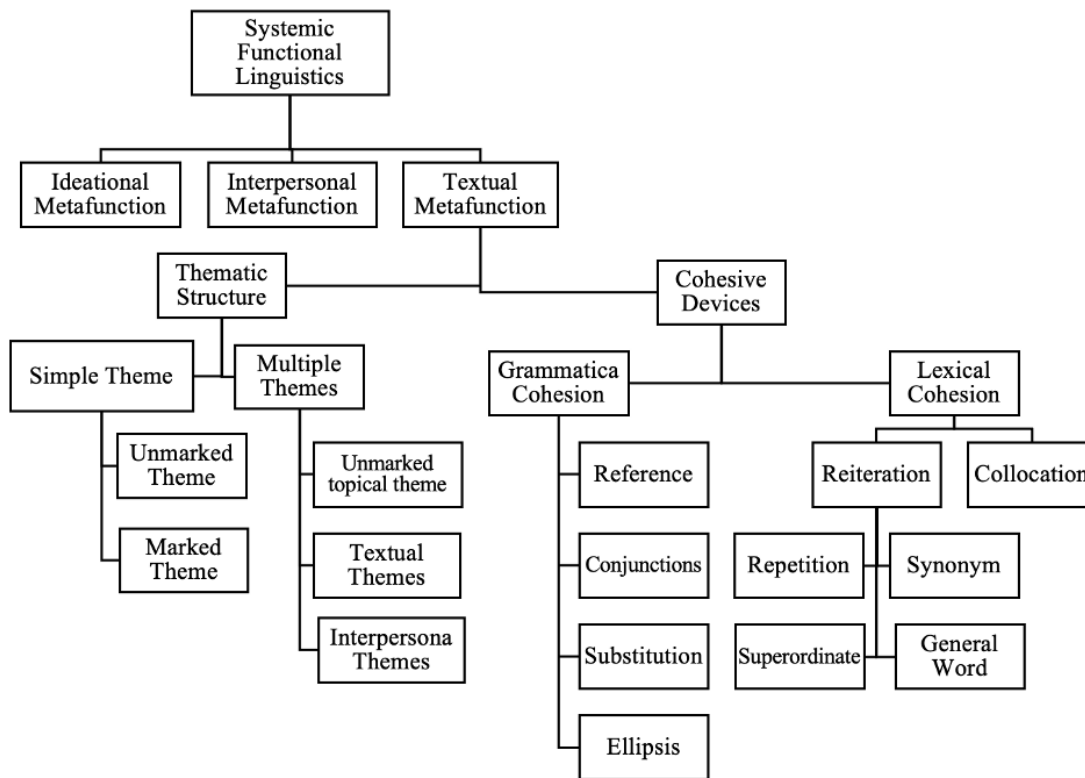


Figure 1. Theoretical framework adapted from Halliday (1994) and Halliday and Hasan (1976)

As previously stated, SFL asserts that language has three metafunctions: ideational, interpersonal, and textual, which are all reflected in a vast system network in the process of giving texts their intended meaning. Halliday (1985) holds that textual metafunction, in particular, explains how a clause is organised as a message and how it contributes to the structure's coherence and cohesiveness. Furthermore, as proposed by Halliday (1985), the mode of communication is directly related to textual metafunction. In communication, people express their meaning by using specific clause structures that reveal the speaker's or writer's idea (Xiang, 2022). Clearly, cohesive elements and thematic organisation are the key elements of how textual metafunction is achieved (Halliday & Matthiessen, 2014).

5. STUDY RESULTS

5.1. Thematic structure

Table 2 summarises the findings of research question one. The table depicts the frequencies of occurrences for interpersonal themes, textual themes, and both topical themes in each speech. The total scores and percentages are calculated and shown below (Table 2). Table 2 contains a quantitative analysis

of the thematic structure of twelve speeches delivered by an unknown speaker. Interpersonal Theme, Textual Theme, Marked Topical Theme, and Unmarked Topical Theme are the four types of thematic structures examined in this study. The table shows the number of times each thematic structure appears in each speech, as well as the total number of times it appears in all twelve speeches. The Interpersonal Theme appears the least, with a total of 61 occurrences which accounts for a total of 0.5% of the total word. This implies that the speaker places little emphasis on interpersonal relationships in their speeches. The Textual Theme, on the other hand, appears more frequently, with 151 occurrences across all twelve speeches, accounting for 1.3% of the total word count. This indicates that the speaker is more concerned with the organisation and structure of their speech. The frequency of Marked Topical Theme and Unmarked Topical Theme was recorded 152 and 466 times, respectively, with the latter occurring almost twice as frequently as the former. Topical Themes appear 618 times in total, both marked and unmarked, accounting for 5.3% of the total word count. These findings imply that the speaker places a high value on the topics covered in their speeches.

