Research on the Visual Communication of High Quality Image Information in Web-page Design

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Abstract

Information is an indispensable resource in contemporary society, and the broadcast of information through the digital media has brought great convenience to people’s life. The speed and efficiency of information broadcast are significant because of the global Internet, which is replacing the traditional paper media gradually. Internet plays a dominated role in this trend of digital information. Therefore, as the main platform of Internet, the web-page design should be drawn more attention. The performance form of information in the web-page includes text, image, even video. Meanwhile, high quality image information could contribute to the information presented in more accurate, effective, and aesthetic way. For a better image information performance in the Internet, The designer of web-page should focus on the general layout and careful color collocation. In addition, the advanced technique support could not be missed for the stability of image information.

Keywords: High Quality Image Information, Visual Communication, Web-page Design.

1. INTRODUCTION

With the rapid development of computer science and the continuous improving of people's life standard, the Internet has become more and more extensive relevant with normally life and work of public (Lee and Kozar, 2006). Meanwhile, the traditional information communication industry is facing a profound challenge (Lemke, 2002). The Internet represents a new approach of information exchange, and it enhance the information communication break the boundaries between the traditional political, economic, geographical and cultural blocks (Chen and Liu, 2016). Therefore, there are significant development of the information communication in terms of the range, speed and efficiency.

There are several significant reasons for studying visual communication in web-page design (Li, 1999). (1) First of all, because of the globalization, it is very importance for individual even nation to access necessary information as soon as possible. Internet is a huge platform, which could upload and download information without the limitation of time and place. Therefore, the Internet information of which presentation relying on web-page has great advantages in efficiency and speed. (2) Secondly, the traditional paper media has been replaced by the digital media gradually, which is the reason of changing of user’s behavior. With the high acceptance rate of the Internet information, the web-page becomes one of the most ways for public to access information. Hence, the increasing requirement of the web-page design could not be ignored. (3) The last but not least, the Internet information bring the world into a win-win situation. Not only will provide more options for information publisher, but also improve the efficiency of information accepting. The Internet information already has a close relationship with people’s life no matter in which corner of the world, and the trend of this connection would merely be closer (Katerattanakul and Siau, 1999).

As a new media platform, the importance of improving the web-page design to satisfied the increasing requirement could not be emphasized any more. The web-page design transforms from the lower model to a new network platform with high standard. However, there are considerable shortages of technology and aesthetic at the moment in China, where the web-page design is at the beginning with a lower level compared with western developed country, while, meanwhile there are increasingly demands and standards for web design form user. Learning from the innovative and practical experience from western developed country and combining with the real developing situation is the solution to help China to get out of that dilemma (Schmidt et al., 2009).
2. THE ADVANTAGES OF HIGH QUALITY IMAGE INFORMATION IN VISUAL COMMUNICATION

Image information is outcome that the data, information and knowledge represented in the form of graphics, and normally performing mainly by aesthetic design. That contributes for brief and efficient presentation of the complex concept, promotes the process of information visualization, and benefits the information exchange and interaction similarly. The categories of image information include paintings, photos, various charts, and even some flash animations. It could be understood that image information as a visual representation of various data, information even viewer’s artistic feeling, which is an approach of visualizing information data. Image information in a considerable part of the performance of visual communication design form (Yang et al., 2005). Mainly through the image display and data design, representing objects, phenomenon or thinking of abstract concepts. Because of that, the core message could be conveyed with the most concise effect. In short, accuracy, artistry and readability are the three distinct characteristics in visual communication.

![Diagram of Digital Information]

**Figure 1.** The Category and Main Component of the Digital Information

2.1 Effective Expression of Complicated Information

Image information has strong capacity in clearing and organizing data. Especially, the information it contains is composed by numerous random data. However, it is not only the simple and intuitive expression of visual information, but also could filter, select and summarize all the data to present in an effective visual image. That could improve the efficiency of information communication and widen the range of information broadcast. In addition, the information with visual presentation is accurate and believable.

As a form of visual expression, image information has a long history. For example, the first subway diagram in Britain modern city, the design of this diagram has broken the traditional map expression by using brief and regular lines to represent the complex subway transportation line, and its influence is continues to this day. The reason of that great influence of image information is that the great ability to select combing and conveying effective information.

2.2 Benefit Aesthetic Design

Meanwhile, the image information has a great impact on aesthetic presentation, which draws the viewer’s attention and completes the communication of information meaning, order, and interaction points to be accepted by the audience.

Image information is the visual center of web design, and the core information of data broadcasts in a brief form. For high quality image information, the audience could receive the image and identify the information quickly and efficiently. Through replace different proportions of data with different colors, and illustrate those data with small notes, audience could collect the important information that published in web-page. Adopting the brief and impressive image information into web-page design by advanced image form could express the deep meaning of the image information. Audiences would be attracted to achieve the great expression effect, through the visualization symbols.

2.3 Enhance the Interaction with Audiences
During the broadcast of the information communication, the graphic design based on the visual language is more attractive for audience than boring text. Because of the direct visual image characteristic, it is easier to arouse the viewer’s interest. As a unique information communication method, the advantages of image information mainly present in its refining degree of information processing and the powerful visual impact of information communication. Through the summary induction and extract of the information, and representation by adoption of a certain visual elements. That could make the information with complex aesthetic form into a logical order. The audience could collect effective and accurate information through this simple and usual approach in a direct and active understanding way.

