Rich Media 2.0: A Methodology to Enhance Media Information Construction for Creating a Better User Experience

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Abstract. With the development of technology, there are more and more emerging new definitions in circulation. For instance, a definition of Rich Media has been created, one which does not take a specific form for internet communication media. Rich Media refers to the methods of information transmission through animation, sound, video, and interactive mediums. Such a social phenomenon reveals people's reactions and the way they explore between technology and information transmission. This, in turn, reflects the combination of information transmission and technology required to create a better user experience. Based on this phenomenon and our current situation, the current definition of Rich Media has its limitations. Such limitations often lead to the over-acceptance of new technologies. Whenever the new technology appears, people try to apply it to every object without considering whether it is suitable or not. It is important therefore to pay attention to the new technology. The methodology proposed here can help build up information construction to verify whether a better user experience is achieved. This paper explores argues for this efficient methodology – Rich Media 2.0, a methodology to enhance Media information construction to create a better user experience.

Keywords: Information construction · User experience · Service design · Design process

1 Introduction

With the advent of the 5G era, information has skyrocketed, and the diversified development of communication channels has been promoted. Information transmission can no longer be limited to the dissemination of information to designated objects, but rather it achieves multiple types of interactive information transmission through multiple media. In this context, the designer acts as a bridge for information conversion and tries diversified communication paths to form sufficient media information to achieve a positive user experience. The diversification of information has enabled the design to evolve from problem-solving to constructing a sound service system before the problem emerges. Any nascent problems that have emerged have been resolved from

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the perspective of the overall service system. From information design to interaction design, the design approaches the users step by step. The combination of a variety of technologies also helps to efficiently screen, refine, and summarize within the context of an enormous amount of information.

Designers have continued to explore application scenarios in various industries under the development of new technologies. Various types of technology and equipment continue to intervene in real life and widely assume service roles in our society. As new definitions of smart cities, smart manufacturing and smart agriculture continue to emerge, designers have gradually perfected various design projects to ensure positive user experience and feedback. Design is more and more valued for its unique value, and the continuous improvement along with the development of design make the boundaries of design continue to widen. Will the focus of different aspects of the design process have an impact on user experience? A complete project has undergone different cycles from zero to completion, such as technical limitations, even staffing changes, and so on, so it may result that the completed project is in line with the initial expectation: as M. Eigen states,

"It is important to understand that this structure is iterative in its approach. This means that at every stage of a service design process, it might be necessary to take a step back or even start again from scratch. The single but very important difference being in ensuring that you learn from the mistakes of the previous iteration" [1].

However, time cannot stagnate, so how to ensure the accuracy of previous information over time, moreover, whether that information has undergone predictable and unpredictable changes. The methodology that tests the value of current information is increasingly needed.

At the same time, with the rapid development of science and technology, more and more cultures and education industries have adopted emerging technologies in order to solve problems. China has a population of 1.3 billion and embraces an extremely complicated user situation. Adopting traditional design and evaluation methods will make the culture and education industries involved in complex social issues and issues relating to human nature. In the standard design and evaluation phases, methods such as user interviews and behavior observations are often utilized. The process is usually costly and have a long cycle. The changeability of the interviewees may cause a bottleneck in the rapid and effective evaluation of service systems. Studying and evaluating the user's operation time, cognitive modes, behavioral habits, error rate, amenability, and degree of satisfaction will help designers observe user experience, products, environment and service details, and further, obtain much information in the process.

Challenges facing designers:

1: How to create an extensible evaluation system for stakeholders?
2: How to ensure that the service content is sufficient under the premise of meeting the feasibility and the needs of customers?
3: How to effectively deal with participants' feedback during the design process, and turn the information into a productive design force in a timely and accurate manner?
4: How to strengthen the construction of media information to update the design to obtain a better user experience?

2 Purpose

In This paper is based on an in-depth interview and discussion from the perspective of the designer. This paper abstracts the critical elements of the whole design process from multiple design projects. Furthermore, it constructs the nodes of the design process as the methodology of Rich Media 2.0 basic structure.

