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A Brief Analysis of Thematic Font Design in Educational Media (Postprint)

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Abstract

As the principal agent of cultural transmission, communication media first establishes the cultural foundation for typography within communication. Depending on the nature of the media and its varying content, type design strikes different balances among cultural, artistic, and commercial considerations, corresponding to the vertical adjustment of three tension relationships—“commonality versus individuality, standardization versus variation, and legibility versus aesthetic appeal”—thereby profoundly establishing the character of the typeface. Educational media represents a particularly distinctive category within communication media, primarily serving teaching and learning, and constituting one of the most frequently used and absolutely authoritative judgment systems for students. In the foundational learning of character recognition and writing, which we may call the foundation of foundations, “standard form” Chinese characters undoubtedly serve as the paradigmatic model—they emerge from commonality and return to commonality, originating from the sedimentation of historical experience, and continue to propagate as the most scientifically sound and stable medium of cultural inheritance through conventional means. To design thematic typefaces for such media, one must incorporate the specific task of character recognition and writing learning, breaking standardized approaches in a limited manner, with content adaptation and accurate recognition as prerequisites, before proceeding with aesthetically pleasing and personalized design. Upon integration with cultural products, this completes the “crossover” with basic education.

Full Text

Preamble

An Analysis of Theme Font Design in Educational Media

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Abstract: As the primary vehicle for cultural transmission, communication media first establishes the cultural foundation for font design in communication. Depending on the nature of the media and its content, font design involves different proportional balances among cultural, artistic, and commercial attributes, corresponding to adjustments along three axes of tension: “commonality versus individuality, standardization versus variation, and recognizability versus aesthetics.” Only through these adjustments can the character of a font be deeply established. Educational media represents a particularly special category within communication media, primarily serving teaching and learning, and constituting one of the most frequently used and absolutely authoritative judgment systems for students. In the foundational processes of character recognition and writing instruction, “standard form” Chinese characters undoubtedly serve as the canonical model—they originate from commonality and return to commonality, derived from the sedimentation of historical experience, and continue to propagate as the most scientifically sound medium of cultural transmission through conventional practice. To design theme fonts for such media, designers must incorporate the specific task of literacy and writing instruction, breaking standardized approaches in a limited manner, with content adaptation and accurate recognition as prerequisites, before pursuing aesthetic and individualized design. When integrated with cultural products, this completes a “crossover” with basic education.

Keywords: standard fonts; artistic fonts; literacy and writing instruction; modern media

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1. Overview of Chinese Character Font Design

Graphic design began when humans first created writing to record their thinking activities. The evolution from chaotic to systematic layout, along with the creation and refinement of character forms, represents early consciousness of typographic design—essentially, character design adapted to production and living needs. Setting aside the initial contractual totemic symbols on rock walls or utensils, writing emerged from pictographic borrowing of objects. The earliest writing systems were the cuneiform script of Mesopotamia from 3000 BCE and Egyptian hieroglyphs from 2000 BCE, which marked the maturation of pictographic writing. Each character in these systems formed a complete structure, with “character form” serving as an information carrier resembling pictures and expressing symbolic imagery. Chinese characters also belong to the pictographic tradition, representing one of the longest continuously used writing systems and the only one from major ancient writing systems to survive to the present day.

Oracle bone script from the Shang Dynasty constitutes China's oldest mature writing system. Beginning with Zhou Dynasty bronze inscriptions, new character creation incorporated “meaning” and “sound” elements, establishing the three fundamental principles of Chinese character formation: “form, sound, and meaning,” later expanded into the “Six Principles” of character creation. Throughout civilizational progress and social development, as cultural recording methods continuously evolved, Chinese characters have fulfilled numerous direct functions including identification, record-keeping, description, expression, and aesthetic appreciation, gradually developing more “styles” and even forming calligraphy as a second-order artistic discipline that profoundly influences Chinese character font design. The invention of printing, particularly movable type, activated the nascent publishing industry, leading to the emergence of various carved fonts. Through integration, a printing typeface characterized by horizontal lightness and vertical heaviness, square and balanced structure, and reading clarity was created, later known as Song typeface. Subsequently, simplification trends emerged globally, with scripts gradually moving toward sans-serif forms and returning to the linear essence of typography, giving rise to Chinese Heiti (black type), which saw extensive use.

