

## Exploring ChatGPT's Capabilities in Creative Writing: Can GPT-4o Conduct Rhetorical Move Analysis in Narrative Short Stories?

Hui Geng<sup>1</sup>, Han Wei\*

<sup>1</sup>College of Foreign Studies, Guilin University of Technology, Guangxi, China

\*College of Foreign Studies, Guilin University of Electronic Technology, Guangxi, China

E-mails: [huiyuqiankun@gmail.com](mailto:huiyuqiankun@gmail.com), [237523688@qq.com](mailto:237523688@qq.com)

### Abstract

With the rapid advancement of artificial intelligence (AI) technology, the application of AI in academic research and language education has become increasingly widespread. GPT-4o, a new flagship model that can reason across audio, vision, and text in real time, has been found to offer substantial improvements over its predecessors. However, its capability to analyse rhetorical moves in creative writing remains unclear. This study aims to investigate whether GPT-4o can identify the rhetorical moves in narrative short stories with a focus on language assessment themes, and check the accuracy of the results by human experts. Moreover, the essentiality and frequency of the moves in these stories are reported. Adopting Jiang et al.'s (2024) eight-move model for the annotation of narrative stories, the results indicated that while ChatGPT (GPT-4o) quickly identified rhetorical moves, its segmentation of sentence endpoints differed slightly from human coders, particularly in several moves. However, these differences did not affect the overall range, frequency, or sequence of the moves, suggesting that GPT-4o can still effectively identify moves in narrative short stories. Another finding showed that Moves 1 to 6 were obligatory in all 50 narrative short stories from *Tests & Us* (Volumes 2 & 3), while Moves 7 and 8 were conventional, with no optional moves identified. As for the occurrence frequency, these stories contain 478 moves, with Move 4, "Complicating the story" being the most frequent, appearing 80 times (16.7%). These findings offer insights into the potential of AI to support textual analysis in creative writing and encourage researchers to explore rhetorical moves in narratives.

*Keywords:* ChatGPT, move analysis, creative writing, narrative short stories, language assessment

### Introduction

Narrative short stories are a vital literary genre that recounts connected events or actions within a specific timeframe, often following a chronological and causally related structure (Yoon, 2021). Beyond storytelling, narratives are fundamental to language acquisition and literacy development, helping individuals articulate thoughts, construct self-identity, and build social relationships (Deane et al., 2019). Moreover, they can shed light on the competency of narrators' language and their pragmatic knowledge, and therefore, they can be of great importance for pedagogical and artistic purposes (Kang, 2005). In terms of narrative structure, the orientation, complication, evaluation, and resolution phases are present in it and there may be a coda as well (Labov & Waletzky, 1967). These stages guide the reader through the story, offering deeper understanding and engagement.

As artificial intelligence (AI) has matured, with an emphasis on natural language processing,

many researchers are interested in the potential of applying AI models to the examination of creative writing processes. Cognitive analysis involves the detection of patterns and structures in various domains using tools, where GPT-4o, which synthesizes not only text but also audio and video data based on advanced technologies, has been highly performed in text and structural analysis of scholarly and technical writings. However, analysis of narrative fiction, particularly short stories, is a more complex task, whose exploration is still in its fledgling stages. Specifically, whether GPT-4o can accurately identify rhetorical moves—key stages in a story’s development—has not been thoroughly examined. Therefore, the purpose of this study is to fill this gap by looking into whether GPT-4o can effectively perform rhetorical move analysis in narrative short stories.

Applying Jiang et al.’s (2024) eight-move model for annotation, this research will compare GPT-4o’s performance with that of human coders, focusing on accuracy in identifying move structures. The analysis will also assess the essentiality and frequency of these moves within 50 short stories from *Tests & Us* (Volumes 2 & 3). By examining GPT-4o’s capabilities in analysing creative writing, this research aims to contribute to the growing discourse on the role of AI in language education and literary analysis. Understanding whether AI can replicate the nuanced analytical skills of human experts in narrative writing will provide insights into its potential applications in both academic research and educational tools.

The findings highlight the potential of AI models in supporting complex forms of text analysis, particularly in reducing the time and expertise required for manual coding. However, despite this progress, there has been limited attention given to how the latest model, GPT-4o, performs in rhetorical move analysis, especially within creative narratives. This study aims to address this gap by examining GPT-4o’s performance in this area. Firstly, the study investigates the extent to which GPT-4o can identify and analyse rhetorical moves in narrative short stories with a focus on language assessment themes. Secondly, the study explores the essentiality rates and occurrence frequency of the moves in these short stories.

## Literature Review

Narrative short stories, a staple of literary fiction, captivate readers by weaving together plot, character, setting, and theme in compact and compelling ways. These stories often employ a variety of rhetorical techniques to engage, inform, and evoke emotions, creating a nuanced interplay between form and function. Whether they are exploring human emotions or depicting fantastical worlds, narrative short stories offer rich material for analysis, especially when it comes to identifying the communicative strategies authors use to convey meaning. One such method of analysis is rhetorical move analysis, which breaks down a text into schematic units or “moves”, each serving a distinct communicative function within the broader discourse. A move is seen as a chunk of text, encompassing at least one complete sentence with a specific communicative function, indicating that any sentence or group of sentences meeting the criteria of a move or step in the coding system was considered an instance of that move or step, irrespective of length (Zhang & Wannaruk, 2016; Geng et al., 2023). In the coding phase, moves or steps are counted as single instances if uninterrupted, but as separate instances if interrupted by different moves or steps (Geng et al., 2023). This type of analysis has traditionally been done manually, a time-consuming process that requires deep expertise in both linguistics and the genre being studied. Though manual move analysis is considered the gold standard, tools such as Mover, Research Writing Tutor, and Academic Writing Analytics (AWA) have emerged to assist researchers in identifying rhetorical structures more efficiently (Knight et al., 2020). These tools offer varying degrees of automation, but they still rely heavily on human input for accurate coding and interpretation.

