

BEYOND ROMANCE:
CORPUS-ASSISTED EVIDENCE ON THEMATIC
STRUCTURE IN THE PANJI STORY CORPUS

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The Panji story corpus, a classical Javanese literary work from the Majapahit period (13th–15th centuries), is renowned throughout the archipelago and in several Southeast Asian countries. Panji story serves as the foundation for numerous performing arts productions, paintings, folktales, temple reliefs, and modern literature. This corpus has garnered significant scholarly attention, with the primary conclusion categorising Panji narratives as love stories. This study re-examines the thematic structure of Panji narratives through a corpus-based approach, challenging the long-standing characterisation of the tradition as primarily romance-oriented. Using a corpus of six Panji story texts, this study integrates frequency-based lexical investigation with Key Word in Context (KWIC) analysis using AntConc to identify recurring patterns and dominant thematic elements. Four semantic domains – love, war, death, and wandering – are operationalised through sets of related lexical items, rather than single keywords. The findings indicate that war-related lexicon is the most dominant, followed by death. Love and wandering appear less frequently. More importantly, these domains exhibit different levels of semantic coherence and narrative function. War has high contextual stability and strong thematic centrality, while death operates with a dual semantic structure combining literal and figurative meanings. On the other hand, love shows significant semantic dispersion, indicating that its frequency does not directly correspond to thematic dominance. Wandering demonstrates functional coherence as a mechanism of narrative development. These results suggest that understanding the story's central theme requires examining the interaction between frequency, contextual use, and semantic coherence. By bridging traditional philology and modern computational methods, this study highlights the potential of digital humanities in redefining our approach to literary studies.

Key words: Panji stories; thematic analysis; computational analysis, Javanese manuscript

Introduction

The Panji narratives constitute a fundamental component of classical Javanese literature, originating during the Majapahit period (13th–15th centuries) and extending their influence across Southeast Asia, including Thailand, Cambodia, Myanmar and Malaysia (Fang, 2013; Kieven, 2013a; Robson, 1996). The texts, replete with elements of love and heroism, have been preserved through manuscripts, temple reliefs, and oral traditions, underscoring their cultural significance (Andalas et al., 2024; Kieven, 2013b; Ras, 1968; Saputra, 2014). These narratives provide valuable insights into Javanese worldviews, identity, and socio-cultural values. However, despite their prominence, systematic computational studies of Panji texts remain limited, restricting broader analytical perspectives beyond traditional philological and literary methods of analysis.

Previous research on Panji texts has primarily focused on textual criticism, intertextuality, and the transmission of these narratives across Southeast Asia (Creese, 2004; Robson, 1996). Poerbatjaraka (1968) analysed the linguistic and stylistic elements of Panji manuscripts, elucidating their structural and thematic coherence. More recent scholarship has examined the socio-political and cultural functions of these texts, highlighting their role in shaping Javanese and regional identities (Ras, 1968; Wiratama, 2019). Despite these valuable contributions, few

studies have attempted to systematically quantify the thematic structures and semantic relationships within Panji story. Recent analyses, while rich in qualitative insights, often struggle to capture large-scale textual trends, particularly in extensive manuscript traditions, where textual variations abound. Computational approaches facilitate the detection of latent themes and semantic dominance and have the potential to complement and enhance existing scholarship by providing broader and more objective analysis.

The development of digital technology in the last two decades has produced significant results in the study of texts (Andalas et al., 2026). A wide range of computational techniques, using a Natural Language Processing (NLP) approach, enables the examination of the text corpus on a scale and level of precision that traditional methods find difficult to achieve (Hatzel et al., 2023). Several researchers have used this method to research classical texts. For example, NLP is used to analyse the structure, themes, and linguistic features of ancient poems, to provide cultural and historical insights (Liu, 2024; Olga, 2023), combining NLP with Optical Character Recognition (OCR) techniques to reconstruct and interpret ancient manuscripts (Raghuraman et al., 2025) because of document deterioration and linguistic differences. Recent progress in Artificial Intelligence (AI, and the application of NLP makes it possible to extract geographic entities from classical texts and turn them into 3D visualizations to aid spatial narrative understanding (Ma et al., 2024) which consumes a lot of time and manpower. This study proposes a systematic method that combines natural language processing (NLP. In Southeast Asia, this approach has been utilised for Part-of-Speech (POS) Tagging Brunei Malay with Conditional Random Fields (CRF) and Bi-directional Long Short-Term Memory (BLSTM) models to produce an F-measure accuracy of more than 90% (Mohaimin et al., 2023), Latent Semantic Analysis (LSA) and N-gram similarity in Balinese texts (Julyantari et al., 2025), and the application of NER to traditional medicine texts (Zhao et al., 2020) this paper attempts to apply NLP in the field of text mining of traditional Chinese medicine (TCM).

NLP methods, such as word segmentation, POS tagging, and classic techniques such as LSA and N-gram similarity have been applied to Southeast Asian languages with varying degrees of success. Whereas digital humanities research has successfully applied NLP techniques to analyse European and modern literary works, the lack of similar studies on classical Javanese texts constitutes a critical gap (Underwood, 2019). This study aims to address this gap by applying computational methods to Panji stories, providing novel insights into their thematic compositions and semantic structures.

This study endeavours to provide a comprehensive description of the content in six Panji stories published by the Ministry of Education and Culture of Indonesia, with two objectives: to identify recurring lexical patterns and to explore predominant thematic elements. The research does not aim to redefine the Panji

genre, but to reassess thematic dominance through corpus-based evidence. By combining quantitative corpus-based analysis and qualitative thematic analysis, this study aims to gain a deeper understanding of the narrative construction of Panji stories, elucidating whether they are predominantly narratives of love, war, death (tragic), or wandering. The utilisation of corpus techniques ensures the objectivity of the findings, mitigating potential human bias in identifying themes in Panji story narratives. By bridging the gap between traditional philology and modern computational methods, this study highlights the potential of digital humanities in redefining our approach to historical and literary studies.