We were inspired by the hypercycle structure of Manfred Eigen, which functions as follows: "If we ask for a physical mechanism that guarantees the continuous evolution of a translation apparatus, hypercyclic organization is a minimum requirement. It is not sufficient - though necessary - that the information carries involved are of a self-replicative nature. If we analyze the conditions of hypercyclic organization we immediately see their equivalence to the prerequisites of Darwinian selection. The latter is based on self-reproduction which is a kind of linear autocatalysis. The hypercycle is the next higher [sic] level in a hierarchy of autocatalytic systems. It is made up of autocatalysts or reproduction cycles which are linked by cyclic catalysis, i.e. by another superimposed auto-catalysis. Hence a hypercycle is based on non-linear (e.g. second or higher order) autocatalysis." [2] On the one hand, the design process is made up of many different elements and links. While performing its duties, each should take into account the overall process. Moreover, on this basis, design is evolved. On the other hand, the individual information of each link needs to achieve "autocatalysis." [2] That is, "autocatalysis", as a real-time information monitoring tool, can determine the positivity or negativity of feedback information through visualization of the audience's emotions and can enable all the design links to have pure feedback - without interfering factors - thus establishing an improved direction. In this way, in-depth research and creation of effective tools will enable not only the design process to be a virtuous circle, but also all the designed links can capture and update information in real-time.

3 Rich Media 2.0

Rich Media 2.0 is a methodology to strengthen the construction of media information and hence to create a good user experience. This methodology is used to test the real feedback of users. It is a hypercycle model that collects information. We can understand the users' emotional changes, get feedback, and optimize the design through the induction device in order to ensure the effectiveness of the service content. We turn the uncontrollable perceptual service into the information data through the observation of psychological and emotional changes according to user behavior. From social phenomena to life trends, from art installations to cultural and educational design, various languages from different industries are trying to define the concept of human-centred design, which is called Rich Media 2.0. The cases we have carried out below reflect the current attempts of designers to develop this concept.

Case 1: A Intangible Cultural Heritage in China
This intangible cultural heritage in China is a palace architecture built in period of the Ming Dynasty. Now it is a museum of classics, calligraphy and painting. Since 2008, the museum began to display numerous exhibits of calligraphy and painting of national

treasure in batches, some of which were not displayed due to site restrictions. For example, if a scroll painting of more than 10 m is rolled up, it is easy to store, but its display space is required to be exigent. When initiating this project, the problem to be solved was to use art technology to make an open-exhibition of painting and calligraphy in a proper way and in a limited space. As a museum of calligraphy and painting, the first task was to make art and cultural education more accessible; to design a new way of exhibiting in order to eliminate the gap between visitors and exhibits.

Based on the above background, we found out that the main problem faced, as in an initial survey, was that the exhibition's rationale regarding the collected works was relatively simple, such as there being a requirement to exhibit according to the classification of dynasties. The main goal of the museum was to become a visitor-oriented cultural organization. Its aim was to focus on the visitors, and improve the content category and way of visiting after understanding the real experience of visitors through researching their visiting routes.

Furthermore, through design scenarios and service roleplay, we could understand the users' behavior from their own perspective and gain a full picture of their mindset. Therefore, visitors were classified according to their purposes: experts, students and tourists. Moreover, we sorted out the relationships of stakeholders, and asked: what can we do for them? How could they give us feedback? We were able to test the impact on service quality through various factors. The museum necessitates the provision of a relatively dark window environment for the protection of ancient calligraphy and paintings, and to display them by stages and by categories. At the same time, we collected information and sorted the key information from research through visitor interviews and questionnaires. For example, Expert A offered a piece of information about the scene light being dark, the exhibits' window being far away, and the viewing capability not being very good; Student B wanted to have an extraordinary explanation of the painting and calligraphy; Tourist C needed more cultural information.

Overall, designers made the reconstruction based on diversified media information in an iterative way to provide an updated solution. We redesigned the service blueprint and visitors' emotional visiting map, creating an independent and neutral methodology. We redesigned the museum through the following three points. First, as shown on the left side of Fig. 1, the digital analysis guide function was provided, which can zoom to three times of the original painting to help visitors to see the original painting more closely and clearly. Second, as shown on the right side of Fig. 1, the methodology allowed a high degree of freedom and expansibility. It could reasonably arrange the different needs of visitors within the visiting service so that visitors could draw virtual paintings themselves and transfer them to mobile phones based on the principle of Chinese traditional painting. Third, digital analysis is provided. Visitors who enjoy this kind of service can have a deeper analysis of the content, including the translation of ancient characters, the background context of the time of the works' creation, the explanation of the composition of the painting and the making process of the painting. Through the above three points, the iterative updating of information was improved. On the whole, we were able to strengthen the human-computer interaction experience, expand the direction of the new service, and make the interactive users' map, which is how we make users become designers too. Moreover, we were able to improve participation in flexible ways.

