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A Study on the Visual Grammar of TikTok Poster Design and Short Video Covers: Content Analysis of Dominant Visual and Layout Structures

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ABSTRACT

This study uses short videos related to poster design on the TikTok platform as samples, selecting the cover or first frame of 150 publicly available videos as the analysis object, and recording publicly visible interaction indicators such as likes, favorites, shares, and comments. The study employs content analysis methods, encoding the cover from six dimensions: text density, readability, dominant visual element, layout structure, color contrast, and visual complexity, describing the visual grammar types and combination patterns of poster covers in the platform context. The study found that the photo-dominant type is the most common dominant visual category, accounting for 64.7%. Layout structures are primarily centered and top-bottom, accounting for 45.3% and 34.0%, respectively. At the combination level, the photo-dominant type combined with centered or top-bottom layouts constitutes the mainstream paradigm, whereas the abstract-graphic-dominant type more often co-occurs with freeform layouts, indicating a more experimental tendency. Based on this, this study proposes a reusable visual grammar description framework for covers, providing empirical basis for the organization and hierarchical control of poster cover information in mobile browsing scenarios.

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Key Words
Visual communication, short video cover, content analysis, layout structure, short video platform, tik tok

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INTRODUCTION

Short video platforms primarily rely on continuous scrolling, leaving users with very little time to make judgments within the information flow. Cover images often serve to immediately guide attention, highlight content, and build anticipation. For content focused on visual communication, the cover is not merely decoration; it is itself a visual interface that is repeatedly viewed and quickly interpreted. While platform interaction data is sometimes used to measure content visibility and popularity, a more critical issue in design research is how covers can organize information hierarchy, allocate visual weight, and establish a clear reading path within the context of small mobile screens and rapid browsing.

Poster design provides a representative subject for studying platform covers. Posters inherently possess both informational and visual attributes. They must ensure that information is readable and that style is perceived. On platforms like TikTok, many poster design videos directly use the final poster as the cover or first frame. This makes the cover not only a content entry point but also an observable design sample. Unlike traditional poster displays, platform covers are influenced by screen size, viewing distance, and browsing pace. Designers often need to complete information prompts and visual appeal within a very short time window, making it easier to develop repeatable structural strategies and visual grammar.

Current research on poster design largely focuses on style history, case studies, or design principles, emphasizing the design logic of composition, typography, color, and information hierarchy. Cover research within the platform context, however, pays more attention to dissemination and participation mechanisms, rarely systematically describing the cover as a design text with an internal structure. There is still room for connection between these two paths. Design research needs to answer a more fundamental and actionable question: What are the dominant visual types and layout structures presented in posters and covers on short video platforms? How are they combined? Which structures have become high-frequency paradigms, and which are more experimental in expression? Only by establishing a clear descriptive framework can subsequent cross-platform, cross-thematic, or cross-temporal comparisons be conducted.

Based on this, this study adopts a content analysis approach, establishing a coding framework around the visual grammar of platform covers and statistically describing it using publicly available samples. The study uses 150 pieces of content related to TikTok poster design as samples, recording the publicly visible basic information and interaction metrics of each piece of content, while using the cover or the first frame as the primary coding object. The coding dimensions focus on the core structural elements of cover design, including dominant visual type, layout structure, text density, readability, color contrast, and visual complexity. The goal of this study is not to evaluate the quality of individual posters, but to identify common types and combination patterns of cover design within the platform context, thereby providing structured evidence for understanding information organization methods in the platform environment.

This study's contributions are mainly reflected in two aspects. First, it proposes and applies a visual grammar encoding framework for short video platform cover scenarios, shifting the description of poster covers from empirical judgment to verifiable classification and statistics. Second, it presents the distribution and combination patterns of dominant visual and layout structures at the sample level and discusses the relationship between these patterns and the rapid reading scenarios on mobile devices, providing an extensible descriptive foundation for cover design research in the platform context.

To achieve the above objectives, this study focuses on the following research questions:

Research Question 1: In TikTok poster design-related content, what are the overall distribution characteristics of the dominant visual type and layout structure type of the cover?