Table 2
Occurrences of each thematic structure in the 12 speeches

SPEECH	INTERPERSONAL THEME	TEXTUAL THEME	MARKED TOPICAL THEME	UNMARKED TOPICAL THEME
1	2	13	13	32
2	2	18	16	52
3	2	10	10	34
4	2	9	10	33
5	5	17	19	33
6	5	23	16	58
7	2	14	12	40
8	1	11	12	43
9	3	8	7	34
10	10	10	9	28
11	12	10	14	37
12	15	8	14	42
Total occurrences	61	151	152	466
Total occurrences/ word count (%)	0.5%	1.3%	1.3%	4%

5.2. Topical themes

About the theoretical framework, the topical or simple themes are the unmarked topical theme and marked topical theme. Halliday and Matthiessen (2014) have explained that unmarked topical theme is realised when the subject is placed as the theme whereas the marked topical theme highlights the adjunct or the complement as the theme. The following tables are extracts from the speeches which provide some evidence of the analysis (Tables 3, 4, 5).

Unmarked topical themes are represented in Table 3 by the subject, which are usually nouns or noun phrases such as *the Covid-19 pandemic*, or pronouns such as *we* that are placed in thematic position, while the remaining information is considered the rheme. Marked topical themes, on the other hand, draw attention to the message's adjunct or complement. For instance, the marked theme is categorised as a hypothetical condition in the extract S2/L54. It functions as a complement at the end of the phrase, highlighting a particular instance or situation. The message is further emphasised or nuanced by this overt motif. The subject theme indicated for extract S5/L15 is 'On 4 February'. This sentence serves as a time adjunct by designating a certain moment in time. The highlighting of the temporal setting in which the event or action indicated in the rheme occurred is made easier by the usage of this marked theme. Additionally, the topical theme of extract S6/L33 is 'To break chains of transmission'. This conditional adjunct expresses the sentence's goal or

objective. It draws attention to the intended result or objective connected with the actions specified in the rheme. Together with the rheme, these theme patterns aid in directing audience comprehension and streamlining material in the speeches.

5.3. Textual themes

As the theme of the clause, textual theme is realised using continuity adjuncts or conjunctions (Halliday & Matthiessen, 2014). This type of theme is frequently seen paired with other themes, particularly unmarked topical themes, to form clauses with multiple themes.

The structure of the textual topics found in the speeches is greatly influenced by conjunctions and conjunctive adjuncts. Conjunctive adjuncts and conjunctions like *first*, *and*, and *but* as well as other linguistic tools help the audience and readers follow the discourse by giving the clauses a clear direction. The textual theme is frequently combined with unmarked topical themes to form a multiple theme clause. In the above examples, the unmarked topical themes *we* and *WHO* are coupled with the textual themes *first* and *and* respectively, to provide a cohesive message that connects the subject of discussion with further information. A conjunction like *but* may occasionally be used to divide two complete clauses, each with its own subject and complement. For instance, the conjunction *but* which introduces a contrasting aspect, follows the textual theme 'I know it's tiring' in speech S6/L29. The organisation and coherence of the speeches

are improved by the employment of conjunctions and conjunctive adjuncts in organising the textual themes. By establishing connections between words or sentences, transitions, and priorities, these language tools direct the audience and readers.

5.4. Interpersonal themes

Eggs (2004) proposed that when categories of modal adjuncts are positioned at the thematic position, the clause is structured with the interpersonal theme. While the use of the interpersonal theme is minimal, the following will present a few examples of the few occurrences. Numerous interpersonal themes are included in the excerpt stated. The interpersonal theme *Henrietta* is employed as a vocative adjunct to address as referred in

speech S10/L34. The words *Thank you* and *Please* are used in the following examples, speech S11/L43 and S12/L37, as modal adjuncts in the theme position. By expressing gratitude and making a request, these modal adjuncts draw the audience in and build a bond. These phrases support the interpersonal themes by expressing messages of recognition, solidarity, and invitation to shared experiences. The interpersonal theme is further enhanced by the use of imperative and declarative phrases, in which the imperative clauses in particular encouraging the audience to act. Clearly, these speeches make use of interpersonal themes to build rapport, recognise other people’s contributions, and foster a feeling of engagement and connection between the speaker and the audience.

Table 3
Extract from speeches as examples for topical themes

SPEECH/	MARKED TOPICAL THEME	UNMARKED TOPICAL THEME	RHEME
S2/L54	If you live in an area with high transmission,		please take every precaution to keep yourself and others safe.
S3/L14		We all	owe a huge debt of gratitude to the nurses and midwives who are often the first and only health professionals present to treat and comfort the sick and dying and bring new life into the world.
S5/L15	On 4 February,		WHO released the first global preparedness and response plan for COVID-19 based on the latest scientific evidence.
S6/L17		The COVID-19 pandemic	has shown us once again how a new infectious virus puts those with underlying conditions at highest risk of dying.
S6/L33	To break chains of transmission,		we must identify and find those who are infected, provide the care they need and help them truly isolate safely.
S8/L7		Governments, manufacturers, civil society, religious and community	must come together to create the greatest mass mobilization in history for equitable vaccination.

