

Enhancing Digital Folklore Storytelling Book Through Design Elements from 2010-2020

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ABSTRACT

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This study explores the role of visual design elements in enhancing digital folklore storytelling books in Malaysia between 2010 and 2020. Digital publishing keeps growing among young readers, and illustrations carry much of the weight in telling cultural stories and holding attention. Using Charles Sanders Peirce's semiotic theory, the research examines how line, shape, color, texture, space, value, and form create meaning and shape the reading experience. The study combines visual content analysis of digital book covers with semi-structured interviews with illustrators. Color, shape, and line turned out to be the elements illustrators reached for most, using them to build emotion, symbolism, and cultural relevance. Texture and space added depth and authenticity to the storytelling. Illustrators also talked about the tension between honoring tradition and meeting modern visual expectations. The findings offer illustrators, educators, and publishers a way to think about combining semiotic and design principles in folklore-based digital media, and add to the conversation around visual communication and children's literature. Future research could track how these design elements affect reader engagement and cultural retention across age groups, test how augmented reality and other interactive tools might deepen immersion and learning, and compare design choices across cultures to separate universal strategies from culture-specific ones.

Contribution/Originality: This study contributes to the existing literature by being one of very few studies which have investigated Malaysian digital folklore storytelling books through a combined semiotic and design-element lens. The paper's primary contribution is finding that specific visual elements, color, texture, and form, actively construct cultural meaning, offering illustrators an evidence-based guideline previously absent from this research area.

1. Introduction

In the digital age today, the digital folklore of storytelling book has transformed and turned into a new avenue to access the reader (Makayev et al., 2020) . All the publications of printed materials such as books, comics and magazines began to change to the digital version. The picture of digital storytelling has been radically changed over the last few years, and this phenomenon has been marked by the significant shift towards digital platforms to design immersive storytellings to a digital folklore storytelling book. This paper is concerned with the complex territory of the design of digital folklore storytelling books and it is in this context that the approach of using digital platforms to create an immersive storytelling has significantly changed. The opportunities and challenges in this regard are the incorporation of digital illustrations in the traditional folklore storytellings. The research determines an important knowledge gap in the particular aspects that optaculate the success of folklore storytelling through digital illustrations and render informative designs practice impossible.

The Digital Storiestelling book can potentially transform the ways we experience cultural content, and it has been generally accepted as a necessary step in drawing more and more customers towards and satisfied by their products (Ioannidis et al., 2019). The research focuses on how mobile platforms could facilitate more accessible and entertaining storytelling, particularly when it comes to cultural heritage (Zhang et al, 2023). Regardless of this development, academic literature does not include much research on the unique nature of digital imagery when it comes to folklore storytelling.

The younger generation have turned their attention to the digital tools and gadgets that are used to offer access to any type of information aimed at entertainment, education, personal projects among others. The exposure to foreign identities has affected the local folklore, with some finding it less compatible with other country counterparts which have better aesthetic value and more appealing visuals, thereby attracting viewers, particularly teenagers (Shuib & Wan Abdul Hamid, 2022). Although Although the increasing use of digital media has challenged the popularity of traditional folklore, it has also created new opportunities for cultural preservation. The adaptation of folklore into digital storytelling platforms enables lesser-known Malay folktales to reach wider audiences through interactive narratives and contemporary visual communication, thereby enhancing their relevance in the digital era (Muhammad, et al. 2023). Although the widespread use of digital media has contributed to declining interest in traditional folklore among younger generations, it also highlights the need to revitalise local heritage through engaging digital storytelling approaches (Shuib & Wan Abdul Hamid, 2022). Considering the scenario in another light presupposes compromise between the traditional folklore and the contemporary equipment that fits the taste of the audience. Even though technology might get negative aspects, there is still a way to promote the idea of folklore to the younger generation, albeit with a subtle concession (Jan, et al. 2025). It is essential to keep the traditional folklore as cultural heritage and digital forms will help to promote and generate a new generation (Shuib & Wan Abdul Hamid, 2022). The inquiry problem, which was approached in the current study, is the necessity to develop and evaluate a digital folklore storytelling book in order to facilitate the production of fervour of the Malaysian folklore, specifically in the youth even the Millennial generation. The gap that this project will fill is the use of the contemporary digital media as a means of expressing the folklore tradition (particularly in the educational setting).

The analysis followed the following research questions:

- i. What are the most significant elements of design in a digital folklore storytelling book?
- ii. How the digital folklore storytelling books in Malaysia can be succeed?
- iii. What are the key elements in producing a digital folklore storytelling book?

This study matters for authors, illustrators, and designers building digital folklore storybooks. The design elements identified here give creators concrete guidance: they can use color, shape, line, texture, and space to make visuals that catch the eye and pull readers deeper into the story. Educators and other professionals working in digital storytelling can draw on these same findings to sharpen how they use design in folklore storytellings in the digital realm.

Developing digital storytelling books as a new medium for literature offers a more immersive experience as they are presented visually, digitally, and accessed online. Reading folklore no longer requires diving into lengthy literary texts; instead, it can be experienced through concise dialogue and visual representations . Similarly, accessing folklore is no longer limited to library visits but can be conveniently done online, catering to the preferences of Millennials, who prioritize quick access and extensive content coverage (Febriani,2021).

