

Narrative Strategies and Effect Evaluation of Dynamic Visual Design in New Media Communication

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ABSTRACT With the rapid development of new media technologies, dynamic visual design has expanded traditional communication forms by integrating images, animation, interaction, and narrative logic into digital content presentation. This paper systematically analyzes the narrative strategies of dynamic visual design in new media communication, including symbol coding, time-space reconstruction, interactive guidance, and emotional resonance. A “strategy-process-effect” evaluation framework is constructed, with cognitive effect, emotional effect, and behavioral effect selected as core indicators. Typical cases are examined through questionnaire surveys, eye-tracking experiments, and statistical data analysis to compare the communication effects of different narrative strategies. The results show that the interactive guidance strategy performs best in improving user participation and information memory depth, while the emotional resonance strategy significantly promotes behavioral transformation. Rhythm control and symbol adaptability of dynamic visual elements directly affect communication effectiveness. The study provides theoretical support and practical guidance for optimizing dynamic visual design schemes, improving visual information transmission efficiency, and enhancing narrative performance in new media communication environments.

INDEX TERMS dynamic visual design, new media communication, narrative strategy, effect evaluation, information transmission

I. INTRODUCTION

A. RESEARCH BACKGROUND

SINCE the 21st century, the emergence and rapid development of the mobile Internet have revolutionized information dissemination and reception, significantly expanding the transmission efficiency and global reach of digital innovations and design trends. This technological shift has accelerated the synchronization of market intelligence and consumer preferences, enabling the industry to respond instantaneously to the demands of a hyper-connected era[1]. The rapid development and application of advanced technologies such as digital technology, multimedia technology and network technology have transformed the traditional visual methods of design works[2-4]. There are not only static visual design works but also dynamic visual design works. Technological development has broken the limitations of traditional media in visual design forms[5, 6].

Compared with traditional visual design, dynamic visual design breaks through spatial constraints and can convert complex information into easy-to-understand visual language by constructing narrative logic[7, 8]. The advantages of three-dimensionality and integrity of dynamic vision in information transmission can effectively empower brand in-

formation dissemination and image building, and have been favored by many enterprises[9-11]. Dynamic visual design is based on certain computer technologies, using software to create artistic visual works. The final presentation of the works can be flat, 2D short films, 3D short films, or interactive, virtual, conceptual, etc.[12, 13] Although dynamic images are very common in brand promotion, facing the digital communication environment, some traditional enterprises still use traditional design methods to meet new design requirements in terms of visual image, which are quite different from competitors in terms of visual vitality, brand narrative strategy and completeness. At present, there are many problems in dynamic visual design in the new media field: first, the disharmony of visual elements, including chaotic basic composition of graphics and inaccurate emotional transmission of colors; second, the excessive and purposeless movement of visual elements, which does not carry information content and interferes with the audience's reception of key information; third, some designs lack accurate positioning of target users, and the narrative strategy does not match user needs; at the same time, the evaluation system for the communication effect of dynamic visual design is not yet perfect, making it difficult to scientifically measure the quality of design schemes.

Based on the above background, this paper explores the narrative strategies of dynamic visual design within new media communication and evaluates its effects on the digital presentation of cultural heritage and modern fabric innovation through a combination of theoretical research and design practice. This dual approach aims to establish a systematic framework for enhancing the visual storytelling and market impact of intelligent products in the digital landscape. To address the specific application in brand communication, this study constructs a theoretical connection between general dynamic visual design principles and brand characteristics: brands often need to convey professional information such as fabric textures, material properties, and design concepts, while dynamic visual design can translate these abstract information into intuitive visual expressions. For example, symbol coding can simplify complex fabric composition information, time-space reconstruction can show the evolution of craftsmanship, interactive guidance can allow users to explore fabric details through operations, and emotional resonance can link products with lifestyle and emotional needs, forming a targeted application path for brand communication.

B. RESEARCH STATUS

The rapid development of digital media technology has shown wide applications in many fields [14-16], such as film, animation, advertising and other fields. Graphic design based on computer technology spreads rapidly with the new media era. Dynamic graphic design has been widely developed and applied, and continues to inject new creativity and vitality into other fields[17, 18].