Despite the proliferation of fonts today, Lishu (clerical script), Kaishu (regular script), Xingshu (running script)—based on handwriting—and Song typeface, Fangsong (imitation Song), and Heiti—born from production technologies—remain the most commonly used typefaces. These fonts have undergone long-term historical sedimentation, appearing stable and dignified, conforming to Chinese aesthetic sensibilities, and becoming popularized “standard form” Chinese characters suitable for various contexts.

In the usual sense, font design differs from the formation and evolution of these civilization-transmitting information symbols, referring specifically to the micro-level category of artistic characters, generally applied for thematic expression. Characters inherently possess semiotic features, and innovative changes in typographic form provide rich design space for this visual communication element. During the Renaissance, French book designer Geoffroy Tory created a lively “artistic letter system” in 1592, pioneering artistic font design. In the 20th century, Bauhaus modern font design founder Bayer proposed a simple, rational geometric form—a graphic communication system that promoted the graphical communication of text, continuously advancing font design innovation. Such concepts similarly influence the font design of Chinese characters, which retain pictographic features. During the Republican era, practical artistic fonts broke through traditional forms of inscribed board and carved fonts, incorporating more industrial art techniques to enrich Chinese font design. Different artistic movements have exerted profound influences on fonts throughout various periods, combined with direct stimulation from real environments and cultural trends. After technological innovations in electrification and informatization, modern society has witnessed highly prosperous and continuously emerging new artistic font designs.

2. A Generalized Comparison Between Standard Chinese Scripts and Designed Fonts

The earliest Chinese characters were simply called “wen” (patterns). The *Shuowen Jiezi* explicitly summarized the structural principles of Chinese characters, clearly stating the principle of “intersecting strokes forming patterns,” emphasizing that Chinese characters are constructed from two elements: “dots and strokes.” Through different sequences and directions, these combine to form infinitely rich yet systematically ordered character structures. We distill this into the three essential elements of Chinese writing: strokes, stroke order, and structure. A stroke comprises the initiation and conclusion of brush movement, with variations in length, weight, and direction, serving as the most basic component of characters. Strokes combine to form higher-level organizational units (radicals), which ultimately compose more complex ensembles—Chinese characters. Stroke order represents the organizational sequence, established to accommodate human kinetic patterns and behavioral habits during writing while maintaining constant reference and correspondence between organizational units. Structure constitutes the organizational principle, determining the distribution of strokes and components in vertical, horizontal, internal, and external relationships, as well as the arrangement of primary and secondary strokes. “Standard form” characters maintain extremely strict parameters regarding these three elements, serving as natural references in our learning and usage processes.

Artistic font design is based on these three elements but not constrained by them, essentially representing an extension of writing—or a form of writing using special tools to meet specific requirements. Visually, Chinese characters express sound and meaning through their forms. Font design precisely targets these formal changes, strengthening the precise, rapid, and effective communication of textual information under specific conditions. Designers use “standard form” as a foundation, following the principles of content adaptation, clear recognition, and aesthetic individuality to deconstruct and reconstruct characters through transformations in stroke form, brush meaning, sequence, and structure, then reorganize them into new typefaces through modeling. Character form, layout, texture, and color can all be exaggerated, reconstructed, and decorated to achieve specific expressive qualities while adapting to usage environments. This both strengthens the direct communication of textual information and expands the rich connotations of standard fonts. Designed fonts may appear elegant and graceful, stable and upright, lively and interesting, or vigorous and archaic, breaking away from original conventions to reveal new internal vitality and visual impact, constituting important elements in visual communication design.