Research Question 2: What are the combination rules between the dominant visual and layout structure, and is there a mainstream cover paradigm in the platform context?

Research Question 3: What descriptive differences exist in information load indicators such as text density, readability, and visual complexity among different dominant visual and layout structures?

The structure of this study is as follows. The next section will review design research and platform cover research related to this study, clarifying the theoretical position and research gaps of this study. Then, the data sources, coding rules, and analysis methods will be introduced, followed by the main results and discussion.

LITERATURE REVIEW

Shift Toward Design Attributes in Platform Cover and Thumbnail Research: Research on platform covers and thumbnails initially focused on dissemination effects and click behavior, but recent studies have increasingly shifted toward systematic descriptions of

visual design attributes. This study using YouTube branded videos as examples shows that attributes such as element complexity, object complexity, color richness, brightness, and image quality in thumbnails can be quantified and linked to user viewing behavior[1]. In larger-scale data contexts, cross-platform research further incorporates the number of faces, emotional cues, and text volume into automated measurement frameworks, indicating a correlation between increased text volume and decreased consumption[2]. Compared to simply discussing style, this type of research emphasizes that thumbnails, as a set of coded visual elements that act as entry cues, provide a retrievable path of variables for subsequent research.

Equally important, existing research has begun to validate the feasibility of human coding frameworks on short video platforms and adjacent platforms. For example, eye-tracking studies on scrolling on short video platform interfaces, starting from the position of the title and the interactive area, demonstrate that the scrolling context changes users' information acquisition paths and preferences[3]. Thumbnail studies on UGC platforms use features such as human-coded subject presentation, number of lines of text, and background distance, and employ visual hierarchy and cognitive load as explanatory frameworks[4]. These works collectively demonstrate that platform covers can be viewed as a type of visual interface with structural constraints, suitable for typological description using content analysis methods. They directly support coding design centered on dominant visual elements, layout structure, and text density, and provide empirical evidence for using platform context as a design constraint.

Complexity, Color Contrast, and Textual Information Serve as Core Visual Cues: At the operational variable level, complexity, color contrast, and textual information have been repeatedly proven to be important cues influencing rapid judgment. Koh and Cui used element complexity and object complexity as informational cues for the central path, emphasizing that thumbnails not only attract attention through aesthetics but also influence entry behavior through information density and structural clarity[1]. In the context of recommended content on children's platforms, researchers further proposed an encoding method for strong visual stimuli, integrating cues such as highly saturated bright colors, high contrast, dense characters, and exaggerated text into gradable intensity indicators, and completing large-sample multi-level coding with a high level of consistency[5]. This approach suggests that complexity and contrast are not abstract concepts but can be broken down into more concrete visual representations, thus entering the coding table and supporting statistical description.

Text density and readability are also key variables commonly found in platform cover research. Dong used the number of title lines as a direct indicator of thumbnail information load and explained its possible mechanism of action using visual hierarchy and cognitive load[4]. Loebbecke *et al.'s* cross-platform study also incorporated text volume into an automated cue system and reported that increased text volume was associated with decreased consumption[2]. In addition, Chu *et al*. discussed the interaction between image complexity and text readability in their research on online review images, providing a supplementary perspective for understanding that complexity and readability are not independent variables[6]. The above studies collectively demonstrate that text density, readability, color contrast, and visual complexity have good transferability and can constitute the core encoding dimensions of the visual grammar of platform covers.

Inspiration From Visual Hierarchy and Layout Structure Framework for Cover Coding: Discussions on visual hierarchy and layout structure in design research provide a more solid conceptual foundation for the structured description of platform covers. Studies focusing on infographics and educational media operationalize hierarchy into dimensions such as headline prominence, information order from general to specific, color contrast, layout organization, and readability, presenting actionable evaluation items in a checklist format[7]. Another infographic study uses hierarchy theory to analyze how color, font, layout, and images collectively guide the reading flow, mentioning common reading path organization methods[8]. In the more applied scenario of health data dissemination, researchers discuss how to derive visual hierarchy from information priority and map hierarchy to visual variables such as font size, color, and contrast[9]. Although these works do not focus on platform covers, their variable definitions and evaluation logic are highly consistent with the needs of rapid reading on platforms, providing theoretical justification for this study to use layout structure and readability as the main coding axis.