The development of dynamic visual design has been studied and analyzed by many scholars in China. In her paper “The Application Value of Visual Dynamic Design in New Media Advertising”, Liu Haiyan elaborated on the connotation of visual dynamic design and the application value of visual dynamic design in new media advertising, including audience experience value and advertising communication value[19]. On this basis, Li Zhuoyang analyzed the extended application of visual dynamic design in new media advertising[20]. Some scholars have proposed that dynamic visual design can be combined with Chinese traditional elements to fully display national characteristics, promote the integration of Chinese traditional culture with world standards, and enable traditional culture to be reborn in the field of modern visual communication[21].

Foreign research on dynamic design has a more complete system and more sufficient content. Austin Shaw proposed in his book “Graphic Design in Motion”[22] that the current and future dynamic visual creation should be summarized by “Graphic Design in Motion”, which is more appropriate than “Motion Graphic Design”. The book also systematically analyzes the entire process of dynamic design project creation, and details the methods and tools that can be used in each design stage such as concept development, visual style definition, narrative timeline construction, and

technical execution. From a linguistic perspective, “Graphic Design in Motion” emphasizes the core status of graphic design in dynamic expression, focusing on the design logic and creative process; while “Motion Graphic Design” tends to highlight the dynamic form itself. For the research framework of this paper, which focuses on narrative strategies and effect evaluation, “Graphic Design in Motion” is more in line with the research orientation of integrating design logic, narrative structure and communication effects, as it emphasizes that dynamic expression is a means to serve graphic design and information transmission, rather than an end in itself. This distinction helps to clarify the core of the research: exploring how to use dynamic means to optimize the communication effect of visual design, which is consistent with the research theme of this paper.

C. RESEARCH CONTENT

The research content of this paper mainly includes the following four aspects:

- (1) Sort out the relevant theoretical basis of dynamic visual design and new media communication, and clarify the core concepts and theoretical support;
- (2) Systematically sort out the core narrative strategies of dynamic visual design in new media communication, and analyze the connotation, applicable scenarios and implementation paths of each strategy;
- (3) Construct an evaluation framework for the communication effect of dynamic visual design, and clarify the evaluation dimensions, indicators and evaluation methods;
- (4) Verify the differences in communication effects of different narrative strategies through empirical research, and test the scientificity and feasibility of the evaluation framework.

II. DEFINITION OF CORE CONCEPTS

A. DYNAMIC VISUAL DESIGN

Dynamic visual design refers to presenting information through narrative storylines or abstract and generalized visual forms. Dynamic graphics have their own unique geometric style characteristics, visual appeal, and can convert language into visual effects, transmitting information through dynamic forms.

Its core characteristics include dynamics, narrativity, interactivity and intuitiveness:

- Dynamics are manifest in the movement and change of visual elements in the time dimension;
- Narrativity is manifest in the construction of a logically clear information transmission path through the combination and sequence of elements;
- Interactivity is manifest in the user's ability to participate in the presentation process of visual content through operations;
- Intuitiveness is manifest in converting complex information into easy-to-understand visual language.

B. NEW MEDIA COMMUNICATION

“New media” is relative to traditional old media. It is both a constantly changing concept and a developing concept. New media is a media with innovative forms based on digital information technology and characterized by interactive communication[23]. At present, the types of new media mainly include network new media, mobile new media, digital new media, etc.

New media communication has the characteristics of immediacy, interactivity, fragmentation and personalization:

- Immediacy is manifest in the rapid release and dissemination of information;
- Interactivity is manifest in the user’s ability to participate in the comment, sharing, creation and other processes of information;
- Fragmentation is manifest in the scattered information reception time and short content of users;
- Personalization is manifest in the platform’s ability to push customized information according to user preferences.

C. VISUAL NARRATIVE STRATEGY

The narrative of dynamic graphics aims at efficient information transmission, so it is required to use vivid graphics and text to present logical and rhythmic information in a short time. To make the information received by the audience more complete and accurate, dynamic elements should occupy the corresponding visual weight according to the information level they carry.

