



ORIGINAL CONTRIBUTION

Modality in the Selected Continents Airlines' COVID-19 Instructions: A Corpus-Based Study

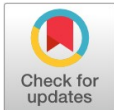
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Abstract— Modal verbs are generally critical in expressing an opinion and assist in the depiction of future events. This work represents and analyzes the function and frequency of modal verbs used in airlines' guidelines during the COVID-19 pandemic. By employing a mixed-methods approach, the corpus was analyzed using Antconc 3.5.8.0. The data were categorized into six components, including ability, possibility, permission, prediction, acknowledgment, and obligation. The findings show that in African and Asian Airlines' instructions, modal verbs are used to share their opinion related to the instructions for the future. Also, findings reveal that 'can' and 'will' are used to predict possible events. Furthermore, findings show that in European airlines' instructions, the obligatory modal verb 'must' is used to enforce their instruction for better comprehension. Additionally, findings also show that Asian writers are more aligned towards using modal verbs than Middle East writers who are least concerned about using modal verbs. The most recurring modal verb used by the writers is their predictive modal verb 'will' and the obligatory modal verb 'must.' This study implies that readers should be conscious of the writer's stance marking since it may affect the mind and exploit ideas.

Index Terms— Modality, Corpus, Airline instructions, COVID-19

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Introduction

Modality is an issue that makes learners face difficulties in studying a language. Modality is the behavior of speakers or writers towards the world. "Modality" is also thought of as being "something that lacks facts." Simpson (1993) argues that auxiliary verbs lead up the lexical verb and perform a semantic function. So, according to this perspective, the auxiliary verb gives additional meaning to the lexical verb. Modal verbs are used in writings and speaking to form opinions, purposes, free will, understanding, and obligation. The above discussion concluded that writers share their viewpoints and make predictions by using modal auxiliary verbs. Huddleston (2002) used the following explanations to describe the concept of "modality". For instance, consider 'Sara is in her office and 'Sara must be in her office. The statement (1) is deemed unmodalized due to its everyday usage, during which the speaker commits to the statement that is stated without limitation or particular emphasis. Statement (2), on the other hand, is fully mobilized. Huddleston and Pullum (2002) proposed that the statement's fact can be seen as something which can be inferred rather than something that can be directly understood, "It is important or practicable to actualize a situation" (Depraetere & Reed, 2006; Depraetere, 2015). Moreover, modal verbs are used creatively in diverse situations; similarly, during the COVID-19 pandemic, these are used in a unique way (Scheiwiller & Zizka, 2021).

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Modal verbs include "can, would, must, might, shall, should, and may." The concept of possibility, likelihood, and probability, as expressed by Herndon (1976), is defined as "the concepts may, have been, and must be or ought to be, respectively". Stubbs (1996) states that "a language encodes sense degrees of dedication and understanding, including degrees of uncertainty or certainty and information; additionally, whether or mere assumed information is at play in the kinds of applications in which it is employed".

According to Quirk, Greenbaum, Leech, and Svartvik (1985), modal verbs perform various functions, including prediction, ability, possibility, acknowledgment, and obligation. These are categorized into different values low, medium, and high. Modal verbs in low value include can, could, may, and might, whereas the median value includes shall, would, and will (Biber, Johansson, Leech, Conrad, & Finegan, 1999). On the other side, their high value includes crude 'should' and 'must' (Greenbaum & Quirk, 1973). The modal verbs are significant for their contradictory function and meaning. The current study helps to understand the utility of modal verbs in diverse contexts in a variety of ways. Moreover, as there is less work available in the field, therefore, this study will add knowledge to an existing body of knowledge. Also, future researchers can get benefit from the current study to explore the use of modality in different writing.

Though various research works have been conducted to analyze the function and frequency of modal verbs in newspapers reporting COVID-19. However, less research is found on the use of modality in airline instructions' by using Quirk, Greenbaum, Leech, and Svartvik (1985) theoretical framework (1985). Sadia and Ghani (2019) analyzed the modality of newspapers by using the theoretical work of Simpson (1993). However, it does not give any remarkable intuition to study the function of modality in detail. Therefore, after recognizing recognition of the research gap, the research aimed to locate the functions of modal verbs, frequency distribution, and the frequently used modal verb in four continents' airline COVID-19 instruction.

The study explored the functions and frequency of modal verbs in the selected airline's COVID-19 instructions; more specifically, its main objectives were (i) to examine the purpose of modal verbs used in different continent's airline instructions and (ii) to analyze the most dominant and frequently modal verb used to instruct the guidelines.

Literature Review

Modality is concerned with the interpretation of the writer's and speaker's worldviews and perspectives. Also, it encourages the speakers to say something without conveying an opinion about it. Modal verbs serve different functions according to the context. Each function alters sentence perspective differently, which are discussed as follows. Prediction is a modal auxiliary that expresses an opinion regarding an occurrence, circumstance, or behavior (Quirk, & Greenbaum, 2000) It is used to make a speculative forecast rather than to prove anything that cannot be said to be definite; it is used to render predictions. Furthermore, duty refers to the speaker's action as mandatory and through which an individual is obligated to perform a specific task. 'Should' is a preterit shall that denotes an action that the speaker considers imperative, such as (you should go), where an individual is required to perform some action (Quirk et al., 2000). Davy and Crystal (1983) observe that the modal verb shall is used to indicate the mandatory outcome of litigation, while Garner (1995) observes that shall implies the meaning of 'has a responsibility to.' However, Ambrus and Bazlik (2009) assert that shall often convey restriction in the negation sense. Moreover, the meanings of probability and capability are much more general than permission. According to this analysis, the possibility says that this may be the situation even if there is no confirmation of it. The modal 'can', 'will', 'might', and 'may' are usually denoting a high possibility (Leech, 1969). The modal 'can' usually denotes a high likelihood. The modal auxiliary 'will' deals with the sense of possibilities and provides proof of a previous capability, and expresses the degree of probability upon which anything is done (Shayegh, 2012). Additionally, the term 'purpose' is inferred where situations specifically entail a potential occurrence that the participant has planned. Given that one of the objectives of instructions is to warn and reflect on activities, another very evident instance found in the corpus demonstrates that the writer comments on the intentions of others (Quirk et al., 2000).

According to Halliday (1970), scholars have long been interested in the morphology and grammar of modal main verbs in the standard language (Coates, 1983; Palmer, 1979; Quirk et al., 1985; Halliday, 1994; Huddleston, 1984). Nonetheless, auxiliary verbs present dynamic difficulties in terms of linguistic representation. Classifying modal auxiliary verbs is far from straightforward, as different models can work in multiple categories. For example, Palmer (2001) states that the sentence "Sara can step in now" conveys authorization, while the sentence "Sara can talk French" conveys ability. Branford (1967) observes that "it is usually preferable to resist over-specific marking of every modal (e.g., 'may' = 'possibility'), preferring instead to research each as per the sense in which it occurs." Thus, there is no dispute that contextual clues are critical in determining the possible perception. However, in terms of auxiliary verb grouping, the expertise of languages has treated the English modals in various rational and structured ways. Halliday (1979) sees modality as a component of language's relational component; therefore, he categorizes the English modal auxiliary verbs in the form of modality and modification (i.e., language's conceptual constituent).