Literature Review

In accordance with the discursive focus of this study, this section presents a summary of the literature on Panji story research and corpus-based approaches to literary analysis.

Qualitative Interpretation of Panji Stories

Panji stories are classic Javanese literary works recognised not only in Java but throughout the archipelago and in several Southeast Asian countries (Fang, 2013; Kieven, 2013a; Poerbatjaraka, 1968; Zoetmulder, 1994). It is posited that the narrative was disseminated to various regions during the Majapahit Kingdom (Munandar & Susantie, 2014; Poerbatjaraka, 1968). Its presence introduces a novel dimension to Nusantara literature, distinguishing it from the Mahabharata or Ramayana narratives which are situated in Indian kingdoms and feature Indian knights (Robson, 1971; Soedarsono, 1990; Zoetmulder, 1994). In Panji stories, the protagonist is a Javanese warrior from a Javanese kingdom.

The significance of Panji stories is paramount in the evolution of community culture, both historically and in contemporary times. This is evidenced by the numerous artistic expressions within the community that have emerged as adaptations of the Panji stories. For instance, Panji stories serve as the foundation for numerous performance art plays, paintings, folktales, temple reliefs, and modern literature (Kieven, 2013a; Manuaba et al., 2012; Rosidi, 1962; Saputra, 2014; Sas-trawinata, 1996; Setiyono, 2020). Currently, Panji stories are being transmitted and developed through digital media (Andito, 2023; Aruna et al., 2021; Irawanto & Arimbawa, 2022; Rich, 2014; Santoso et al., 2021).

Panji stories exhibit numerous variants within the society. For instance, in the form of manuscripts. Kaeh (1989) documented at least 329 Panji manuscripts. This figure does not encompass the variants of Panji stories that have been adapted into other artistic forms. Nevertheless, the Panji stories maintain a consistent

narrative structure. Generally, Panji stories centre on the romantic relationship between Inu Kertapati, a prince of the kingdom of Jenggala, and Sekartaji or Candrakirana, a princess of the kingdom of Kediri. In pursuit of their union, both protagonists encounter numerous challenges that necessitate extensive travel and the adoption of disguises to facilitate their reunion. Robson (1971) even categorised Panji stories as a genre because of the multitude of variants featuring identical character names and narrative structures.

In recent years, research on the textual issues of Panji stories has been extensive. Leiden University Library possesses the largest collection of Panji manuscripts globally, comprising 260 manuscripts in eight languages, predominantly written on palm leaves and paper (Tol, 2019). Within the framework of this narrative, previous qualitative studies have focused primarily on the analysis of the dominant theme of the Panji story and its cultural meaning. Among these studies, not a few interpret the story of Panji as a tale of romantic love that emphasises the relationship between the two protagonists along an emotional trajectory of separation and reunion (Faizah, 2007; Hikmah & Roihanah, 2017; Rassers, 1959). On the other hand, studies also highlight alternative thematic dimensions, including the political legitimacy, mythological structure, and social values of Panji story (Ras, 1968; Yudhistira et al., 2023). Comparative studies also show that Panji story has a set of variants in various regions showing differences in thematic emphasis, narrative development, and different cultural interpretations (Wieringa & Pudjiastuti, 2020).

In addition to thematic interpretations, previous research has examined specific narrative elements, including mythological motifs, gender representation, and intertextual relationships. For example, some studies have identified myths, heroic female figures, gender representation, and shifts in the construction of identity culture in Panji stories (Ajidarma, 2020; Mu'jizah & Ikram, 2022; Pramadhanti et al., 2022; Wan Mohd. Khairi et al., 2022). In addition, some studies have also shown how the story of Panji is reinterpreted in modern literature in various Southeast Asian traditions (Koster, 2020; Waro'i, 2020).

Previous research has provided a strong qualitative foundation but has not used computational methods in its study of the story of Panji. However, these studies rely on narrative interpretation rather than systematic lexical evidence. The story of Panji has been studied through various traditional philological approaches and literary comparisons. While these methods have provided important insights into textual variation, historical context, and narrative function, they are limited in scalability for handling a large corpus. In addition, the qualitative approach relies heavily on careful reading of texts that are usually done on individual texts or their limited variants, making it difficult to assess the distribution and dominance of thematic elements in a large corpus. The availability of a computational approach, especially one that uses Natural Language Processing and corpus analysis, provides an opportunity for a more systematic examination of Panji story.

In this study, three concepts are interrelated but analytically distinct: narrative, theme, and genre. Narrative refers to the structural organisation of events and plot development in a story. Themes refer to recurring semantic patterns or their conceptual domains that arise through language use. Genre refers to a broader classification based on the same narrative structure, motifs, and conventions across various texts. In previous studies, the Panji story was often classified as a romance-genre story based on its narrative structure. However, this study specifically focuses on themes as lexical-semantic patterns identified through corpus-based analysis.

The distinction between these three analytical concepts is important because this study does not analyse narrative structure directly but rather examines it through word frequency and the context of word use as the main indicators of theme. By shifting the analytical focus from narrative interpretation to lexical patterns, this study aims to offer a perspective that complements previous research on Panji story. This research can serve as a more systematic evaluation tool for the distribution of themes in the corpus of Panji stories studied.