1.1. Research Objectives

- i. To identify the most significant elements of design in digital folklore storytelling book
- ii. To analyse the successful/factor element of design produced in digital folklore storytelling book in Malaysia
- iii. To propose a guideline for key elements in producing digital folklore storytelling book

2. Literature Review

2.1. Digital Storytelling Book

Storytelling book is a form of communication that has been around for almost as long as human history itself. It is a form of communication that uses verbal and visual signals to educate and entertain "story readers." Digital storytelling is a new style of storytelling that shares similarities with more traditional types of storytelling while also presenting apparent differences from those types of storytelling (Sabah,2023). Children can learn where they started to understand right and wrong during this developmental stage by reading (Okwilagwe, 2018). Children's literature is rooted in oral traditions, such as folktales, children's songs, and beautiful lyrics. "Folk literature for children" in this sense refers to books that have been modified for the enjoyment of young readers. In order for the story's message to reach young audiences, the story's substance and writing styles were toned down. Children were drawn to the folktales despite their intended audience being older audiences.

The online learning system may make use of a variety of learning resources. One possibility that positions technology as a relevant instrument for teaching and learning

is the applicability of learning materials in terms of digital storytelling (Sakarelos, 2020). Additionally, digital storytelling can assist students transfer their information, abilities, and culture, which will evolve their thought process and help them develop confidence (Robin, B.R., 2008). This will boost students' ability and confidence to enjoy and access independently. Digital storytelling encompasses various mediums, such as interactive multimedia, online platforms, and other digital tools, to tell stories in innovative ways.

2.2. Malay Folklore

Folklore is disseminated for the purposes of entertainment, education, and cultural preservation within societies. They are regarded as valuable for both national and worldwide culture. Folk tales are valuable tools for enhancing cross-cultural understanding and communication (Dahal, 2021). Folklore refers to the unwritten stories, traditions, and beliefs within a culture that are transmitted orally from one generation to the next. It is perceived as a body of culture that is collectively shared by a specific group of people. Some folklore conveys valuable life lessons to young people (Bhatta, 2021).

children nowadays do not fully appreciate folktales because of the changes in lifestyle and physical environments. This is because they are unable to relate to or make sense of the traditional cultural values that are portrayed in the stories. Despite the fact that these folktales, which have been passed down for hundreds of years, depict completely different ways of life, traditions, and cultures, the rich values and lessons of life continue to be relevant in terms of providing examples and direction to newer generations (Alwi, 2019). This is due to the fact that children are typically more attracted to gadgets. Additionally, the attraction of children for gadgets instead reading traditional books is a complex issue that is shaped by several aspects, such as convenience, accessibility, and the nature of the contents (Abbas et al., 2019).

The Malay way of seeing the world is clearly shown in Malay folk literature. Interpersonal relationships, as well as those between humans and the natural world and the supernatural or metaphysical world, are all important aspects of the Malay worldview. This explains why folk writing uses so many metaphors that combine elements of instruction and example. It's important to remember that kids need adult supervision to live independently. To learn about, explore, and recognize the world around them, they need the help of the local community. Consequently, relevant reading material can be used as a reference or a means of exchanging information (Balcazar, 2019).

Malay folklore can be broken down into three categories. The three categories are;

- i. Myths; explain and trace the origins of things.
- ii. Legends; more supernatural beliefs.
- iii. Storyteller; moral, animal, and funny stories that happened anywhere and at any time.

2.3. The Design Elements

These crucial elements are vital in art and design, as well as in the visual production of artworks by designers. Every design element has a role in the visual representation, and their combination influences the design's perception. Artists can use these design elements alone or in conjunction with each other, depending on their intention (Han et

al., 2019). In digital illustration, space, color, form, texture, and value are all important factors. Colour selections elicit emotions and distinguish objects, while "space" refers to the arrangement of objects within the artwork. Applying shade and contouring to an object creates depth perception. Value creates differences in brightness and darkness, while texture contributes further visual and tactile characteristics. These elements work together to bring digital illustrations to life.

These elements, including line, shape, color, texture, space, and value, are critical for creating impactful visuals and influencing audience perception

- i. Lines guide the viewer's gaze, create movement, and structure storytelling (Acer et al., 2020).
- ii. Shapes, whether geometric or organic, establish hierarchy and visual interest and shape a page's layout (Acer et al., 2020).
- iii. Color evokes emotion, sets mood, and guides the eye, with its properties, hue, saturation, lightness, driving how strongly it does so (Jonaskaite et al., 2025).
- iv. Texture adds visual and tactile qualities that enrich composition and give illustrations atmosphere (Sun et al., 2025).
- v. Space, positive and negative, shapes depth, focus, and visual dynamism (Sun et al., 2025).
- vi. Form conveys three-dimensionality, built through light, shadow, and the arrangement of flat elements into apparent depth (Hermanto, 2019).
- vii. Value, the range from light to dark, shapes depth perception and visual interest (Acer & Gözen, 2020).