Erhman (1996) defines modal auxiliaries as a "restricted category of verbs that may occur in the first location of a verb sentence, are not immediately followed by some other verb, may modify with the topic in questioning, and are negated by the word not ."Throughout this context, Erhman implies that each modal verb also has a primary and a secondary sense which researcher referred to as 'connotations.' Similarly, Bibber and Leech (2002) regard modal verbs as the initial phrases in a sentence, supplemented by the initial position of

another noun, most often a key verb. Lyons (1977) categorizes them as epistemic and deontic modals, whereas discursive linguists often refer to them as a base and epistemological modifier. Lyons adds that epistemic modalities are interested in questions of understanding, belief, or judgment rather than truth, while deontic modalities deal with the obligation or probability of morally accountable agents performing actions. Fowler (1997) encourages the interlocutor to say something without conveying an opinion about it. Any written or spoken dialogue that is purely factual, neutral, or unbiased, its actual worth, is extremely difficult to find. It is basically about the author's perspective, one of the means of the disclosure, opinion, and authorial curiosity that determines the story's theme with its distinct texture and color (Simpson, 1993).

The wide research conducted on the usage of modal verbs shows its significance. The research works show the differences in the usage of modal verbs by foreign native and non-native learners in articles, each concentrating on its specific aspects. Ahmad, Mahmood, Mahmood, and Siddique (2019) conducted a study that investigated the usage of modal verbs in a newspaper published in English in Pakistan. The researcher took Corpora of 1000 publications created from the articles published in "The News" and "The Dawn." The aftereffect of information shows that editorialists in English Pakistani newspapers are concerned primarily with introducing 'what will occur,' 'what can occur,' and 'what ought to occur.' The researchers conclude that modality, being a significant property in linguistics, is utilized by the editorialist to collaborate with perusal, set up authorial persona, and present individual and institutional positions.

Torabiardakani, Khojasteh, and Shokrpour (2015) conducted research on advanced EFL learners, modal verbs, and their meanings. They claimed that auxiliary verbs are identified as the most perplexing syntactic systems in English. Researchers explored how advanced L2 learners in Iran use modal verbs, emphasizing the meaning of nine modals. To accomplish this, a learner-corpus comprising 136 comprehensive materials written by L2 learners was developed and then analyzed using the Wordsmith Tool. The research findings indicated that specific terms are overused (such as the ability interpretation of can) while others are underused by L2 learners, such as the possible interpretations of could and can. According to researchers, it is essential to educate Iranian students about the additional pragmatic roles of models.

Ling (2016) examined how modal auxiliary verbs are used in Horoscope. These horoscopes are a frequent feature of women's magazines. This work concludes that auxiliary verbs were some of the most troubling linguistic features in the EFL classroom. Ling employed a corpus-based technique to determine term frequency and the frequency at which modal verbs are used in women's magazines. The content was examined using Edit pad pro and Antconc to create concordance lines and frequency lists. The "may" and "will" modal verbs were the most often used in horoscopes to communicate probability and prediction. On the other hand, "Must" and "should" are modals of obligation and necessity, which are the least commonly used modal auxiliary verbs. "You" is a pronoun that is the most frequently occurring lexis in each Horoscope entry. According to the results of this report, horoscopes may be used in addition to recommending Malaysian curriculums to teach modal verbs.

Sadia and Ghani (2019) have explored the usage of auxiliary verbs in English newspapers in Pakistan. According to the comparative study, the results concluded that the editors of both newspapers preferred predictive auxiliary modals like would and will over other forms of modals. According to the predictive modal for The News, the editorial writers' primary concern was predicting the future "what will/would happen." When comparing the two newspapers' modals of duty, "The Daily Dawn" newspaper was even more oriented on the solution that "what should be achieved." According to the study of the identified editorials, the article writers of Dawn seem to be more capable of spreading authentic knowledge among readers than the article writers of The News International.

Odhiambo (2020) conducted a study on the modal verbs used in a few papers in the daily national newspaper covering COVID-19. This research focused on developing various auxiliary verbs used throughout the discussion on COVID-19 and its associated functions. The study discovered that in addressing COVID-19, newspaper articles have many modal auxiliary verbs. "Will" is the most frequently used auxiliary verb, with the highest frequency of 61 and 28.9%, as per the discussion, and is used to convey duty and meaning. 'May' comes in second, with a rate of 28.3% and 13.33%, respectively, and denotes capability and potential. With a frequency of 25 and 11.8 percent, the third is 'can' and 'should.' Quirk et al.'s typology shows that the auxiliary verbs used in the language serve various functions. According to the results, obligation, purpose, and prediction are more critical in terms of these functions, as the 'will' is used over all three.

Research Methodology

This study focused on the use of modal verbs, their function, occurrence, and frequency used in airline instructions for COVID-19. The study used a mixed-method approach and purposive design to select and analyze the data. The data were evaluated to determine the various roles of modal auxiliary verbs in instructions. The corpus for this research was evaluated using the functional method established by Quirk et al. (2000). In qualitative design, the researchers analyzed the functions of modal verbs in a different context. In the quantitative design, the researchers examined the frequencies of modal verbs used in airline instructions.

For this study, data were collected from four selected continents' (Asia, Africa, Europe, and the Middle East) airlines to determine how writers used modal auxiliary verbs in COVID-19 airlines instructions. The total word count of these instructions was corpora of 15000 words. The tool used for analyzing the data was Ant-Conc. 3.5.8.0. The data was rectified from the top 10 airlines as given on the specific

link World's Best Airlines 2019 by Region SKYTRAX (worldairlineawards.com). Initially, the researchers converted all the data into word form and then into plain text (files containing only text, having no tools for text formatting).

Findings and Discussion

Functions of modal verbs

Modal verbs play an essential role in the depiction of a meaning. There are various functions of modal verbs: prediction, ability, possibility, acknowledgment, and obligation. The following analysis describes the various functions of the modal verb used by the writers and their purpose in airlines' instructions.