3. THE METHODS TO IMPROVE THE VISUAL COMMUNICATION OF HIGH QUALITY IMAGE INFORMATION

3.1 Reasonable Web-page Layout

There are several similarities between layout design in traditional newspaper and magazine and web-page that occupies an irreplaceable position in media aesthetic design. However, there are many differences between the layout design in traditional newspaper or magazine and web-page as well. The printed matter has a fixed size, which not existing in the web-page designs, whose size is controlled by the reader.

![Figure 2. Six Different layouts Example for Web-page Design](image)

It is impossible for web-page designers to accurately control the size and location of each element on the page. Moreover, the organization structure of web-page layout is not as linear as printed media, which makes it more difficult to design the layout of web-pages. When the overall style of the web-page is determined, the pages are divided according to the existing pictures, text and other materials. As an efficient and accurate information
communication method, image information is also crucial in web-page design. The layout of the web-page design must be subject to the content requirements. When putting all necessary information in the web-page, the whole feeling should be considered, while the attention should be paid for the arrangement of details as well. That asking the designer to think clearly about which is the beat way to combine the visual information and web-page design form to achieve an active and rich presentation of visual information.

In the web-page design, the basic components of the layout space include point, line, surface and blank. The process of web-page layout design is to organize these point, line, surface and blank in the space of web-page for conveying a certain aesthetic feeling. When the points, line, surface and blank are in different positions of the web-page layout, the visual effects and psychological effects for audience are different. Generally, in the center of the layout geometry, there is a sense of heavy or a sense of balance (Sheikh and Bovik, 2006). Therefore, the important level could determine the location of the high quality image information in a web-page design. For better visual communication, if the image information is the assisting role for text or video information, it could be distribute at top or bottom, even as a background of the web-page. While, if those information is the key role of the web-page, such as a diagram which could help audience to access the information quickly and accurately, that kind of image information should be located at the center of the web-page, where could draw more attention from audience.

3.2 Design Color Collocation

In web-page design, good color matching plays a crucial role in the success of web-page design. A website with professional level of color matching, even if only use very few graphics, still could bring the audience a deep impression and comfortable visual feeling. Generally, in a single page, the number of colors should not be more than three, in which a main color should be selected to dominate the web-page. Meanwhile, the cultural psychological information contained in color should be considered appropriately. The applications of color collocation should follow the principle of "overall coordination and partly comparison", which means that the overall color of the web-page should be harmonious and unified, while some strong color should be used partly to highlight important information.

Figure 3. The Association Between Colors and the feeling of Human or Atmosphere

Themes of different web pages could be represented in different colors. Here are some regulations of common color collocation:

(1) Blue is the color of commercial publicity, which could give audience an impression that this web-page is very professional. It creates a professional and formal atmosphere. Blue is often used for serious occasions to show a kind of gravity and seriousness.

(2) Green is natural color, which could give person a fresh and natural feeling. Furthermore, this color could relieve visual pressure greatly. Green can be used for environment-related topics, such as the website of tourist scenic area and environment protection.

(3) Red is a warm color that could create a warm and active atmosphere of web-page. Red is also the color of sports, with strong visual appeal and attractive.
(4) Yellow is a popular color, which has been adopted in web-page design. Yellow could give person an impression about relaxing and casual life breath. It could create a kind of friendly and multidimensional atmosphere. At the same time, yellow is a very bright color that could be matched with many kinds of colors.

In addition, some advanced color like black, white and gray should be used appropriately, which could produce unexpected effect. The colors includes in one web-page should not be more than four, because too many colors will be too confused for audiences to miss the key information (Santos, 2003). In addition, the color of text and background should be matched well to avoid the comparison is too weak or too strong, which would affect the reading of audience.

3.3 Advanced Technique Support

In the 1980s, the first computer with graphical interface was created, and it created a friendly computer graphical user interface with necessary visual icon, which pioneered the digital image information. Nowadays, the first corners of the digital world are using graphical user interfaces, and digital information is presented, used, and propagated in the form of digital image information. Digital information has some unique characteristics because of its graphical creation, rendering and using. Due to the continuous improvement of technology, graphic design also has more and more space for creation and imagination. Many design ideas are beyond the imagination of the past. In the age of digitization, photographs have begun to waver in the image of graphic design, and the professional classification between photography, illustration and art has become increasingly blurred.

| Table 1 Key Data of High Quality Image Information in web-page Design |
|-------------------|-----------------|-----------------|
| Color Figure | Number of Color | Name of Image |
| 1 | 2 | Single Color Image |
| 4 | 16 | 16 Color Image |
| 8 | 256 | 256 Color Image |
| 16 | 65536 | HI-Color Image |
| 24 | 16672216 | True Color Image |

Throughout the development of image information in web-page design, the development of graphic design could not be separated from the development of technology. The revolution of digital technology could not be ignored in the visual communication. Contemporary computer network and the development of digital technology introduce several new concepts and elements for the information exchange of human (Thayne et al., 2009). During the boot and emotional expression, the image information gradually broke the previous throughout and design principle of graphic design. Those enhance the overall changes in web-page design, editing, image processing, and picture creation, even the printing procedure.

4. CONCLUSIONS

In terms of the web-page design, attracting visitors is the final purpose. When visitors access to web-pages, the quality of visual communication effect would influence the first impression visitors have about this website. Only fully considering about the factors that will impact the quality of web-page design, the visual communication effect could be improved. Those factors include the reasonable web-page layout, and acceptable even popular color collocation, even the sufficient technique support. However, compared with image information, the space provided for text in terms of the above-mentioned factors is not that much. It is more effective and practical to improve the proportion, scale and location of image information in web-page design, and adopt the color collocations into a more acceptable and popular way. High quality image information, with the advantage of accuracy, aesthetic and readable, has great possibility to perform in the web-page, and provides information in a creative way.

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