Fig. 1. (left) The process of translating ancient Chinese characters by touch screen. (right) A self-coloring process to create ancient paintings anew.

However, user requirements will change with time, and the change of information level caused by time is worthy of attention, an issue that will be the core for improving the next step of design. The requirements of the users for the first experience will be different from those for the second or further experiences. However, the content of experience for the user who has experienced visiting many times is not updated in time, and our design should consider this information transformation. This shows the importance of this Rich Media 2.0 methodology. Through Rich Media 2.0, users' emotions can be monitored in real time and essential information can be found to make a redesign.

Case 2: Regeneration Plan of Old Town in Beijing

Located in Xicheng District, Beijing, the old town covers an area of about 37 hectares. Its history can be traced back to the Yuan Dynasty, and it lasted through the Ming and Qing Dynasties. It is mainly composed of the former residences of celebrities, with a temple at the core. The whole cultural area of the old town in Beijing was without protection or promotion. After understanding the background, we underwent a process of research through contextual interviews and storyboards to collect user in-formation and understand the expectation of tourists here. We prioritized these expectations and built "a day in the life", and then used that as the basis for the creation of a blueprint for tourists.

As a consequence of this research, the central axis of this service gradually appeared: we needed to provide users with a quick guide to discover the profound historical background and rich cultural features of the region. We provided services through APP to gain the maximum contact point with tourists, as shown in Fig. 2. We provided a digital guide of services that users may need during their journey, including ancient buildings, former residence of celebrities, traditional food. We also established a scoring system rating places to visit. In the ancient building area, the AR function of the APP could be used to combine the virtual digital image with the actual scene, making the explanation and guide service more intuitive. For example, the ancient building photographed by AR will virtually restore what was happening at that time.

Fig. 2. Finding popular locations through the application's AR capabilities

After the APP had been used, we conducted a follow-up visit for users, and discovered that the knowledge of history and culture was boring for tourists. As an opportunity for improvement, we provided a platform that allowed the residents to tell the story in the APP. With the advancement of time and the increase of visitor flow, the difficulty of auditing and the cost of human resources was getting higher and higher. After reassessment, we cancelled this service. In order to find out what motivated people to use the APP and then combine it with the current entertainment experience, once again, we focused on tourists. How to integrate tourists with the service itself - how to find common ground? To increase attention and relevance, we attempted to mark the scenes that had been filmed in the region in the APP, and then users could find matching scenes.

Overall, we are considering what services we can provide to customers at the functional level. Is it usually difficult to motivate visitors while providing customer service? How to stimulate users to use our services first when they have many alternatives? We need to think about all these questions. As time goes on, media information is presented in a more and more diversified way. It is particularly important to pay attention to the fact that information of such historical and cultural areas changes in real time. The protection of the area does not mean that it is divorced from the surroundings, but protecting it does mean finding a combination of new design products and regional planning.

Case 3: Cocoa Bean Experience Day

In 2017, Shanghai University of Science and Technology held a three-day cocoa themed activity experience day to cultivate the learning interest of 8–10-year-old pupils. What needs to be highlighted is how to teach students to learn the content of extra-curricular learning materials through new media, and how to cultivate students' interest in learning. According to the research, the form of exhibition, explanation and teaching cannot stimulate students' interest. We focused on improving the activity service itself, aiming to combine the interests of children, expand the possibility of teaching methods, and improve the learning efficiency. We used contextual interviews and storyboards to collect insights from teachers, parents, and children. We found that children now prefer to use mobile phones or iPads to experience digital services after class, and that more interaction and animation feedback can attract their attention. Moreover, parent-child interaction to complete the learning task together can improve

the learning experience of children. We tried to visualize the key points of knowledge in the textbook and show them dynamically, and connect the teaching knowledge points through games.

Fig. 3. Learning about cocoa beans through interactive games

The user interface with touch control may generate information exchange as shown in Fig. 3. Diversified presentation is a way that students today accept at an earlier stage. The changes in our times create the distinct characteristics of students. Their focus, daily life style and hobbies are also different. We need to continually reflect and grasp the trend of the times and update the service contact points to meet the current needs and achieve the service goals. It is obvious that the methodology is crucial: one which can monitor users' emotions in real time to feedback information in order to determine design work at a higher stage.

