MODALITY IN HEMINGWAY: A CORPUS ANALYSIS OF HEMINGWAY'S NOVEL "THE OLD MAN AND THE SEA"

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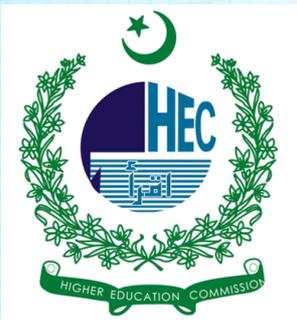*1Research Scholar of English (Literature and Linguistics) Lahore Leads University, Lahore, Punjab, Pakistan,
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Abstract

The present research focused on three main aspects as it checks out the frequency of modal verbs in the novel, analyze that, how modal verbs express possibility, obligation, or permission and study that how modal verbs are used differently in different context. The study uses the Corpus Linguistic tools for the analysis of Modal Verbs. In Ernest Hemingway's The Old Man and the Sea, modality serves as a critical linguistic tool for articulating the protagonist Santiago's determination, psychological shifts, and perceptions of reality. Corpus-based analyses, often utilizing tools like AntConc, identify significant patterns in the use of modal verbs that shape the novel's tone and characterization. The Earnest Hemingway's Novel; "The Old Man and the Sea" utilized as the research population while, lines from 1 to 60 are selected as a source of target population to make Corpus Analysis of the Modal Verbs in this novel. The research finds total 500 model verbs of nine types which are categorized in three types epistemic, demotic, and dynamic. In the end on the bases of these results research presented recommendations.

Keywords: *Modal Verbs, Corpus Analysis, Hemingway's Novel; The Old Man and the Sea*

Introduction

The present study aims to analyze some selected lines of Earnest Hemingway's novel through corpus analysis. This corpus based analysis will be affected for the general linguistics teachers and educators, in order to design materials on corpus linguistics, modality and stylistics (Bujanova, 2013). The corpus based analysis of modal verbs can play a significant role in the classroom as a model for teaching (Abdeen, 2018). It can deal with how linguistics tools can be applied to literature (Lugea & Walker, 2023). The use of modal verbs depicts the characters inner thoughts and emotions in the novel for example; "He must be very tired" this shows Santiago's internal reflection and empathy (Fairchild, 2019). Modal verbs are also used to show uncertainty and possibility in the narrative.

Moreover Modal Verbs play a critical role in expressing modality, including ability, obligation, and probability, which reflects the writer's stance toward events and characters (Haung, 2011; Lugea & Walker, 2023). This study explores modal verbs in Ernest Hemingway's novella The Old Man and the Sea, using the Corpus of Contemporary American English (COCA) as a reference corpus (Abdeen, 2018). The objective is to compare modal usage in the novel against contemporary American English fiction and interpret Hemingway's stylistic choices through a Critical Discourse Analysis (CDA) lens (Mellouki & Berriha, 2016).

This corpus based analysis can compare Hemingway's use of modals to how they appear in, spoken conversation, academic writing, and news articles, moreover it could also be helpful for the learners to study how modality varies across registers (Aarts, 2022). As this novel is around about 27,000 words, which makes it ideal for, building up a small scale corpus, manual corpus analysis can also be possible by using Word or Excel, modal verbs corpus analysis can also be practiced as classroom projects by using software like Antconc or Lancs Box (Wilson, 2005; Huang, 2011).

Research Objectives

The main objectives of the present study are to check out the frequency of modal verbs in the novel and to analyze that, how modal verbs express possibility, obligation, or permission and to study that how modal verbs are used differently in different context.

Research Questions

1.   Analyze the frequency of modal verbs in the Earnest Hemingway's Novel; "The Old Man and the Sea?

2.   Analyze that how modal verbs express possibility, obligation, or permission and how modal verbs are used differently in different context?

Literature Review

A literature review is a comprehensive survey and critical analysis of published scholarly works such as journal articles, books, and conference proceedings on a specific topic (Ahmad et al., 2021; Ansari et al., 2025; Yousaf et al., 2025; Rashid et al., 2026). "Review of the literature summarize and evaluate the text of writing of the definite theme, and provide frame work to think about the possible consequence of innovative study" (Ahmad et al., 2023). It "may only be a clear overview of the sources, in an organizational pattern, and its function is to estimate and summarize the previous writings linked to current topic" (Ahmad et al., 2024). Corpus Linguistics has developed through the work of many scholars, John Sinclair is often cited as one of the most influential figures in its modern development. He emphasized that meaning is not inherent in individual words but emerges from their combinations and patterns within a corpus. Other notable contributors include Henry Kučera, W. Nelson Francis, Randolph Quirk, and scholars like Leech, Biber, Johansson, Hunston, Conrad, and McCarthy (Murakami et al., 2017).