Computational Methods for Literary Analysis

In recent years, computational literary studies have gained increasing traction, particularly regarding the analysis of large-scale textual corpora. Techniques such as topic modelling (Blei, 2012), sentiment analysis (Kim & Klinger, 2019), and semantic network analysis (Goldberg, 2017; McGillivray, 2020), linguistic trends and dominant thematic elements (Jockers, 2013; Moretti, 2013) have been widely used to uncover hidden thematic patterns and discourse structures in literature. These methods have proved effective in Western literary studies, where they have been applied to analyse narrative coherence, genres, authorial styles, and thematic evolution over time (Osawa et al., 2022; Underwood, 2019; van Cranenburgh et al., 2024). However, despite their growing prominence, the application of computational techniques to classical Southeast Asian literature, particularly Panji stories, remains largely unexplored.

Computational literary analysis (CLA) leverages computational methods, including corpus analysis, to explore and understand literary texts and themes (Hatzel et al., 2023). This approach allows researchers to analyse large amounts of text, identify patterns, and draw conclusions about thematic content that might be difficult or impossible to achieve through traditional close reading (Jockers, 2013). Corpus analysis provides a quantitative basis for identifying and studying themes within and across literary works (Omar, 2021). For example, Omar (2021) demonstrated the applicability of text-clustering approaches in literary studies; sentiment analysis can be used to track emotional tone (Rebora, 2023), analyse character emotions (Kim & Klinger, 2019), and Cao (2022) applied AntConc to

Faulkner's "The Sound and the Fury" for narrative, semantic, and syntactic analysis, emphasising the potential for thematic precision.

Computational literary analysis and the use of AntConc software in text analysis have proved to be a reliable tool in literary text analysis. However, the use of this technique in textual studies also has several drawbacks: for example, the inability to isolate specific linguistic features (Zih et al., 2020) depending on the user's membership (Chernyavskaya, 2018; M. Liu, 2023), the inability to analyse semantics in depth (Chernyavskaya, 2018), and potential bias in corpus design (Kamasa, 2015). Therefore, these limitations require a qualitative approach that complements the quantitative.

Method

This study utilises corpus analysis techniques. The data in this study are quantitative and qualitative. The quantitative aspect of this research is the utilisation of software to produce word frequency and coordination. The qualitative aspect is the examination of word collocation to reveal the use of words in their context. The corpus analysis in this study was conducted using AntConc software version 4.2.4 (Anthony, 2023). The data sources of this research are six manuscripts of Panji stories entitled 1) Hikayat Mesa Gimang, 2) Hikayat Panji Kuda Semirang, 3) Panji Dadap I, Panji Dadap II, 4) Panji Kudanarawangsa, 5) Panji Sukara, and 6) Panji Angreni (Table 1). These manuscripts are the result of the republication of Panji stories in Indonesian from ancient local-language manuscripts. All six sources were published by the Ministry of Primary and Secondary Education of the Republic of Indonesia.

The corpus in this study was compiled based on the availability of digital texts accessible in the repository of the Ministry of Primary and Secondary Education of the Republic of Indonesia. The six Panji stories selected are presented as samples rather than comprehensive representations of the Panji tradition. The selection of texts is based on the criteria of the availability of complete and digital texts, the representativeness of the main narrative variants in the Panji version of the story, and the linguistic consistency that enables computational processing. The texts selected are variants of well-known canonical stories, such as Panji Angreni, Panji Kuda Semirang, and variant narratives, such as Panji Dadap I & II, thus providing an initial overview of the genre. Therefore, the findings of this study are limited to the selected corpus and cannot be generalised to the entire tradition of Panji's manuscripts.

The six manuscripts were merged into corpus. The corpus consisted of six Panji story titles and 190,609 tokens. Some of the original texts, written in Javanese, have been translated into Indonesian by the Ministry of Primary and Secondary

Table 1. Data source of Panji story corpus

No	Title	Year	Link
1	Hikayat Panji Kuda Semirang	1996	https://repositori.kemendikdasmen.go.id/1893/
2	Hikayat Mesa Gimang	1997	https://repositori.kemendikdasmen.go.id/1886/
3	Panji Dadap I	1980	https://repositori.kemendikdasmen.go.id/26687/
4	Panji Dadap II	1980	https://repositori.kemendikdasmen.go.id/24102/
5	Panji Kuda Narawangsa	1983	https://repositori.kemendikdasmen.go.id/26689/
6	Panji Sukara	1996	https://repositori.kemendikdasmen.go.id/1649/

Education of the Republic of Indonesia. All texts covered in this research corpus are in Indonesian. Therefore, the analysis performed reflects the lexical patterns in the translated text, not those of the original language. This can affect the stylistic and semantic nuances inherent in the source text.

The methodological procedure used in this study was twofold. Firstly, Ant-Conc was used for frequency-based lexical analysis to identify words related to four thematic elements discussed in Panji study, namely love, warfare, death, and wandering. This was done because the main purpose of this research was to understand the content of the Panji story text, so words relating to love, warfare, wandering, and death are the main highlights. These categories are operationalised through a series of related lexical items, rather than a single keyword. In addition, a word-usage plot analysis was conducted to determine the dominance and distribution of word usage in the six titles of Panji stories. Secondly, concordance analyses of words were then conducted to determine the use of the word in context. To reduce selection bias, the analysis is not limited to the frequently occurring words. This study used a random sampling of words in each domain (love, warfare, death, and wandering). Random sampling was performed at the level of lexical items within each semantic domain across all texts. This is done to ensure a more representative sampling of lexical uses in the corpus.