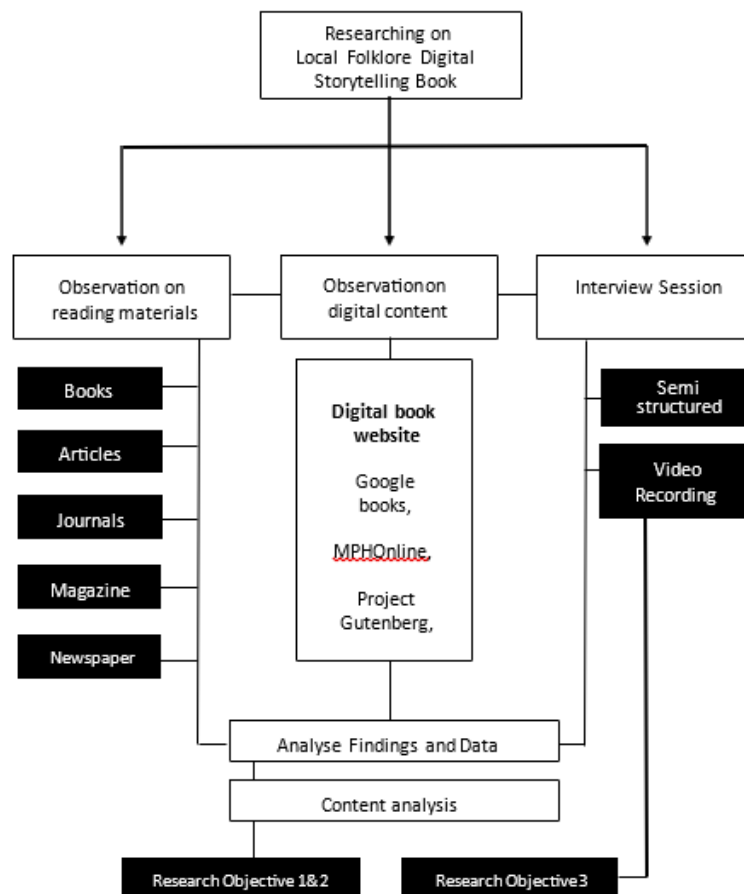
3. Research Methods

This research design was a qualitative one because the authors aimed to investigate a multifaceted relationship between the elements of digital illustration and folklore storytelling in the digital books of the Malaysians. This methodology helped to pursue profound research on the aspects of aesthetic, addressing the audience, and cultural representation (Tenny & Brannan, 2022). In this paper the research study design is qualitative, so as to develop a complete understanding of the multi faceted association between the elements of digital illustrations and folklore narration. In such a design, it is possible to delve deep into the qualitative world and quantify several important variables, which gives a sophisticated analysis. This research paper would examine book cover design in one of the digital folklore storytelling books of 2010-2020 on the subject. This study employed purposive sampling to select 13 Malaysian digital folklore storytelling books published between 2010 and 2020. The books were selected based on three inclusion which are the publication is presented in a digital storytelling format, The narrative is based on Malaysian folklore, and the publication contains original digital illustrations suitable for visual semiotic analysis.

Referring to Figure 1, this research design analyses local folklore and digital storytelling books. It starts with clear goals that will lead in the collection of data. The information used is about two sources, which are primary and secondary. The secondary data will be acquired through the digital storytelling books themselves, observing their contents, characteristics, and even It should be noted that the primary data will be provided by means of the interviews with illustrators. After collection the data is analysed to bring out information that can be traced to the research objectives. Lastly, the results will outline the most relevant design aspects and effective factors within a digital folklore

storytelling book, as well as play a role in proposing a guideline to the most important aspects in the creation of the digital folklore storytelling book.

Figure 1: Research Design



Source: Authors' own work

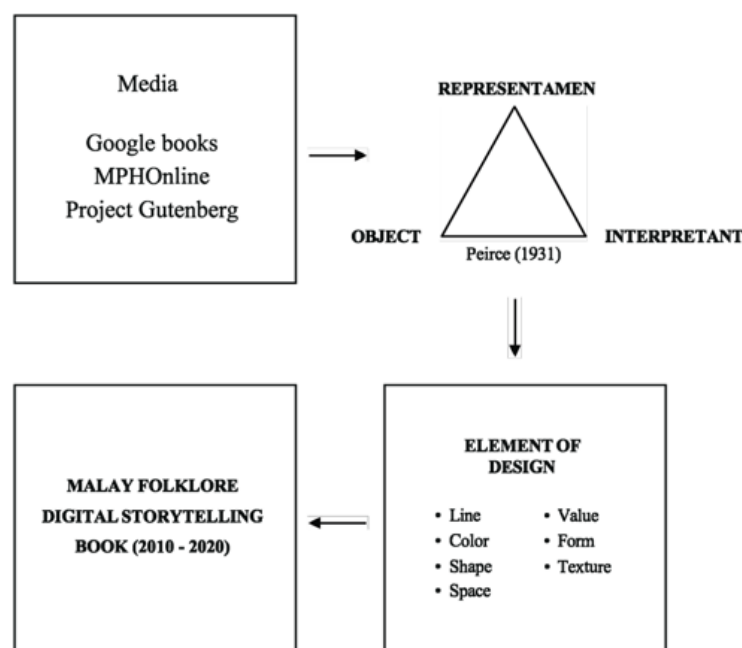
Semiotic theory (the framework of Charles Sanders Pierce) was also incorporated into the analysis to investigate into the underlying meaning and interpretation of such aspects of digital designs as line, shape, color, form, space, value, etc. and their functionality in the context of communicating about cultural relevance and authenticity when discussing Malay folklore storytelling (Reynolds, 2023). Such methodology gave a chance to the deep appreciation of how symbolic color, iconic embodiments and intertextual allusions contribute to the cultural meanings and audience involvement.

As illustrated in Figure 2, this theoretical framework maps how media sources and the seven design elements feed into Peirce's Representamen–Object–Interpretant triad, which in turn structures the analysis of the Malay folklore digital storytelling books sampled in this study.

Walks through the framework left to right – media sources (Google Books, MPHOnline, Project Gutenberg) → Peirce's triadic model → the seven design elements as representamens → the sampled 2010-2020 books, explaining how each stage connects to the next rather than just describing the figure in isolation. Considering a book about digital folklore storytelling in terms of semiotic analysis, as explained in the paper by

Ulfa Muazzomah concerns the careful decomposition of the signs and symbols that are present to decode the subtle meanings that are transferred to the audience. To start the analysis, it is necessary to determine the signs that are presented on the book cover and these elements can include a variety of elements (images, colors, text, and symbols) each of which is having both denotative and connotative meaning. These signs are then divided into separate categories depending on their properties as to whether they are iconic, indexical or symbolic in nature, devoid of shedding light on their relation to the narrative being told. Using the investigation of the interruption of these signs on the cover the focus is shifted to the way these factors, such as the location of the item, size and color, and style play up to the creation of the whole message to be delivered to the viewers.