Table 4
Extract from speeches as examples for textual theme with unmarked topical theme

SPEECH/LABEL	TEXTUAL THEME	UNMARKED TOPICAL	RHEME
S2/L6	First,	we	face an immediate funding gap of US\$4.3 billion to procure vaccines for the most needy countries.
S5/L12	And	WHO	convened the Strategic Technical Advisory Group for Infectious Hazards and the Global Alert and Response Network.
S6/L29		I	know it’s tiring,
	but	it	’s many times worse for those working or being treated in an overcrowded hospital, or for people who have had their cancer treatment postponed.

Table 5
Extract from speeches as examples for interpersonal theme

SPEECH/LABEL	INTERPERSONAL THEME	RHEME
S10/L34	Henrietta,	thank you as always for your close partnership.
S11/L43	Thank you	for your partnership and support over the past year.
S12/L37	Please	tell us about your experience working through the pandemic.

5.5. Cohesive devices

Table 6 below demonstrates the overall occurrences of each cohesive device. The results of the analysis of a few selected cohesive devices will be further explained with supplemental figures. The table shows the total number of times the DG used cohesive devices in 12 speeches. Cohesive devices are divided into two types: grammatical cohesion devices and lexical cohesion devices. Reference, conjunction, substitution, and ellipsis are examples of grammatical cohesion devices, whereas repetition, synonym, superordinate, general noun, and collocation are examples of lexical cohesion devices. The table shows that repetition is the most frequently used cohesive device in the speeches, accounting for 7,490 occurrences and accounting for 77.5% of all cohesive devices used. This implies that the DG emphasised repeat-

edly important ideas and concepts to make sure that the audience comprehends the message being conveyed. With the occurrences of 680 and 669, respectively, reference and conjunction are the most used grammatical cohesion devices. This suggests that DG frequently uses pronouns and conjunctions in their speeches to establish coherence and connect his ideas.

The use of substitution and ellipsis, on the other hand, is sparse, with only seven occurrences altogether. This implies that DG employs lesser devices to create cohesion in his speeches. With 211 and 139 occurrences, respectively, synonym and superordinate are the highest lexical cohesion devices used. This suggests that DG frequently employs these devices to create coherence by employing words with similar meanings or words that belong to a larger category.

Table 6
Total occurrences of each cohesive device used in all 12 speeches

TYPES OF COHESIVE DEVICES	OCCURRENCES	PERCENTAGE
Substitution	7	0.1%
General noun	91	0.9%
Superordinate	139	1.4%
Synonym	211	2.2%
Collocation	373	3.9%
Reference	373	3.9%
Lexical cohesion devices	441	4.6%
Grammatical cohesion devices	680	7.0%
Conjunction	669	6.9%
Repetition	7490	77.5%

Table 7
Occurrences and percentage of pronouns used for references

TYPE OF PRONOUN	PRONOUN	OCCURRENCE	PERCENTAGE
First person pronoun	I	78	11.5%
	me	1	0.1%
	my	14	2.1%
	our	42	6.2%
	ourselves	2	0.3%
	us	32	4.7%
	we	170	25.0%
	Sub-total	339	50%
Second person pronoun	you	72	10.6%
	your	20	2.9%
	yours	5	0.7%
	yourself	2	0.3%
	Sub-total	99	15%
Third person pronoun	her	2	0.3%
	his	1	0.1%
	they	23	3.4%
	it	89	13.1%
	its	14	2.1%
	itself	2	0.3%
	their	33	4.9%
	them	17	2.5%
	Sub-total	181	27%
Demonstrative pronoun	that	5	0.7%
	there	17	2.5%
	these	4	0.6%
	this	35	5.1%
	Sub-total	61	9%
Total Occurrences		680	100%

5.6. Reference

Any association between an element and its source is known as a reference (Halliday & Hasan, 1976). There are personal, demonstrative, and comparative references. The reference depends on the use of pronouns, articles, or adverbs.

Table 7 provides an analysis of the use of pronouns in this study. The table depicts the four types of pronouns, namely: first person, second person, third person, and demonstrative pronouns, including the frequency and percentage of each type of pronoun used. Findings reported that the First-Person Pronoun category appeared to be the highest-use pronoun, accounting for 50% of all pronoun occurrences, with *we* as the most used pronoun in this category, accounting for 25.0%. This finding implies that DG wishes to connect with the readers by emphasising their shared involvement or responsibility in the presented ideas or findings. Besides, the Second Person Pronoun accounts for

15% of all pronoun occurrences, with *you* being the most frequently used pronoun (10.6%). This indicates that DG includes some level of interaction with the readers or audience, addressing them directly and establishing a personal connection. The Third Person Pronoun category accounts for 27% of all pronoun occurrences, with *it* being the most frequently used pronoun (13.1%) in this category. The relative frequency of this pronoun indicates that the manuscript prefers to refer to things or concepts in a more objective manner rather than emphasising individuals or groups of people. The Demonstrative Pronoun category accounts for 9% of all pronoun occurrences, with *this* being the most used pronoun (5.1%). These pronouns are used in the study to refer to specific things or concepts, emphasising their relevance or importance to the overall argument or findings. The number of occurrences and percentage count of various pronouns used for references in the speeches are shown in Table 8.

