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User Experience-based Web Interface Design for University Websites

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Abstract:

As a university, its website is the "facade", and also an efficient way of publicity to convey information and build an image. With the rapid progress of the internet and technology, users are no longer satisfied with obtaining basic information for the sole purpose, but pay more attention to the browsing experience in the process of use. The rise of user experience means that everything should be designed with people in mind. A university website with user experience as its core not only enhances the usefulness and effectiveness of the website, but also establishes a good image for the university itself. This paper will analyse the web interface design of universities in China and analyze the current design principles based on the design philosophy of web interfaces. The principles of web interface design for university website will be analyzed from four aspects: user groups, visual experience, interaction design and emotional experience from a humanistic perspective. It is hoped that the analysis and research will enhance the design meaning of domestic universities for their own portal construction, and meet the visual enjoyment and emotional experience brought by the user needs.

1. Background of the Times

In today's rapid development of the Internet, the network has been an essential part of our life, we can know the world through the network ans we can as well work, study, entertain, etc., through the network. At the same time, the internet can also affect the economy, education, culture and many other aspects of this society. With the continuous development of the network, it turns from a passive concept of receiving information transmission gradually to the active reception of information and service to the human state. The construction of a human-centred network ecology has become the goal of development that we must constantly strive to create today.

1.1. Development of the Internet

According to the 49th Statistical Report on the Development Status of the Internet in China released by the China Internet Network Information Center (CNNIC), as of

December 2021, the number of internet users in China reached 1.032 billion, an increase of 42.96 million compared with last year, and the internet penetration rate reached 73.0%. As of December 2021, the scale of mobile phone internet users in China reached 1.029 billion, with 42.98 million new mobile phone users compared to last year in December 2020, and the proportion of internet users using mobile phones for internet access was 99.7%. It is easy to see from the above data that China's digital economy is flourishing and the journey of building a strong network nation is being witnessed by over one billion internet users in China.

1.2. The Advent of the Era of User Experience

With the development of the internet, websites have become one of the main ways of disseminating information on the web, but people are no longer interested in simply getting information as their sole purpose, but are gradually interested in the experience that comes with getting information, which can be physical or psychological. Especially for users browsing websites, the browsing experience is even more important than access to information. Especially for the users browsing the website, browsing experience is even more important than getting information. For website construction, only from the user's point of view, by grasping the users' mind and their needs, taking all the users as centre to improve the website's browsing and dissemination of breadth, can we better achieve the meaning and value of building a website. This process of human-computer interaction is what marks the advent of the era of user experience.

2. User Experience and Features of Web Interface Design for University Websites

2.1. User Experience

User experience, abbreviated as UX or UE, is understood as a purely subjective self-perception built up by users during the interaction process of actually using products or browsing web pages. User experience design refers to a series of methods used in interactive experience design. It encourages designers to improve the quality of user experience. The logic behind the method is simple, easy, efficient, and communicating more user needs is an important way to gain competitive advantage [1]. UX is actually a series of design from and for the user's feeling of use, and all the processes and methods are considered from the user's point of view. The core of UX is to put the users at the centre of the design and research process, and ultimately develop products that satisfy the users and meet their real needs to achieve an optimal experience in the process of use. For the user, it can be a physical experience or a psychological experience, or all the feelings from both physical and psychological aspects of the use process.

User experience is actually involved in all fields. No matter what product or industry, it will produce corresponding user experience. Nowadays, the quality of many products is measured and judged by user experience. For the Internet industry, user experience is the experience brought by the interaction between human and machine. Especially when users browse the web, the cognitive process and feeling of a series of interactions from the first moment of opening the web page to the moment of closing the web page can be called user experience.

2.2. Features of Web Interface Design for University Websites

As a cluster of multiple information, the university website is a multifaceted and comprehensive platform for displaying information. Considering the types of websites, it should be both integrated and not too complicated, classified and targeted web interface. Such design principles can better grasp the needs of target groups and stroke the content of the interface framework, and also show the cultural style and charm of universities.

The main groups of College portal websites are students and faculty, followed by social personages. Compared with the traditional business and government websites, university portal websites have remarkable characteristics [10]. The author found some problems in browsing experience after browsing some college portal websites in China. First, the design level of portal web pages of colleges and universities in China is uneven. Some colleges and universities attach great importance to the construction of their own websites, which are very comfortable in visual effect and browsing experience, but other colleges and universities do not pay enough attention to the construction of their own portal websites [12]. No matter in the page design or content arrangement, there are pages imitating each other, leading to some websites in the design experience is the same, no experience. At the same time, it failed to reflect the characteristics of the school itself. Second, there is a lack of interactivity in the user experience. Although the web interface design and production of many colleges and universities are very beautiful and atmospheric, they generally fail to grasp the psychology and needs of users in the page interaction and browsing experience, resulting in chaos, unclear content regulations, and no content framework designed according to the needs of different users, resulting in users greatly reducing the efficiency of obtaining information and a sense of prosperity and fatigue in the browsing process. I think that as a university, the groups it faces are generally people with high cultural quality, so we must carefully consider the website design and content arrangement [4]. We should not design according to personal subjective ideas at will, but design the interface of the web page from the perspective of user needs and experience. As a cluster of multiple information, college portal website is a comprehensive display information platform in many aspects.