Case 4: APP of the Traditional Culture Museum

In early 2013, the museum launched the APP project in order to popularize the knowledge of cultural relics. The historical data was presented digitally. Although there are essential differences between digital presentation and cultural relics, the former offer easier means of preserving relics and disseminate them.

Based on the above background, the museum can receive 15 million tourists every year. Through the app display, the cultural treasures of the museum will be presented to more Chinese more efficiently. How to choose cultural relics to display and promote? How to explain them in the app? These are the first things we needed to consider. We used the Shadowing Plan to observe visitors to the museum. The Plan, combined with the situational interview, revealed that many visitors had deep feelings for the auspicious beasts on the building and at the gate of the palace. Although many did not know what they were, they still took photos of them. We tried to use auspicious animals to find a clue through the history of cultural relics. We found that our ancestors had used auspicious animals as decorative patterns since ancient times, including flying in the sky, climbing on land and swimming in the sea. We connected these mythical animals and used them as an opportunity to display cultural relics, guiding users to understand cultural knowledge. Through written text and text decoration, we drew a set of auspicious animals by hand, and explained them according to relevant cultural relics stories, and combined these with the actual location of the museum's icon to attract tourists to find auspicious animals on the spot.

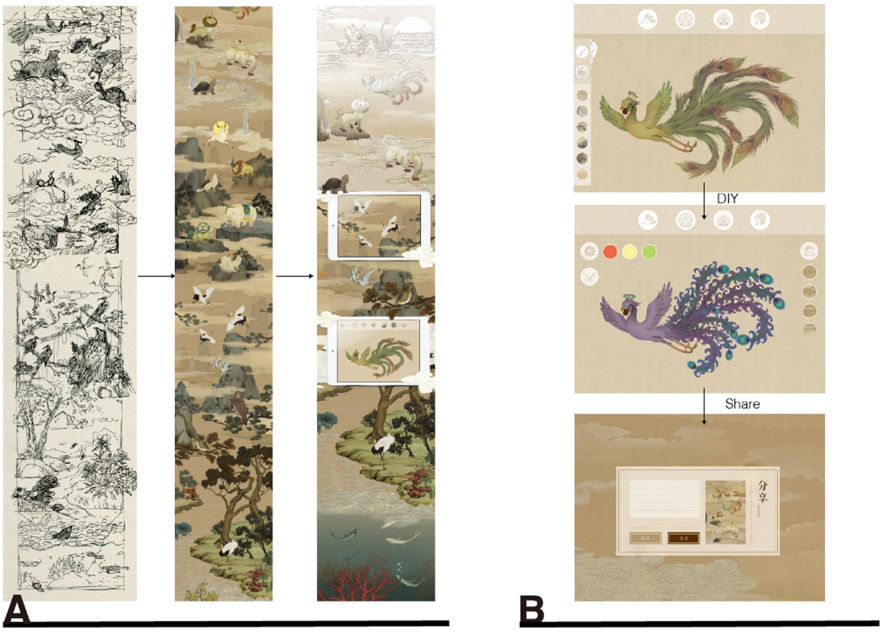

Fig. 4. Group A on the left shows the connected visual map of auspicious animals. And the relationship between buildings and cultural relics. Group B on the right shows the interaction application.

As soon as the APP was launched, the majority of users liked it, and they also asked for derivative products. We took this opportunity to contact the relevant government sector, to launch a series of derivative products, and provided DIY functions to create auspicious animal models, including replaceable parts such as eyes, horns, scales, feathers, head crowns, etc., which were drawn according to the real data shown in Fig. 4. Each detailed part had a prototype, allowing the visitors to customize their own auspicious animal cultural relics. On reflection, we were able to provide expandable services and maintain individual autonomy, so that users could decide the time and intensity of experience according to their actual needs.

Case 5: Digital Marketing Construction of a Jewelry Brand in Beijing International Trade Mall

China International Trade Yintai jewelry concept store is a pioneering practice in China's new retail era. This brand focuses on the new concept of "jewelry personalization": providing each customer with the most suitable jewelry products. The main obstacle to the initial growth of the brand lies in the experience of the service path. There are deficiencies in customer value identification, integration and the practicability of the brand.