“Standard form” Chinese characters permeate the history of civilization transmission, synthesizing commonalities in character learning, cognition, and application to form a standardized, highly recognizable, and widely applicable system—an excellent model for writing. Excellent artistic fonts, after careful design and refinement, become aesthetically pleasing, highly individualized, strongly

targeted, memorable, and communicative, facilitating the exchange of various types of information needed in specific environments. The comparison can be summarized as differences and changes across three dimensions: “commonality versus individuality, standardization versus variation, recognizability versus aesthetics,” which often exist in a tense, seesawing relationship. All artistic font designs in various works should find balance among these three tensions. For instance, commercial font design, emphasizing creativity and communication, typically pursues strong individuality, prominent variation, and striking aesthetics, while academic fonts strive for standardization, accurate cognition, and rigorous prudence. Each makes trade-offs according to its context; losing connotation through arbitrary variation does not constitute font design.

3. The Effects of Font Design on Literacy and Writing Instruction in Educational Media

Chinese characters convey different semantic information depending on word combinations, audiences, or contextual conditions. These differences directly lead to divergent starting points for creative font design. Content determines form, as the saying goes. This unique internal information visualization and direct expression, manifested through changes in character structure, enables audiences to instantly receive the primary information we intend to convey while generating positive psychological responses—this is theme font design. As the main carrier of cultural transmission, publications first establish the cultural foundation for font design. According to the nature of publication and its content, font design involves different proportional balances among cultural, artistic, and commercial attributes, corresponding to adjustments along the “three tensions,” through which the character of a font is deeply established.

Educational media represents a particularly special category within the communication system, primarily serving teaching and learning, and constituting one of the most frequently used and absolutely authoritative judgment systems for students. In the foundational processes of character recognition and writing instruction, “standard form” Chinese characters undoubtedly serve as the canonical model—they originate from commonality and return to commonality, derived from the sedimentation of historical experience, and continue to propagate as the most scientifically sound medium of cultural transmission through conventional practice. To design theme fonts for such media, designers must incorporate the specific task of literacy and writing instruction, breaking standardized approaches in a limited manner, with content adaptation and accurate recognition as prerequisites, before pursuing aesthetic and individualized design. When integrated with cultural products, this completes a “crossover” with basic education.

First, educational media requires theme font design. Various media formats present content through text, images, or multimedia combinations, with “text” being the fundamental form. To create an excellent product, designers must craft meticulous overall concepts while repeatedly refining content, including

text. Designing theme fonts that embody the main content serves a “finishing touch” function. In educational media, appropriate font design for student audiences can achieve many special effects. Two font case studies from practice illustrate this point.

3.1 Font Design as the Creation of Vivid Teaching Content

Students at the primary level exhibit obvious characteristics of involuntary attention, with concrete thinking predominating, before developing stronger voluntary attention and abstract thinking. Theme characters provide general summaries of main content, which designers transform into concise graphical languages to create novel fonts. Content leaps from the character surface, simple and direct, clear at a glance, and fresh and lively, better capturing student attention. This enables students to quickly capture and receive effective educational information, forming deep impressions and even memorization at a glance.

The visual imagery of fonts manifests not only in content-adaptive expression but also, under specific circumstances, in functional information regarding individual pronunciation, intonation, stroke direction transitions, stroke sequence, and writing pressure. As shown in Example 1, the four characters for “Happy Magic” (快乐魔术) feature extended strokes, with some strokes incorporating concrete elements such as magic hand gestures and props, placed within a mysterious environment that fully reveals the magic theme. This font works well in both print and video media and can be extended into two-dimensional and three-dimensional applications, representing a creative and vivid font design.

3.2 Font Design as Further Beautification of Chinese Characters

Chinese character structures are well-proportioned and balanced, possessing universal beauty. After shape molding, color setting, and decorative embellishment, theme characters become more rhythmic and moving. Aesthetic education constitutes an important yet currently weak link in holistic development. It cannot be separated from aesthetic infiltration and artistic influence. Good font design can stimulate students’ unconscious aesthetic needs, subtly exposing them to beauty and thereby developing their ability to appreciate, express, and create beauty. In Example 1, decorative embellishments of stroke forms and coordinated color variations make the font lively and aesthetically pleasing. The design avoids dazzling color contrasts and disorderly accumulation of image elements, allowing children to be easily attracted by the beautiful characters.