Table 8
Dominant pronouns and their associated references

PRONOUN	REFERENCE	EXAMPLE FROM SPEECH
we	everyone/public	S7/L45: Remember, ending this pandemic is one of humanity's great races, and whether we like it or not, we will win or lose this race.
	WHO	S7/L2: COVAX – set up by GAVI, CEPI and WHO in April last year – has now secured contracts of 2 billion doses of safe and effective COVID-19 vaccines, which we are ready to roll out as soon as the vaccines are delivered.
it	dummy subj	S11/L38: It's my sincere wish that all governments pay careful attention to this study.
	the pandemic	S12/L14 We will not end the pandemic anywhere until we end it everywhere.
	the virus	S7/L17 This is normal of every virus but at present we're helping it thrive if we don't reduce transmission and vaccinate equitably.
I	DG	S9/L21 I came into public health because I wanted to ensure that everyone everywhere has access to quality health services.
you	audience	S6/L3 In our first briefing of 2021, I want to take a quick step back and tell you what's going to be coming up in the next few weeks.
	Professor	S11/L35 Professor, thank you for this important work, and thank you for joining us today.
	Harriet	S12/L36 Harriet, thank you so much for joining us today.

Findings showed that the references used comprised of the four dominant pronouns, *we* is used to refer to both the public and the WHO. The pronoun *we* is assumed to refer to the organisation since DG gave these speeches. The pronoun *We* is used to include the audience in the discussion, highlighting group responsibility and cooperation. The speeches mostly use the pronoun *it* as a dummy subject. The pandemic or the virus, which are the main subjects of discussion, are also mentioned in the speeches. When speaking directly to the audience, the pronoun

you is used. It creates a sense of solidarity between the speaker and the audience. The pronoun *you* is also used to refer to the audience mentioned in speeches. The pronoun *I* is mostly used to refer to DG, who is the main speaker in all the speeches. Finally, the pronoun *you* refers to the audience, but it can also refer to the guests of the speeches, such as *Professor* or *Harriet*. These pronouns appear to be effective in delivering clear communication and promotes a sense of diversity and audience participation.

5.7. Conjunction

Halliday and Hasan (1976) define conjunctions as features that link sentences together to create semantic relations. There are four categories – additive, adversative, causal, and temporal. Table 9 presents the occurrences, percentages, and a few examples used in each category. The most common sort of conjunctions in the talks were additive conjunctions, *like* and *or* and *for instance*. They appeared 535 times in total, accounting approximately 80% of all conjunctions. The second most frequent type of conjunctions were causal conjunctions, which include *so*, *because* and *if*. Findings showed that 49 of these were used, ac-

counting for 7.3% of all conjunctions. In the speeches, adverse conjunctions, such as *but*, *however* and *yet* were used 48 times, accounting for 7.2% of all conjunctions. The least often used conjunctions were temporal conjunctions, like *while*, *as* and *since*. It was reported 37 times, accounting for 5.5% of all conjunctions. These results demonstrate the use of additive conjunctions, which suggests a propensity for speeches to emphasise inclusion and addition. In order to communicate cause-and-effect linkages and contrast, respectively, causal conjunctions and adversative conjunctions were used. The use of temporal conjunctions to link events or denote temporal links was generally limited.

Table 9
Categories and total occurrences of conjunction used

CONJUNCTION	OCCURRENCES	PERCENTAGE	EXAMPLES
Additive	535	80.0%	and, or, for example
Adversative	48	7.2%	but, however, yet
Causal	49	7.3%	so, because, if
Temporal	37	5.5%	as, while, since
Total	669	100%	

5.8. Repetition

Olajoke (2015) mentions that repetition is simply the act of repeating the same words or phrases. The repeated words are categorised into the categories as shown in Table 10 below which shows each occurrence, percentages, and examples.

The analysis of word repetition in various categories shows that nouns made up 22.7% of all repeats, making them the most often repeated words in the speeches. These repeated nouns include *vaccine*, *health*, and *countries*. Verbs and prepositions were also repeatedly used, making up 19.6% and 15.4%, respectively. Adjectives, determiners, pronouns, and adverbs were less frequently used. Numbers, on the other hand, were the least repeated category, with only 34 occurrences and a weightage of 0.5%. In the speeches, repeated numbers such as *one*, *hundred*, and *thousand* were used to convey amounts. These results highlight the significance of nouns and functional words in communicating the speeches' messages, while numbers were only marginally significant in terms of repetition.

5.9. Collocation

McCarthy (1991) claims that collocation can be discovered through the association and relationship between the lexical items which co-occur regularly or are of a similar series such as colours, numbers, and months. The table below presents a de-

tailed illustration of the number of themes, and nouns along with percentages in each speech.