Corresponding to the hierarchical framework is the structured understanding of layout organization. Starting with page layout, Shi *et al*. proposed recovering hierarchical grouping from the layout of visual elements and defined and evaluated layout hierarchy on large-scale information presentation

samples[10]. In the field of visual narrative, the research of Upadhyayula and Cohn emphasizes that the viewer's segmentation and understanding of visual sequences has hierarchical structural characteristics, providing cognitive support for understanding the hierarchical organization of visual materials[11,12]. These studies collectively support a key judgment: layout structure is not only a stylistic description, but also an explicit form of information organization.

Normative Requirements for Visual Content Analysis Methods and Coding Research: When studying a large number of platform images, visual content analysis offers a path to balance sample size and repeatability. Parry provides a methodological overview of quantitative content analysis of visual materials, emphasizing the importance of unit division, sampling strategies, coding table design, and reliability and validity issues in visual research[13]. In a more general quantitative content analysis methodology, Coe and Scacco emphasize that the clarity of coding rules and consistency checks are prerequisites for ensuring reliable inferences[14]. The DCAM framework for video research further organizes coding types into nominal, ordinal, and scale categories, and emphasizes the necessity of clearly presenting the coding process and reliability checks in the research report[15]. These methodologies provide a normative basis for presenting coding rules and variable types in this study and also reserve a clear path for subsequent research to expand to two-person coding and consistency checks.

In the specific coding practice of visual communication content, Byrne *et al.'s* content analysis of infographics and data visualizations points out that visual expression contains a large amount of acquired coding and conventional arrangements. This means that the meaning of visual materials does not come entirely from a single element, but from conventional combinations and structures[16]. This point is equally important for platform cover research. Platform covers often trigger rapid recognition and categorization through stable structural combinations. Therefore, this study focuses on the combination rules of dominant visual and layout structures, and uses text density, readability, color contrast, and complexity as supplementary dimensions of information load to ensure that categorization not only describes form but also reflects structural differences under reading conditions.

Summary and Research Gaps: In summary, existing research has developed a relatively mature set of quantifiable clues in thumbnail and cover design, providing multi-layered support from platform context, visual hierarchy to coding methodology[1,2,13]. However, from a design research perspective, for content on short video platforms that uses the final poster as the cover, there is still a lack of systematic type descriptions and summaries of combination rules centered on dominant visuals and layout structure. This study, based on the transferable variables from existing research, further organizes them into a visual grammar coding framework for platform cover scenarios, and uses sample distribution and cross-structure to present common paradigms in the platform context, thus laying a descriptive foundation for more detailed comparisons and explanations in subsequent research.

MATERIALS AND METHODS

Research Design: This study employs quantitative content analysis as the primary research approach, treating poster covers on short video platforms as observable and coded design texts. A structured coding framework is used to perform descriptive statistics and typological induction of their visual grammar. Quantitative content analysis facilitates verifiable classification and comparison within a larger sample, transforming design observation from case-by-case judgments into reportable variable distributions and combination structures [14,13]. To ensure the adaptability of the coding dimensions to the platform cover scenario, this study focuses on the most critical visual organizational elements under the conditions of rapid reading on mobile devices, such as dominant visual elements, layout structure, text density, and readability, and provides clear judgment criteria and value ranges in the coding rules[13,15].

Sample Source and Analysis Unit: The sample consisted of publicly available content related to poster design on the TikTok platform. The study used poster design videos appearing in the platform's search results and recommendation feed as the sample frame, selecting content with a clearly defined poster image on the cover or in the first frame for analysis. The unit of analysis was a single cover image corresponding to a single video. If the same account or the same work appeared repeatedly with highly similar covers, deduplication was performed during the data collection phase to avoid bias in the typological distribution caused by duplicate samples. This study included a total of 150 samples. The sample publication dates covered May 25, 2022, to January 14, 2026. Account identifiers were recorded during the data collection phase for deduplication and verification, but identifiable account information

was not used in the statistical analysis and study presentation; the main text only used sequential numbers to represent the samples.