The function of modal verb 'can' in selected continents:

Africa

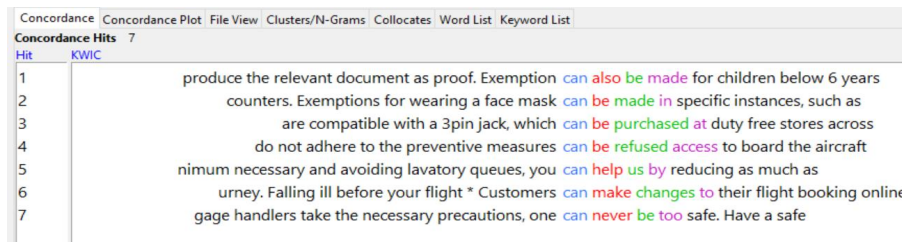


Fig. 1. JPEG image of function of the modal verb 'can' in African airlines

The modal verb 'can' is mainly used as a modal verb to show possibility and ability. In the 1st and 2nd sentences in Figure 1, the modal verb 'can' shows a possibility. The possibility allows the passengers to edit their children's data below 6 years, and they give relief to the passengers to have possible solace in wearing the mask during flight. However, in the 3rd sentence in the same figure, the modal verb 'can' is used to explore the ability; passengers can have their items on the flight from duty staff, like a 3D jack. Furthermore, in the 4th sentence, the modal verb 'can' shows that if the passengers had not followed the prevention measures, then there is the possibility of a situation in which the passengers may not be allowed to have a flight.

Asia

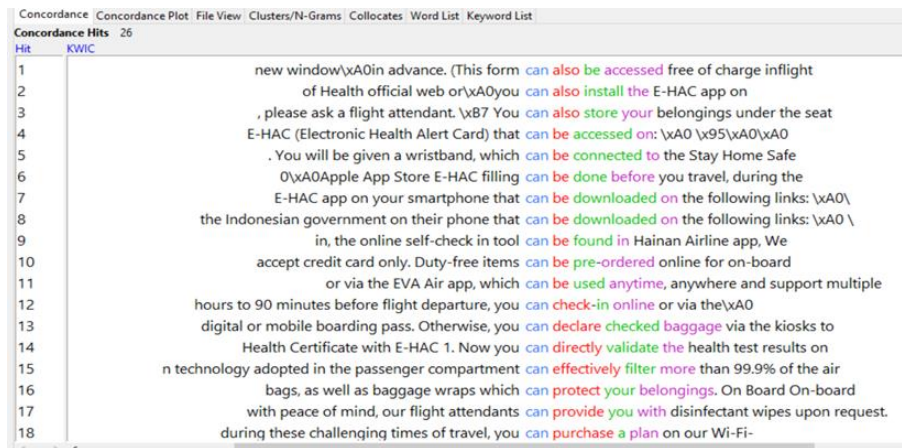


Fig. 2. JPEG image of function of the modal verb 'can' in Asian air lines

In Figure 2 above, the modal verb 'can' is analyzed in Asian airline instructions. In the 1st and 2nd sentences, the modal verb 'can' is a representation of possibility. It shows that passengers access their forms without any charges during the flight. Furthermore, the modal verb 'can' shows the possibility of installing an E-HAC application on a cell phone. Additionally, in the 3rd and 4th sentences, the

modal verb 'can' represents the ability that passenger to place their luggage under the seat. Moreover, 'can' shows that passengers have the ability to access the E-HAC app on a cell phone during the flight.

Europe

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits		5					
Hit	KWIC						
1		them as recommended by the manufacturer. You can also take hand sanitizer on board provided					
2		of charge. Each compliant hand baggage item can be checked in free of charge - even					
3		reasons, an exception to the mask requirement can be made. An exception is only accepted					
4		TLESS TEMPERATURE TAKING A body temperature check can be put in place from some Air					
5		masks are not allowed on board. Violations can have consequences. Exceptions to the mask obligat					

Fig. 3. JPEG image of function of the modal verb 'can' in European airlines

In the above-given Figure 3, the modal verb 'can' shows the possibility of sanitizing the hands while onboard, and the next instruction reveals the possibility of checking luggage free of cost if any of the luggage is luggage compliant. Afterward, in the 3rd statement, the use of the modal verb 'can' shows the possibility of objection to the requirement of masks as if any of the passengers are not wearing a mask, he will be complicit to the crew on duty, and then in the 4th guideline, modal verb 'can' shows the possibility of checking the temperature while leaving on the board. The last instructive guideline, the use of 'can,' shows the prediction of some possible negative consequences if the passengers violate the instructions.

Middle East

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits		7					
Hit	KWIC						
1		to complete mandatory 7-day quarantine. It can be any hotel or from the					
2		be available on board. However, our passengers can enjoy our digital in-flight entertainment systems					
3		at the time of check-in. Passengers can get 10% discount on hotel reservation by					
4		being allowed to travel. Symptoms of COVID-19 can include mild to severe respiratory illness with					
5		in the aisle, remain seated until you can leave and still maintain a safe distance					
6		the bus will be limited so you can maintain social distance from other passengers. O					
7		applicable. > Passengers holding a credit voucher can utilize their credit as a payment while					

Fig. 4. JPEG image of function of the modal verb 'can' in Middle East air lines

In above Figure 4, the use of the modal verb 'can' revealed an ability that there is no restriction in choosing the hotel for an absolute/mandatory 7 days of quarantine during this pandemic which is mandatory. In the second sentence, it again shows the ability that passengers over the board can relish the facility of the digital entertainment system that is available on flights to make their passengers pleased. The following directive also shows the ability to offer passengers during check-in; they can acquire a 10% discount on a unique XAO hotel if reserved by crew members. Afterward, in the fourth sentence, the modal verb 'can' demonstrates the possibility of encountering COVID-19 symptoms.

The function of the modal verb 'could' in selected continents air lines:

Europe

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits		1					
Hit	KWIC						
1		list. > As a guide, a face mask could last up to four hours, so please					

Fig. 5. JPEG image of function of the modal verb 'could' in European air lines

In above Figure 5, using the modal verb ‘could’ reveals the ability of European airline instructions related to COVID-19. In the first instruction, the modal verb ‘could’ shows the ability of the face mask that can be used only for four hours.

Middle East

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits 1							
Hit	KWIC						
1		boarding sick passengers or suspected cases that could adversely affect the comfort and safety of					

Fig. 6. JPEG image of function of the modal verb ‘could’ in Middle East air lines

In above Figure 6, the modal verb ‘could’ is used to show the possibility of some unpleasant happenings. Allowing ailing passengers and doubted passengers to check in will unsympathetically disturb the other passengers on board, and it will also malaise the environment and the safety of healthy passengers.