The KWIC analysis was conducted with a window of 10 contextual range. This allows the identification of lexical items to be used in literal, metaphorical, or contextually expanded meanings. Instead of relying solely on frequency calculations, this study's thematic interpretation is based on a combination of frequency patterns and contextual validation through KWIC.

This study prefers the corpus-assisted KWIC approach to other modelling techniques, such as Latent Dirichlet Allocation (LDA), for the following reasons. Firstly, the main objective of this study is to examine how thematic meaning arises

through the use of lexical items in the context of sentences, rather than to deduce the distribution of abstract topics. Secondly, the story text in the corpus is an Indonesian translation from the Javanese, which can affect the stability of topic modelling results. Thirdly, the size of the corpus used and the focus of this research are intended to make the KWIC-based concordance analysis more suitable for ensuring semantic accuracy. Based on this, KWIC is used as a complementary method for frequency analysis to validate thematic interpretations at the contextual level.

Result and Discussion

Result

This research aims 1) to identify recurring lexical patterns in the Panji story corpus, and 2) to explore predominant thematic elements within the storytelling medium. This investigation examines the use of words as a medium for narrative expression. This study focuses on four keywords that consistently appear in qualitative research to analyse the occurrence of words in the corpus text of Panji stories: love, war, death (tragic), and wandering.

Lexical Patterns of Panji Stories Corpus

An analysis of six Panji story documents, comprising a total of 190,609 tokens, yielded the following results.

Table 2 demonstrates that the occurrence of words associated with warfare is the most prevalent in the six analysed Panji story texts (n=554), followed by death (n=351), love (n=233), and wandering (n=158). These data indicate that Panji stories emphasise warfare scenes. This observation is corroborated by numerous instances of diction pertaining to death caused by war. To ascertain the characteristics of each Panji story text in the corpus, an analysis of the frequency of thematic words in each text and the manner in which the plot manifests in each story title was conducted.

Figure 1 demonstrates that the thematic word “warfare” exhibits a high frequency of occurrence in the majority of story titles, with the exceptions of *Hikayat Mesa Gimang* (14.77%) and *Panji Kujanarawangsa* (26.45%). The text of *Hikayat Mesa Gimang* focuses predominantly on the theme of wandering (44.31%), whereas *Panji Kujanarawangsa* emphasises love (32.27%) and death (31.21%). Nevertheless, the frequency of words associated with warfare remains substantial compared to that related to wandering. This observation indicates that warfare and death constitute significant elements in the narrative development of the analysed corpus of Panji stories.

Table 2. Frequency of occurrence of words associated with love, war, death, and wandering

No	Word	Fre- quency	Range
Love			
1	<i>cinta</i> (love)	23	4
2	<i>asmara</i> (romance)	34	6
3	<i>berahi</i> (lust)	3	1
4	<i>kasih</i> (affection)	91	6
5	<i>sayang</i> (affection)	40	6
6	<i>kagum</i> (admire)	11	4
7	<i>nafsu</i> (lust)	3	2
8	<i>kasmaran</i> (passion)	10	2
9	<i>tunangan</i> (fiancé)	6	2
10	<i>jodoh</i> (soulmate)	1	1
11	<i>pernikahan</i> (marriage)	8	3
12	<i>menikahi</i> (marry)	1	1
13	<i>pertunangan</i> (engagement)	2	1
Total		233	

No	Word	Fre- quency	Range
War			
1	<i>perang</i> (war)	195	6
2	<i>senjata</i> (weapons)	122	6
3	<i>pertempuran</i> (battle)	12	3
4	<i>tempur</i> (combat)	1	1
5	<i>musuh</i> (enemy)	201	6
6	<i>bermusuhan</i> (hostile)	1	1
7	<i>seteru</i> (enemy)	7	1
8	<i>bertarung</i> (fight)	1	1
9	<i>bergumul</i> (wrestle)	9	2
10	<i>pertarungan</i> (fight)	2	1
11	<i>bergulat</i> (wrestle)	3	2
12			
Total		554	

Death (Tragic)			
1	<i>ajal</i> (death)	8	3
2	<i>akhir hayat</i> (end of life)	1	1
3	<i>kepergian</i> (departure)	10	3
4	<i>tewas</i> (died)	15	4
5	<i>musnah</i> (perish)	6	1
6	<i>lenyap</i> (vanish)	6	4
7	<i>mati</i> (die)	300	6
8	<i>meninggal</i> (died)	5	3
Total		351	

Wandering			
1	<i>mengembara</i> (wandering)	19	5
2	<i>pengembaraan</i> (wandering)	7	3
3	<i>berkelana</i> (wandering)	1	5
4	<i>asing</i> (foreign)	4	2
5	<i>mencari</i> (seeking)	127	6
Total		158	

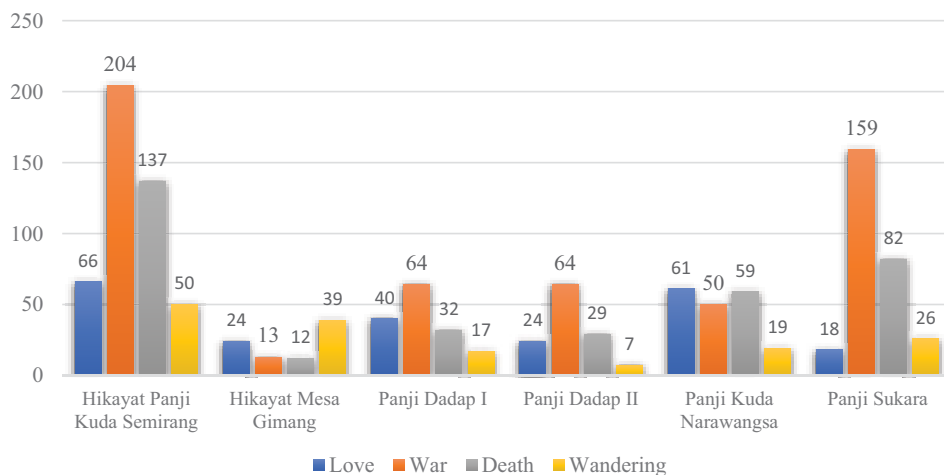


Figure 1. Frequency of thematic words in the Panji story corpus









The analysis subsequently examined the distribution of thematic word occurrences in the Panji story texts. The following presents a plot of thematic word occurrence in the six analysed Panji story texts.