The nouns that are frequently collocated with the six Covid-19 themes of vaccines, health, economies, time, rights, and country are shown in the table. Within the context of the theme of vaccines, the most collocated nouns include Covid-19, pandemic-world, doses, measure, rollout, virus, and a few others. Considering the pandemic, these nouns highlight the significance of vaccine efficacy and distribution. Besides, the WHO, ACT-Accelerator, care, and hospital are the common collocations in the health theme, signifying the crucial roles of healthcare facilities and public health organisations in response to the pandemic. Other collocation to the noun associated with the economies theme are workers and funds which indicate that the economy affects people and societies in time of the pandemic. As for the time theme, the common collocations include year, days, week, and today, which reflect the temporal dimension and duration of the pandemic while for the rights theme, collocations such as choice and voice are found which are mostly related to emphasising the liberties and rights of the people considering the pandemic. The last theme is the country theme in which the council, people, and leaders are the collocations observed which bring forward the concepts of the importance of involving national and international institutions to fight against the pandemic.

Table 10
Word categorisation and total occurrences of repetition analysed

CATEGORIES	TOTAL OCCURRENCES	PERCENTAGE	EXAMPLES
Adjectives	421	5.6%	important, effective, new
Adverbs	306	4.1%	more, together, quickly
Conjunctions	635	8.5%	and, but, because
Determiners	1030	13.8%	a, an, the
Nouns	1698	22.7%	vaccine, Covid-19, health
Numbers	34	0.5%	one, hundred, thousand
Prepositions	1471	19.6%	to, of, for
Pronouns	742	9.9%	I, we, which
Verbs	1153	15.4%	ensure, protect, spread
Total	7490	100	

Table 11
Nouns Collocated with the themes derived from the categorisation of nouns in speech 10

NO.	THEME	NOUNS COLLOCATED WITH THE THEME
1.	Vaccine	Covid-19, pandemic- world, doses, measure, rollout, virus, COVAX, readiness, risk, supply, transmission, vaccination, vaccine
2.	Health	WHO, ACT- Accelerator, care, hospital (place, capacity, facility)
3.	Economies	workers, funds
4.	Time	year, days, week, today
5.	Rights	choice, voice
6.	Country	council, people, leaders

6. DISCUSSION

The current study's findings are consistent with those reported in previous research. For example, findings showed that topical themes were the most used, followed by textual themes and there were limited use of interpersonal themes in the speeches of the DG. These findings supported Forey & Sampson's (2017) study. Similar with that of Lan (2020) and Harman (2013), the studies attributed the high occurrence of unmarked topical themes to its simple and direct structure, which aids audience comprehension. Likewise, supported by Dou and Zhao (2018), the use of simple themes could avoid complex elements that may cause misunderstandings or confusion. Findings also suggest that noun phrases or pronouns were positioned as the theme, which was a common occurrence as reported in Lan's (2020) study. In table 4.2, the S3/L14 extract uses the phrase *we all*, which refers to not only WHO the organisation is, but also to

the audiences and readers. This finding corroborates with Harman's (2013) study which reported that the use of the pronoun *we* creates a sense of togetherness and fosters close relationships between the speaker and the audience. While it was discovered in this study that marked topical themes had fewer occurrences than unmarked topical themes, they are significant because as suggested by Xiang (2022), marked themes are structured to shape text organisation that produces coherence to the text.

Another important finding was the use of themes manifested by noun phrases and pronouns. These findings are consistent with the findings of Lan's (2020) study. Similarly, Harman (2013) highlighted that the use of *we all* in a speech fosters a sense of togetherness and creates a closer relationship between the speaker and the audience. Also, marked topical themes, which highlight specific elements such as settings, were found to be less frequent but still significant for creating coherence in the

speeches. Interpersonal themes, which convey feelings and appreciation, were present in the speeches studied, but were used less frequently than topical themes. This finding is nevertheless in contrast with Dou and Zhao's (2018) study which reported that interpersonal themes were more frequently observed than topical themes. To add, Xiang (2022) also maintained that their study did not observe the use of interpersonal themes at all due to the nature of inauguration addresses examined. The differences in findings could be attributed to the different themes and nature of the samples examined. Overall, this study discovered that topical themes were used the most in the speeches, while interpersonal themes were used the least. DG holds a high position that necessitates maintaining a certain level of professionalism and neutrality. The speeches might be crafted to support the speaker's capacity as an organisation representative, placing an emphasis on objectivity and eliminating prejudices or subjective opinions. By using this strategy, the speeches are made to appear credible and authoritative, reinforcing the speaker's position as a leader in global health.

On the other hand, the results revealed that the two most common devices for grammatical cohesion were reference and conjunction, with substitution having a limited use which are similar with past studies. Mahlberg (2006), for example, found that other than lexical cohesion devices, references were the most frequently used devices. Furthermore, Klebanov et al. (2007) found that personal references were the prevalent cohesive devices used in the political speeches to avoid repetition. Not only that, Alwan (2018) supported that several pronouns, such as *it*, *there*, and *this*, are used to refer to dummy subjects that have no lexical meaning and only serve to meet the structural and semantic needs of clauses.