The function of the modal verb 'may' in selected continents air lines:

Africa

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits 10							
Hit	KWIC						
1		check-in, safety procedures and protocols that may apply at the airport. We suggest you					
2		access to board the aircraft cabin, or may be asked to disembark the aircraft before					
3		not hold up your fellow passengers. You may be asked to scan your own boarding					
4		bags are allowed on board. Hand baggage may be checked free of charge in the					
5		any unnecessary contact during check-in. There may be delays at the airport due to					
6		. Children under the age of 6 years may be exempted from wearing a mask. * Passengers					
7		. Children under the age of 6 years may be exempted from wearing a mask and					
8		before the aircraft doors are closed. Passengers may be subject to additional actions as determined					
9		sanitizing your bag's handles as it may have passed through a few hands during					
10		relevant health personnel at the airport and may not be permitted to fly. * Documents * Remember					

Fig. 7. JPEG image of function of the modal verb ‘May’ in African air lines

In the above Figure 7, the function of the modal verb ‘may’ is described in the African airline's instructions. Looking into the 1st statement, ‘may’ shows that there is advice for the passengers at the airport to check papers and safety procedures properly. Moreover, ‘may’ used in the 2nd statement reveals that there is a possibility that they would have to change the plan in sudden conditions, and they will land before the time. Furthermore, acknowledgment and intention are shown in the 3rd and 4th statements to give information. Afterward, the use of ‘maybe asked’ is an acknowledgment as they have to check their luggage. The use of ‘maybe check for free’ represents that it is acknowledged they can have their handbags without any cost, thus showing the functions of possibility either to perform the function or vice versa.

Asia

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits 8							
Hit	KWIC						
1		to the wearing of gloves, cabin attendants may also wear gowns at the passenger's					
2		at HKIA are open, though operating hours may be shortened. Bring snacks and a refillable					
3		it difficult to wear a mask. We may check your health when you travel on					
4		as the alcohol content of the wipes may damage the window. Garuda Indonesia Wear Masks					
5		to reduce any discomfort that fellow passengers may feel. However, this does not apply to					
6		open before planning a visit as there may have been changes due to the Covid-19					
7		Arrive 2-3 hours ahead of your flight. We may have to contact immigration at your final					
8		the airport. Depending on the airport, this may include temperature screening or questionnaires a					

Fig. 8. JPEG image of function of the modal verb ‘may’ in Asian air lines

In Figure 8, the modal verb 'may' is used to present possibility and ability in Asian airlines. In the 1st statement, 'may' shows the possibility that while wearing the gloves, Cabin employees can also wear gowns as well, and 'maybe shortened,' thus shows a possibility that functioning hours get shortened and one may pass the time by bringing snacks as well. Afterward, 'may check your health' shows the possibility that it is not possible to wear a face mask and gloves all time during the flight, so there is a little bit of possibility to check the passengers when they are on the flight ht. In the last statement, 'may' shows the possibility that using the alcohol content wipes may increase the possibility of damaging the windows of aircraft.

Europe

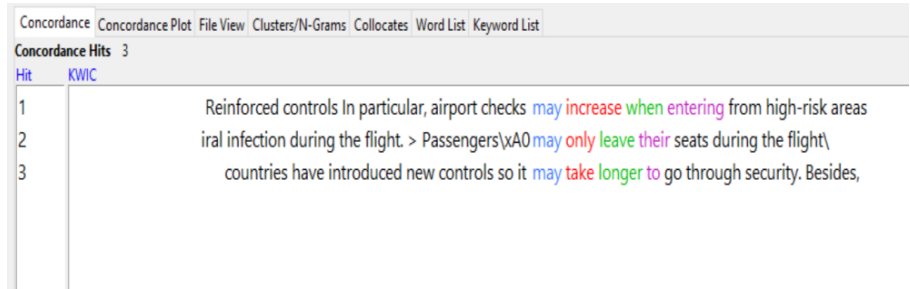


Fig. 9. JPEG image of function of the modal verb 'May' in European air lines

The above statement shows the possibility of checking while going through the areas where there is a risk of passing through. In the 2nd statement, the modal verb 'shows the possibility of how passengers take permission to leave their seats once the plane has taken off. In the 3rd statement, the use of the modal verb 'may' shows the possibility of consumption of more time in checking as some of the countries have inaugurated new rules and regulations.

Middle East

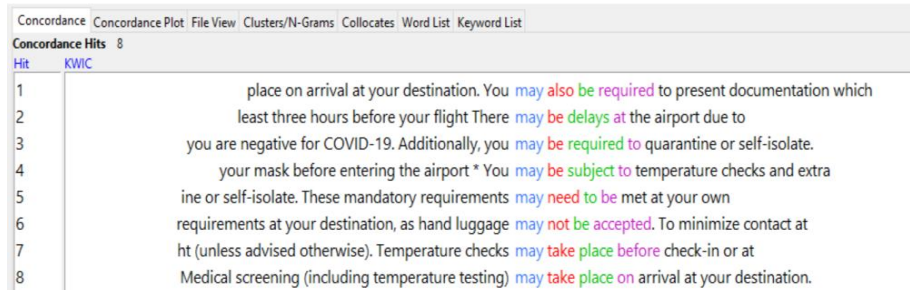


Fig. 10. JPEG image of function of the modal verb 'May' in Middle East air lines

In above Figure 10, 'may' is a representation of possibility. It shows that security checks may demand passengers' all documents at the influx of their landing place/destination. In the 2nd statement, the modal verb 'may' reveals the possibility that it is necessary to be at the airport at least three hours before your flight to avoid hesitation. In the following guidelines from 3rd to 8th, the modal verb 'may' is the depiction of the possibility that passengers are obliged to self-quarantine since they tested negative for COVID-19.

The function of the modal verb 'might' in selected continents air lines:

Asia

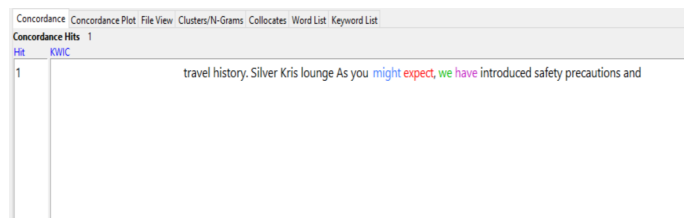


Fig. 11. JPEG image of function of the modal verb 'might' in Asian air lines

In the above Figure 11, the use of the modal verb 'might' shows the possibility of sequential cleaning and safety measures in lounges to ensure a safe flight, and the staff ensures their hygienic and sanitation standards.