Figure 2: Theoretical framework based on the semiotic theory



Source: Authors' own work

4. Results

4.1. Content Analysis

This content analysis of the book covers in digital folklore storytelling utilizes a semiotic theory in analyzing the interplay between visual elements and story value in its complex interplay. This plan involves a keen de-code of the signs and symbols on the covers of the books to locate the subtle meaning that they convey to the readers. Based on the semiotic theories, and specifically the ones of Charles Sanders Pierce, this paper classifies elements of visual culture as an iconic, indexical, and symbolic image, colour, text and symbol. These categories evoke insight into the nature of the relationship of design elements to the cultural and storyline of the stories. Some of the factors analyzed include their use in sending messages, eliciting emotional reactions and their importance depending on placement, size, color, and style, among others. This paper will seek to unravel further narratives in the covers through researching these elements in the cultural context and narratives. Using this method ensures that the design makes a

sound accord with the cultural situation and expectations of the targeted audience hence enhancing the story telling process.

This study looks closely at how well book cover designs capture the spirit of digital folklore storytelling. The findings show that visual storytelling can preserve cultural history while still pulling in modern audiences, giving creators and educators in digital design and folklore something concrete to work with.

A detailed semiotic breakdown of the Puteri Gunung Ledang cover, decomposed according to Peirce's Representamen–Object–Interpretant model, is presented in Table 1.

Figure 3. Puteri Gunung Ledang digital storytelling book cover



Source: <https://asianpicturebooks.wordpress.com/2018/09/29/puteri-gunung-ledang/>

Table 1: Content analysis

No	Representamen	Object	Interpretant
1.	Elegant serif font for the title "Puteri Gunung Ledang" in a dark, earthy red color.	The title suggests this is a tale of Puteri Gunung Ledang, a legendary princess from Malay folklore.	The serif font and deep red color evoke a sense of tradition and mystique, suggesting a classic, culturally significant story. The font style and color give the impression of a tale with historical roots and traditional values, making it appealing for readers interested in folklore.
2.	Detailed illustration of Puteri wearing traditional Malay attire, adorned with gold jewelry.	The Puteri is depicted as a beautiful and regal figure, emphasizing her noble and culturally iconic status.	Her traditional attire and jewelry highlight her royal and cultural significance, establishing her as a figure of beauty, elegance, and heritage. The illustration suggests that the story is connected to Malay culture and values, drawing readers to expect a story that respects traditional aesthetics and portrays a revered character.
3.	Soft, natural color palette with greens, browns, and earthy tones in the	The colors represent the lush, forested setting of Gunung Ledang, a mountain in Malaysia where the	The earthy tones create a serene, natural atmosphere, inviting readers to immerse themselves in the mystical and tranquil world of the story. This color palette suggests that the storytelling is closely

	background setting.	story is set.	tied to nature and the legendary setting, giving a sense of adventure within a culturally rich environment.
4.	Presence of an elephant and a monkey next to Puteri, illustrated with soft, rounded lines.	The animals suggest a connection with nature and portray Puteri as compassionate and in harmony with wildlife.	The presence of the animals emphasizes Puteri's kindness and connection to her natural surroundings, reinforcing the idea that the story is not only about royalty but also about coexistence with nature. The soft lines and friendly depiction of the animals make them approachable, appealing to a young audience.
5.	Use of soft lines and rounded shapes in the illustration.	The design choice for soft, rounded lines implies a gentle and approachable story for children.	These lines give the cover a welcoming feel, suggesting that the storytelling is gentle, educational, and suitable for younger readers. The rounded shapes also align with a child-friendly design, implying that this is a tale with moral lessons that can be enjoyed by readers of all ages.
6.	Balanced composition with the Puteri in the foreground and natural elements and animals around her.	The centered composition emphasizes Puteri as the main focus, with the background elements enriching the setting.	This arrangement draws the viewer's attention to Puteri as the protagonist, while the surrounding elements set the scene, creating a balanced view of character and environment. The composition implies a harmonious storytelling where the central character and her environment are deeply intertwined.
7.	Fine texture in the Puteri's attire and jewelry, contrasting with the smooth background.	The detailed textures convey a sense of realism and importance, emphasizing the cultural significance of her attire.	The texture in her attire and jewelry highlights her nobility and importance in the story, suggesting that her character is both revered and central to the cultural storytelling. This contrast with the simpler background texture draws the eye to Puteri, indicating her as the focal point of the story.

To summarise which of the seven design elements identified in the literature review are present on this cover, Table 2 presents a checklist of each element alongside a brief description of how it manifests in the Puteri Gunung Ledang illustration.

Table 2: Content analysis

No	Element of Design	Present (✓)	Description
1	Line	✓	Soft, flowing lines are used to define the characters and natural elements, giving the illustration a gentle feel.
2.	Shape	✓	Rounded shapes are present in the figures of the animals and Puteri, creating a friendly and approachable aesthetic.
3.	Color	✓	A natural palette with greens, browns, and earthy tones evokes serenity and a

			connection to nature.
4.	Texture	✓	Fine textures are visible in Puteri's traditional attire and jewelry, emphasizing her cultural and royal significance.
5.	Space	✓	The foreground highlights Puteri and the animals, while the background is filled with lush greenery, creating depth.
6.	Value		
7.	Form	✓	The characters and elements are rendered with a sense of three-dimensionality, particularly in Puteri and the animals.