Released on May 13, 2024, GPT-4o (“o” for “Omni”, derived from the Latin word “omnis”, meaning “all” or “every”) is the latest multimodal LLM (Large Language Model) from OpenAI. It provides significant enhancements on its predecessors with the addition of multimodal features, larger context windows, advanced tokenization, and higher processing speeds, and, the performance state of the arts in generation and comprehension over texts, audio, images, and video. It is also a step towards much more natural human-computer interaction (Islam & Moushi, 2024). It has the ability to respond to audio inputs in 232 milliseconds on the minimum and a little over 320 milliseconds on an average, which is rather efficient in conversation. It also delivers performance on par with GPT-4 Turbo in terms of processing text in English and code and demonstrates further breakthroughs in producing text in other languages, but it is vastly quicker and costs half as much in the API. The model’s efficiency in handling different types of data results in high success rates and reduced processing times and costs (OpenAI, 2024). Thus, Geng et al. (2024) considered if there is a possibility of employing AI to conduct other various types of textual analysis including discourse, sentiment, and stylistic analysis, as well as for linguistic analysis encompassing lexical, semantic, pragmatic, genre, frame, and intertextuality analysis.

Based on previous findings, scholars have already begun exploring GPT-4 and GPT-4o’s capabilities in automating elements of textual analysis. For example, Savelka et al. (2023) demonstrated that GPT-4 can analyse legal texts at a level comparable to trained law students. Similarly, Siiman (2023) found that GPT-4 could assist in qualitative data analysis when properly guided by structured prompts, aligning AI outputs closely with human interpretations. Geng & Nimehchisalem (2023) noticed that GPT-4 could conduct conceptual metaphors and thematic analysis of short stories. Lian (2024) investigated GPT-4o in fields such as medical education, where it outperformed previous models by achieving accuracy levels above the national pass mark in the 2023 Chinese Medical Licensing Examination. However, while these studies have demonstrated its potential in structured disciplines, its application to creative and narrative-based textual analysis remains largely unexplored.

## **Methods**

### **Research Design**

The current study used a mixed approach that integrated qualitative and quantitative methods to obtain the benefits from both approaches. The qualitative aspect involved human coders verifying the moves identified by the AI-assisted tool GPT-4o. Meanwhile, the quantitative aspect aimed to determine the essentiality rates and frequency of occurrence of rhetorical moves within the constructed corpus.

### **Corpus Construction**

In this study, 50 narrative short stories were selected from the books *Tests & Us – A Collection of Real Stories* (Volumes 2 and 3) (Nimehchisalem & Geng, 2023; Nimehchisalem & Geng, 2024), published by Generis Publishing. Volume 2 contains 22 stories, while Volume 3 contains 28 stories. These stories were chosen because they collectively provide a diverse and representative corpus, featuring narratives written by students, teachers, researchers, educators, and professional writers from different parts of the world. With various backgrounds originating from diverse countries and nurtured among different linguistic environments, these writers have not only brought their cultural perspectives but also given new insights on “assessment” to make it more thrilling for readers. To enable comprehensive examination by GPT-4o and language specialists, the accessible stories were collated into a single Word file. Table 1 presents the word counts of short stories in these two collections.

**Table 1: Word Counts of Short Stories in *Tests & Us* (Volumes 2 & 3)**

No.	Words	No.	Words	No.	Words	No.	Words	No.	Words
1	871	11	657	21	1345	31	775	41	934
2	1135	12	989	22	894	32	1134	42	625
3	1364	13	879	23	1314	33	1635	43	1205
4	1054	14	965	24	1309	34	1011	44	1284
5	979	15	710	25	1030	35	1856	45	1176
6	1011	16	837	26	1198	36	961	46	851
7	949	17	519	27	1112	37	1434	47	1407
8	1038	18	613	28	975	38	1116	48	1145
9	1052	19	822	29	806	39	2091	49	490
10	1263	20	1348	30	1100	40	773	50	1652
<b>Total Word Count: 53693</b>					<b>Average Word Count: 1074</b>				

It can be seen from the table that the total word count is around 53,693, with an average of 1,074 words per short story. The briefest narrative, titled “The Power of Hard Work”, consists of 490 words, whereas the lengthiest story, entitled “Bridging Worlds: The Odyssey of Hammurabi”, encompasses 2,091 words.

### Analytical Framework

The current research analysed the use of rhetorical moves in 50 narrative short stories of language assessment by employing Jiang et al.’s (2024) pioneering eight-move model. This framework (as can be seen in Table 2) consisted of three stages, namely, Orientation, Incident, and Conclusion, which were further categorized into eight moves.

**Table 2: Jiang et al.’s (2024) Eight-Move Model for the Annotation of Narrative Stories**

Stages	Moves		Functions
Orientation	Move 1	Setting the scene	Introducing characters, time, location, and behavioural situation
	Move 2	Laying out the event	Presenting a temporal sequence of occurrences at the beginning of the text and giving an account of how one event leads to another
	Move 3	Giving the current situation	Describing the temporary condition in the story before turning to the complication of the plot
Incident	Move 4	Complicating the story	Unfolding temporally ordered actions that lead to one or more crises
	Move 5	Evaluating the status quo	Appraising complication by indicating attitudes, opinions, or the usuality of events, suspending or interwoven with action
	Move 6	Dealing with the	Performing further actions to resolve the crisis

		complication	
Conclusion	Move 7	Foregrounding the main idea	Stating the main idea of the story after the resolution, acting as a culminating event
	Move 8	Ending the story	Making a statement or comment about the story, or returning the narration to the present time

The first stage, Orientation, sets up the context and “presents an expectant activity sequence” for the narrative (Martin & Rose, 2008, p. 51). Three moves are involved in this stage. Move 1, Setting the scene, introduces the story’s characters, time, location, and behavioural situation. Move 2, Laying out the event, presents a temporal sequence of occurrences at the beginning of the text, explaining how one event leads to another while expounding on the context and acquainting readers with the story’s setting to promote plot development. Move 3, Giving the current situation, outlines the temporary state within the story before the plot complication arises. This move helps readers understand the overall atmosphere and mood, setting the stage for the following section.

