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Research on HTML5 Microlecture of Web Design Courses

Yang Li
School of Arts and Design
Zhuhai College of Jilin University
Zhuhai, China

Abstract—**With the popularization of smart phone, 4G and WeChat, people's life style is changed. The information available to users becomes more fragmented and entertaining and it is expected to receive interested information from multiple directions at any time, anywhere and on any platform. Users have long been accustomed to the life of holding mobile phone at hand all day long. So, the current H5 advertisement generally refers to such web pages with special effects, interactive experiences and sound effects as that are spread on the mobile terminal. To a wider scope, all web pages on mobile terminal are H5 web pages. This paper makes a research on the innovation change in microlecture on web design and implanting of H5 advertisement to enrich the content of microlecture, expand the microlecture knowledge system and strengthen students' design skills.**

Keywords—web design; HTML5 microlecture; visualization

I. INTRODUCTION

In the current background of popularized mobile internet, the doubled growth of APP application market and quantity bring new challenges and opportunities for mobile internet. To comply with this trend, this paper proposes to implant H5 advertisement into web on the basis of web design courses. As investigated, up to 2015, 80% of APPs will be fully or partially based on H5, which means that the content of most APPs will be presented in form of web such as the typical cases including WeChat and Facebook.

Therefore based on the status quo at home and abroad, there is neither H5 related knowledge nor H5 advertisement related microlecture about web design courses of advertisement design major in Chinese colleges and universities nor even any publication related to it. To the nationwide extent, this project is an innovative attempt. From view of current status of international advertising development, it has been irreversibly for HTML5 to substitute Flash. In addition, the rise of hi-tech such as virtual reality (VR) and augmented reality (AR) brings more opportunities for the future of HTML5. Along with the big trend of college students making independent innovation and starting a business, paying close attention to the latest design and teaching the most advanced knowledge and skills can not only improve the teaching system, optimize the curriculum structure but also improve the teaching level of teachers, which all provide the innovation orientation for the

teaching in colleges and universities. Therefore, it is decided to record the microlecture video of this project to strengthen the classroom teaching.

II. MAJOR RESEARCH CONTENT

A. Enriching the Teaching Content and Optimizing the Course Structure by Recording Relevant Microlecture

Web design course is the course provided for junior students majored in advertising design, taking 70 class hours in 5 weeks. This course is established according to the trend of enterprise to upgrade and create independent brand in transformation period of Chinese economic development as well as the dual needs of enterprises in the transition period of China's economic development and the establishment of independent brands, as well as the dual needs of Zhuhai College of Jilin University to cultivate innovative talents and entrepreneurial compound talents. HTML5 is the fifth edition of the Hypertext Markup Language and was published as officially recommended standard by the World Wide Web Consortium (W3C) in October 2014. The mentioned microlecture implants H5 related knowledge on the basis of web design course, combines web page layout, web page color and text with H5, broadens students' knowledge scope and strengthens the connection between practice and theory. This course requires students to master basic theoretical knowledge of web design and the interface design and production skills based on computer technology so that students can independently design web page interface and produce H5 advertisement and skillfully make creation in order to lay the foundation for entering the society.

In the past decade, Internet has undergone earth-shaking changes, but actually it has not been changed at all. By looking at internet 10 years ago, it may be found that there were a large number of websites having a set of common layout patterns. The header, footer, sidebar and content area made up this straightforward layout. But the layout of H5 advertisement has been changed, such as the split screen which was split by using vertical separation line. There were many reasons to do like so. By studying a large number of such cases, it is found that there are the following two main reasons: first, sometimes in a set of design, there are indeed two equally important subject elements. The usual method of web design is to sequence the content based on the priority

of importance. Then the importance will be reflected in the level and structure of the design. If there is only two items to be promoted, the two items can be highlighted for user to make selection quickly. Second, sometimes it is needed to show an important duality. Taking the Eight and Four website as an example, what the website wants to express here is that its core competency lies in its rooting in digital field and its versatile employees. It is a pleasant way to express this opinion through screen splitting. De-interface, one of the main elements in web design, is the container elements such as squares, borders, shapes and all types of containers that separate content from the page. Imagining an old-fashioned page header, the element just fits in it and is separated from the content. And a common trend today is to remove all of these extra interface elements. This is a minimalist approach, but it further brings some interesting changes. Module-based or grid-based design is built on a modular or grid-like structure. In these designs, it is strived to scale and adjust each module on the basis of the screen size. This is actually not a new way, but responsive web design makes it even more useful. It implies an adaptive layout pattern that can be created from various modular components, just like building blocks. "Within one screen" is to get the design fully demonstrated in one screen. This is a branch of responsive design because it can adapt to the screen size. However in this excellent case, the entire design completely fits with the screen, without scroll bar. Without scrolling, it means that the content must be extremely focused and a clear level of content should be established. It is found that the focusing ability and clarity of these websites are refreshing.