Similarly, the high occurrences of conjunctions in the present study are in line with that of Olajoke (2015), Wu (2010) and Klebanov et al. (2007), especially additive conjunctions. Among the other adverbial conjunctions analysed, such as *however*, *yet* and *in contrast*, *but* was found to be the most frequently used but there appeared limited use of substitution and ellipsis in this study. One possible reason of the sparse use of ellipsis could be contributed to the general pattern for formal addresses, typically by a key person like DG of WHO. It was hard to deduce that it was deliberately used less frequently as the use of ellipsis is rather context dependent. Although ellipsis can generate pauses in the speech by omitting certain words or phrases, allowing the audience to fill in the gaps, it, however, was not appropriate for the DG to deliver such an important address to the international audiences, leaving them to fill in any incorrect information.

Although these grammatical cohesion devices were not frequently used, they were still useful in avoiding redundancy and excessive repetition to produce a more coherent flow to the samples analysed. The DG may have used repetition frequently as part of a rhetorical approach to highlight important points and make an impression on the audience that would enhance in their minds. Repetition can make key ideas more salient and clearer, strengthen the speaker's message, and promote audience com-

prehension and retention. Repetition can be an effective persuasion technique since it makes a speech more interesting and remembered. Clausal substitution, which is the process of replacing an item with another clause using *so* or *not*, was realised more in the cases where substitution was used in this study.

Additionally, AlAfnan (2022) reported that lexical cohesive devices were dominant devices used in speeches. The same study suggested that lexical cohesive devices can be used to emphasise feelings and expressions in speeches for better comprehension by listeners or audiences. Furthermore, Mahlberg (2006) highlighted that repetition plays a significant role and is used more frequently and explained that the devices function to emphasise specific messages, particularly those concerning urgent or significant issues, to instil a sense of urgency in the audiences. According to Olajoke (2015), it was reported that there was minimal use of synonyms, superordinate, and collocation in speeches. These findings did, however, explain that, despite their limited use, these devices play important roles in ensuring speech cohesion. As explained by AlAfnan (2022), the use of collocations enhances the dynamics of a speech.

Finally, the Systemic Functional Linguistic (SFL) framework (Halliday & Matthiessen, 2014), which emphasises the features of language utilised in a social context, was validated by the results of the current study. SFL analyses various ways of employing linguistic components to fulfil diverse social responsibilities and posits that language is a source of meaning making. As seen in the speeches by the DG of WHO, coherence and cohesion as documents through different linguistics cues contributed to the speeches' increased significance in addressing the Covid-19 vaccine administration issue. Likewise, the topic of the speeches contained interpersonal themes, which is one strategy for engaging listeners. This is consistent with Eggins' (2004) study, which found that the majority of central ideas are articulated using modal adjuncts in the they position.

7. CONCLUSION

This study sought to better understand the thematic organisation and cohesive devices employed in the speeches given by the Director General (DG) of the World Health Organization (WHO). The study found that unmarked topical themes were used the most frequently in speeches for their directness in conveying the main message, while marked topical themes were useful for emphasising certain elements. Lexical cohesion devices were used more frequently than grammatical cohesion devices, with repetition being the most common device used for emphasising urgent or significant issues, followed by references, conjunctions, and collocation. The findings of the study suggest that thematic structure and cohesive devices are two essential elements in producing coherence and cohesive in a speech to gauge a better understanding of the content delivered. These findings are following that of Halliday and Hasan (1976) which highlight the same findings. Importantly, DG's delivery of information is made easier for the audience to understand and participate in (Chen, 2018).

This study provides a few theoretical implications. First, this study fills a gap and adds to the body of knowledge about using thematic structure and cohesive devices to produce cohesion, which could be useful for future research in the field. This research has the potential to broaden and deepen our understanding of cohesion in speech discourses. Thematic structures and cohesive devices are rarely studied together as cohesion markers. However, it is in fact a good way to better understand the concept of cohesion when all aspects should be considered together. Besides, this study provides speakers with useful information on how to use various thematic structures and cohesive devices to improve coherence in their speeches, allowing audiences to easily follow and grasp the main points. Given the importance of WHO in global health governance, especially during pandemics, their addresses must be constructed cohesively, which can be achieved through cohesiveness. Consequently, the speeches chosen in the present study emphasised the thematic structures and cohesive devices. The findings of this study support the idea that thematic structure and cohesive devices denote substantial roles in producing cohesion in speeches.

This study also offers several practical implications. First, understanding the use of thematic structures and cohesive devices enables the audience to gain knowledge in analysing the speaker's intention. The findings of this study could benefit writers or editors because cohesion structured through these cohesive tools creates semantic links within texts, allowing readers to easily understand the texts. To fully comprehend the concept of cohesion, it is beneficial to consider all of its components. Researchers and students can gain a more comprehensive understanding of texts' structure and connections by looking at both grammatical and

lexical cohesion. This integrated approach promotes more effective communication and comprehension while allowing for a deeper examination and appreciation of language use cohesiveness. Furthermore, this research could assist English language teachers in raising students' textual awareness of the importance of proper thematic structure and cohesive device usage in producing cohesion.