Data Recording and Variable Construction: This study records publicly visible interaction metrics and basic information for each sample, including likes, comments, favorites, shares, and posting date. Interactive metrics are used only for platform context and sample description information and are not the sole basis for the typological conclusions of this study. Considering that the platform's numerical displays may contain abbreviations of different magnitudes, this study uniformly converted abbreviations to actual values during table construction and stored all interactive metrics as calculable numerical variables.

Regarding design variables, the study used cover images for manual coding to form a set of visual grammar variables. The coding dimensions were uniformly defined by a coding rule table, mainly including dominant visual elements, layout structure, text density, readability, color contrast, and visual complexity. All of these dimensions adopted nominal or ordinal scales, suitable for frequency distribution, cross-tabulation, and type combination analysis[15].

Encoding Rules and Operational Definitions: To reduce drift caused by subjective judgment, the study established an operational coding rule table and provided a value range and judgment criteria for each variable. The coding was mainly based on the overall first-glance salience of the cover and the way the information was organized, ensuring that the judgment criteria could be repeatedly applied across different samples[13].

The dominant visual type describes the primary source that defines the visual center of the cover. Encoding categories include typography-dominant, abstract-graphic-dominant, illustration-dominant, photo-dominant, and 3D-rendering-dominant. Classification is based on the element that most immediately attracts attention and carries the main message. If typography occupies the main visual center, it is classified as typography-dominant. If a representational image or photograph of a person or object occupies the visual center, it is classified as photo-dominant.

Layout structure is used to depict the main organizational methods of cover information and visual weight. Encoding categories include centered, top-bottom, left-right, and freeform. Centered means the visual focus is concentrated in the center of the image and organized around it. Top-bottom means the information or main visual element is clearly divided into top-bottom sections and a reading path. Left-right means the information or main visual element is clearly divided into left-right sections. Freeform means there is no clear central axis or partition structure; elements are scattered or overlapped, creating a non-linear reading order.

Text density describes the amount of text information on the cover. Encoding uses ordinal levels to distinguish between almost no text, a small amount of text, and a moderate amount of text. Readability describes how easily the core text is recognized and read, coded as poor, medium, and good. Color contrast describes the intensity of contrast between the foreground and background in hue, brightness, or saturation, coded as medium or high. Visual complexity describes the number of elements, the degree of layering, and the intensity of texture detail, coded as simple, medium, and complex.

Coding Process and Quality Control: The coding was completed collaboratively by two researchers. The first researcher initially coded all samples according to the coding rules. The second researcher reviewed the coding results, focusing on variables where category boundaries were easily confused, such as dominant visual type and layout structure, as well as ordinal variables such as readability and visual complexity. The review phase combined sampling review with a review of disputed items. For items with disagreements, the two researchers returned to the original cover image and coding rules for discussion and determined the final code through consensus. To improve research transparency, this study retains the complete definition of the coding rule table in the appendix and explains the review process and dispute resolution principles in the main text. This process meets the basic requirements of content analysis research for the clarity of coding rules and the reproducibility of the coding process[14, 13,15].

Data Analysis Methods: This study focuses on descriptive statistics, first reporting the frequency and proportion distribution of each coded variable. Then, through cross-tabulation analysis, it identifies the combination patterns of dominant visual and layout structures, pinpointing high-frequency type combinations within the platform context, and further compares the distribution differences of different combinations in information load indicators such as text density, readability, and visual complexity. The analysis results are presented in tabular form, emphasizing a clear description of type structure and combination patterns. This analytical strategy is consistent with the type of induction and distribution reporting

emphasized in quantitative content analysis, providing a foundation for subsequent cross-platform comparisons or interpretative modeling[15,13].

RESULTS AND DISCUSSIONS

Based on the coding results of 150 TikTok poster design samples, this section presents the overall distribution and combination structure of cover visual grammar. The results section first describes the distribution characteristics of the dominant visual and layout structures, then presents the high-frequency combination paradigms of the two and finally compares the differences in information load indicators such as text density, readability, and visual complexity among different structural types.