The second stage, known as the Incident, introduces the central event of the story and marks a significant progression in the plot. Three moves are comprised in this stage. Move 4, Complicating the story, unfolds temporally ordered actions that break the normalcy established in the first stage and that lead to one or more conflicts in the story. Move 5, Evaluating the status quo, assesses the complication by expressing attitudes or opinions about it. This evaluation often “suspends the action, increasing the narrative tension, and intensifying the release when tension is resolved” (Martin & Rose, 2008, p. 52). Move 6, Dealing with the complication, addresses and resolves the crisis introduced in Move 4.

The third stage, the Conclusion, wraps up the narrative by summarizing its essence and guiding readers back to the ‘reality’ of the present. This stage includes two moves. Move 7, Foregrounding the main idea, highlights the central theme following the resolution, either implicitly through a climactic event or explicitly by emphasizing the story’s moral. Move 8, Ending the story, provides a final statement or reflection on the narrative, either returning to the present moment or offering a new context unrelated to the main event, thus bringing the story to a close.

### Data Analysis

In this study, an AI-assisted tool was employed for qualitative analysis of rhetorical moves within creative writing, specifically for narrative short stories. To address the first research question, a most recent cutting-edge version of ChatGPT (GPT-4o) was used to identify the moves in 50 narratives from *Tests & Us – A Collection of Real Stories* (Volumes 2 & 3). The interaction with GPT-4o commenced with the researchers initiating a “new chat” and inputting specific prompts and cues.

Firstly, Jiang et al.’s (2024) pioneering eight-move model for the annotation of narrative stories was inserted into the chat interface in detail, serving as the instruction set for the AI program. Subsequently, GPT-4o was tasked with performing the analysis based on the provided requirements. As observed by Geng et al. (2024), the accuracy of the results generated by ChatGPT was directly proportional to the precision and clarity of the instructions and questions. The AI system provided more accurate and dependable results when it received lucid and explicit directives. Hence, the researchers tried to add some instructions on how to code chunks of text and underline the typical parts that realize certain moves.

The prompt entered to GPT-4o was like:

- *The contents of Jiang et al.'s (2024) eight-move model.*
- *A rhetorical move is characterized as a chunk of text that contains at least one complete sentence and serves a specific communicative function. This means that whenever a sentence or combination of sentences fits the description of any move in the coding system, it is regarded to be an instance of a move regardless of its length.*
- *By adopting Jiang et al.'s (2024) eight-move model, could you please tag chunks of text as No. 1, 2, 3, mention the start and end point of each chunk, underline the typical parts that realize each move, add a short description, and create a table by thoroughly analysing all the moves in the following narrative short story, with special attention to recurring ones that contribute to the cyclical progression of the narrative? The columns of the table should be: Move No., Functions, Start & End Points, and Descriptions.*

By clicking “send message” to deliver the prompt, GPT-4o would answer by generating a table with the requested information. Due to the cyclical repetition feature of moves (Swales, 2004), the researcher delivered another prompt - *Does the analysis include all the recurring moves?* to make the results more accurate by avoiding the missing of any recurring moves.

After obtaining the results for the identification of moves in 50 narrative short stories, the potential errors that GPT-4o made in the analysis were examined by two human coders. If any discrepancies arose, the researcher conducted a deeper investigation to determine the underlying causes.

Finally, the essentiality and frequency of the moves in these stories were analysed manually. Essentiality is about the covering range of moves and refers to the percentage of texts that contain a certain move at least once (Lu et al., 2021) while frequency is about the number of moves and refers to the occurrence of a certain move in all the texts of a corpus. Regarding essentiality rates or inclusion rates, this study followed Rasmeenin's (2006) rationale by defining a move as obligatory if it appeared in 100% of the analysed corpus, conventional if it occurred in 66% to 99% of the corpus, and optional if it was present in less than 66%. As for occurrence frequency, this study used descriptive statistics and the auxiliary software SPSS to report the distribution (percentage) of each move. A point worthy of mention is that the cyclical repetition of a move within a section of text was addressed by treating each occurrence of the move as separate. For instance, if a text begins with Move 1, proceeds to Move 2, and then returns to Move 1, Move 1 would be counted twice (Biber et al., 2007).

## **Results and Discussion**

### **GPT-4o's Capacity of the Identification of Moves in Narrative Short Stories**

According to the findings, the researcher discovered that ChatGPT (GPT-4o) was able to quickly and accurately identify rhetorical moves. However, regarding the chunks of text segmented by GPT-4o, the sentence endpoints were coded differently by GPT-4o and human coders. This discrepancy can be observed in several moves, such as M2, M3, M4, M5, M6, and M7.