Previous studies on cohesion did not investigate both aspects of cohesion concurrently. Many studies focused on grammatical or lexical cohesion devices, leaving a gap in our understanding of cohesion. As a result, future research should consider examining both thematic structures and cohesive devices as cohesion markers in tandem, as demonstrated in this study. Furthermore, future research should delve deeper into the use of distinct topical or textual themes and their emphasis on various elements, as well as the specific roles of less dominant cohesive devices in producing cohesion.

Furthermore, future research should investigate different types of speeches, such as humorous speeches and wedding speeches, to broaden the scope of speech discourse research. More speeches collected for analysis could additionally enhance the generalisability of findings. Future research may compare the speeches studied here with those of other leaders in global health as another area of inquiry. Speeches from top officials of national or international health organisations, as well as well-known public health professionals, may be the subject of this analysis to examine the distinctive styles of thematic structure and cohesive devices used. Overall, this research lays the groundwork for future studies aimed at expanding and deepening the knowledge of cohesion in speech discourses.

References

- Abdeen, A. A. (2018). A corpus stylistic analysis of some lexical and semantic devices in young adult dystopian fiction. *Egyptian Journal of English Language & Literature Studies*, 9(1), 67-126.
- AlAfnan, M. A. (2022). Public discourse: Systemic functional analysis of Trump's and Biden's inaugural speeches. *Journal of Language and Linguistic Studies*, 18(1), 1-14.
- Al-Ghazalli, M. F., & Majli, N. M. (2019). A study of lexical cohesion in women's articles written by native and non-native speakers of English. *International Journal of English Language and Linguistics Research*, 7(1), 1-18.
- Alwan, Z. H. (2018). A semantic study of dummy subjects in Dickens' novel 'Hard Times'. *International Journal of English Linguistics*, 9(1), 383-388. <https://dx.doi.org/10.5539/ijel.v9n1p383>
- Arunsirot, S. (2013). An analysis of textual metafunction in Thai EFL students' writing. *Research on Youth and Language*, 7(2), 160-174.
- Bello-Osagie, V. M., Iliya, B., & Rueben, M. (2018). Cohesion and thematic pattern in ABC, Yola radio interview. *Angewandte Chemie International Edition*, 6(11), 951-952.
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., ... & Walker, K. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652-661.
- Chen, W. (2018). A critical discourse analysis of Donald Trump's inaugural speech from the perspective of systemic functional grammar. *Theory and Practice in Language Studies*, 8(8), 966-972. <https://dx.doi.org/10.17507/tpls.0808.07>
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed method approaches*. Sage.
- Crossley, S., Salsbury, T. L., & McNamara, D. S. (2010). The role of lexical cohesive devices in triggering negotiations for meaning. *Issues in Applied Linguistics*, 18(1). <https://dx.doi.org/10.5070/L4181005124>
- Dejica-Cartis, D., & Cozma, M. (2013). Using Theme-Rheme analysis for improving coherence and cohesion in target-texts: A methodological approach. *Procedia – Social and Behavioral Sciences*, 84, 890-894. <https://dx.doi.org/10.1016/j.sbspro.2013.06.668>
- Dou, C., & Zhao, S. (2018). An analysis of themes and thematic progression patterns in Ivanka Trump's speech. *Studies in Literature and Language*, 16(3), 62-67.
- Eggs, S. (2004). *An introduction to systemic functional linguistics*. Continuum.
- Fischer-Starcke, B. (2010). *Corpus linguistics in literary analysis: Jane Austen and her contemporaries*. Continuum. <https://dx.doi.org/10.1515/east-2011-0010>