3.3 Font Design as Personalized Innovation

Theme font design always proceeds from bland to interesting, from rough to refined, ultimately becoming uniquely wonderful through creative transformation that attaches richer and deeper connotations—essentially artistic innovation. Adolescence represents a crucial period for personality formation and development, as well as a key time for developing innovative spirit, expanding creative

capacity, and forging innovative character. Through innovative influences including font design, we can not only encourage students' imaginative thinking and stimulate interest in active innovation but, more importantly, cultivate divergent thinking and gradually liberate students' innate creativity. As shown in Example 1, although mysterious magic itself appeals to children, static fonts require creative processing to express hidden mystery. This font's strokes are constructed through isomorphism with magic clown props and hand gestures, combining form and meaning in a novel way with distinctive personality that quickly resonates with children's active exploratory instincts.

Second, educational media imposes higher and more meticulous requirements on font design. Spanish art master Goya once said, "We need imagination, but we must also know where to stop." Theme font design can involve various creative innovations, but there is little room for compromise on the instructional requirements of "standardization" and "high recognizability."

3.3.1 Character Standardization The "standardization" here refers not to the previously mentioned "standard form" but to standardized Chinese characters—simplified and traditional characters officially promulgated by the state through the *General List of Simplified Characters* and the *General Standard Chinese Character Table*, rather than variant characters. This reflects the fundamental nature of educational inheritance.

3.3.2 High Recognizability Theme fonts in educational media can be beautified and emphasized but should remain moderate. At this stage, the primary function of text is not merely transmission; it also influences students' mastery of characters and shapes adolescents' cognition of traditional culture. The most recognizable form is the "standard form" of standardized Chinese characters. Font design must maintain the necessary standardized communicative effect, providing students with clear textual impressions. Chinese characters represent not only writing tools but also the crystallization of national spirit. Standardized character usage embodies the self-discipline and tempering of Chinese spirit—no randomness, intention preceding execution, no blind action, movement based on evidence. Structural changes should conform to character formation principles, with limited and bounded transformations. Extreme simplification or complex combinations should be restricted, stroke order should not be reversed, strokes should not be arbitrarily added or distorted, and point-line transitions should be clear. Overall design should avoid complexity and disorder, eliminating unnecessary decorations to ensure characters remain easily recognizable and understandable. The fundamental should not be sacrificed for the incidental; deviating from character formation principles to the point where sound and meaning cannot be expressed creates false memories and even "persistent problems" in writing that are difficult to correct. Both examples maintain high recognizability with essentially unchanged structures. Particularly in Example 2, the font strokes completely follow writing principles and can be referenced for writing practice. Only adjustments to positive and negative space, plus some

pictographic and color decorations, create a lively and beautiful new font that evokes a fresh, natural forest and pastoral atmosphere.

In summary, font design practice must maintain clear and strict judgment regarding the degree of personalization, dimensions of variation, aesthetic levels, and cognitive span. Necessary universal recognizability of Chinese characters must be preserved, allowing students to quickly return to the standard prototype while absorbing new font information. If ambiguity in understanding or writing arises, causing cognitive confusion, the design fails.

Surveying current domestic and international basic educational media (excluding textbooks), font design generally remains cautious: existing “standard” font library typefaces still dominate, with few customized font designs that align with unique content. Comparatively, complex Chinese character design appears even more conservative. Even in lively and interesting children’s books, disorderly accumulation is relatively common, somewhat suppressing the intellectual enlightenment effects and sales performance of such media transmission. Prolonged free usage of Chinese font libraries has gradually made media professionals and designers increasingly dependent on them, resulting in insufficient investment in font design. This current situation provides broad space for strengthening understanding, researching Chinese character principles, and exploring font design in special fields.

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