While the analysis includes 50 narrative short stories with a language assessment theme, Table 3 presents an example of GPT-4o's identification of moves within a story titled “Assessment in My Little Heaven, Primary One” written by Jayakaran Mukundan. The story recounts his childhood experiences as the eighth child in a large family, along with his struggles with dyslexia and health issues. Despite these challenges, his Standard One teacher, Ms. Ong Siok

Lay, who lacked formal university training but employed a caring teaching approach, helped him overcome these difficulties. Ms. Ong used songs, dramatization, and positive reinforcement to create an inclusive and encouraging classroom environment. Jayakaran’s traditional writing difficulties were mitigated by his strong artistic abilities; he was even praised for his creative drawings, despite often inverting letters. Ms. Ong’s patient and supportive approach made Jayakaran feel valued and capable. Unfortunately, her departure at the end of the year marked the end of this nurturing period, as subsequent teachers did not offer the same level of understanding or support. The story underscores the profound impact of compassionate teaching and highlights the importance of recognizing and nurturing each child’s unique abilities, demonstrating how tailored educational strategies can significantly enhance a student’s learning journey and self-esteem.

**Table 3: Example of GPT-4o’s Move Identification in Narrative Short Stories with Emphasis on Language Assessment Themes**

<b>Move No.</b>	<b>Functions</b>	<b>Start &amp; End Points</b>	<b>Descriptions</b>
<b>1</b>	<b>Setting the scene</b>	“As a child, the eighth in a family of eleven...” <b>to</b> “...poorly developed lungs. I was also asthmatic.”	Introducing the protagonist, their family background, and early health issues.
<b>2</b>	<b>Laying out the event</b>	“I was an all-day thumb-sucker...” <b>to</b> “...kept quiet and just replaced the wet bed sheets.”	Describing the protagonist’s behaviour and struggles with anxiety and bed-wetting, setting the stage for his challenges.
<b>3</b>	<b>Giving the current situation</b>	“I was born a true-blue dyslexic...” <b>to</b> “...death (+) and all attention to the board and the teacher was lost as my imagination strayed from the class.”	Transitioning to the protagonist’s difficulties at school, highlighting his dyslexia and attention span issues.
<b>4</b>	<b>Complicating the story</b>	“Dyslexics starting school discover a lot about themselves...” <b>to</b> “...completely the reverse when you wrote it. My letters seemed shy (just like my personality) and some simply looked the other way.”	Elaborating on the protagonist’s struggles with learning, particularly in arithmetic class, and the impact of his dyslexia.
<b>5</b>	<b>Evaluating the status quo</b>	“My Standard One teacher, Ms. Ong Siok Lay...” <b>to</b> “...the combined voices of the majority seemed to have drowned the errors and solved the problems of those who did not sing the entire song.”	Discussing the protagonist’s early school experiences and the realization of his differences compared to other students, leading to feelings of hopelessness.
<b>6</b>	<b>Dealing with the</b>	“Ms. Ong’s assessment at the end	Introducing Ms. Ong, the

	<b>complication</b>	of the song...” to “...intuitively knew how learners develop language.”	protagonist’s teacher, and her methods of teaching and assessment that help the protagonist cope with his difficulties.
<b>4</b>	<b>Complicating the story</b>	“While the early morning English lessons...” to “...at the top and bottom of the page.”	Describing the challenges faced by the protagonist during writing lessons and his initial struggle with writing the letter B.
<b>6</b>	<b>Dealing with the complication</b>	“Ms. Ong then showed how the letter B was written on the blackboard...” to “...together drew the line and the two half circles to look like the B on the board.”	Illustrating Ms. Ong’s supportive approach in helping the protagonist learn to write the letter B correctly.
<b>4</b>	<b>Complicating the story</b>	“Ms. Ong then went around to look at the other students’ work...” to “...outer space in total darkness.”	Highlighting the protagonist’s continued struggle with writing the letter B and the resulting frustration.
<b>6</b>	<b>Dealing with the complication</b>	“Meanwhile Ms. Ong returned to my desk and I sheepishly looked at her...” to “...What a way to assess a dyslexic. There were two parts meant for assessment; the letters were not up to expectations but the patterns made up for it. I passed!”	Showing Ms. Ong’s positive reinforcement and her way of assessing the protagonist’s work by focusing on his strengths.
<b>7</b>	<b>Foregrounding the main idea</b>	“They say nothing good lasts forever...” to “...taught by teachers whom I felt had somehow escaped from Hell.”	Emphasizing the positive impact of Ms. Ong’s teaching methods on the protagonist’s learning experience and self-esteem.
<b>8</b>	<b>Ending the story</b>	“And from Primary Two onwards I was taught by teachers whom I felt had somehow escaped from Hell.”	Concluding with the departure of Ms. Ong and the protagonist’s return to facing less supportive teachers, indicating a return to his previous challenges.

From the analysis in Table 3, it is evident that all eight moves were detected by GPT-4o. The sequence of moves was identified as M1-M2-M3-M4-M5-M6-M4-M6-M4-M6-M7-M8. GPT-4o accurately labelled the move functions corresponding to their respective move numbers. Notably, M4 (Complicating the story) and M6 (Dealing with the complication) occurred three times each, reflecting their cyclical repetition within the narrative. In contrast, the other moves each appeared only once.



However, when comparing GPT-4o's coding results with those of human coders, discrepancies were found in the endpoint for M7 (Foregrounding the main idea) and the starting point for M8 (Ending the story). The last paragraph of the story reads:

“They say nothing good lasts forever. This was terribly true in my case. Ms. Ong got married and moved out of my school. And from Primary Two onwards I was taught by teachers whom I felt had somehow escaped from Hell.”

GPT-4o identified M7 from the beginning until the end of this paragraph and labelled M8 for the last sentence, overlapping with part of M7. However, human coders classified “They say nothing good lasts forever. This was terribly true in my case.” as M7, as it philosophically encapsulates and elevates the main idea. They classified “Ms. Ong got married and moved out of my school. And from Primary Two onwards I was taught by teachers whom I felt had somehow escaped from Hell.” as M8, because it comments on the story and returns to the author's experience from Primary Two onwards with a sense of pessimism. The use of critical language in this final section achieved a contrast effect.