Talking about its functions we find that Corpus Linguistics has generated a number of research methods, which attempt to trace a path from data to theory. Wallis and Nelson (2001) first introduced what they called the 3A perspective: Annotation, Abstraction and Analysis.

  I.   **Annotation** consists of the application of a scheme to texts. Annotations may include structural markup, part-of-speech tagging, parsing, and numerous other representations.

 II.   **Abstraction** consists of the translation (mapping) of terms in the scheme to terms in a theoretically motivated model or dataset. Abstraction typically includes linguist-directed search but may include e.g., rule-learning for parsers.

III.   **Analysis** consists of statistically probing, manipulating and generalizing from the dataset. Analysis might include statistical evaluations, optimization of rule-bases or knowledge discovery methods.

Through corpus analysis Bujanova, (2013) in his master thesis analyzed Mitchell's" Gone with the Wind" and Hemingway's" A Farewell to Arms", While, Mahmood et al. (2013) analyzed modal verbs in Pakistani and British English fictions through corpus analysis method. Mellouki and Berriha, (2016) in their doctoral dissertation analyzed of lexico-semantic features in the Ernest Hemingway's novel "The Old Man and the Sea". Qian, (2017) conducted a corpus-based study of modal verbs use in English writing by EFL learners in china context. Yang, (2018) conducted corpus-based study of modal verbs in Chinese learners' academic writing. While, Abdeen, (2018) analyzed lexical and semantic devices in young adult dystopian fiction. Zhang and Cheung, (2022) analyzed model verbs in English press in china by using corpus analysis approach. In the same year Yasmeen, Nazeer and Ahmad, (2022) analyzed Stance-Modal and Semi-Modal Verbs though corpus-Based analysis method, while Samodra, and Bram, (2022). Also analyzed modal verb "Shall" in contemporary American English by using similar approach. Coberley, Speltz and Zawadzki, (2023) used corpus methods to analyze modal verbs in government science communication on twitter. In the same year Bashir, Ullah and Iqbal, (2023) analyzed epistemic modal verbs in the field of linguistics and literature through corpus-based study. But there is still gap as no one analyzed the modal verbs which is analyzed in Earnest Hemingway's Novel; "The Old Man and the Sea" by using following methodology.

Previous Related Studies

Ihrmark and Nilsson, (2021). Stylistically, evaluated of the development in the literary production of Hemingway through corpus analysis technique. Parveen et al. (2022). Stylistically analyzed lexical diversity in monologue in Santiago's character in the Hemingway's novel "The Novel Old Man and the Sea". Lian et

al. (2024). Analyzed the Hemingway's of writing style through corpus based multidimensional analysis. Tyas et al. (2025). Focused on the functions of moves and speech in the Hemingway's novel "The Old Man and the Sea" by examining discourse structure and interpersonal meaning in the dialogues of this novel. Instead of these all studies there is still a gap left as there is no single research that is conducted on the model verbs in this fiction. The researchers find this gap and decided to fill bridge this gap through conducting research on this area which ignored from a long time. The focus of present research is on the frequency and usage model verbs in this novel.

Research Methodology
Research methodology is the systematic and theoretical blueprint of a study. It justifies why specific methods were chosen and explains how they align with the research aims (Ahmad et al., 2025; Riaz et al., 2026). "Design of the research comprises of the whole procedure which is conducted research" (Ahmad, et al., 2022, p524). The study uses the Corpus Linguistic tools for the analysis of Modal Verbs. In Ernest Hemingway's The Old Man and the Sea, modality serves as a critical linguistic tool for articulating the protagonist Santiago's determination, psychological shifts, and perceptions of reality. Corpus-based analyses, often utilizing tools like AntConc, identify significant patterns in the use of modal verbs that shape the novel's tone and characterization. The Earnest Hemingway's Novel; "The Old Man and the Sea" utilized as the research population while, lines from 1 to 60 are selected as a source of target population to make Corpus Analysis of the Modal Verbs in this novel (Mellouki & Berriha, 2016; Walsh, Cave & Griffiths, 2024). The present research focused on three main aspects as it checks out the frequency of modal verbs in the novel, analyze that, how modal verbs express possibility, obligation, or permission and study that how modal verbs are used differently in different context.