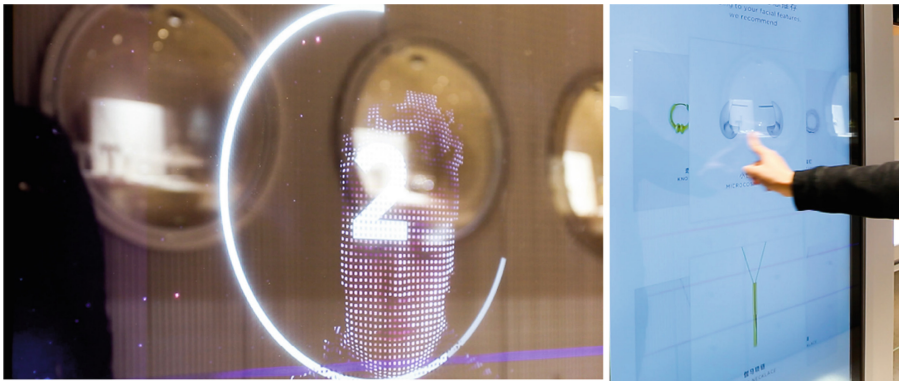

Fig. 5. (left) Facial recognition. (right) Jewelry recommended according to the face shape according to the DATA of Facial recognition.

Based on the above research, we decided to improve the user experience. How to provide customers with the most suitable jewelry products? We focused on how users chose their jewelry and extracted a series of keywords through interviews and insights, including matching temperament, light convenience, etc. Then we put forward the concept of a face jewelry service shown in Fig. 5. The establishment of face jewelry is not just to develop a product, but also to carry out marketing and sales work, in the anticipation that designers become a part of the business and solutions are found together with customers. Starting from the key points of users' attention, we recommended appropriate headwear through the camera to identify users' face shape, hairstyle, and expected weight size so that users could realize that each piece of jewelry should have a unique emotion and become the wearer's self-expression and spiritual strength. We tried to create a product recommendation that could match the user's look and facial features in real time, which, in turn, would expand the Rich Media 2.0 framework.

4 Characteristics of Rich Media 2.0

In addition to all the strategies above, the design process itself proved a way of finding the critical points of redesign after the design was completed. We were then able to integrate the redesign into the methodology, namely, Rich Media 2.0., as shown in Fig. 6.

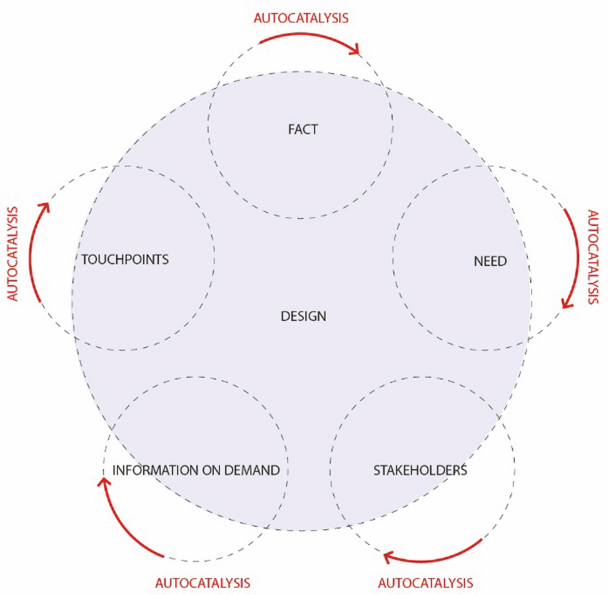

Fig. 6. The construction model of Rich Media 2.0.

4.1 Fact

According to Cambridge dictionary the meaning of fact is 'something that is known to have happened or to exist, especially something for which proof exists, or about which there is information' [3].

The design process is built by facts such as atmosphere, time, events, common sense, space and factors.

4.2 Need

During design project the need influenced by all participants such as provider, user and designer related to function, purpose and service.

4.3 Stakeholders

Stakeholders refers to all associates of a complete project. Status, relevance, balance and value were used to analyze the interaction among different stakeholders.

4.4 Touchpoints

Touchpoints mean the connection between user and service, which happens consciously and unconsciously, and a number of ways to communicate between them.