These differences likely stem from several underlying reasons. First, linguistic complexity and ambiguity play a significant role. In moves like “Foregrounding the main idea” (M7) and “Ending the story” (M8), the overlap in segmentation suggests that GPT-4o may struggle to distinguish nuanced transitions in the narrative flow. Human coders rely on deeper contextual understanding, such as recognizing when a philosophical statement concludes a central theme, while GPT-4o may depend too heavily on surface-level patterns like sentence structure or keywords, leading to misaligned coding. Another factor is the lack of cultural or emotional depth. As an AI, GPT-4o processes language through algorithms and datasets, excelling at identifying structural patterns but often missing subtle emotional or cultural cues that human coders use to define narrative endpoints. For instance, the transition between the emotional farewell to Ms. Ong and the protagonist's return to a more challenging environment requires an understanding of the shift in tone, which GPT-4o might not fully grasp. Additionally, there is overlap in thematic content, especially in personal and emotional stories, where certain narrative moves serve multiple functions. In this case, the sentences in M7 that reflect Ms. Ong's departure and the change in the protagonist's circumstances could logically be seen as both the conclusion of M7 and the beginning of M8. Human coders, with their experience and interpretive judgment, are better suited to navigating such overlaps, whereas GPT-4o might struggle to determine where one function ends and another begins. Finally, the cyclical nature of certain moves presents challenges. The repetition of Moves 4 (Complicating the story) and 6 (Dealing with the complication) shows how stories loop through similar thematic stages. This cyclical structure could confuse GPT-4o's more linear approach to move segmentation, whereas human coders are better equipped to recognize and mark the recurrence of moves and their significance in the narrative.

Even though there are slight differences between GPT-4o and human coders in the determination of the start and end points for the moves, this does not affect the range, frequency, and sequence of the moves. This suggested that GPT-4o could identify moves in narrative short stories and that it followed a structured process. It began with Phase 1: Text Extraction and Cleaning, where the narrative text was extracted and cleaned to focus solely on the story's content. In Phase 2: Text Understanding and Analysis, GPT-4o thoroughly read the cleaned text to grasp the narrative's characters, plot, and key events. Phase 3: Move Identification and Tagging involved classifying text chunks according to the eight moves and determining their start and endpoints. During Phase 4: Annotation and Description, GPT-4o annotated these moves, underlined parts that illustrated each move's function, and provided brief descriptions. Phase 5: Recurring Move Analysis involves examining the narrative for

recurring moves and their effects on the story's cyclical progression. The information was then organized into a table in Phase 6: Table Creation and Summary, detailing Move No., Functions, Start & End Points, and Descriptions. Finally, Phase 7: Review and Adjustment ensured that the table and annotations were accurate and aligned with Jiang et al.'s (2024) model, providing a comprehensive analysis of the narrative.

### The Essentiality and Frequency of Moves in Narrative Short Stories

**Table 4: Essentiality of Moves in 50 Narrative Short Stories from *Tests & Us* (Volumes 2 & 3)**

Narrative Short Stories (N=50)	Moves	No. of Stories	Inclusion Rates	Essentiality
	Move 1	50	100%	Obligatory
	Move 2	50	100%	Obligatory
	Move 3	50	100%	Obligatory
	Move 4	50	100%	Obligatory
	Move 5	50	100%	Obligatory
	Move 6	50	100%	Obligatory
	Move 7	49	98%	Conventional
	Move 8	45	90%	Conventional

Based on the results in Table 4, a 100% inclusion rate of Move 1 to 6 makes these moves all obligatory in the 50 narrative short stories from *Tests & Us* (Volumes 2 & 3). A total of 98% and 90% inclusion rate for Moves 7 and 8 were shown respectively, making them conventional moves. There were no optional moves found in this study. The results indicated that for the 1st stage (Orientation) and 2nd stage (Incident), the moves are consistently present, highlighting their fundamental role in structuring the narrative. For the 3rd stage (Conclusion), the high inclusion rates of Moves 7 and 8 demonstrate their significant, though not essential, role in enhancing the narrative. This stage consolidates the narrative's main idea and provides closure, which is crucial for reader satisfaction and the overall coherence of the story.

Imagine a narrative short story as a meticulously crafted house. For the obligatory moves, Setting the scene (Move 1) is akin to laying the foundation of the house, providing the essential groundwork without which the entire structure would be unstable. This foundational move is supported by Martin & Rose (2008), who emphasize the necessity of establishing context to ground the reader. Laying out the event (Move 2) acts like the walls that define the space within the house, organizing the sequence of occurrences. According to Swales (1990), the logical progression of events is crucial for maintaining coherence in academic writing, which parallels narrative storytelling. Given that the current situation (Move 3) is comparable to erecting a roof, creating a temporary shelter before the storm of complications hits. This move prepares readers for the upcoming conflict, akin to how a roof protects the interior from external elements. Complicating the story (Move 4) is like introducing architectural elements that challenge the structure, such as intricate staircases or unconventional designs. These elements disrupt the normalcy and create intrigue. Bruner (1991) highlights the importance of conflict and disruption in narrative construction, which aligns with this move. Evaluating the status quo (Move 5) can be seen as the interior load-bearing walls that sustain the tension and weight of the structure. Martin & Rose (2008) note that evaluation increases narrative tension, essential for engaging the reader. Dealing with the complication (Move 6) is like the structural reinforcements that resolve any weaknesses, ensuring the house stands firm. This move

provides the necessary resolution, analogous to resolving structural issues in a building.