III. NARRATIVE STRATEGY SYSTEM OF DYNAMIC VISUAL DESIGN IN NEW MEDIA COMMUNICATION

A. SYMBOL CODING STRATEGY

Dynamic visual symbols include image symbols, color symbols, text symbols, animation symbols, etc. The core of the symbol coding strategy is to achieve accurate matching between symbols and information, and improve information transmission efficiency. The symbol coding strategy is applicable to new media scenarios with high information density that need to quickly transmit core information, such as government information release, news bulletins, and product core function introduction. For high-information-density scenarios, the symbol coding strategy prioritizes transmission speed and information coverage, and its effectiveness should be evaluated by “information transmission efficiency” (i.e., the amount of information transmitted per unit time) rather than simply relying on attention duration, information comprehension, and memory indicators. In such scenarios, a shorter attention duration may indicate that users can quickly obtain key information, reflecting the efficiency advantage of the strategy.

B. TIME-SPACE RECONSTRUCTION STRATEGY

Dynamic visual design can realize the flexible reconstruction of narrative time and space through time compression,

stretching, flashback, as well as space switching, superposition, and virtual construction, enriching the expressiveness and appeal of the narrative.

The time-space reconstruction strategy is applicable to new media scenarios with rich narrative content that need to show time span or spatial changes, such as historical and cultural communication, character story telling, tourism promotion, and sci-fi theme content creation.

C. INTERACTIVE GUIDANCE STRATEGY

The interactive guidance strategy emphasizes user initiative, allowing users to independently control the progress, direction and content of the narrative through interactive operations such as clicking, sliding, and dragging.

The interactive guidance strategy is applicable to new media scenarios that need to improve user participation and enhance user immersion, such as interactive advertisements and H5 marketing activities. In the evaluation of the interactive guidance strategy, “attention duration” should be interpreted in combination with the interactive mechanism: the longer attention duration is not only a mechanical result of the interactive format but also reflects the active investment of users in the information reception process. Supplementary analysis of eye-tracking data (such as fixation point concentration and saccade frequency) shows that users in the interactive guidance group have more concentrated attention and deeper information processing, which verifies that the longer attention duration is accompanied by improved psychological attention quality.

D. EMOTIONAL RESONANCE STRATEGY

Dynamic visual design can convey different emotions such as joy, touch, anger, and worry through the combination of colors, images, animation rhythms and other elements, triggering users’ emotional identification. The emotional resonance strategy is applicable to new media scenarios that need to convey emotional values and improve users’ emotional identification, such as public welfare communication, brand emotional marketing, holiday greeting content, and emotional story telling.

IV. CONSTRUCTION OF EFFECT EVALUATION FRAMEWORK OF DYNAMIC VISUAL DESIGN IN NEW MEDIA COMMUNICATION

A. CORE LOGIC OF THE EVALUATION FRAMEWORK

Based on the core logic of “strategy-process-effect”, this paper constructs an effect evaluation framework of dynamic visual design in new media communication.

- “Strategy” refers to the four narrative strategies sorted out earlier: symbol coding, time-space reconstruction, interactive guidance, and emotional resonance;
- “Mechanism” refers to the intermediate path through which narrative strategies affect communication effects, including attention allocation mechanism (how strategies guide users’ attention distribution), information processing mechanism (how users interpret and

integrate information under different strategies), and emotional activation mechanism (how strategies trigger users' emotional responses);

- “Effect” refers to the final impact of the communication process on users, including three dimensions: cognition, emotion and behavior.

The construction of the evaluation framework should follow the following principles:

First, the scientific principle. The evaluation indicators should be based on relevant theories and research results, with clear theoretical basis;

Second, the comprehensiveness principle. The evaluation indicators should cover multiple effect dimensions such as cognition, emotion and behavior to comprehensively

measure the communication effect; Third, the operability principle. The evaluation indicators should be measurable and data can be obtained through empirical research methods;

Fourth, the targeted principle. The evaluation indicators should be combined with the characteristics of dynamic visual design and new media communication to meet the needs of the research theme.

B. EVALUATION DIMENSIONS AND INDICATOR SYSTEM

Based on relevant theoretical foundations and combined with the characteristics of dynamic visual communication, the evaluation dimensions and indicator system of dynamic visual design effect are designed (Table 1).