In the text of Hikayat Panji Kuda Semirang, diction related to wandering appears at the beginning of the text, is not predominant in the middle of the narrative, and reappears at the end. Conversely, diction pertaining to love, although present and distributed throughout the text, is less dominant. This contrasts with the diction of war and death, which appear prominently at the core of the narrative. This indicates that the Hikayat Panji Kuda Semirang emphasises the themes of war and death, with elements of love and wandering serving as subordinate narratives throughout the story. It is also observable that lexical items associated with warfare appear at the commencement of the story, followed by those related to wandering, and then other elements. This pattern is analogous to the texts of Panji Dadap I, II, and Panji Sukara. Warfare is depicted from the beginning, middle, and end of the narrative.

The word occurrence plot in Table 3 also reveals noteworthy aspects. Firstly, Hikayat Panji Kuda Semirang, Panji Dadap I, and Panji Sukara begin and conclude with warfare-related diction. This suggests that the narrative is thematically connected to warfare. This structure differs from that of other titles. Secondly, only the text of Panji Kudaraawangsa exhibits a high frequency of romantic diction. These findings further corroborate that the Panji stories in the analysed corpus primarily focus on war and death themes. Love and wandering are merely ancillary aspects of narrative development.

Table 3. Plot of thematic words in the corpus

No	Title	Theme	Plot	Fre- quency	Norm_ Freq
1	Hikayat Panji Kuda Semirang	Love		66	850,855
		War		204	2629,917
		Death		137	1766,169
		Wandering		50	644,587
2	Hikayat Mesa Gimang	Love		24	2024,291
		War		13	1096,491
		Death		12	1012,146
		Wandering		39	3289,474
3	Panji Dadap I	Love		40	2498,438
		War		64	3997,502
		Death		32	1998,751
		Wandering		17	1061,836
4	Panji Dadap II	Love		24	1599,787
		War		64	4266,098
		Death		29	1933,076
		Wandering		7	466,604

No	Title	Theme	Plot	Fre- quency	Norm_ Freq
5	Panji Kuda Nara- wangsa	Love		61	2198,119
		War		50	1801,737
		Death		59	2126,05
		Wandering		19	684,66
6	Panji Sukara	Love		18	424,839
		War		159	3752,744
		Death		82	1935,377
		Wandering		26	613,656

Thematic Analysis

The thematic exploration was based on frequency patterns, which were then validated through KWIC analysis rather than solely through frequency calculations. The thematic words of Panji stories, as presented in Table 1, are analysed using Key Word in Context (KWIC) to examine the semantic properties of the words. In this section, concordance analysis is conducted to elucidate the meaning of each thematic word utilised in the analysed corpus of Panji stories. This research aims to investigate the meaning that emerges from the usage of words related to love, warfare, death, and wandering.

Table 4 shows that the semantic categories analysed in the corpus do not operate on the same level of semantic stability. KWIC analysis shows that some lexical items function in a relatively fixed thematic context, while others exhibit greater variation.

In the domain of war, typologies indicate a high degree of alignment between lexical items and the type of their use in the text. The analysis shows words associated with war in the corpus appear in contexts that directly describe combat

Table 4. KWIC-based typology across semantic domains

No	Domain	Type	Linguistic-contextual description	KWIC Example	Source
1	Love	Interpersonal-affective	Love as an emotional relationship between characters, including romantic attachment, longing, and relational bonding.	“Undhakan Narawansa yang berisi sindiran kepada Raden Panji, “Aduhai, sayang sekali seorang Ksatria rupawan telah kehilangan cinta kasih karena...” (Undhakan Narawansa contains a satire on Raden Panji, “Oh, what a shame a handsome knight has lost love because...)	Panji Kuda Narawangsa (1983)
		Devotional	Love functioning as loyalty, service, or hierarchical attachment (e.g., abdi-tuan relations).	“...sebagai ratu agung yang kaya akan prajurit (karena) aku jatuh cinta padamu. Maukah engkau aku abdi?”. Demikianlah, Kusuma Galuh lalu...” (as a great queen who is rich in soldiers (because) I fell in love with you. Will you be my servant? “Thus, Kusuma Galuh then...)	Panji Sukara (1996)
		Performative	Love realised through speech acts such as declaration, confession, or request.	“...baik adinda berterus terang saja kepadaku, pada siapakah adinda jatuh cinta Sang Panji Carangwaspa terkejut dan segan kepada...” (Ok, just be honest with me, who did you fall in love with? The Carangwaspa banner was surprised and reluctant to...)	Panji Dadap I (1980)