Figure 3 shows the cover of Puteri Gunung Ledang, one of the thirteen digital folklore books in this study. Across all thirteen covers, the visual design elements work as semiotic signs, carrying cultural identity and narrative meaning. Take the serif typeface in dark earthy red: as a representamen, it signifies tradition and mysticism (the object), and pushes readers to read the story as an authentic Malay legend (the interpretant).

Puteri Gunung Ledang, an important cultural figure, is depicted in the middle of the cover wearing traditional Malay clothing and jewelry. These decisions are more than just page decorations; they have cultural significance. Similar effects are produced by the earthy and green color scheme, which evokes Gunung Ledang's natural surroundings as well as harmony, spirituality, and cultural continuity. The use of natural colors to set cultural scenes and create emotional pull was a common theme in all thirteen works. Younger readers are drawn to the cover's warmth, which is supported by animals, rounded curves, and soft lines that highlight the harmony between humans and the natural world. The protagonist remains at the center of the composition, and the detailed textures of her outfit and accessories give her a sense of authenticity and prestige.

Having illustrated this coding process using the Puteri Gunung Ledang cover as a single case, Table 3 extends the same seven-element checklist across all thirteen digital folklore storytelling books sampled in this study, allowing design element usage to be compared across the full dataset.

Table 3: Content analysis

Book Title	Line	Shape	Color	Texture	Space	Value	Form
Tun Teja	✓	✓	✓	✓	✓	-	-
Dongeng Haiwan	✓	✓	✓	✓	✓		
Sang Kancil dengan Buaya	✓	✓	✓	-	✓	-	-
Puteri Gunung Ledang	✓	✓	✓	✓	-	✓	✓
Hang Li Po	✓	✓	✓	-	✓	✓	-
Mah Meri Animal Folklore	✓	✓	✓	✓	✓	✓	✓

Malaysian Children's Favourite Stories	✓	✓	✓	-	✓	-	✓
Legendary Princesses of Malaysia	✓	✓	✓	✓	✓	✓	-
Puteri Gambus (Princess of the Lute)	✓	✓	✓	✓	✓	-	✓
Lagu Cenderawasih	✓	✓	✓	✓	✓	✓	✓

According to Charles Sanders Peirce's semiotic theory, a content examination of a sample of digital folklore storytelling book covers from 2010 to 2020 revealed that color, shape, and line were most frequently used. These elements built symbolic meaning, evoked emotion, and represented cultural identity: the Representamen (the visual form) signified cultural Objects (themes, characters, traditions) and triggered Interpretants (audience responses such as pride, nostalgia, or interest). For example, vibrant colors represented youth and cultural spirit. This was directly supported by four of the seven illustrators, who identified color as the most important component in conveying cultural environment and emotion, as one of the informant stated, "colour played an important role..." (Informant 3). Texture and space showed up less often but still mattered. Texture built authenticity, often mimicking traditional materials like batik or wood. Space balanced compositions, established focal points, and gave key visual symbols room to breathe.

These results address the first research objective, which was to determine the most important design elements in digital folklore storytelling books. They also partly support Research Objective 2, on analyzing which design elements succeed in Malaysian digital folklore books, by showing which visual strategies, particularly color and symbolism, kept appearing in well-received publications. In the end, semiotic interpretation provides researchers with a strong foundation for comprehending how digital illustration encode folklore and attract viewers.

4.2. Interview Data Collection

4.2.1. Importance of Digital Illustrations

The interviews showed strong agreement: illustrations matter to how well folklore stories appear digitally. According to the participants, illustrations are more than just visuals; they preserve cultural identity, convey story meaning, and captivate readers in the story. Especially for younger audiences, who are more open to visual medium in any case, visually appealing illustrations help readers in understanding characters, situations, emotions, and cultural values.

As one participant explained:

"Digital illustrations help readers visualise the story more clearly while making traditional folklore more engaging and relevant to today's generation." (Informant 3)."

These findings line up with the visual content analysis of the thirteen digital folklore books, where color, composition, typography, and character design consistently reinforced each story's cultural context and narrative atmosphere. The illustrations did more than decorate the page, they worked as semiotic signs, giving readers a way into the story's cultural meaning. Serafini and Reid (2024) make a similar point in their work

on picturebook analysis, arguing that illustrations guide how readers interpret visual narratives and build meaning through semiotic, literary, and artistic frameworks.

This study builds on that work by showing that digital illustrations do more than make storytelling effective, they preserve Malaysian cultural heritage through visual semiotic communication. Good illustration design, in other words, is what keeps digital folklore storytelling culturally authentic, educational, and engaging for today's readers.

4.2.2. Effective Digital Illustration Elements

The interviews showed that effective digital illustrations come down to balancing color, line, shape, texture, composition, and typography. Participants kept coming back to the same point: these elements need to work together to carry the story's narrative, cultural identity, and emotional atmosphere, not sit there as separate decorative pieces. Color and composition stood out as the two elements that did the most work, both in grabbing readers' attention and setting the story's overall mood.

As one participant stated:

"An effective illustration is not only visually attractive but also able to communicate the story and cultural values through the proper use of design elements." (Informant 2)

These perspectives back up the visual content analysis of the thirteen digital folklore books, where color, composition, character design, and typography consistently strengthened narrative communication and cultural representation. Through Peirce's semiotic framework, these elements work as representamen, pointing to cultural symbols and storytelling contexts (the object) that let readers build meaningful interpretations (the interpretant) of Malaysian folklore. Effective illustration design, in other words, depends on more than visual aesthetics; it depends on whether the illustrations successfully carry symbolic and cultural meaning.

Serafini and Reid (2024) make a similar point in their work on picturebook analysis, arguing that illustrations construct meaning by guiding how readers interpret visual language. This study extends that work by showing that digital illustration's effectiveness ties directly to how well it preserves Malaysian cultural identity through the deliberate use of design elements within a semiotic framework.