TABLE 1. Evaluation Dimensions and Indicator System of Dynamic Visual Design Effect

Evaluation Dimension	Indicator Name	Indicator Definition	Measurement Method
Cognitive Effect Dimension	Attention Duration	The length of time users focus on dynamic visual content, reflecting the degree of attention attraction of the content to users	1. Eye-tracking experiment to measure fixation time; 2. Obtain residence time from new media platform background data
	Information Comprehension	The degree to which users understand the core information transmitted by dynamic visual content	Questionnaire survey method, design information comprehension questions, and evaluate according to the correct rate of answers
	Information Memory	The depth of users' memory of the core information of dynamic visual content	Delayed recall method, conduct a questionnaire survey after a period of time receiving information, and evaluate according to the accuracy and completeness of recall
Emotional Effect Dimension	Emotional Identification	The degree of users' identification with the emotions transmitted by dynamic visual content	Questionnaire survey method, measured by Likert 5-point scale
	Emotional Fluctuation Amplitude	The degree of users' emotional changes in the process of receiving dynamic visual content	1. Physiological experiment method to measure physiological indicators such as heart rate and skin conductance response; 2. Questionnaire survey method to let users describe emotional changes and evaluate
	Content Preference	The degree of users' preference for the dynamic visual content itself	Questionnaire survey method, design dimensions for content design, narrative, etc., measured by Likert 5-point scale
Behavioral Effect Dimension	Participation Intention	The degree of users' willingness to participate in interactive activities related to dynamic visual content	Questionnaire survey method, measured by Likert 5-point scale
	Sharing Intention	The degree of users' willingness to share dynamic visual content with others	1. Measured by questionnaire survey method; 2. Obtain the number of shares and reprints from new media platform background data for evaluation
	Behavioral Transformation Intention	The degree of users' willingness to take relevant actions after receiving the content	1. Measured by questionnaire survey method; 2. Obtain behavioral transformation data from background data for evaluation

Note: The “Likert 5-point scale” in the table uniformly adopts the scoring standard of “1-strongly disagree/strongly unwilling, 2-disagree/unwilling, 3-neutral, 4-agree/willing, 5-strongly agree/strongly willing.”

C. SELECTION OF EVALUATION METHODS

This paper adopts a combination of multiple evaluation methods, including eye-tracking experiment method, questionnaire survey method, background data analysis method and in-depth interview method:

(1) Eye-tracking Experiment Method:

Use an eye-tracker to record the eye movement indicators of users while watching dynamic visual content, which is used to evaluate the attention distribution and attention duration of users.

(2) Questionnaire Survey Method:

After users receive dynamic visual content, collect users' subjective evaluation data through online questionnaires. It is applicable to the evaluation of three effect dimensions: cognition, emotion and behavior.

(3) Background Data Analysis Method:

Obtain objective data from the background of new media

platforms to verify the authenticity of questionnaire survey results and provide objective data support for the evaluation of behavioral effect dimensions.

(4) In-depth Interview Method:

Select some users for in-depth interviews to understand their cognitive process, emotional experience and behavioral decision-making motivation of dynamic visual content, and provide qualitative support for the analysis of evaluation results.

D. EVALUATION PROCESS DESIGN

The effect evaluation process of dynamic visual design in new media communication mainly includes the following five steps:

(1) Determine the core objectives of the evaluation, and clarify the dynamic visual content and target user groups to be evaluated.

(2) According to the evaluation objectives and objects, select appropriate evaluation methods, and design eye-tracking experiment schemes and questionnaire survey content.

(3) Data Collection:

Conduct eye-tracking experiments to collect users' eye movement data;

Release dynamic visual content and collect background data of new media platforms;

After users receive the content, distribute questionnaires to collect subjective evaluation data;

Select some users for in-depth interviews to collect qualitative data.

(4) Data Processing and Analysis:

Use SPSS statistical software to conduct quantitative analysis on questionnaire survey data and eye movement data;

Conduct qualitative analysis on in-depth interview data to extract core viewpoints.

(5) Based on the data analysis results, draw conclusions on the differences in communication effects of different narrative strategies, evaluate the quality of dynamic visual design schemes, and put forward targeted optimization suggestions for existing problems.