No	Domain	Type	Linguistic-contextual description	KWIC Example	Source
1	Love	Conflictual	Love as a source of emotional tension, loss, or suffering.	"...sedang marah, maka hatinya hanya merasa kesal. Jika sedang putus cinta maka ia tidak pernah merasa putus asa atau hilang..." (...When he is angry, his heart only feels annoyed. When he is jilted, he never feels hopeless or lost....)	Panji Kuda Narawangsa (1983)
		Psychological	Love as an internal mental or emotional state (<i>kasmaran</i>), often indicating obsession or disorientation.	"...tidur. Istimewa yang empunya kekasih jangan dikata lagi mabuk dalam kasmaran asyik dalam pemandangan bertambah gairah berahinya. Kalbunya pun makin..." (...sleep. Especially those who have a lover, don't say that they are drunk in love, engrossed in the sight of increasing passion. His heart is getting bigger...)	Hikayat Panji Kuda Semirang (1996)
2	War	Mobilisation	War as preparation, organisation, or mobilisation of forces prior to battle.	"...raja sedang berkumpul dihadap oleh para senapati agung, membicarakan soal perang karena musuhnya menghilang. Sedang asyik demikian ki Gunasaranta datang..." (...the king was gathered in front of the great senapati, discussing war because his enemy had disappeared. I was having fun when Ki Gunasaranta came...)	Panji Dadap II (1980)

No	Domain	Type	Linguistic-contextual description	KWIC Example	Source
2	War	Engagement	Direct participation in battle or entry into the battlefield.	"...setelah dilihat oleh Panji Semirang akan sang Nata sendiri masuk perang itu maka Panji Semirang pun segeralah melarikan ratunya mendapatkan gajah..." (...after Panji Semirang saw that Nata himself was going to war, Panji Semirang immediately ran away with his queen and got an elephant....)	Hikayat Panji Kuda Semirang (1996)
		Weapon	Weapons as both material tools and symbolic/supernatural objects in warfare.	"...sang Raja, ia segera menarik panah saktinya yaitu senjata Cakra. Senjata ini dulu adalah pusaka kerajaan Makasar yang telah dirampasnya..." (...the King, he immediately drew his magic arrow, namely the Cakra weapon. This weapon used to be an heirloom from the Makasar kingdom which he had confiscated...)	Panji Dadap I (1980)
		Enemy	Enemy as external threat or as target of military action.	"...adakah yayi mendengar khabar akan negeri kita ini diserang oleh musuh kelana bemama Mesa Wirapati Sira Panji Melatak Agung? Inilah..." (...has anyone heard the news about our country being attacked by a wandering enemy called Mesa Wirapati Sira Panji Melatak Agung? This is it...)	Hikayat Panji Kuda Semirang (1996)

No	Domain	Type	Linguistic-contextual description	KWIC Example	Source
2	War	Battle-event	War as an actual combat event involving direct confrontation.	“...Kuasa keluar dari istana. Ia menantang pasukan Sri Panji. Terjadilah pertempuran sengit antara pasukan Sri Panji dengan pasukan Raja Kebalen...” (...Kuasa emerged from the palace. He challenged Sri Panji’s troops. A fierce battle ensued between Sri Panji’s troops and King Kebalen’s forces...)	Hikayat Mesa Gimang (1997)
3	Death	Physical death	Actual biological death occurring in narrative events.	“...ke perut lawan sehingga bedah. Daeng Makincing terjatuh menggeletak meregang ajal. Semua Daeng kaget melihat Daeng Makincing yang telah mati...” (... into the opponent’s stomach so that it was cut. Daeng Makincing fell and lay stretched out, dying. All the Daeng were shocked to see Daeng Makincing who had died....)	Panji Sukara (1996)
		Dramatic death	Narratively dramatized or vividly described death events.	“...Pasukan musuh menjadi kocar-kacir. Banyak prajurit yang menemui ajal Sementara itu, Arya Brajanata, ,Kartala, Andaga, Panji Anom, Wirun,,” (... The enemy troops were in disarray. Many soldiers met their end. Meanwhile, Arya Brajanata, Kartala, Andaga, Panji Anom, Wirun...)	Panji Dadap I (1980)

No	Domain	Type	Linguistic-contextual description	KWIC Example	Source
3	Death	Threat/ sacrifice	Death used as threat, oath, or expression of determination.	"...banyak cakap, jika tidak menurut akan kutikam kau sampai mati kata Ki Pamade. Maka diceritakanlah putri Daha yang ketika..." (...talk too much, if you don't obey I will stab you to death said Ki Pamade. So the story of Princess Daha was told that when...)	Panji Kuda Narawangsa (1983)
		Liminal / extended death	Near-death states, non-literal death, or extended meanings (including separation such as <i>kepergian</i>).	"...kata Sri Panji. Dengan berat hati Ratna Kumala Galuh melepas kepergian Sri Panji ke medan perang. Setelah berjalan tiga hari..." (...said Sri Panji. With a heavy heart, Ratna Kumala Galuh saw Sri Panji off to the battlefield. After walking for three days...)	Hikayat Mesa Gimang (1997)
		Annihilation	Total destruction or disappearance (<i>musnah</i>), often including supernatural dimensions.	"...Tubuh Prabu Brama Kumara seketika musnah terbawa angin badai. Hat itu atas kehendak dewa. Raden..." (...King Brama Kumara's body was instantly destroyed by the storm. It was the will of the gods. Raden...)	Panji Sukara (1996)
4	Wandering	Quest	Wandering as a search for a person (central narrative quest).	"...ksatria yang luhur budinya, tak terkalahkan di medan perang, yang mengembara mencari kekasihnya Candra Kirana, putri yang cantik itu? Generasi..." (...A noble knight, invincible on the battlefield, who wanders in search of his lover Candra Kirana, the beautiful princess?...)	Hikayat Panji Kuda Semirang (1996)