4.2.3. Contribution to Cultural Representation

The interviews showed that digital illustrations carry real weight in representing and preserving Malaysian cultural identity through deliberate visual design choices. Participants kept coming back to accuracy: illustrations need to portray traditional costumes, architecture, landscapes, symbols, and cultural practices correctly, or folklore loses its authenticity for today's readers. These visual representations, they said, carry cultural values while making folklore more accessible in digital spaces.

As one participant stated:

"Digital illustrations should maintain the originality of our cultural identity so that younger generations can recognise and appreciate Malaysian heritage through visual storytelling." (Informant 5)

This lines up with the visual content analysis of the thirteen digital folklore books, where recurring elements, traditional attire, natural landscapes, decorative motifs, and culturally significant color palettes, consistently represented Malaysian heritage. Through Peirce's semiotic framework, these elements function as representamen, signifying cultural symbols and traditions (the object) and letting readers build meaning (the interpretant) tied to identity, history, and collective memory. Hermanto (2019) makes a related point about folklore illustration: visual storytelling homogenizes interpretation across readers in ways verbal narration alone cannot, binding audiences to a shared understanding of the story rather than leaving space for fragmented or inconsistent readings, which matters directly for how consistently a culture's symbols get read and remembered.

Taken together, digital illustrations work as an important medium for cultural representation, turning traditional folklore into visual experiences that build cultural awareness, preserve heritage, and keep audiences engaged with Malaysian folklore.

4.2.4. Enhancing Audience Engagement

Informants agreed that digital illustrations can pull audiences deeper into folklore storytelling. Interactive elements, clickable illustrations, animations, immerse readers in the story, making it more enjoyable and easier to remember. This dynamic approach keeps readers engaged by visually flagging key moments and emotional shifts as the story unfolds.

As one participant put it:

"Digital illustration as limitless approach... you can transform it into interactive such as AR animation..." (Informant 4)

This lines up with the visual content analysis of the thirteen digital folklore books, where vibrant color palettes, balanced compositions, expressive character illustrations, and culturally meaningful symbols consistently pulled readers deeper into the narratives.

4.2.5. Role of Technology

All informants pointed to technology as central to shaping design in digital folklore storytelling books. Technology opens up storytelling techniques, animation, interactivity, that make the reading experience richer, pulling in contemporary audiences with a format that feels more immersive.

As two informants explained:

"Technology serve as, like a guideline or a platform to research for folklore... technology is like a tool for artists, for digital artists... technology serves as like the platform for you to publish your art." (Informant 4)

"It allows for innovation with tools for animation, interactivity, and enhanced visuals." (Informant 1)

4.2.6. Balancing Tradition and Modern Design

The interview findings indicated that achieving a balance between traditional cultural elements and contemporary design approaches is essential for ensuring the continued relevance of digital folklore storytelling. Participants consistently emphasised that while traditional visual elements, such as cultural motifs, traditional attire, and local landscapes, should be preserved to maintain authenticity, modern illustration techniques and digital technologies are equally important for attracting contemporary audiences, particularly younger readers. This balance was viewed as necessary to preserve cultural heritage without compromising the visual appeal and accessibility of digital storytelling.

As one participant explained:

“Traditional values should remain the foundation of the illustration, but modern design techniques are needed to make folklore more engaging for today's audience.” (Informant 6)

These perspectives validate the visual content analysis of the thirteen digital folklore storytelling books, where traditional cultural symbols were consistently integrated with contemporary illustration styles, digital colouring techniques, and modern layouts. Through Peirce's semiotic framework, these visual elements function as representamen that signify Malaysian cultural heritage (object) while enabling contemporary readers to construct meaningful cultural interpretations (interpretant) within a modern digital context. This demonstrates that effective digital illustrations preserve cultural authenticity while adapting visual communication strategies to meet current audience expectations.

These findings are consistent with Fang et al. (2024), who argued that digital storytelling should combine traditional cultural narratives with contemporary visual technologies to improve audience engagement. However, the present study extends previous research by demonstrating that the successful balance between tradition and modern design depends on the purposeful integration of visual design elements that simultaneously communicate cultural identity and contemporary aesthetic values.

Overall, the findings suggest that balancing traditional cultural representation with modern illustration practices enables digital folklore storytelling to remain culturally authentic, visually engaging, and relevant to contemporary audiences, thereby supporting the long-term preservation and appreciation of Malaysian folklore.

4.2.7. Selection of Color Schemes

The interview findings indicate that all illustrators considered colour to be the most influential visual element in establishing emotional atmosphere and communicating cultural identity within digital folklore storytelling. Participants consistently emphasised that colour selection should reflect the cultural setting, narrative mood, and characteristics of the folklore being represented.

As one illustrator explained,

"Colour plays an important role because it creates the mood of the story and reflects the cultural identity that readers immediately recognise."
(Informant 4)

These perceptions support the visual content analysis, where earthy tones, greens, and warm colours were consistently observed across the thirteen digital folklore storytelling books to represent traditional Malay environments and reinforce narrative authenticity. This finding is consistent with Fang et al. (2024), who reported that colour enhances both emotional engagement and cultural communication in digital storytelling. The present study further demonstrates that colour functions as a semiotic sign through Peirce's framework by enabling readers to interpret cultural meaning from visual representations.

4.2.8. Techniques for Cultural Authenticity

The interview findings highlighted that cultural authenticity in digital folklore storytelling is achieved through the deliberate integration of traditional visual elements that accurately represent Malaysian heritage. Participants consistently emphasised that authentic illustrations should incorporate culturally recognisable features, including traditional costumes, architecture, local landscapes, decorative motifs, and symbolic colour palettes. These visual elements were considered essential for preserving the original identity of folklore while ensuring that cultural meanings are effectively communicated to contemporary audiences.