For the conventional moves, Foregrounding the main idea (Move 7) is like the interior design that highlights the house's theme, bringing cohesion and aesthetic appeal. This move reinterprets the story's central theme, making it more impactful. Previous studies, such as Labov (1972), emphasize the importance of a coda or resolution that reiterates the narrative's core message. However, in the data analysed by the researcher, sometimes authors intentionally do not explicitly state the theme, leaving space for readers to guess, ponder, and reflect. For example, in the third story, "Two Hours", written by Vahid Nimechisalem, the author does not use Move 7 in the Conclusion stage to directly highlight the theme, which is the value of time. Instead, the author advances the plot by describing how the protagonist, Elissa, does not need to continue answering the unfinished questions in her first formal English exam. When she leaves the exam room and returns home, she learns from her parents the meaning of the "two hours" noted at the top of the exam paper. This approach of resolving the suspense without directly revealing the theme is intended to leave space for readers to think deeply about the theme, thereby achieving the effect of conveying boundless meaning through limited words. This subtlety allows the story's deeper significance to emerge from the narrative, encouraging readers to engage in reflection and interpretation.

Ending the story (Move 8) is akin to the final touches and furnishings that make the house feel complete and lived-in. This move provides closure, comparable to how finishing touches make a house feel like a home. Research by Thornbury & Slade (2006) indicates that effective narrative endings provide a sense of closure and satisfaction, enhancing the overall storytelling experience. As observed by the researcher, some authors also intentionally omit Move 8. For example, in Rong Lu's short story "I'd Rather Be a Student", the teacher recounts a difficult experience with a student named Dick. Despite the teacher's efforts to establish clear rules and grading criteria, Dick shows disinterest, misses classes, and fails to give his oral presentations. As the semester progresses, Dick avoids penalties for absences and manages to sit for the final exam, despite his poor performance. The story reaches a turning point when Mr. Black, the department head and Dick's relative, pressures the teacher to pass Dick despite his inadequate performance. Torn between professional integrity and career concerns, the teacher reluctantly adjusts Dick's exam answers to ensure he passes. The story ends with the teacher feeling ashamed and disheartened, reflecting on the gap between her personal values and her role's demands. The omission of Move 8, typically a clear statement or return to the present, serves several key purposes. Firstly, it amplifies the emotional impact by leaving the narrative open-ended, preserving the teacher's internal conflict and disillusionment. This lack of resolution underscores the moral ambiguity and unresolved tension, encouraging readers to engage deeply with the teacher's ethical and personal dilemmas. The absence of this move highlights the teacher's internal struggle rather than offering a neat conclusion or moral lesson. This narrative choice emphasizes her feelings of shame and frustration with the educational system, focusing on her emotional experience rather than resolving the external conflict. It aligns with the story's theme of systemic unfairness. The omission also invites readers to reflect on the broader implications of the story. Without a clear closure, the narrative prompts readers to consider their perspectives on fairness, integrity, and the challenges within the educational system, highlighting the real-life consequences of systemic issues. Finally, not including Move 8 maintains the story's ambiguity and complexity. The open-ended nature of the ending leaves a lasting impression of the protagonist's unresolved conflict, enhancing the emotional resonance of the narrative and reflecting the ongoing and unresolved nature of real-life educational issues.

**Table 5: Occurrence Frequency of Moves in 50 Narrative Short Stories from *Tests & Us* (Volumes 2 & 3)**

Narrative Short Stories (N=50)	Moves	Occurrences of Moves	Percentage of Frequency
	Move 1	50	10.5%
	Move 2	50	10.5%
	Move 3	50	10.5%
	Move 4	80	16.7%
	Move 5	79	16.5%
	Move 6	75	15.7%
	Move 7	49	10.3%
	Move 8	45	9.4%
	<b>Overall</b>	<b>478</b>	<b>100%</b>

Table 5 shows the total instances or the total number of moves used in the 50 narrative short stories from *Tests & Us (Volumes 2 & 3)*. The total number of moves across these stories is 478, and each move contributes differently in terms of frequency.

From the data, Move 4, “Complicating the story”, is the most frequent, occurring 80 times and accounting for 16.7% of all moves. This high frequency suggests that complications, crises, or climactic moments are central to narrative storytelling, aligning with the idea that tension or conflict is essential to keep readers engaged (Labov & Waletzky, 1967). The close follow-up by Move 5, “Evaluating the status quo” (79 occurrences, 16.5%), further emphasizes that narratives often involve reflecting on or assessing the complication, which adds depth to the story and conveys character emotions or moral lessons (Bamberg, 2012). As a natural progression, Move 6, “Dealing with the complication,” follows this assessment and focuses on how characters actively respond to the crises they face. This move, occurring 75 times (15.7%), illustrates the resolution or attempt to manage the complications, showing that resolving or addressing crises is a critical step in narrative development.

For example, in the short story *I’m a Cat* by Diyah Indiyati, the author portrays the deep bond between a cat and its master, who struggles to achieve a higher IELTS score, ultimately finding comfort in the cat’s unwavering emotional support. Two sets of Move 4, Move 5 and Move 6 are used, meaning these three moves appear cyclically.

In the first set, Moves 4, 5, and 6 play critical roles in developing the master’s journey from frustration to renewed hope.

Move 4: Complicating the story

In this move, the master’s frustration with his tutor comes to the forefront: “*On a dreadfully hot afternoon, he grabbed me and put me on his lap, saying that his tutor was always demeaning his speaking effort.*” This complication reveals the emotional burden he carries due to an unsupportive learning environment, where the tutor’s harsh criticism discourages him rather than helping him improve. The master’s decision to find a new tutor reflects his determination to address this challenge, setting the stage for further development in the story.

Move 5: Evaluating the status quo

The evaluation of the situation occurs after the master finds a new, supportive tutor who offers constructive feedback: “*Don’t worry, Andi, just learn one step at a time. Try to use more words in one sentence.*” This move highlights the turning point in the master’s journey, where the new tutor provides clear guidance on how to improve his speaking skills. The contrast with the

previous tutor's demeaning approach shows the positive impact of an encouraging teacher, as the master begins to build confidence and see progress in his preparation for the IELTS exam.