No	Domain	Type	Linguistic-contextual description	KWIC Example	Source
4	Wandering	Quest	Wandering as a search for a person (central narrative quest).	"...ksatria yang luhur budinya, tak terkalahkan di medan perang, yang mengembara mencari kekasihnya Candra Kirana, putri yang cantik itu? Generasi..." (...A noble knight, invincible on the battlefield, who wanders in search of his lover Candra Kirana, the beautiful princess?...)	Hikayat Panji Kuda Semirang (1996)
		Exile	Wandering as escape, banishment, or departure from the centre of power.	"...Kumara ke pelosok pedesaan dan hutan-hutan. Dikisahkan, dalam perjalanannya mencari Prabu Brama Kumara itu, di tengah perjalanan ia..." (...Kumara to remote villages and forests. It is said that on his journey to find Prabu Brama Kumara, in the middle of his journey he...)	Panji Suka-ra (1996)
		Identity shift	Wandering associated with disguise or transformation of identity (becoming <i>asing</i>).	"...Kumala Galuh. Dan kakakmu, Inu Kertapati mengembara mencariku. Rupanya dalam pengembaraan itu, ia mengubah namanya menjadi Sri Panji. oh Tuhan..." (...Kumala Galuh. And your older brother, Inu Kertapati, wandered looking for me. Apparently, in his wanderings, he changed his name to Sri Panji. Oh God...)	Hikayat Mesa Gimang (1997)

No	Domain	Type	Linguistic-contextual description	KWIC Example	Source
4	Wandering	Physical journey	Wandering as geographical movement across landscapes (forest, mountains, kingdoms).	“...dekat kaki. Kala itu di udara ada seseorang yang sedang berkelana Sang Retna Kenakawulan terbang di atas hutan belantara. Ketika...” (near the feet. At that time in the air there was someone who was travelling. Sang Retna Kenakawulan flew over the wilderness. When...)	Panji Dadap I (1980)

situations, enemy relationships, and weapon use. The lexicon distribution showed that references related to weapons (31.2%) and enemy construction (23.7%) dominated the dataset. On the other hand, explicit battle events only account for 5.8%. This suggests war is primarily represented in its material and realistic dimensions rather than direct battle events. In addition, mobilisation (17.2%) and engagement (22.0%) highlight the procedural nature of war: preparation and participation are more prominent than the battle itself. The strong correspondence between the realm, type, and contextual use of words in sentences indicates that the realm of war exhibits high semantic coherence. In other words, the lexical frequencies in this domain can be well interpreted as reflecting the dominant narrative focus.

The love domain shows a very different pattern. This category shows considerable semantic variability in terms of lexical items and types of use. The typology of the word ‘love’ spans various contexts, including romantic affection, family relationships, social expression, and evaluative discourse. These terms often function outside a purely romantic context. For example, KWIC analysis shows this variability because the same lexical items appear in the contexts of gratitude, kinship, and subjective evaluation. This spread shows that the domain of love is characterised by low semantic coherence. Based on typology, words associated with the love domain in corpus texts show a predominantly (28.9%) interpersonal-affective use, but not exclusively, since devotional (16.1%) and psychological (15.6%) functions also make a significant contribution. The presence of conflictive (7.8%) and performative (6.7%) uses shows that love operates as an emotional tension and spoken action. It should be noted that 25% of the data set falls into the pragmatic category. This means that the lexicon related to love does not represent one single theme. Although the frequency analysis found dominance in word usage

associated with love, it could not serve as a direct indicator of the dominance of romantic themes. Rather, this typology suggests that affective expressions in the corpus are widespread and go beyond mere romance.

The classification of the domain of death shows words associated with death spread across different types that include literal physical death and figurative or symbolic expressions, such as honour, loss, and emotional responses. In the context of their use, these meanings often coexist within the same narrative, especially in conflict situations. KWIC's analysis shows that death-related vocabulary can refer to concrete events, such as deaths in combat, or to abstract meanings, such as expressions of dignity or sadness. This indicates that the domain of death serves a double semantic function. Based on the lexical distribution, physical death was the most dominant category (53.6%), followed by dramatic representations (14.8%) and liminal or extended uses (14.2%). Expressions of threat or sacrifice account for 12.0%, whereas annihilation (destroyed) remains relatively rare (5.5%). This shows that while deaths are mostly represented as physical events, most of the data reflect non-literal, transitional, and expressive uses.

The domain of words associated with wandering indicates that this domain pertains to movement, search, and processes related to travel. Contextually, these words emphasise goal-oriented actions and spatial transitions. On the other hand, KWIC analysis shows that the lexical domain forms part of a sequence of narrative movements and developments. The distribution of lexemes related to wandering in the corpus supports this pattern, with wandering emerging as the most dominant category (51.5%). This dominance indicates that wandering is primarily constructed as a goal-driven quest. In contrast, physical movement without a clear narrative goal accounts for 22.5%, while exile (10.0%) and identity transformation (5.0%) represent less frequent yet significant dimensions. Overall, the findings indicate that wandering is not merely a form of spatial movement, but also involves social displacement and identity transformation. However, unlike the war domain, the wandering domain does not occupy the thematic core. Instead, it functions as a narrative mechanism facilitating plot development, particularly in relation to separation, search, and transformation.

Discussion

Analysis of the six Panji stories (Hikayat Mesa Gimang, Hikayat Panji Kuda Semirang, Panji Dadap I, Panji Dadap II, Panji Kudaraawangsa, Panji Sukara, and Panji Angreni) demonstrates that the Panji stories predominantly focus on themes of warfare and mortality. Although love and peregrination are elements of plot development, they are not the primary focus. Research on Panji stories generally highlights love, disguise, travel, and recovery as the basic motives of

the stories (Ras, 1973; Robson, 1996). The current findings do not contradict the views of previous studies. However, this study suggests that at the lexical level, other thematic domains may play a more central role in Panji story.