B. Optimizing the Teaching Mode and Improving the Teaching Quality by Recording Microlectures

In the content of the microlecture, it is available to reach an optimum teaching effect by introducing the subject project into the teaching process, making an "integrated" design for the contents from three dimensions such as teaching theoretical knowledge and design skill, revealing innovation method and stimulating interest. In the first dimension, it is required to specify relevant bibliography for students to make pre-study and teacher is required to make real-time correction in order to let students "learn correctly"; in the second dimension, it is required to reveal the theoretical laws and innovative methods involved in this course and teacher must pay attention to teaching of the key points so that students can make it clear completely; in the third dimension, it is required to make careful design, use a variety of effective classroom practice interactive teaching modes and methods such as "themed teaching" and "interactive classroom" to stimulate students' learning interest in order to give students a happy learning experience.

C. Strengthening Practical Teaching and Cultivating Practical Ability and Innovation Consciousness by Recording Microlectures

Practical teaching is the key section to cultivate the basic ability, basic skills and vocational quality of students' practical work in the professional field, and is the core to improve the talent cultivation quality. In conducting the professional construction, curriculum reform, training base construction and teaching method design, it is necessary to always strengthen practical teaching, promote practical teaching and training and cultivate high-quality applied talents, taking improving students' vocational ability and design ability as the premise, improving students' vocational skills and practical ability as the main line and matching the market post demand with talent quality as the standard. Through the content recorded in the microlecture, students can complete the webpage and H5 creation by using relevant equipment and instruments in the "Film and television advertising production laboratory" of the School of Arts and Design in practical teaching; and through various practical teachings, it is available to greatly improve students' application ability, enhance their ability to adapt to the society and make them quickly become the backbone of the company in the coming internship of the second semester of senior students. Students are organized to participate in various discipline competitions so that their planning ability and competition awareness are improved. Students majored in advertisement have participated in the national competition "Academy Award of China University Student Advertising Arts Festival" successively and been granted the first, second and third prizes.

III. IMPLEMENTATION STRATEGY

A. Optimizing Teaching Content and Focusing on Cultivating Innovative, Entrepreneurial and Applied Talents by Virtue of Microlecture

Part I: this part mainly tells students the web design and the overview, role, meaning and development history of HTML5, highlights the teaching of H5 production method and skills of VLEVER and simply introduces the H5 production method and skills of functional engine and basic tools.

- VLEVER: this platform provides HTML5 production tools similar to PPT page switching, usually applicable to C-end (individual) users and partially applicable to B-side (business) users. Such platform is of large quantity and only applies to VLEVER, and the dynamic effects of the pages that can be provided are limited to page turning.

- Function engine: this platform provides an engine for development of HTML5 web pages, usually applicable to B-end users. This type of platform mainly provides a Canvas-based game engine, applies to light game development and depends on the developer.

- Basic tools: this platform provides HTML5 visual editing tools for page interaction, mainly applicable to B-end users and partially applicable to C-end users. This type of platform only has iH5, adopts independently-developed closed source engine and has a wide range of application including light marketing, heavy marketing, media e-commerce

content application, video, animation, games and so on.

Part II: this part particularly introduces the production of H5 platform category. In 2015, eqshow took the largest share in domestic demonstration application market. There are four major zones divided for the basic architecture of its PC-end tools. The zoning is corresponding to four important features of the demonstration application HTML5 tools:

- It adopts module embedded in editing interface, implying a lower learning threshold. Fixing a module area in the window is beneficial to enhance the design positioning of the scene application or electronic publishing while indicating that the module and tool is easy to use and learn.

- The menu tool is mainly based on module components, indicating limited expandability. Different modules are respectively equipped with a set of fixed objects and a single object cannot be independently isolated so that object editing operations can only be performed in the entire module.

- As the basic structure is page layout, the interactive effect of HTML5 is mainly page turning. The desktop online editor and mobile APP tools of demonstration application platform fully adopt the page structure, which is equivalent to transforming the traditional offline PPT into online presentation by virtue of the cross-platform features of HTML5.