Analysis and Findings
A corpus analysis the Hemingway's novel "The Old Man and the Sea" would examine the frequency, percentage, distribution, and functions of modal verbs like can, could, may, might, must, shall, should, will, and would. This analysis would aim to reveal how these verbs contribute to the novel's meaning, characterization, and overall narrative style.

Table: 1. Frequency and Percentage of English Modal Verbs

Modal Verb	Frequency	Percentage
Could	116	24%
Would	95	18%
Will	90	18%
Can	80	16%
Must	72	14%
Should	21	4%
Might	15	4%
May	11	2%
Shall	0	0%
Total	500	100%

The table number one showing that, in the lines from 1 to 60 of the Hemingway's novel "The Old Man and the Sea"nine kinds of model verbs found and the total frequency of these modal verbs is 500 percentage 100%, as could frequency 116 percentage 24%, would frequency 95 percentage 18%, will frequency 90 percentage 18%, can frequency 80 percentage 16%, must frequency 72 percentage 14, should frequency 21 percentage 4%, might frequency 15 percentage 4%, may frequency 11 percentage 2% , and shall frequency

0percentage 0%.

Table: 2. Classification of English Modal Verbs and Their Function

Types	Functions	Examples
Epistemic	Expresses possibility, probability, certainty	Might, may, must, could, would, should
Deontic	Expresses obligation, permission, duty	Must, shall, should, can, may
Dynamic	Expresses ability, willingness, volition	Can, could, will, would

The table number two showing that, in the lines from 1 to 60 of the Hemingway's novel "The Old Man and the Sea" nine types of model verbs found which are categorized in three types epistemic, demotic, and dynamic. The functions of first type known as epistemic are to expresses possibility, probability, and certainty for example, might, may, must, could, would, and should. While, the functions of the second type known as deontic are to expresses obligation, permission, and duty for example, must, shall, should, can, and may. Whereas, the functions of the third type known as dynamic are to expresses ability, willingness, and volition for example, can, could, will, and would.

Discussion

The Earnest Hemingway's novel "The Old Man and the Sea" was analyzed through corpus analysis. The purpose of the study was to find the frequency, percentage, distribution, and functions of modal verbs in the novel. These corpus analysis revealed that how these model verbs contribute to the novel's meaning, characterization, and overall narrative style.

The table number one showing that, in the lines from 1 to 60 of the Hemingway's novel "The Old Man and the Sea" nine kinds of model verbs found and the total frequency of these modal verbs is 500 percentage 100%, as could frequency 116 percentage 24%, would frequency 95 percentage 18%, will frequency 90 percentage 18%, can frequency 80 percentage 16%, must frequency 72 percentage 14, should frequency 21 percentage 4%, might frequency 15 percentage 4%, may frequency 11 percentage 2% , and shall frequency 0percentage 0%.

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Conclusion

It may sum up that, this study finds total 500 model verbs in the analyzed lines of the novel, like can, could, may, might, must, shall, should, will, and would. The Usage-Based Theory of Language was used as a theoretical frame work to check out the frequency and percentage of modal verbs. The present study will provide valuable contribution in the realm of corpus linguistics. It will motivate researchers and scholars to conduct this kind of the studies by using different approaches. This study can be contextualized and contribute in Pakistani institutions as well in order to the use of modal verbs as a central part of English grammar syllabi at HSSS, SSC and university level in Pakistan. It can also helpful to conduct workshops and modules on tools such as Antconc, Lingualyzer and Sketch Engine for the teachers to promote education

programs to empower educators with corpus-informed teaching methods.

Recommendations

Furthermore this study can helpful for the teachers to design classroom activities that highlight Santiago's abilities, hopes, possibilities, obligations and uncertainties through modal usage. This study also suggests that student can analyze how writer uses modal verbs to construct age, respect, courage and social hierarchy which can be relatable in Pakistani cultural norms for example, respect for elders, perseverance, masculinity. Students can also depicts beyond grammar and explore how modal verbs contribute to ideology, politeness strategies, and autonomy in texts. Teachers should integrate novel in grammar lessons in order to assist the students to observe real- world modal usage in context rather than memorizing isolated rules with the lens of Corpus Linguistics analysis.

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