The analysis shows that war-related vocabulary dominates the corpus, indicating that war is the main thematic element of the analysed texts. This is supported by the contextual consistency of war-related vocabulary that tends to appear in explicit narrative structures, such as mobilisation, engagement, and confrontation. These patterns suggest that warfare operates as a structurally stable domain rather than merely an incidental element. Although previous studies have mentioned the existence of war and political struggle in Panji story, it is often associated with a cycle of disruption and recovery. These elements are usually discussed as part of a broader narrative structure rather than as separate lexical domains. Therefore, this study complements existing interpretations by showing that warfare is not only narratively present but prominent and lexically dominant.

Analysis of the thematic elements of death contributes to this reinterpretation. Previous discussions of Panji story have often focused on the resolution, reunion, and restoration of order, which is an important narrative outcome. However, this study shows that these motifs are embedded in the substantial lexical presence of expressions related to death. For example, KWIC's analysis shows that these expressions do not fall into literal descriptions of death, but include figurative, liminal, and expressive meanings. This suggests that within the story, the thematic element of death operates both as an event and a discursive resource that contributes to an emotional and symbolic dimension. In other words, the findings illuminate the role of death as a repetitive and diverse semantic domain in the corpus.

The thematic element of love, which is considered central to Panji research, shows a more diffused semantic profile. Although the frequency of lexical items related to love is quite high, the contextual use varies. It includes interpersonal-affective, devotional, performative, conflictual, and psychological meanings. This diversity suggests that love does not function as a single thematic domain but as a vast affective register spread across a variety of contexts. From the linguistic perspective, frequency does not determine semantic centrality, and contextual analysis is required to interpret lexical patterns (Sinclair, 1991). Therefore, this study supports a more cautious interpretation of the role of love in Panji narrative, suggesting that its superiority may lie more in narrative framing than in consistent lexical realisation.

The analysis reveals that romantic elements are subordinate to the dominant themes of warfare and death in the Panji stories. This finding diverges from the qualitative interpretation of Panji stories as human creation mythology in Javanese society (Rassers, 1959). Quantitative analysis substantiates that lexical choices pertaining to warfare and death are more prevalent than those related to love. The analysis indicates that the lexemes associated with warfare ($n=554$) and death

(n=351) predominantly convey their literal meanings, with “enemy”, “war”, and “weapon” dominating the warfare category, and “die”, “killed”, and “departure” predominating in the death category. Conversely, the qualitative analysis conducted by Yulianti (2013) on Panji Kudanarawangsa, which asserts that the theme of romance is dominant, aligns with our findings in terms of frequency. However, when examined based on the percentage of word occurrence, this figure is relatively insignificant, with love-related terms showing a frequency of 32.27%, compared to those related to warfare showing 26.45% and death 31.21%.

The thematic element of wandering in previous studies has consistently been identified as an important motif in Panji story. The findings of this study confirm the structural relevance of this domain, but the results show that its role is more functional than dominant. Lexical terms related to wandering are often used in contexts of purposeful movement, such as searching for lost characters or moving between narrative spaces. This shows that wandering serves as a mechanism for developing the storyline, including separation, transformation, and completion. Although wandering is an important component of Panji story, its role is more that of a narrative element than a lexically dominant theme.

This study reconceptualises the thematic hierarchy in Panji story by showing that thematic domains operate within different levels of semantic coherence and narrative centrality. The results show that domains generally considered central, such as love and wandering, are not always dominant at the lexical level. In contrast, domains such as war and death, which are often considered supporting elements, play a more central role in shaping the narrative discourse. Therefore, genre labels, such as romance, do not directly reflect thematic dominance on a lexical level. These findings also highlight the need to integrate quantitative and qualitative approaches in corpus-based literature analysis. Frequency patterns alone do not sufficiently determine thematic significance, as the semantic spread of the domain of love shows. The incorporation of KWIC analyses enables contextual validation, while semantic-domain-based sampling and random lexical selection reduce bias and increase representation. This approach is relevant to the study of narrative traditions, both modern and pre-modern, in which thematic assumptions are often shaped by interpretive frameworks rather than by systematic textual analysis.

Conclusion

This study has examined the use of words as a medium for narrative expression and focused on four keywords that consistently appear in qualitative research to analyse the occurrence of words in the corpus text of Panji stories: love, war, death (tragic), and wandering. The results indicate that the Panji stories predominantly

focus on themes of warfare and death. Although love and wandering are elements of plot development, they do not constitute the primary focus of the narrative.

Although previous research has generally positioned Panji story as romance-centred, this study suggests that this view needs to be refined. Words associated with “love” often appear, denoting semantic spread and serving as distributed affective registers. Wandering plays an important, especially functional, role in narrative development, particularly about separation, quest, and transformation. On the other hand, warfare is a highly coherent and structurally central domain, whereas death operates as a dual semantic field that bridges literal events and symbolic meanings.

The findings suggest that thematic analysis in literary texts needs to be evaluated not only through frequency but also in terms of contextual stability and its functional role. By exploring their lexical and thematic patterns, this study contributes to the understanding of Panji stories as texts shaped by conflict, transgression, and affective complexity, rather than solely by romantic motives. By bridging the gap between traditional philology and modern computational methods, this study also highlights the potential of digital humanities in redefining our approach to historical and literary studies.

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Declaration of AI Use

The author(s) disclose the use of a generative AI tool (Grammarly) solely for language editing and/or technical assistance. The author(s) confirm that they are fully responsible for the content, originality, interpretation, and conclusions of this article.

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