The Platform Cover Presents a Stable Dominant Visual and Layout Distribution: In terms of dominant visual type, the photo-dominant category accounts for 64.7%, followed by typography-dominant at 19.3% and abstract-graphic-dominant at 13.3%. Illustration-dominant and 3D-rendering-dominant together account for less than 3%. This distribution indicates that in this context, representational images are still the most commonly used visual entry point for covers, while covers using typography or abstract graphics as the main visual element are relatively rare.

The layout structure also presents a stable mainstream form. Centered structures account for 45.3%, top-bottom structures account for 34.0%, and the two together account for nearly 80%; freeform layouts account for 17.3% and left-right layouts account for only 3.3%. This means that platform covers tend to favor a clear reading path and a well-defined focus in terms of structure, while left-right layouts, which require a longer reading span, are less common in the context of mobile covers.

From the perspective of information load-related indicators, the overall sample remained within the medium information load range. Text density was predominantly at level 1, accounting for 64.7%; level 2 accounted for 27.3%; and level 0 accounted for only 8.0%. Overall readability was good, with 56.0% of the samples coded as good, 39.3% as medium, and only 4.7% as poor. Visual complexity was relatively evenly distributed, with simple accounting for 37.3%, medium for 34.7%, and complex for 28.0%. Color contrast was predominantly medium, accounting for 57.3%, with high contrast accounting for 42.7%. These indicators suggest that the platform's poster covers tend to use a moderate amount of text information while maintaining readability and complexity within a relatively controllable range, under conditions of rapid recognition and reading. For ease of summary and presentation, the overall distribution of key variables is shown in Table 1.

The Combination of Dominant Visual Elements and Layout Structure Forms Several High-Frequency Paradigms: Based on the overall distribution, the cross-distribution results of dominant visuals and layout structure show that platform cover designs are not random combinations but rather form stable paradigms around a few high-frequency patterns. The two most prominent combinations are photo-dominant with a centered structure, and photo-dominant with a top-bottom structure, with 42 and 38 occurrences respectively. The third high-frequency combination is typography-dominant with a centered structure, with 20 occurrences. These three combinations alone account for two-thirds of the total sample, constituting the most typical cover design paradigms in this context. The cross-distribution of dominant visual types and layout structures is shown in Table 2.

Compared to the mainstream paradigm, the distribution of abstract-graphic-dominant layouts is more dispersed, appearing in top-bottom, freeform, and centered configurations, with 7 examples each of top-bottom and freeform layouts, and 5 of centered layouts. While typography-dominant layouts also show freeform and top-bottom arrangements, they clearly rely more heavily on centered structures, accounting for nearly 70% of the typography-dominant samples. Illustration-dominant and 3D rendering-dominant layouts have fewer samples, representing more individual stylistic experiments. Overall, platform posters and covers exhibit a mainstream combination centered on photographs and stable reading structures, while also containing secondary types represented by abstract graphics and freeform layouts, the latter being more experimental in structure and expression.

Different Structural Types Exhibit Clear Differences in Information Load Indicators: To illustrate the differences in information load among different visual grammar types, this study compares indicators such as text density, readability, and complexity from the perspectives of layout structure and dominant visual elements. The comparison results show that the correspondence between layout structure and information load is the clearest.

Freeform layouts are more strongly associated with higher information load. In freeform layouts, the proportion of text density at level 2 is 50.0%, significantly higher than the 19.1% for centered structures and 27.5% for top-bottom structures.

Table 1: Overall distribution of key variables (n=150)

Variable	Category	Count	Percentage
Dominant visual type	Photo-dominant	97	64.7
Dominant visual type	Typography-dominant	29	19.3
Dominant visual type	Abstract-graphic-dominant	20	13.3
Dominant visual type	Illustration-dominant	3	2.0
Dominant visual type	3D-rendering-dominant	1	0.7
Layout structure	Centered	68	45.3
Layout structure	Top–bottom	51	34.0
Layout structure	Freeform	26	17.3
Layout structure	Left–right	5	3.3
Text density	None	12	8.0
Text density	Low	97	64.7
Text density	Moderate	41	27.3
Readability	Good	84	56.0
Readability	Medium	59	39.3
Readability	Poor	7	4.7
Color contrast	High	64	42.7
Color contrast	Medium	86	57.3
Visual complexity	Simple	56	37.3
Visual complexity	Medium	52	34.7
Visual complexity	Complex	42	28.0