- Forey, G., & Sampson, N. (2017). Textual metafunction and theme: What's 'it' about? In T. Bartlett & G. O'Grady (Eds.), *The Routledge handbook of systemic functional linguistics* (pp. 155-169). Routledge Press. <https://dx.doi.org/10.4324/9781315413891>
- Halliday, M. A. (1985). *An introduction to functional grammar*. Edward Arnold Publishing.
- Halliday, M. A. (1994). *An introduction to functional grammar*. Edward Arnold Publishing.
- Halliday, M. A. (2007). *Language and education*. Continuum.
- Halliday, M. A., & Hasan, R. (1976). *Cohesion in English*. Longman.
- Halliday, M. A., & Matthiessen, C. M. (2014). *Halliday's introduction to functional grammar*. Routledge.
- Harman, R. (2013). Literary intertextuality in genre-based pedagogies: Building lexical cohesion in fifth-grade L2 writing. *Journal of Second Language Writing*, 22(2), 125-140. <https://dx.doi.org/10.1016/j.jslw.2013.03.006>
- Hasan, R. (1984). Coherence and cohesive harmony. In J. Flood (Ed.), *Understanding reading comprehension* (pp. 181-263). International Reading Association.
- He, Z. (2020). Cohesion in academic writing: A comparison of essays in English written by L1 and L2 university students. *Theory and Practice in Language Studies*, 10(7), 761-770. <https://dx.doi.org/10.17507/tpls.1007.06>
- Helfer, K. S., Freyman, R. L., & Merchant, G. R. (2018). How repetition influences speech understanding by younger, middle-aged and older adults. *International journal of audiology*, 57(9), 695-702. <https://dx.doi.org/10.1080/14992027.2018.1475756>
- Hope, J. (2010, November 8). What are the main functions of the World Health Organization? *E-International Relations*. <https://e-ir.info/2010/11/08/what-are-the-main-functions-of-the-world-health-organization>
- Khoo, M. Y., & Abidin, M. J. (2014). The use of public speaking in motivating ESL learners to overcome speech anxiety. *International Journal on Studies in English Language and Literature*, 2(11), 127-135. <https://www.arcjournals.org/pdfs/ijSELL/v2-i11/16.pdf>
- Klebanov, B. B., Diermeier, D., & Beigman, E. (2007). Lexical cohesion analysis of political speech. *Political Analysis*, 16(4), 447-463. <https://dx.doi.org/10.2139/ssrn.1026942>
- Kuswoyo, H. (2016). Thematic structure in Barack Obama's press conference: A systemic functional grammar study. *Advances in Language and Literary Studies*, 7(2), 257-267. <https://dx.doi.org/10.7575/aialc.all.v.7n.2p.257>
- Kuznetsova, L. (2020). Covid-19: The world community expects the World Health Organization to play a stronger leadership and coordination role in pandemics control. *Frontiers in Public Health*, 8, Article 470. <https://dx.doi.org/10.3389/fpubh.2020.00470>
- Lan, N. (2020). Analysis of the thematic structure and thematic progression patterns of the Queen's 2020 national speech. *English Literature and Language Review*, 6(8), 147-152. <https://doi.org/10.32861/ellr.68.147.152>
- Liu, X. L., & Zhang, H. J. (2018). Discourse analysis of the victory speech of President Trump from the perspective of theme and thematic progression patterns. *Advances in Social Science, Education and Humanities Research*, 250, 277-282. <https://dx.doi.org/10.2991/emim-18.2018.56>
- Mahlberg, M. (2006). Lexical cohesion: Corpus linguistic theory and its application in English language teaching. *International Journal of Corpus Linguistics*, 11(3), 363-383. <https://dx.doi.org/10.1075/ijcl.11.3.08mah>
- McCarthy, M. (1991). *Discourse analysis for language teachers*. Cambridge University Press.
- McLeod, S., & McCormack, J. (2015). *Introduction to speech, language and literacy*. Oxford University Press.
- Neumann, S., & Fest, J. (2016). Cohesive devices across registers and varieties: The role of medium in English. In C. Schubert & C. Sanchez-Stockhammer (Eds.), *Variational text linguistics: Revisiting register in English* (pp. 195-220). De Gruyter Mouton. <https://dx.doi.org/10.1515/9783110443554-010>
- Olajoke, A. S. (2015). A lexical analysis of an inaugural speech of the speaker of Benue State House of Assembly in Nigeria. *Journal of Language Teaching & Research*, 6(2), 258-264. <https://dx.doi.org/10.17507/jltr.0602.03>
- Rostambeik Tafreshi, A., Hajirezaie, A., & Assi, M. (2017). An analysis of the development of lexical cohesion in Persian-speaking students' written discourse. *Language Related Research*, 8(1), 179-205.
- Samsudin, S. (2020). Reference: A grammatical cohesion in Seloka journal introduction published by Semarang State University. *Journal Polingua Scientific Journal of Linguistics Literature and Education*, 9(1), 5-9.
- Slagell, A. (2009). Public speaking. In W. F. Eadie (Ed.), *21st Century communication: A reference handbook* (pp. 194-201). Sage.
- Tanskanen, S. (2006). *Collaborating towards coherence: Lexical cohesion in English discourse*. John Benjamins Publishing Co.
- Wu, S. (2010). Lexical cohesion in oral English. *Journal of Language Teaching and Research*, 1(1), 97-101. <https://dx.doi.org/10.4304/jltr.1.1.97-101>
- Xiang, Q. (2022). Transitivity analysis of Joe Biden's inaugural address from the perspective of systemic functional grammar. *Theory and Practice in Language Studies*, 12(1), 165-169. <https://dx.doi.org/10.17507/tpls.1201.20>
- Yule, G., & Brown, G. R. (1986). *Discourse analysis*. CUP.
- Zainuddin, Z. (2018). An analysis of cohesion in short story 'The Gift of Magi'. *English Education: English Journal for Teaching and Learning*, 6(1), 1-12. <https://dx.doi.org/10.24952/ee.v6i1.1213>