The function of the modal verbs 'must' in selected continents air lines:

Africa

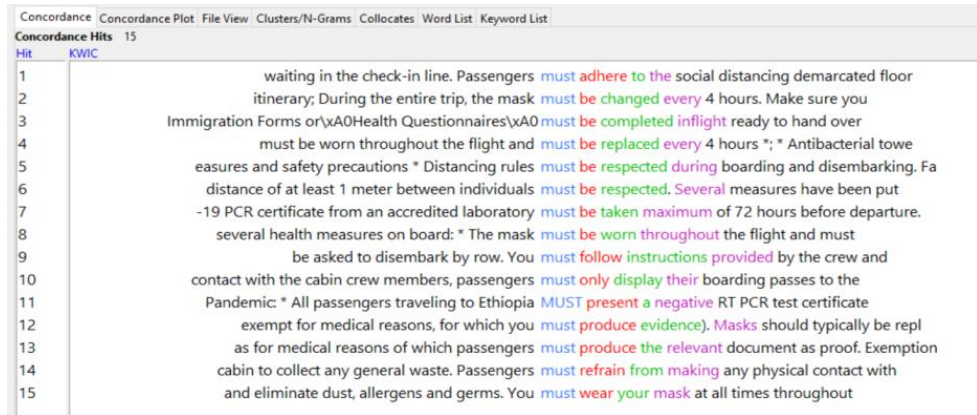


Fig. 12. JPEG image of function of the modal verb 'must' in African air lines

In above Figure 12, the modal verb 'must' in instructions from 1 to 15 reveals obligations as it can be seen that passengers are directed to follow the rules and regulations. These are some of the instructions that are to be followed after boarding, as the passengers are strictly directed to maintain social distancing and wear surgical masks. PCR test 'must' shows obligations that it is being done 72 hours before boarding, and passengers are asked to have their medical certificates as well as all the relevant documents for the verification.

Asia

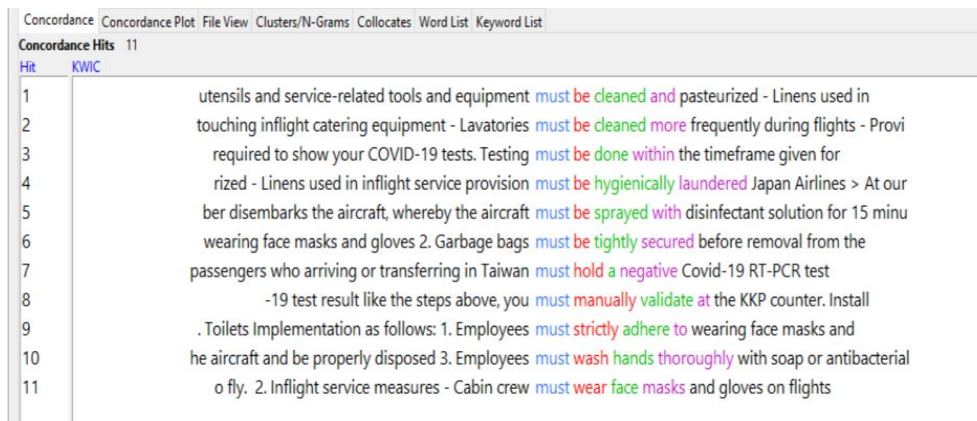


Fig. 13. JPEG image of function of the modal verb 'must' in Asian air lines

The above Figure 13 reveals the use of the modal verb 'must'; this line shows the obligation that all the utensils' services and tools must be cleaned to make the products safe, thus showing that there is no chance of avoiding the cleaning of utensils. In the next sentence, 'must be cleaned' has a function of duty that touching the equipment during the flights should be cleaned repeatedly. Furthermore, in the 3rd directive, 'must be done' represents the obligation that it is compulsory to show your COVID-19 tests during the flight. Tests must be done at the given time. Furthermore, in the 4th sentence, 'must be hygienically laundered' again shows the obligation that Japan Airlines to provide such services to the flight to avoid any infections.

Europe

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits 17							
Hit	KWIC						
1	negative PCR test result*. This PCR test must be carried out no more than 72 hours						
2	\xA0social distancing gap of 1.5-2 m\xA0must be maintained\xA0in the aircraft aisle. >						
3	rapid anti-gen test result. This test must be taken within 4 hours before boarding. > A						
4	airport and during the flights. * All passengers must complete the passenger information form when arri						
5	a face mask or face covering, you must contact and notify our Special Assistance team						
6	bridge of your nose. 3. The mask\xA0must fit snugly on your face, covering your						
7	(nucleic acid). The sample for the test must have been taken within 72 hours prior to						
8	-19. > When boarding and disembarking, passengers must maintain the recommended\xA0social distancing gap						
9	elts fastened throughout the flight. > Passengers must replace their face coverings every 3 hours. If						
10	law all passengers over the age of 2 MUST wear a face covering at all times						
11	. AT THE AIRPORT MANDATORY SURGICAL MASK You must wear a surgical mask as soon as						
12	flights. ON BOARD MANDATORY SURGICAL MASK You must wear a surgical mask as soon as						
13	. ON THE ARRIVAL MANDATORY SURGICAL MASK You must wear a surgical mask as soon as						
14	infants during the flight. > Flight attendants must wear gloves and face coverings. Air France						
15	5-2 m. > Before entering the aircraft, passengers must\xA0clean their hands with a safe						
16	hands with a safe liquid sanitizer. > Passengers must\xA0keep their seat belts fastened throughout						
17	s, without touching the front part. 5. Passengers must\xA0replace their face coverings every 3 hours.						

Fig. 14. JPEG image of function of the modal verb ‘must’ in European air lines

In above Figure 14, the use of the modal verb ‘must’ shows the obligation and duties of passengers that they should follow the instructions as their duty which is focused by the use of the modal verb ‘must.’ They should carry out the PCR test 72 hours before the take-off of the plane. They should keep their distance among themselves. It is obliged to fill out the information form to abolish any mishap during flight. They are bound to wear surgical masks and keep changing them every 3 hours. Flight attendants and passengers are instructed to wear gloves and use liquid sanitizers to keep themselves safe and fasten their seat belts.

Middle East

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits 9							
Hit	KWIC						
1	thermal screening at the airport and you must be determined to have no symptoms before						
2	not cleared from the Medical Centre you must follow the advice of the DHA. * Receive						
3	, or begin to have difficulty breathing, you must inform a member of crew immediately and						
4	assigned seat.\xA0During the flight, you must remain in the seat assigned to you						
5	ff baggage counters are being added. * Passengers must undergo all medical checks, including a mandatory						
6	e a designated lavatory. Economy class passengers must use the lavatories at the rear of						
7	of the aircraft and business class passengers must use the lavatory at the front of						
8	at every point of your journey. You must wear a face mask whilst you travel						
9	the picture page. Please note that you must wear a mask to be able to						

Fig. 15. JPEG image of function of the modal verb ‘must’ in Middle East air lines

In the first instruction in above Figure 15, the modal verb ‘must’ represents the obligation that refers to the situation where a thermal screen test is performed, and the body must not detect any symptoms. The use of ‘must’ in the sentence demonstrates that if Medical Center has not cleared the situation yet, it is compulsory to follow the advice of the DHA that one has received. Afterward, the modal verb ‘must’ shows the obligation that the passengers must inform immediately. Similarly, it performs the same function in the other sentences.