V. EMPIRICAL RESEARCH: COMPARATIVE ANALYSIS OF COMMUNICATION EFFECTS OF DIFFERENT NARRATIVE STRATEGIES

A. RESEARCH HYPOTHESES

Based on the narrative strategies sorted out earlier and the constructed evaluation framework, this paper proposes the following research hypotheses:

H1: There are significant differences in cognitive effects among different narrative strategies, and the interactive guidance strategy has the best cognitive effect.

H2: There are significant differences in emotional effects among different narrative strategies, and the emotional resonance strategy has the best emotional effect.

H3: There are significant differences in behavioral effects among different narrative strategies, and both the emotional resonance strategy and the interactive guidance strategy have better behavioral effects.

B. EXPERIMENTAL DESIGN

1) Experimental Objects

Using random sampling, 120 new media users were selected as experimental objects, aged between 18-45 years old, covering different genders, occupations and educational backgrounds.

The experimental objects were randomly divided into 4 groups, with 30 people in each group, watching dynamic visual content designed with symbol coding strategy, time-space reconstruction strategy, interactive guidance strategy and emotional resonance strategy respectively. This study was approved by the Ethics Committee of Shanxi College of Applied Science and Technology, and was performed in accordance with the principles of the Declaration of Helsinki. All eligible participants signed an informed consent form. It should be noted that the sample size in this study is a preliminary exploration. Although statistical analysis shows "extremely significant differences", the generalizability of

the results is limited to a certain extent. In future research, we will expand the sample size to 300-500 people, covering more diverse age groups, educational backgrounds and regional distributions to improve the external validity of the research.

2) Experimental Materials

Select "green environmental protection" as the experimental theme, and design 4 dynamic visual short videos with different narrative strategies. Each video is 60 seconds long to ensure that the core information points (including the importance of environmental protection, common environmental protection behaviors, and the impact of environmental pollution) are consistent, while the narrative strategies and information presentation forms are different:

(1) Symbol Coding Group:

Adopt a combination of concise environmental protection icons and text symbols to transmit environmental protection knowledge through dynamic switching, emphasizing the intuitiveness and understandability of symbols.

(2) Time-Space Reconstruction Group:

Show the evolution process of environmental pollution through time-lapse, and show the comparison between different pollution scenarios (forests, rivers, cities) and post-environmental governance scenarios through space switching, constructing a narrative logic of time-space interweaving.

(3) Interactive Guidance Group:

Design interactive links such as "click to unlock environmental protection knowledge" and "slide to switch scenes". Users can participate in the narrative process through clicking and sliding operations, and independently control the progress of information reception.

(4) Emotional Resonance Group:

Adopt warm green as the main color, show scenes of harmonious coexistence between humans and nature, and transmit environmental protection emotions through the emotional expression of characters to arouse user resonance.

The consistency of core information is guaranteed by formulating a detailed information outline, and each video strictly follows the outline to transmit the same key information. The difference in narrative strategies lies in how to present these core information points, rather than changing the information itself. For example, the symbol coding group uses symbols to simplify the expression of core information, while the emotional resonance group combines core information with emotional scenes, which is in line with the definition of "different strategies with consistent core information" in communication theory.

3) Experimental Tools

Experimental tools include an eye-tracker (model: Tobii Pro Fusion), a questionnaire survey system (Wen juanxing), and an in-depth interview record form.

- The eye-tracker is used to collect users' eye movement data while watching videos;

- The questionnaire survey system is used to distribute online questionnaires and collect users' subjective evaluation data;
- The in-depth interview record form is used to record interview content.

C. DATA COLLECTION

A total of 120 questionnaires were distributed in this experiment, and 116 valid questionnaires were recovered, with an

effective recovery rate of 96.67%; eye movement data of 116 experimental objects were successfully collected; in-depth interviews with 20 experimental objects were completed.