Table 2: Cross-tabulation of dominant visual types and layout structures (n=150)

Dominant visual type	Centered	Top–bottom	Freeform	Left-right
Photo-dominant	42	38	13	4
Typography-dominant	20	4	5	0
Abstract-graphic-dominant	5	7	7	1
Illustration-dominant	1	2	0	0
3D-rendering-dominant	0	0	1	0

Simultaneously, freeform layouts exhibit higher complexity, with complex layouts accounting for 46.2% and simple layouts only 15.4%; the opposite is true for centered structures, where simple layouts account for 50.0% and complex layouts only 22.1%. This means that in the samples, freeform layouts are often accompanied by denser element organization and higher textual information content, and without clear hierarchical control, they are more likely to increase reading costs.

In contrast, centered and top-bottom structures are more likely to maintain low visual complexity and high readability. The proportion of structures with good readability is 58.8% for both types. The proportion of freeform layouts with good readability is 46.2%. Although there is no obvious collapse in readability, its higher text density and complexity suggest that freeform layouts rely more on fine-grained control of contrast, font size, and white space to maintain readability. Color contrast varies relatively mildly across different layouts: high contrast is observed in centered structures (39.7%), top-bottom structures (47.1%), and freeform layouts (46.2%), indicating that layout structure has a stronger impact on information density and complexity than on color contrast.

From the perspective of dominant visual type, typography-dominant covers tend to have lower complexity and higher readability. In typography-dominant covers, simple covers account for 65.5%, complex covers for only 13.8%, and good readability for 75.9%. Abstract-graphic-dominant covers also show good readability, with 70.0% rated as good. Photo-dominant covers have a complexity range of medium to complex, with medium at 42.3%, complex at 28.9%, and simple at 28.9%; their readability is concentrated between medium and good, with good at 47.4% and medium at 48.5%. This result suggests that while photo-dominant covers provide a concrete entry point, background details and multiple layers of information can easily increase the overall complexity, making readability more dependent on typography and contrast. Regarding text density, 12.4% of photo-dominant covers still have a density of 0, indicating that in some samples, the concrete image itself can serve as the primary means of clarification; while typography-dominant and abstract-graphic-dominant covers almost never have a density of 0, indicating that these two types rely more on text to convey information.

Summary: Overall, the poster covers within the platform context exhibit a relatively clear typological structure and differences in information load. The dominant visual element is photo-dominant, with centered and top-bottom layouts predominating, forming a stable, high-frequency combination paradigm. In contrast, abstract graphics and freeform layouts more frequently coexist, constituting a more experimental secondary type. Structurally, freeform

layouts are more likely to be accompanied by higher text density and complexity, while typography-dominant layouts tend towards lower complexity and higher readability. These findings provide a data foundation for subsequent discussions on the structural constraints and design Implications of platform covers in mobile fast-reading scenarios.

Mainstream Cover Paradigms and their Design Meanings in the Platform Context: The sample data shows that the cover designs of TikTok posters exhibit a relatively stable distribution and combination structure in terms of dominant visual elements and layout. Photo-dominant elements occupy the mainstream position, with centered and top-bottom structures being the most common organizational methods. The three combinations of photo-dominant with centered structure, photo-dominant with top-bottom structure, and typography-dominant with centered structure are particularly prominent, constituting typical cover paradigms within the platform's context.

From a design research perspective, this concentration does not necessarily mean that poster covers on the platform are becoming monotonous but rather reflects the selective pressure on information organization in the context of rapid mobile browsing. Centering and top-bottom structures provide a clearer reading path and visual focus, suitable for quickly identifying key information and providing meaning cues. Eye-tracking experiments show that in continuously scrolling interfaces, information location and interface structure influence attention allocation and preference, suggesting that the cover is not an isolated flat work, but rather a visual entry point embedded in the information flow interface[3]. In this context, the high proportion of photographs can be understood as a strategy to reduce the cost of understanding through concrete recognition. Consistent with the emphasis on "quickly identifiable visual cues" in thumbnail research, concrete subjects are often more likely to become part of the entry cue[1].