As one participant explained:

"To maintain cultural authenticity, illustrators must understand the historical and cultural background of the folklore so that every visual element accurately reflects Malaysian heritage." (Informant 3)

These perspectives validate the visual content analysis of the thirteen digital folklore storytelling books, where traditional attire, architectural forms, natural environments, and cultural ornaments were consistently represented through the strategic application of colour, shape, texture, and composition. Within Peirce's semiotic framework, these visual elements function as representamen that signify Malaysian cultural traditions (object), enabling readers to construct interpretations (interpretant) associated with historical identity, cultural values, and collective memory. This demonstrates that cultural authenticity is achieved not only through historical accuracy but also through the meaningful use of visual design elements that reinforce cultural symbolism.

Overall, the findings suggest that techniques for achieving cultural authenticity extend beyond accurate visual representation. Instead, authenticity is reinforced through the purposeful integration of visual design elements that communicate cultural values, historical context, and symbolic meaning, thereby supporting the long-term preservation of Malaysian folklore in digital storytelling.

i. Utilizing Texture and Patterns

Participants agreed that texture enhances the realism and authenticity of digital folklore illustrations by representing traditional materials, costumes, and decorative motifs.

Rather than functioning solely as decorative details, textures were perceived as visual cues that communicate historical and cultural identity.

As one participant stated,

"Traditional patterns and clothing textures help readers recognise the historical background of the story." (INF2)

This observation supports the visual analysis, where detailed costume textures and traditional ornaments consistently reinforced the noble identity of folklore characters. Similar findings were reported by Ivanova (2024), who argued that texture contributes to authenticity in digital illustration. However, the present study further demonstrates that texture also functions as a cultural sign that preserves traditional Malaysian visual identity.

4.2.9. Role of Visual Storytelling Techniques

The interview findings demonstrated that visual storytelling techniques play a fundamental role in communicating narrative meaning, emotional expression, and cultural values in digital folklore storytelling. Participants consistently emphasised that the effective integration of composition, visual sequencing, character expressions, colour, and environmental settings enables readers to follow the storyline more intuitively while strengthening their emotional connection with the narrative. These techniques were considered essential for transforming traditional folklore into engaging digital experiences without compromising its cultural authenticity.

As one participant explained:

"Visual storytelling is about guiding readers through the story using illustrations that clearly communicate emotions, actions, and cultural values without relying solely on text." (Informant 4)

These perspectives validate the visual content analysis of the thirteen digital folklore storytelling books, where the strategic use of composition, visual hierarchy, character expressions, and symbolic visual elements consistently enhanced narrative clarity and audience engagement. Within Peirce's semiotic framework, these visual storytelling techniques function as representamen that signify narrative events, cultural symbols, and emotional contexts (object), enabling readers to construct meaningful interpretations (interpretant) throughout the storytelling process. This demonstrates that visual storytelling techniques extend beyond aesthetic presentation by facilitating narrative understanding and reinforcing cultural meaning.

Overall, the findings suggest that visual storytelling techniques are essential for enhancing narrative communication, audience engagement, and cultural preservation. By integrating visual design elements with culturally meaningful symbols, digital folklore storytelling books create immersive storytelling experiences while ensuring that Malaysian folklore remains relevant and accessible to contemporary audiences.

4.2.10. Considerations for Younger Audiences

The interview findings indicated that designing digital folklore storytelling books for younger audiences requires the careful integration of visual design elements that enhance comprehension, engagement, and cultural learning. Participants consistently emphasised that illustrations should employ vibrant colour palettes, expressive character designs, clear compositions, and age-appropriate visual complexity to sustain children's attention while effectively communicating cultural values. These design strategies were considered essential for making traditional folklore more appealing and accessible without diminishing its cultural authenticity.

As one participant explained:

"Illustrations for children should be simple, engaging, and culturally meaningful so that they can easily understand and enjoy the story."
(Informant 5)

These perspectives validate the visual content analysis of the thirteen digital folklore storytelling books, where bright colours, simplified character forms, balanced layouts, and expressive illustrations consistently enhanced narrative clarity and audience engagement. Within Peirce's semiotic framework, these visual elements function as representamen that signify characters, emotions, and cultural contexts (object), enabling younger readers to construct meaningful interpretations (interpretant) while remaining engaged with the narrative. This demonstrates that effective illustration design supports both storytelling and cultural understanding through purposeful visual communication.

Overall, the findings suggest that effective digital illustrations for younger audiences require a balance between visual simplicity, narrative clarity, and cultural authenticity. By integrating appropriate visual design elements with meaningful cultural symbols, digital folklore storytelling books can encourage children's engagement while fostering an appreciation of Malaysian cultural heritage.

4.2.11. Integration of Digital and Traditional Techniques

The interview findings indicated that the integration of traditional artistic elements with contemporary digital illustration techniques is essential for producing engaging and culturally authentic digital folklore storytelling books. Participants consistently emphasised that while digital tools improve creative flexibility, production efficiency, and visual quality, traditional cultural elements such as motifs, costumes, architecture, and local landscapes should remain central to the illustration process. This integration was perceived as an effective approach to preserving the originality of Malaysian folklore while adapting it to the expectations of contemporary digital audiences.