#### Move 6: Dealing with the complication

In this move, the master actively addresses his challenge by embracing the new tutor's guidance and regaining his confidence: *"This time seemed different; his confidence grew bigger with this new tutor. I'll have my speaking test today, Fluffy, and I'm very confident more than ever. I'm all set."* The master's renewed optimism demonstrates his resilience and ability to overcome setbacks. He prepares for the speaking test with a sense of readiness, showing that he has successfully dealt with the previous complication by finding a better learning environment.

In the second set, we see another cycle of challenge, reflection, and response, this time focusing on the emotional impact of the master's test results and the cat's role in comforting him.

#### Move 4: Complicating the story

The complication arises when the master eagerly awaits the results of his IELTS test: *"The result came two weeks after the test, as I saw a postman put it inside the letterbox outside the house. My master sprinted eagerly to pick up that document, ripped its seal, and opened the one-page document."* This marks a significant moment of hope and anticipation, but the complication is introduced when the master's expectations are dashed by the disappointing test results. The high hopes he had for success are shattered, setting the stage for the emotional challenge he must now face.

#### Move 5: Evaluating the status quo

The evaluation occurs as the master reacts to his disappointing score of 5.5: *"Suddenly, his body slipped onto the couch and his eyes looked away. The paper sagged down to the floor."* This evaluation highlights the emotional weight of the setback, as the master's body language reflects his deep sense of failure and frustration. Despite all his hard work and newfound confidence, the score signifies that his efforts have fallen short, leading to emotional deflation and introspection.

#### Move 6: Dealing with the complication

Dealing with the complication is shown when the cat responds to the master's distress: *"I walk, approaching him, to the couch and jump onto his lap. I give him the best language I have learned so far: a gentle purr and a soft head butting."* The cat's actions provide emotional comfort, offering a non-verbal way of addressing the master's sadness. Though the problem (the test score) remains unsolved, the cat helps the master cope with his emotions, showing the strength of their bond. This move reflects the narrative's focus on emotional support rather than a direct resolution of the external issue, emphasizing that sometimes comfort and companionship are the best ways to handle disappointment.

In this set of moves, the master's emotional arc is explored deeply, showing how complications and emotional challenges can be met with compassion and non-verbal communication, reinforcing the theme of resilience in the face of setbacks.

In addition to Moves 4, 5, and 6, Moves 1, 2, and 3 each appear 50 times (10.5%), indicating the importance of establishing the setting and context early in the stories, a common technique to immerse readers in the narrative world. Finally, Move 7, "Foregrounding the main idea" (49 occurrences, 10.3%), and Move 8, "Ending the story" (45 occurrences, 9.4%), are the least frequent, suggesting that while conclusions and reflections are important, they take up less narrative space than the development and resolution of the plot. This might reflect a tendency

in storytelling to prioritize the progression of action and conflict over the denouement (Bruner, 1990).

## Conclusion

This study aimed to explore the capabilities of GPT-4o in conducting rhetorical move analysis on narrative short stories based on the theme of language assessment. By adopting Jiang et al.'s (2024) eight-move model, the results indicate that GPT-4o's move identification aligned closely with human coders, despite small differences in the segmentation of certain moves. The discrepancies in move segmentation are likely due to GPT-4o's reliance on surface-level patterns, whereas human coders employ deeper contextual understanding, such as emotional or cultural cues, to determine move boundaries. Regarding essentiality, the obligatory moves (Move 1-Move 6) were consistently identified in all stories, while the conventional moves (Move 7 and Move 8) were identified with slightly lower rates. Concerning occurrence, the overall moves totalled 478. Move 4 (Complicating the story) was the most frequent, occurring 80 times (16.7%), followed by Move 5 (Evaluating the status quo) with 79 occurrences (16.5%), and Move 6 (Dealing with the complication) appearing 75 times (15.7%). Move 1 (Setting the scene), Move 2 (Laying out the event), and Move 3 (Giving the current situation) each occurred 50 times (10.5%). Move 7 (Foregrounding the main idea) appeared 49 times (10.3%), and Move 8 (Ending the story) was the least frequent, with 45 occurrences (9.4%). This study demonstrated that GPT-4o is capable of effectively identifying rhetorical moves in narrative short stories. It highlighted the model's ability to analyse narrative structure using an established rhetorical move framework and provided insights into how AI can support textual analysis in creative writing. The findings suggest that AI tools like GPT-4o could be integrated into educational settings to assist with narrative analysis, helping students and educators to better understand story structure and rhetorical strategies.

A limitation of this study is the size of the corpus, as it included only 50 narrative short stories. A larger and more diverse corpus may provide a broader range of rhetorical structures, offering more insights into the model's accuracy and flexibility across different narrative types. Additionally, GPT-4o struggled with subtle transitions between moves, especially when cultural or emotional depth influenced the narrative flow. Further research is recommended to examine GPT-4o's performance across different narrative genres and to refine its capabilities for detecting rhetorical intricacies.

## References

- Bamberg, M. (2012). *Narrative Development: Six Approaches*. Routledge.
- Biber, D. (2007). *Discourse on the Move: Using Corpus Analysis to Describe Discourse Structure* (Vol. 28). John Benjamins Publishing.
- Bruner, J. (1990). *Acts of Meaning*. Harvard University Press. *Cambridge, MA*.
- Deane, P., Somasundaran, S., Lawless, R. R., Persky, H., & Appel, C. (2019). The key practice, building and sharing stories and social understandings: The intrinsic value of narrative. *ETS Research Report Series*, 2019(1), 1-78. <https://doi.org/10.1002/ets2.12266>
- Geng, H., & Nimehchisalem, V. (2023). Can ChatGPT Analyse Textual Data? The Sub-Themes Reflected by Typical Conceptual Metaphors in Short Stories of Language Assessment. *ASEAN Journal of Applied Linguistics*, 2, 16-31.