Meanwhile, the type of distribution also reflects the generation of visual conventions within the platform environment. Information visualization and infographic research indicates that visual expression often establishes meaning through routine arrangements and acquired encoding, and viewers can more quickly identify and categorize within familiar structures[16]. Platform covers, to some extent, also rely on such structural conventions to enhance readability and type recognition. The concentration of mainstream paradigms in this study's sample provides structured evidence for the existence of relatively stable visual conventions on platform covers.

The Coupling Relationship Between Freeform Layout and Information Load: The research results show that freeform layouts are more likely to be accompanied by higher text density and higher visual complexity, while centered structures are more often associated with lower complexity. The significance of this for design research lies in the fact that layout structure is not only a style label, but also an outward manifestation of information load. Freeform layouts often create stronger experimental visual effects through element overlay, floating arrangements, and multi-focal organization, but they also tend to increase the reading cost on mobile devices, making hierarchical control a key factor in determining whether a cover is "readable."

Related research provides two intersecting explanatory paths. The first comes from research on thumbnails and platform visual cues. Studies focusing on short video platform thumbnails use the number of title lines as a direct cue for information load and explain its potential impact through cognitive load and visual hierarchy[4]. Cross-platform studies also incorporate cues related to text volume and complexity into their measurement frameworks and discuss how increased text volume may reduce consumer propensity to consume[2]. These studies do not directly discuss poster covers, but they are highly similar to the coding dimensions in this study, indicating that text density and complexity are indeed core variables in the context of rapid platform selection.

The second explanatory path comes from research on visual hierarchy and reading flow. Information hierarchy research emphasizes that elements such as prominent headings, the order of information from general to specific, contrast, and readability are crucial for establishing a reading path[7]. In more applied health data dissemination scenarios, researchers also emphasize the need to derive visual hierarchy from information priority and map this hierarchy to font size, contrast, and structural levels[9]. In contrast to this study, freeform layout is not necessarily undesirable, but it requires explicit hierarchical strategies to offset the burden of high density. In the sample of this study, freeform layout did not exhibit a complete loss of readability, indicating that some covers achieved compensatory processing through contrast, font size, and white space. However, considering the overall trend of text density and complexity, freeform layout relies more on fine-grained hierarchical control to maintain rapid reading.

Differences Between Typography-dominant and Photo-dominant Covers, and Implications for Design Strategies: At the level of dominant visual type, typography-dominant covers tend to have lower complexity and higher readability, while photo-dominant covers are more likely to fall into the medium to high complexity range, with readability concentrated at a medium level. This difference can be translated into two more operational structural strategies.

First, typography-dominant covers rely more on structural order to convey meaning. When a font serves as the primary visual element on a small mobile screen, it needs a clear hierarchy to maintain recognizability. Therefore, it naturally integrates with centered structures and maintains clarity by minimizing background interference. Existing research suggests an interaction between image complexity and text readability; complex backgrounds may amplify the difficulty of text recognition[6]. This research also supports our conclusion: when a font serves as the primary visual element, it must maintain rapid readability through stronger contrast and more restrained background details.

Secondly, while photo-dominance has advantages in concrete image recognition, it also more easily introduces background details and multiple layers of information, leading to increased complexity and thus increasing the difficulty of text layout. Research on the visual attributes of thumbnails considers complexity as part of the informational cue, pointing out that it may affect entry behavior and comprehension costs[1]. Therefore, photo-dominance does not equate to "easier to read." It requires stabilizing the hierarchy through cropping, framing selection, background simplification, and reserving text areas to avoid the subject and text competing for visual weight. In other words, the key to photo-dominance is not whether to use a photograph, but whether to process the photograph into a clear primary visual carrier.