D. EXPERIMENTAL RESULTS AND ANALYSIS

1) Analysis of Cognitive Effect Dimension

The evaluation results of different narrative strategies in the cognitive effect dimension are shown in Table 2:

TABLE 2. Evaluation Results of Different Narrative Strategies in the Cognitive Effect Dimension

Narrative Strategy	Attention Duration (seconds)	Information Comprehension (correct rate%)	Information Memory (correct rate%)
Symbol Coding Strategy	48.62±5.31	75.33±8.25	68.67±9.12
Time-Space Reconstruction Strategy	52.35±4.89	78.67±7.56	72.33±8.65
Interactive Guidance Strategy	58.76±3.24	86.33±6.12	82.67±7.34
Emotional Resonance Strategy	54.21±4.56	80.33±7.21	76.33±8.15

The results show that there are extremely significant differences among different narrative strategies in the three cognitive effect indicators: attention duration, information comprehension and information memory. Among them:

- The interactive guidance strategy scores higher than the other three strategies in all three cognitive effect indicators;
- The scores of the time-space reconstruction strategy and the emotional resonance strategy are higher than those of the symbol coding strategy;
- The difference between the time-space reconstruction strategy and the emotional resonance strategy is not significant.

This result verifies Hypothesis H1, that is, there are significant differences in cognitive effects among different

narrative strategies, and the interactive guidance strategy has the best cognitive effect. For the symbol coding strategy, although its scores in information comprehension and memory are lower than other strategies, this is related to the positioning of the strategy. In high-information-density scenarios, the symbol coding strategy can transmit more information in a short time. The evaluation of its effect should comprehensively consider information transmission efficiency rather than simply comparing the correctness of comprehension and memory.

2) Analysis of Emotional Effect Dimension

The evaluation results of different narrative strategies in the emotional effect dimension are shown in Table 3:

TABLE 3. Evaluation Results of Different Narrative Strategies in the Emotional Effect Dimension

Narrative Strategy	Emotional Identification	Emotional Fluctuation Amplitude	Content Preference
Symbol Coding Strategy	3.21±0.65	2.89±0.72	3.35±0.58
Time-Space Reconstruction Strategy	3.56±0.58	3.24±0.65	3.67±0.52
Interactive Guidance Strategy	3.89±0.52	3.45±0.58	4.02±0.45
Emotional Resonance Strategy	4.56±0.42	4.23±0.48	4.67±0.38

Note: Scored by Likert 5-point scale, the higher the score, the better the effect.

The results show that there are extremely significant differences among different narrative strategies in the three emotional effect indicators: emotional identification, emotional fluctuation amplitude and content preference. Among them:

- The emotional resonance strategy scores higher than the other three strategies in all three emotional effect indicators;
- The score of the interactive guidance strategy is higher than that of the time-space reconstruction strategy and

the symbol coding strategy;

- The score of the time-space reconstruction strategy is higher than that of the symbol coding strategy.

This result verifies Hypothesis H2, that is, there are significant differences in emotional effects among different narrative strategies, and the emotional resonance strategy has the best emotional effect.

3) Analysis of Behavioral Effect Dimension

The evaluation results of different narrative strategies in the behavioral effect dimension are shown in Table 4:

TABLE 4. Evaluation Results of Different Narrative Strategies in the Behavioral Effect Dimension

Narrative Strategy	Participation Intention	Sharing Intention	Behavioral Transformation Intention
Symbol Coding Strategy	3.12±0.68	3.05±0.71	2.98±0.75
Time-Space Reconstruction Strategy	3.45±0.62	3.38±0.65	3.21±0.68
Interactive Guidance Strategy	4.12±0.51	4.05±0.55	3.89±0.58
Emotional Resonance Strategy	4.35±0.45	4.42±0.42	4.21±0.48

Note: Scored by Likert 5-point scale, the higher the score, the better the effect.

The results show that there are extremely significant differences among different narrative strategies in the three behavioral effect indicators: participation intention, sharing intention and behavioral transformation intention. Among them:

- Both the emotional resonance strategy and the interactive guidance strategy score higher than the time-space reconstruction strategy and the symbol coding strategy in all three behavioral effect indicators;
- The score of the emotional resonance strategy is slightly higher than that of the interactive guidance strategy;
- The score of the time-space reconstruction strategy is higher than that of the symbol coding strategy.

This result verifies Hypothesis H3, that is, there are significant differences in behavioral effects among different narrative strategies, and both the emotional resonance strategy and the interactive guidance strategy have better behavioral effects.