The function of the modal verb 'will' in selected continents air lines

Africa

Hit	KWIC
1	e airport terminal. Boarding gates * Kulula staff will again be adhering to a \x91no
2	ailable before allocating their seats. Passengers will also need to handle and stow their
3	and dispatching to the basement. * Kulula staff will be adhering to a \x91no touch
4	airport as much as possible. Boarding Passengers will be advised to board the aircraft by
5	the relevant travel documentation for a flight, will be allowed entry into the airport terminal. *
6	gation against the spread of COVID-19. Passengers will be allowed to remove their mask for
7	hysical distancing when leaving the aircraft, you will be asked to disembark by row. You
8	at all areas. Cleaning, spraying and disinfecting will be conducted in a manner to make
9	at the airport terminal without a mask will be denied entry. Children under the age
10	t. In adopting good hygiene protocols, passengers will be directed to use sanitizers readily made
11	epartures. * At check-in, only confirmed bookings will be entertained. While physical distancing has bee
12	process to the aircraft, if required only, will be expected. * ON ARRIVAL: * To maintain physical
13	arrive on board, all our cabin crew will be in full personal protective equipment (PPE).
14	e consistently disinfected. Boarding the aircraft will be in smaller groups and will start
15	their first point of departure. These passengers will be isolated from the other passengers on
16	roughout the flight. Immigration and Health cards will be made readily available in the seat
17	ed for temperature measurements; your temperature will be measured as well to ensure your
18	ID-19 symptoms. Customers displaying any symptoms will be referred to the relevant health personnel

Fig. 16. JPEG image of function of the modal verb 'will' in African air lines

Figure 16 shows the use of the modal verb 'will' in the African airline's COVID-19 instructions. In the 1st statement, 'will' represents the prediction that passengers will have boarded on time. The modal verb 'will be handled' shows the prediction that it is the responsibility of the passenger for the future that they have to locate their seats afterward. In the next sentence, 'will advise' shows that there is a prediction that each passenger has to be on time. Moreover, 'will be allowed' reveals the possibility that they have to tell fill out all their relevant documents, and there is also the possibility that passengers will be allowed to remove their masks for the meal.

Asia

Hit	KWIC
1	passengers in the aisle. On arrival, we will allow passengers off in order from the
2	on the Singapore Air mobile app. You will also be required to check-in via
3	the risk of droplet infection, our staff will also keep conversation outside of that necessary
4	providing guidance through physical contact. They will also wear gowns upon request or at
5	adjusted according to the actual situation. We will always provide passengers with safe and trusted
6	> List of Lab Test > Applicable test results will appear green, OR 2. Scan the barcode on:
7	on our aircraft. When doing so, we will ask you to cover your nose and
8	are rejected from entering Hong Kong, you will be able to stay at the airport
9	assengers at all service counters. Floor markings will be added to maintain appropriate social distancin
10	\x92s demand. The relevant flight policies will be adjusted according to the actual situation.
11	Midfield Concourse for your results. The wait will be approximately 4 hours. \xB7 You will be
12	and behind (a total of seven rows) will be collected. * Self-protection for passengers Pa
13	testing kit for your second sample. This will be collected the following day. \xB7 On
14	hand sanitizing gel and a sanitizing wipe, will be distributed to all passengers on board
15	port (CGK), the verification & validation process will be done by Soekarno-Hatta Health Port
16	Kong health declaration and quarantine form. You will be given a wristband, which can be
17	access your checked-in baggage. \xB7 You will be given a table and chair for
18	7 If you receive a positive result, you will be guided by health officials on the

Fig. 17. JPEG image of function of the modal verb 'will' in Asian air lines

In above Figure 17, the modal verb 'will' is frequently used by the Asian writer to emphasize diction and possibility. After analyzing the instruction, it revealed that the modal verbs 'will' is the modal prominent used by the writers. Moreover, the usage of modal verbs in the statement from 1st to 10th shows that these are predictions of upcoming happenings during the flight. They recommended that each passenger has to be conscious of the visa to avail of the mobile apps in Singapore.

Europe

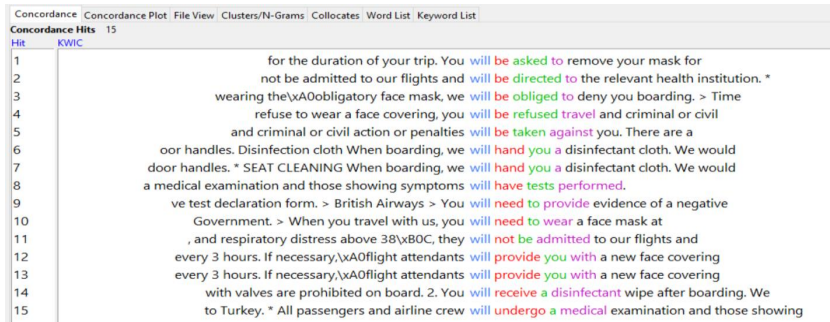


Fig. 18. JPEG image of function of the modal verb ‘will’ in European air lines

In the above instructions, the use of ‘will’ shows the prediction and possibility of some happenings; for instance, wearing a face mask is mandatory, and if it is not followed, their boarding will be denied. Actions will be taken against them, as wearing no mask during flight is considered a crime. Passengers ‘will’ shows the function of prediction that they will give disinfected clothes to clean their seats. If any of the passengers have got symptoms, then there is a possibility to be examined. All the passengers and airline crew will undergo a medical examination once the plane is landed. The above sentence shows the obligation that those with respiratory distress above 38°C will not be admitted to the flights.

Middle East

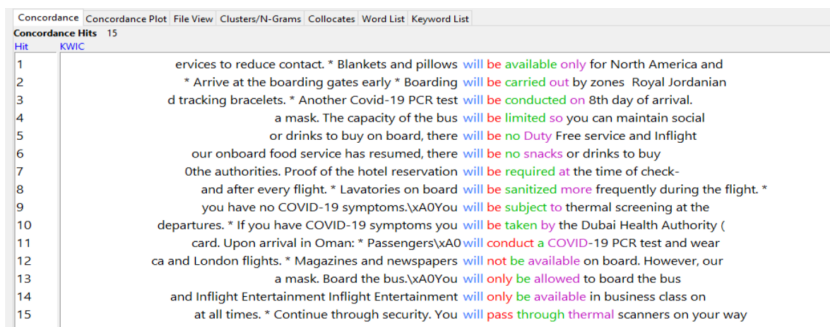


Fig. 19. JPEG image of function of the modal verb ‘will’ in Middle East air lines

In above Figure 19, the modal verb ‘will’ is used to perform a different function in the Middle East airline instruction, such as interpretation, permission, possibility, prediction, and ability. In the 1st instruction, the modal verb ‘will’ is represented as a prediction that the services have been reduced, and cushions and rugs are now accessible in North America. Furthermore, in the 2nd statement, the modal verb ‘will’ shows permission for passengers will proceed towards the boarding gates early as soon as they execute further boarding. Moreover, in the 4th to 6th statement, the modal verb ‘will’ shows the interpretation that passengers should purchase their drinks on board to avoid excessive contact. Moreover, there will be no free staff members on flights to serve passengers. Furthermore, in the instruction from 6th to 9th, the modal verb ‘will’ is demonstrated as permission that shows food services are restarted on boarding.