Contribution to Design Research and its Reusability: Based on the literature review and results, this study's contributions are mainly reflected in two aspects: framework and evidence. First, poster covers are explicitly identified as analyzable design texts, and a verifiable coding framework is established through content analysis, enabling visual observations to be reported and verified in the form of variables and types[13,14]. Second, the study identifies mainstream paradigms and secondary types with dominant visual and layout structure as the core axis, emphasizing the stability of the structural combination itself, thus presenting platform cover design conventions as comparable typological evidence[10]. Third, this study provides a baseline distribution and variable system, facilitating the subsequent introduction of samples from different platforms, themes, or time periods within the same framework for further comparative and interpretive research[15].

CONCLUSION

This study focuses on poster design on the TikTok platform, treating the cover or first frame as observable and coded design text. A visual grammar coding framework for the platform's cover scenarios is constructed and applied. Based on descriptive statistics and cross-analysis of 150 publicly available samples, the study presents the type of distribution and combination patterns of poster covers within the platform context from dimensions such as dominant visual elements, layout structure, and information load.

The research results show that platform poster covers exhibit a relatively stable mainstream structure. The dominant visual element is photo-dominant, with centered and top-bottom layouts forming high-frequency combination paradigms. Meanwhile, abstract-graphic-dominant and freeform layouts are more likely to form secondary types, exhibiting a stronger experimental tendency. More importantly, the study found a clear correlation between layout structure and information load characteristics. Freeform layouts are more often accompanied by higher text density and higher visual complexity, while centered structures are more often associated with lower complexity. Typography-dominant covers are more effective in controlling complexity and maintaining readability, while photo-dominant covers are more susceptible to the influence of background details and multiple layers of information, making readability more dependent on the handling of structure and contrast.

For design research, the significance of this study lies not in providing a universally effective best solution, but in offering a reusable descriptive language and structural evidence. Existing research has shown that platform thumbnails and covers can be decomposed into a quantifiable set of visual cues, and content analysis of visual materials also emphasizes the importance of coding rules and reproducibility[1,13]. Building on these foundations, this study further focuses on the structural level that design research is concerned with, establishing typological evidence around the combination of dominant visual elements and layout structure, and supplementing typological differences with information load indicators such as text density, readability, and complexity. This

framework can be used to describe the cover design ecosystem within a specific platform context and provides a variable basis for subsequent cross-platform or cross-thematic comparisons.

Based on the findings of this study, several design insights for platform cover scenarios can be proposed. First, mobile browsing requires a clear reading path and a well-defined visual focus, so it is not surprising that centered and top-bottom structures are the mainstream in the samples. Second, freeform layouts offer greater room for experimental expression, but often come with a higher information load, requiring stronger hierarchical strategies to offset the reading cost. Finally, typography-dominant and photo-dominant approaches each have their advantages and risks. Typography-dominant approaches are more likely to achieve structural order and high readability, while photo-dominant approaches are easier to identify, but they also require cropping, background simplification, and text area reservation to control complexity and stabilize hierarchy. These insights should be understood as structural summaries based on the sample context, rather than prescriptions effective for all platforms and all themes.

This study still has several limitations. The samples are from a single platform and a specific context; their type of distribution may be influenced by the content creator group, platform aesthetic preferences, and recommendation mechanisms simultaneously; therefore it is not suitable to directly generalize to all platforms or all design themes. This study used a method of one-person initial coding and another person reviewing; although review and negotiation reduced individual bias, the boundary samples may still have some flexibility in judgment in the absence of reports on the proportion of independent repeated coding and consistency coefficients. Finally, this study mainly uses descriptive statistics and did not conduct significance tests on type differences, nor did it directly verify the impact of different structures on attention allocation and information acquisition through user experiments; therefore, the conclusions should be understood as structural evidence rather than causal inferences.

Further research can proceed in three directions. First, conduct independent, repeated coding by two coders on a certain proportion of the sample and report the consistency coefficient to further enhance the verifiability and reproducibility of the typology. Second, conduct cross-platform, cross-topic, or cross-time comparative studies to examine whether platform cover paradigms are platform-specific or exhibit evolutionary trends. Finally, introduce mobile experimental methods, such as eye-tracking or rapid recognition tasks, to directly examine the impact of different layout structures and dominant visual types on attention and reading efficiency, thereby more closely connecting the descriptive framework of this study with user-level reading evidence[3].

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