3. Principles of Web Interface Design for University Website

3.1. User Group-Centred Principles

Because for the university website, it's mainly to display school information and resource interchange, of which purpose is to facilitate the display of school news and information, comprehensive resource integration and expand the influence of the school. Therefore, the primary visitors in the website design are mainly students and staff. Finding this type of targeted population will allow you to highlight relevant content and information. Especially for students, it is important to consider the students' point of view, analyze what content the student group wants to find and what information they want to get through the website information, and take it as a design principle. For example, display information on students' main tasks at school: studies, exams, club activities, etc. as highlights. This way the needs of this group of people can be accurately grasped. Similarly, for the staff, there is a gap between what the staff need to know and what the teachers need to know. The staff are more concerned about the school office news and news notices, while for the teachers they are more interested in the school's research results, academic exchanges and teaching information while paying attention to the school's news. Therefore, as a university

website design, the above contents need to be classified and displayed according to the content section.

3.2. The Principle of a Simple and Smooth Visual Experience

With the continuous progress of technology, both browsing network speed and the realization of technology have been further upgraded. Especially with the arrival of the 5G era and the realization of html5+css3 code technology, it allows the website to be free to play from nothing to something. The interface design of the university website should also bring the users a simple and smooth visual experience, which can improve the efficiency of the users' browsing content and bring the users a sense of comfort and pleasure from the psychological and physical aspects through this visual experience. This plays a vital role in establishing the image and friendliness of the university.

With the continuous progress of science and technology, both browsing speed and implementation technology have been further upgraded, especially with the arrival of 5G era and the implementation of html5+css3 code technology, the website can play freely from scratch [9]. The interface design of university portal website should also bring users simple and smooth visual experience, which can improve the efficiency of users browsing content. Secondly, it can bring users psychological and physiological comfort and pleasure through this visual experience, which plays a vital role in establishing an image and friendly University.

3.3. Unity of Interaction Design Principles

As an important part of the user experience, interaction design is the link between human and machine interaction. Good interaction design makes the browsing experience lively and interesting for the users. The interaction design of a web interface allows for communication and interaction with the user in the form of text, images and icon elements on the page [7]. For example, when we browse a web page, when the mouse is placed on a text or image, the corresponding will be based on the mouse stay to produce special effects such as colour change, zoom in and out, slide or shadow. This is where the page creates an interactivity with the user through the mouse. With this interactivity, the effect is perceived as guiding the users on to further actions based on the feedback from their own actions. And by writing code it is possible to implement realistic bionic effects like physical buttons, power sensing or light sensing. This interactivity greatly elevates the users' mind from traditional browsing to a fun-filled interactive experience that brings a humanized sense of sophistication, even from visual to mental pleasure.

But for interaction design, too much interaction will make people look dizzy, and physics will be reversed. Without a clear interaction standard, users can not feel that they are browsing the web, but like going to an amusement park. Especially for users in Colleges and universities, the general cultural quality is high, and there are certain aesthetic requirements in vision and use experience. A unified interactive way can provide users with a good feeling when browsing web pages. For example, as a comprehensive information display website, the portal website has many types of content and plates. After browsing the interactive feeling of the first content page, the user's brain will remember the operation feeling at that time, and then browse other columns with the same idea. If the interaction design does not reach unity, It will enable users to make new judgments and feelings about the interaction mode of the web page, which will greatly reduce the efficiency of browsing the web page and

waste time [5]. Secondly, it will interfere with the user's experience and produce bad emotions. Unified interaction design is an essential design principle in user experience.

3.4. Building the Image of the University with Emotional Experiences

Emotional experience is a purely subjective feeling generated by users in the process of browsing the website, and it is a dimension that must be taken seriously for user experience. Emotional experience is an emotion that is stimulated through visual interaction from mood to emotion. When users browse the website, it caters to their diverse needs through attraction, interaction, effectiveness and ease of use to achieve emotional satisfaction. If there is a good emotional experience, it will deepen the impression of the website. At the same time, it will also generate good feelings towards the content presented on the website and the website itself, which will come to enhance the image of the website in the users' psyche, while the opposite will make the user have a negative impact and destroy the image in their mind.

There are many factors to improve users' emotional experience. For example, in the layout of web interface, through reasonable and orderly content organization and interesting and vivid interaction design, users will feel the intention and serious attitude of designers, so as to improve users' interest in browsing web pages. For college portal websites, some landmark buildings or visual element symbols of the school can be integrated into the interface of the web page, which can make the website have its own characteristics and deepen the impression of users on the web page during browsing. The combination of friendly interactive experience and simple and refreshing content will enhance users' impression of the whole web page. Only when the content and form are mutually complementary, balanced and unified, can a good emotional experience be formed, so as to establish an image position of colleges and universities in the hearts of users [11].

4. Conclusions

In this era of rapid development of the internet, websites are becoming more and more concerned about the user experience while meeting our needs for information. As a comprehensive information publishing website, the university website should not only meet the needs of different user groups for information, but also fit in with the times, and analyse the users' experience from a humanization perspective to achieve the value and significance of the website in many aspects. In terms of both design field and the development history of web production, it reflects the new trend of combining social development and reflects the progress of the times. With the development of technology, under the rapid change of interactive website design, user experience follows the trend of this era and also leads the development of the design industry. The web interface design of university websites needs to start from the perspective of user experience, including visual experience, interactive experience and emotional experience to achieve a good feeling of use. This will attract users in the education and education-related fields, thus expanding the influence and establishing a good image of the university.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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