The function of the modal verb ‘shall’ in selected continents air lines

Africa

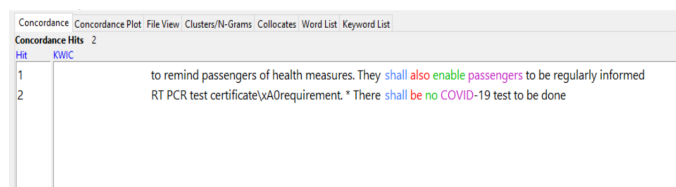


Fig. 20. JPEG image of function of the modal verb ‘shall’ in African air lines

In the above Figure 20, the modal verb 'shall' is used to explore the possibility in the African airline guidelines. In the 1st statement, 'shall' describe that passengers are informed regularly by the staff, and they intend to update the travelers regarding the new health precautionary measures.

Asia

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits		1					
Hit	KWIC						
1		plans starting from 30MB. Complimentary Wi-Fi shall be on selected aircraft. View your inflight					

Fig. 21. JPEG image of function of the modal verb 'shall' in Asian air lines

In above Figure 21, the modal verb 'shall' is only used by Asian writers to reveal the possibility during flights in the period of COVID-19. The usage of the modal verb 'shall' shows that there is a possibility that the passengers will be entertained during the flight by providing them the facility of Wi-Fi through which they can be connected with their beloved ones, and that is only present in selected aircraft.

The function of the modal verb 'should' in selected continents air lines:

Africa

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits		6					
Hit	KWIC						
1		ir) Contact Centers to reschedule their flight. * Should a customer be unable to call the					
2		d sanitizers provided throughout the airport. You should be able to locate them at the					
3		not yet checked in. * Checked in customers should call the relevant kulula.com or British					
4		9 positive or are awaiting their COVID-19 results should not travel and contact our Contact Centre					
5		, for which you must produce evidence). Masks should typically be replaced every four hours or					
6		to other formal border processes * All travelers should wear masks at all times whilst within					

Fig. 22. JPEG image of function of the modal verb 'should' in African air lines

In above Figure 22, the usage of the modal verb 'should' shows obligation. In the 1st statement, 'should' represents the duty that the staff is responsible for the passengers who missed their flight and they have to arrange a new booking for them. Additionally, the modal verb 'should' in the 2nd statement represents that it is obligatory to use sanitizer, and they have to locate the spots where the sanitizer is located in the airport, and they must be using it. Moreover, the modal verbs 'should' used in the sentences from 3rd to 6th reveal the obligation that the passengers must obey their rules.

Asia

Concordance		Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Concordance Hits		4					
Hit	KWIC						
1		you are eligible for lounge access, you should check if it is open before planning					
2		of hardware equipment. 6. Before your flight, you should check the entry and transit regulations for					
3		in Singapore. Undergo a health assessment You should expect to undergo a basic health assessment					
4		ent (PPE) and necessary materials for employees - Should the physician on duty deem necessary, a					

Fig. 23. JPEG image of function of the modal verb 'should' in Asian air lines

The modal verb 'should' is used to show obligation in Figure 23 Asian airline instruction that it is essential to look at the following instruction guidelines.

Europe

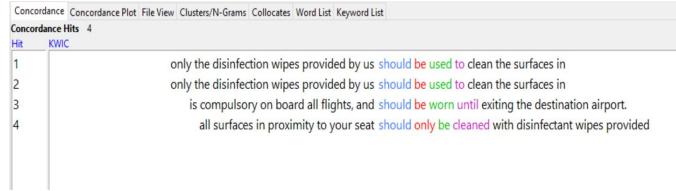


Fig. 24. JPEG image of function of the modal verb 'should' in European air lines

In above Figure 24, the usage of the modal verb 'should' shows the obligation that passengers are obliged to use disinfected water to keep themselves and the area around their seats clean. Passengers are bound to use these wipes unless they exit the destination airport.

Middle East

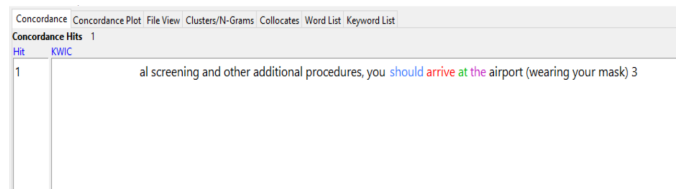


Fig. 25. JPEG image of function of the modal verb 'should' in Middle East air lines

In above Figure 25, the modal verb 'should' is used to show the obligation that each passenger needs to make an appearance at the airport with a mask and carefully go through all the screen testing and all the essential procedures.

The function of the modal verb 'would' in selected continents air lines:

Africa

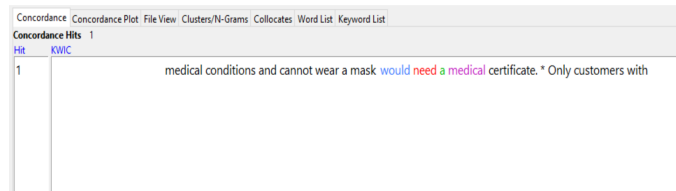


Fig. 26. JPEG image of function of the modal verb 'would' in African air lines

In African airlines Figure 26, the modal verb 'would' represents the obligation that a medical certificate is necessary for the passengers; if any passenger is unable to wear a mask for an extended period, then it is compulsory to show the official health certificate to the crew members.

Asia

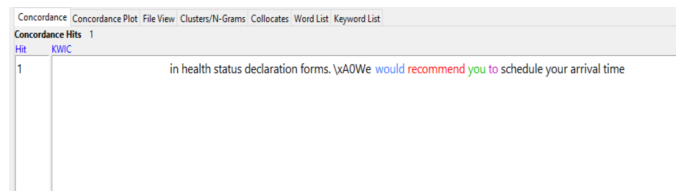


Fig. 27. JPEG image of function of the modal verb 'would' in Asian air lines

In Figure 27, the modal verb 'would' is used to show predictions about the upcoming happenings in Asian airlines that recommend that passengers arrive early at the airport to implement precautionary measures.