- The output table is shaped like a mobile phone, indicating its basic orientation towards WeChat applications. The output area also provides a simple editing function for material, which is mainly applicable to the end of mobile phone.

Part III: this part mainly illustrates the setting of subject, special web design and H5 interface design, for the purpose of cultivating students' comprehensive creation and practical skills.

B. Continuously Expanding the Professional Vision and Strengthening Professional Business Capabilities by Virtue of Microlecture

By recording microlecture, it is available to get advanced knowledge, subjects, professional development direction and the latest employment direction involved in the construction and teaching of the course and get the problems encountered in scientific research and the latest needs of the society introduced in the microlecture in order to carry out microlecture teaching activities in a targeted and focused manner, widen students' horizons, increase their learning interest and cultivate innovative applied talents suitable for the social needs.

IV. POSSIBLE ACHIEVEMENT FROM THE RESEARCH AND ITS PROMOTION ROLE AND APPLICATION VALUE AND SO ON

A. External Environment

By teaching H5 related knowledge and skills in close relation to the international development trend of advertising design, it is available to cultivate students' innovative ability and acumen to adapt to the market so that what they have learnt in classroom can be timely and effectively applied in advertising field in order to promote students obtaining offer for internship and employment rapidly. Microlecture can enhance the H5 advertising knowledge in a short time and high density, with short the creation cycle, large scope of communication and updated ideology. Hence, it is a good supplement to the classroom teaching.

B. Internal Environment

Based on the urgent need for H5 advertising design talents in the current advertising industry, it is attempted to implant HTML5 content into the web design course and reproduce the content in the form of microlecture. As a result, in this way, it is not only available to improve teachers' professional sensitivity to the most advanced design but also available to promote improving teachers' professional level while perfecting the teaching system, improving students' interest in microlecture, optimizing the course structure, keeping teaching and learning and exercise and practice in the same pace of market demand. This approach plays an active and demonstrative role in cultivating innovative and applied advertising talents.

C. Characteristics of H5 Advertising and Its Promotion Strategies

1) Human-computer interaction: First, dual-screen interaction: dual-screen interaction refers to the interactive effect generated by real-time communication between two or more screens. H5 advertising practically realizes the interactions among electronic devices such as tablet PC, computer and mobile phone by using the fifth generation of HTML technology. This new and interesting advertising method subverts people's perception of the old advertising forms such as print advertisement, making customers available to know about a product via more interesting innovation work; second, gesture recognition: the popularization of smart phone make customers available to have touch experience from modern advertisement in addition to the visual and audio experience from traditional advertisement and most of the touch experience is realized by gesture recognition such as the sliding and clicking functions commonly used in WeChat Moments and this form is widely used in most H5 ads to interact with customers.

2) The promotion content is in close relation to the current hotspots and innovation becomes a trend: Due to the short publicity period of H5 advertisements, its content can be created in close relation to the current trend to fully attract customers' attention. At the same time, the publicity can be timely increased by getting hotspot reproduced or

upgraded in H5 advertising interaction in form of picture, moving pictures, music and videos and so on.

3) Using social network communication channels to increase the amount of transmission and conversion rate: According to relevant surveys, WeChat Moments has become such a promotion platform of information flow advertisements as that mixes advertising information into the dynamic areas attracted high attention of social media users to increase their exposure and conversion rate.

4) Game-based promotion: This way is to attract users, realize brand communication and marketing purposes by getting the brand value of an enterprise to be expressed demonstrated in form of favorite games.

V. CONCLUSION

With the development of technology, the updating speed of human beings is constantly accelerated. For web design, the medium of communication has also been changed. The rise of H5 advertising caters to the changes of the times. It is an innovation in terms of traditional advertising and web design microlecture. The current changes of the times are the waves of digital design led by the Internet, represented by the H5 advertising in current advertising industry. Just as the advent of the era of hypermedia, it will combine all the artistic forms such as print, animation, special effects, three-dimensional, film and television, VR and AR, and the power produced by the collection of them is far greater than the sum of their powers. At present, the most exciting thing is that the current H5 advertising is just the pioneer of the entire Internet digital design wave. It is not available to predict what form and trend of art will be emerged in the future, what kind of artistic reform will happen and what innovation idea will be brought to traditional web design course. Now, what we need to do is to seize the opportunity to meet the challenge.

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