4) Auxiliary Analysis of Eye-Tracking Data

Eye-tracking data shows that the average fixation time (58.76 seconds) of users in the interactive guidance strategy group is significantly longer than that in other groups, and the fixation points are mainly concentrated in the interactive element area with low saccade frequency, indicating that users can focus on the information reception process; the fixation points of users in the emotional resonance strategy group are mainly concentrated in scenes with strong emotional expression (such as facial expressions of characters, natural scenes), and the change amplitude of pupil diameter is large, indicating that users have strong emotional fluctuations; the fixation time of users in the symbol coding strategy group is short with high saccade frequency, indicating

that users' attention is not concentrated enough and the information reception process is relatively scattered. The eye-tracking data results are consistent with the previous analysis results of cognitive effects and emotional effects, further verifying the reliability of the research conclusions. The specific eye-tracking data statistics are shown in Table 5:

TABLE 5. Statistics of Users' Eye-Tracking Data in Different Narrative Strategy Groups

Narrative Strategy	Average Fixation Time (seconds)	Saccade Frequency (times/second)	Pupil Diameter Change Amplitude (mm)
Symbol Coding Strategy	48.62±5.31	0.85±0.12	0.32±0.08
Time-Space Reconstruction Strategy	52.35±4.89	0.72±0.10	0.45±0.09
Interactive Guidance Strategy	58.76±3.24	0.56±0.08	0.51±0.10
Emotional Resonance Strategy	54.21±4.56	0.68±0.09	0.65±0.12

E. RESEARCH CONCLUSIONS

The results of this empirical study show that:

(1) There are differences in the new media communication effects of dynamic visual design among different narrative strategies, and each strategy has different advantage dimensions.

(2) The interactive guidance strategy performs best in the cognitive effect dimension, which can effectively improve users' attention duration, information comprehension and memory.

(3) The emotional resonance strategy performs best in the emotional effect dimension, which can effectively improve users' emotional identification, emotional fluctuation ampli-

tude and content preference.

(4) Both the emotional resonance strategy and the interactive guidance strategy perform better in the behavioral effect dimension, which can effectively improve users' participation intention, sharing intention and behavioral transformation intention.

(5) The overall communication effect of the symbol coding strategy is relatively weak, but it has the advantages of simple design and low production cost, and is suitable for scenarios where information is transmitted quickly. Its effectiveness should be evaluated by information transmission efficiency rather than traditional cognitive effect indicators.

VI. CONCLUSION

This paper systematically studies the narrative strategies and effect evaluation of dynamic visual design in new media communication, focusing on its application in the digital promotion of innovative materials and apparel aesthetics. By integrating design language with motion graphics, the research establishes a specialized framework for enhancing the communicative impact of industry-related visual content. Through theoretical combing, framework construction and empirical research, the following core conclusions are drawn:

First, the core narrative strategies of dynamic visual design in new media communication include symbol coding strategy, time-space reconstruction strategy, interactive guidance strategy and emotional resonance strategy.

Second, a multi-dimensional effect evaluation framework of “strategy-process-effect” is constructed, covering three core effect dimensions: cognition, emotion and behavior, clarifying key evaluation indicators such as attention duration, information comprehension, emotional identification and participation intention, and proposing a combination of evaluation methods such as eye-tracking experiment method, questionnaire survey method and background data analysis method, which provides a theoretical framework and practical guidance for the scientific evaluation of the communication effect of dynamic visual design.

Third, empirical research verifies the differences in communication effects of different narrative strategies: the interactive guidance strategy performs best in the cognitive effect dimension, which can effectively improve user attention and information memory depth; the emotional resonance strategy performs best in the emotional effect dimension, and both the emotional resonance strategy and the interactive guidance strategy have significant advantages in the behavioral effect dimension; the communication effects of the symbol coding strategy and the time-space reconstruction strategy are relatively weak, but they have their own applicable scenarios and advantages.

AUTHOR CONTRIBUTIONS

Wei Wei designed, collected and analyzed the data, and drafted the manuscript. Wei Wei conducted the study, critically revised the manuscript for important intellectual content, and gave final approval of the version to be published. Wei Wei participated fully in the work, take public responsibility for appropriate portions of the content, and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICTS OF INTEREST

The author declares no conflict of interest.

FUNDING

This research received no external funding.

ACKNOWLEDGEMENTS

Not applicable.

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