<https://ejournal.maal.org.my/asjal/article/view/9>

- Geng, H., Lee, G. I., Jalaluddin, I., & Tan, H. (2023). Occurrence Frequency of Rhetorical Moves in Introductions of Linguistics Research Articles From Non-Scopus and Scopus Journals. *Journal of Language Teaching and Research*, 14(5), 1279-1289. <https://doi.org/10.17507/jltr.1405.16>
- Geng, H., Lee, G. I., Jalaluddin, I., & Tan, H. (2023). Rhetorical Moves of Introduction Sections in English Linguistics Research Articles From Two Non-Scopus and Two Scopus Journals. *Theory and Practice in Language Studies*, 13(8), 2087-2096. <https://doi.org/10.17507/tpls.1308.25>
- Geng, H., Nimehchisalem, V., Zargar, M., & Mukundan, J. (2024). A Comparison of Rhetorical Move Analysis by GPT-4 and Humans in Abstracts of Scopus-Indexed Tourism Research Articles. *International Linguistics Research*, 7(2), 1-12. <https://doi.org/10.30560/ilr.v7n2p1>
- Islam, R., & Moushi, O. M. (2024). GPT-4o: The cutting-edge advancement in multimodal LLM. *TechRxiv*. <https://doi.org/10.36227/techrxiv.171986596.65533294/v1>
- Jiang, Y., Lu, X., Liu, F., Zhang, J., & Jin, T. (2024). What Should Go With This Word Here: Connecting Lexical Collocations and Rhetorical Moves in Narrative Stories. *Applied Linguistics*, amae001. <https://doi.org/10.1093/applin/amae001>
- Kang, J. Y. (2005). Written Narratives as an Index of L2 Competence in Korean EFL Learners. *Journal of second language writing*, 14(4), 259-279. <https://doi.org/10.1016/j.jslw.2005.09.001>
- Knight, S., Abel, S., Shibani, A., Goh, Y. K., Conijn, R., Gibson, A., ... & Shum, S. B. (2020). Are You Being Rhetorical? A Description of Rhetorical Move Annotation Tools and Open Corpus of Sample Machine-Annotated Rhetorical Moves. *Journal of Learning Analytics*, 7(3), 138-154. <https://doi.org/10.18608/jla.2020.73.10>
- Labov, W. (1972) *Language in the Inner City*. University of Pennsylvania Press.
- Labov, W. and Waletzky, J. (1967). *Narrative Analysis: Oral Versions of Personal Experience*. In J. Helm (Ed.), *Essays on the Verbal and Visual Arts*. Seattle: University of Washington Press.
- Lian, L. (2024). Comparative study of GPT-4.0, ERNIE Bot 4.0, and GPT-4o in the 2023 Chinese medical licensing examination. *Research Square*. <https://doi.org/10.21203/rs.3.rs-4639770/v1>
- Lu, X., Casal, J. E., Liu, Y., Kisselev, O., & Yoon, J. (2021). The Relationship Between Syntactic Complexity and Rhetorical Move-Steps in Research Article Introductions: Variation among Four Social Science and Engineering Disciplines. *Journal of English for Academic Purposes*, 54, 1-13. <https://doi.org/10.1016/j.jeap.2021.101006>.
- Martin, J. R. and D. Rose. 2008. *Genre Relations: Mapping Culture*. Equinox.
- Nimehchisalem, V., & Geng, H. (Eds.). (2023). *Tests & Us - A Collection of Real Stories* (Vol. 2). Generis Publishing.
- Nimehchisalem, V., & Geng, H. (Eds.). (2024). *Tests & Us - A Collection of Real Stories* (Vol. 3). Generis Publishing.
- OpenAI. (2024, May 13). *Hello GPT-4o*. <https://openai.com/index/hello-gpt-4o/>
- Rasmeenin, C. (2006). *A Structural Move Analysis of MA Thesis Discussion Sections in*

*Applied Linguistics*. Mahidol University.

- Savelka, J., Ashley, K. D., Gray, M. A., Westermann, H., & Xu, H. (2023). Can Gpt-4 Support Analysis of Textual Data in Tasks Requiring Highly Specialized Domain Expertise?. *arXiv preprint arXiv:2306.13906*.
- Siiman, L. A., Rannastu-Avalos, M., Pöysä-Tarhonen, J., Häkkinen, P., & Pedaste, M. (2023, August). Opportunities and Challenges for AI-Assisted Qualitative Data Analysis: An Example from Collaborative Problem-Solving Discourse Data. In *International Conference on Innovative Technologies and Learning* (pp. 87-96). Cham: Springer Nature Switzerland.
- Swales, J. M. (1990). *Genre analysis*. Cambridge university press.
- Swales, J. M. (2004). *Research Genres: Explorations and Applications*. Cambridge University Press.
- Thornbury, S. & Slade, D. (2006). *Conversation: From Description to Pedagogy*. Cambridge University Press.
- Yoon, J. (2021). *Stories in play: Narrative formation in sports and esports* (Master's thesis, University of Waterloo). UWspace. <https://uwspace.uwaterloo.ca/items/3e1f076b-086f-49b8-b6e3-1972750b2f14>
- Zhang, B., & Wannaruk, A. (2016). Rhetorical Structure of Education Research Article Methods Sections. *PASAA*, 51(1), 155-184. <https://doi.org/10.58837/CHULA.PASAA.51.1.6>