Europe

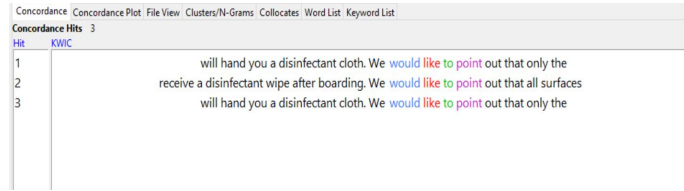


Fig. 28. JPEG image of function of the modal verb ‘would’ in European air lines

In above Figure 28, the modal verb ‘would’ is used to predict that the passengers arrive early at the airport to implement precautionary measures and ensure that they are disinfected. Moreover, these statements refer to the attention that they want to present or inform the passengers.

Middle East

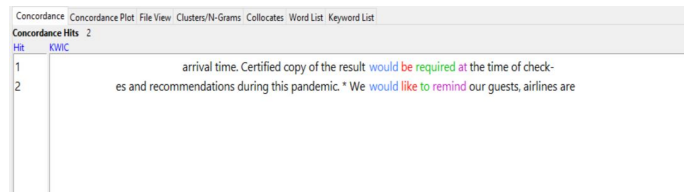


Fig. 29. JPEG image of function of the modal verb ‘would’ in Middle East air lines

In above Figure 29, both instructions with ‘would’ show the obligation to make sure that the passengers must follow. It is mandatory for the passengers arriving in the check-in area to have a certified copy of the results before and during the time of check-in. The staff will jog their guest’s memory about the safest and the best airlines. They will also endorse the guests about secure flights during this pandemic.

Frequency distribution of Modal verbs

The modal auxiliary verbs' data analysis from airline instruction reveals various frequency distributions among modal verbs.

Table I

Frequency distribution of modal verbs across the continents

Modal verbs	Concordance	Percentage
Can	45	14.3%
Could	2	0.63%
May	29	9.21%
Might	1	0.32%
Must	52	16.51%
Will	149	47.30%
Would	7	2.22%
Shall	3	0.95%
Should	15	4.76%
Will not	9	2.85%
Can not	0	0
May not	2	0.63%
Should not	1	0.32%
Total	315	100%

Table 3 shows the exciting markings in the data. All the central modal verbs that are nine in number are used in airline instructions on COVID -19. The author's most frequently used modal verb is 'will .'The modal verb 'will' is most commonly used at 47.30% of the total modal verbs used in airline instructions. The least used modal verb form in the airline instruction is 'might .' Its usage frequency is 0.32 percent of the total modal verbs. Some of the modal verbs are most frequently used in the instructions in comparison to the others. The most frequently used modal verbs are 'will' and 'can', whereas the least used is might.

The modal verb 'must' is the second most frequently used modal verb in airline instructions. Its usage frequency is 16.51 percent, whereas on the other hand, 'could' is the least used modal verb. The usage frequency of 'could' is 0.63 percent, whereas the usage frequency of 'shall' is 0.95 percent. The modal verb 'can' has a usage frequency of 14.3 percent, and 'may' account for 9.21 percent. The modal verb 'should' accounts for the usage frequency of 4.76, whereas 'would' is used 2.22 percent in the instructions.

Based on frequency data, it is possible to see which modal verbs are the most salient ones. In this case, the use of the modal verb 'will' and 'must', which accounts for 47.30 percent and 16.51 percent, and the modal verb 'can', which accounts for 14.3 percent, should be used to portray opinion about COVID-19 as the cabin crew intends. The fact that the use of will, must, and modal verbs is more frequent than others proves that modal auxiliary is contextually deployed to achieve specific communicative intents of the cabin crew.

The cabin crew of many airlines uses these modal verbs to better communicate and display their ideas in a simple and purposeful way. They use these modal auxiliary verbs to show their opinions and share some predictions while on the flight.

Table I frequency distribution of modal verbs continent wise In above Table I, modal verbs are analyzed and used by the writers of four continents. Modal verbs are used to present their ideas about the future. It is concluded from the analysis that the total modal verb used by the writers is at a frequency of 351. Additionally, Asian writers are more focused on the modal verb at the frequency of 121 as compared to other continents. Furthermore, the second most concerned continent towards the modal verb is Africa at the frequency of 100. Writers of both continents frequently use the modal verb 'will', which represents possibility and ability most of the time. The second last in Europe at the frequency of 49 who are indirect in their speech. Moreover, the Middle East writers are least anxious about the modal verbs at the frequency of 45. The results reveal that Asian and African writers are more directed toward modal verbs than Europe and the Middle East. The examination of the four continents shows that through the use of modality, writers share their viewpoints and thoughts. The findings of the current research are similar to Sadia and Ghani (2019), which manifest that modality is possible through modal auxiliary verbs, adverbs, adjectives, and certain instructing verbs. Moreover, the analysis shows that modality is used to engage their audience through prediction and possibility, and these confirm the findings of (Sadia & Ghani, 2019). The findings of other works Ahmed et al., 2019; Kenneth and Odhiambo (2020) are merely based on just one continent and shows a lack of generalizability, whereas the findings of the current paper are generalizable. However, due to the similarity of findings with other mentioned researchers, the findings can be generalized.

Conclusion

The study concludes that the writers used modal verbs to predict the coming situation and alert the passengers to follow precautionary measures. Modal verbs in African, Asian, and Middle East airlines' instructions show the same function, but European airlines' instructions convey different functions. Moreover, it shows that Asian writers are more focused on using modal verbs such as 'will', which shows possibility as compared to other Continents (Africa, Europe, and the Middle East). Furthermore, European writers are least concerned about the usage of modal verbs because they are indirect in their speech, thus showing politeness. On the other hand, Asians are direct in their speech and are less polite. The study concludes that modal verbs are essential for writers to make flexibility in their utterances.

Implications

Analysis shows that all sub-continent airlines use the same language, but modal verbs derive a different function, and it is difficult to understand. The analysis is helpful in understanding the language as it represents the language selection used in the instructions according to the geographical area. The study provides implications for the passengers and cabin crew to consider the usage of modality in the instructions to avoid miscommunication among them. As mentioned previously, there may be a communication gap between the passengers and cabin crew; therefore, it requires the understanding of modal verbs, whether these refer to communicating the function that the communicator intends to or it may imply the other function and meaning. Thus, such miscommunication may lead uncomfortably. So this study suggests that the regional variations of languages should be highlighted for all the airlines for the comfort of passengers during the flight.

Limitations and Future work

The current study is mainly based on the use of modal verbs with some limitations; that is, how do the cabin crew of these four different continents airlines use the modal verbs in their instructions regarding precautionary measures of COVID-19 before and during the flight? The researcher has also measured the frequency and function of these modal verbs and which modal verb is dominant in the use of their language. Further research can be carried out in the area of collocation in which tense these modal verbs occur the most. Secondly, in which kind of sentence do these modal verbs are used frequently.

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