As one participant explained:

"Digital tools should enhance the illustration process without changing the traditional identity of the folklore. The cultural essence must always remain visible." (Informant 6)

These perspectives validate the visual content analysis of the thirteen digital folklore storytelling books, where traditional visual elements were consistently combined with

modern illustration styles, digital colouring techniques, and contemporary layouts. The integration of these approaches enhanced visual appeal while maintaining the authenticity of cultural representation. Within Peirce's semiotic framework, traditional visual elements function as representamen that signify Malaysian cultural heritage (object), while digital illustration techniques facilitate the effective communication of these meanings (interpretant) to contemporary readers. This demonstrates that digital technologies serve as a medium for strengthening, rather than replacing, traditional cultural narratives.

Overall, the findings suggest that integrating digital and traditional illustration techniques enables digital folklore storytelling books to remain visually engaging while preserving Malaysian cultural identity. This balanced approach ensures that folklore continues to be communicated effectively to contemporary audiences without compromising its historical and cultural significance.

4.1.12. Attractiveness of Design Elements

Based on the responses from the seven Informants regarding the specific elements of design that contribute to the attractiveness of digital folklore storytelling books, here is a list of keywords and all elements of design mentioned:

Color:

Keywords: Color choices, color palette, mood setting, traditional colors.

Mentioned by: Informants 1, 2, 4, 5, 7.

Form:

Keywords: forms, exaggerated shapes.

Mentioned by: Informants 2, 4, 5, 7.

Texture:

Keywords: Natural details, textures that add depth and richness.

Mentioned by: Informants 2, 4, 7.

Space:

Keywords: Clear layout, organized design, preventing overcrowding.

Mentioned by: Informants 4, 5, 7.

Line:

Keywords: Defining shapes, creating movement, guiding the eye.

Mentioned by: Informants 2, 4, 7.

Shape:

Keywords: Overall shapes in character and environment design.

Mentioned by: Informants 2, 4, 7.

Value:

Keywords: Contrast, highlighting key elements, ensuring readability.

Mentioned by: Informants 4, 5..

The findings show that design elements, particularly color, line, shape, and texture, carry significance in communicating cultural identity and pulling audiences into digital folklore storytelling. This is consistent with the findings of Acer and Gözen (2020), who discovered that youngsters recognize and understand illustrated design features like color and shape as significant elements of culture rather than simply design. Wang (2022) expands on this by demonstrating how illustration serves as a basic form of visual communication in digital environments, conveying aesthetic and cultural value as it adapts to digital medium. Hermanto (2019) raises a related point: unlike verbal storytelling alone, visual storytelling connects readers to a shared understanding of a

story's cultural symbols. This study builds on all three by applying Peirce's semiotic theory directly, showing how individual design elements function as representamen that generate cultural meaning through readers' interpretation.

This is supported by the interviews. Illustrators explained how they purposefully used these visual techniques to adapt Malaysian folklore for digital audiences while preserving it. Color, line, and shape were most frequently mentioned for the purpose of expressing cultural identity in the thirteen digital storytellingbook cover that were examined. The interviewees confirmed this, identifying color as the main tool for conveying a mood and reinforcing symbols of culture.

Notably, the analysis also established that online folklore story telling books can help close the generation gap by creating a fresh interest in preserving the cultural heritage amongst younger generations who are increasingly finding themselves attracted to digital media. It was also found out that creating a proper correlation between the classic designs and the modern design is the key to producing compelling and culturally sensitive digital storytells.

Furthermore, the results reveal why the visual design items are not just attractive features to be delighted to see but are essential to the overall storytelling elements that enhance the act of storytelling in digital books on folklore. In the analysis of the selected illustrations, it was determined that the most important and commonly used elements generally Across the thirteen digital folklore storytelling books analysed were color, shape, and line. They were often utilized when conveying a cultural element, emotional mood, and symbolism. In a manner of speaking, warm, vivid colors were often utilized as a sign of the warmth, traditions and excitement whereas the curves and dynamic shapes imprinted the motion and life in the images. The sense of place and reality was provided with a stronger texture and space, placing the narration in the settings that were familiar to the culture.

The paper analyzed every drawing based on the semiotic model created by Peirce and concentrated in the relationship between the representamen (the sign), object (the concept), and interpretant. This approach established that photographic representations report rich cultural messages, which can be arranged by the readers, especially children, with illustrations that are appealing to the eyes. These findings were backed by the interviews with the illustrators, who argued that they were interested in preserving old traditions, but should attract contemporary readers. Most of them have recognised the challenges of the process of transcription of the folklore into illustration and preservation of the major messages. It was also evident that thoughtful components of design must be used in sealing the divide that exists between the conventional and present digital storytelling.

5. Conclusion

The conducted research had a particular focus on the development of the Malaysian folklore in the digital age with the emphasis on the significance of design features that affect the digital folklore books of storytelling. The author examined how the traditional storytelling is changing with the application of digital media with special focus on the importance of visual design in terms of preserving cultural heritage and modern representation of the same. This paper sought to examine the application of unique design elements of line, shape, color, texture, space, value, and form in thirteen digital

storytelling books that portrayed Malaysian folklore published in the last ten years (2010-2020). According to the semiotic theory presented by Charles Sanders Peirce, the study has examined the role of illustrations in meaning making, enhanced engagement in the story, and the role of illustrations in the process of conveying the cultural identity essence. The research offered information on the role of artwork as an artistic and communicating component of digital folklore storytelling through content analysis and interviewing a number of illustrators. Lastly, it realized the need to investigate the ability of such digital versions to reach out to new audiences, especially younger generations, to leave them interested in the local folklore despite all the popularization of world of digital content.

Ethics Approval and Consent to Participate

The researchers followed the research ethics guidelines provided by the Research Ethics Committee of Universiti Teknologi MARA (UiTM). All procedures involving the illustrators interviewed in this study were conducted in accordance with the ethical standards of the institutional research committee, and informed consent was obtained from all participants prior to their involvement.

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