4.5 Information on Demand

The strategy of information on demand allows the audience to determine the timing, type, and intensity of the media service they participant in.

4.6 Autocatalysis

An essential part of Rich Media 2.0. is a real-time information-monitoring tool. It can judge the positivity or negativity of feedback information through the visual visualization of the visitor's emotions, meaning the design link produces feedback to establish improvement in future directions. That is, in the design process chain, each link can carry out information value tests and strengthen the authenticity of user feedback, in order to promote the higher cycle of the design chain that, in turn, can improve the design and user experience.

Secondly, emotion [4], self-expression produced in the process of human contact and interaction with things, is a feeling state of cognition and behavior that is inspired and integrated by neural circuits, response systems. With the development of technology and computer technology, emotion recognition based on image recognition and physiological signal analysis has gradually evolved into a mature field of emotion research. In the model of Rich Media 2.0 methodology, we propose that users' emotional feedback can be used to assist the design work in every link, that is, through the results of feedback, it can help designers improve the service design in the process. This self-cycling program not only emphasizes the visualization process of emotion but also, more importantly, links the positive and negative aspects of user emotion with changes in time. Emotion is a kind of internal subjective experience, but when emotion occurs, it is always accompanied by some external performance. This kind of external performance reveals some behavior characteristics that can be observed. People's facial expression shows various emotional states through the changes of eye muscles, facial muscles and mouth muscles. People's eyes are best at communicating. Different eye movements can express people's different emotions and feelings. The change of mouth muscles is also an important clue to express emotions, for example, when hateful, "gnashing teeth" and when nervous, "with open mouth" [5]. This way also makes it possible to judge the emotional state of a person by observing the changes.

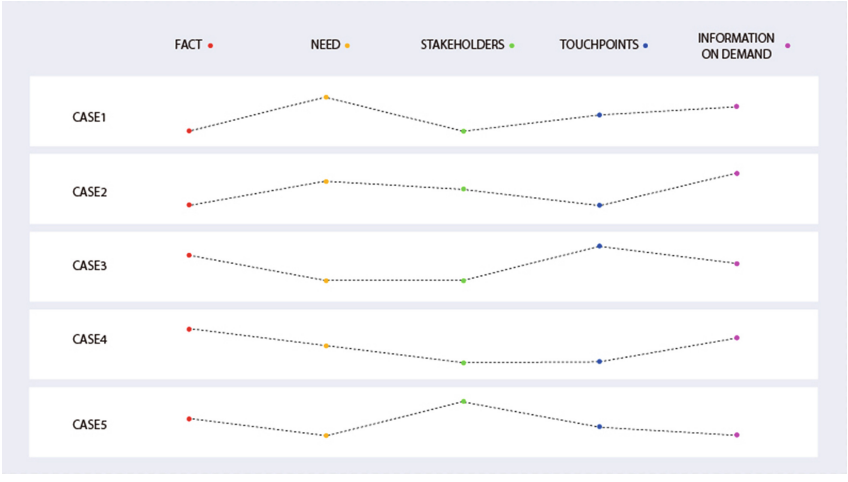

Fig. 7. Evaluation of the Listed Cases by Rich Media 2.0 Mode

Based on the above cycle, autocatalysis is the driving force of the higher cycle. The construction of the framework improves the construction of media information in the design process. Autocatalysis, as the core link, promotes the whole design process chain to find problems and catalyze them so they become a more advanced infinite cycle. It monitors emotions in real time to gain real feedback information that can improve the design. By extracting the features of Rich Media 2.0 and applying it to grounded theory, the following picture shows the framework of its construction mode, and provides a visual analytical method for people, as shown in Fig. 7. As can be seen from the above picture, in the design process, the information fluctuation is presented, which shows the degree of deviation from the original information reality in each design link. The selected cases all present a wavy line, and all need to have the methodology to build the construction of media information. Furthermore, the autocatalytic effect of autocatalysis is used to show that the prototype of the ideal model may achieve a more stable and balanced route in the future.

5 Constructing Rich Media 2.0

Where should Rich Media 2.0 usefully be applied? First of all, the information will change as time goes on, and autocatalysis will be triggered by re-examining the real feedback of information in each link of the design process. Autocatalysis is used to monitor various emotional states of people. We have a fundamental emotional classification. Most studies tend to agree that there are at least six basic emotions: happiness, anger, fear, sadness, disgust and surprise [6]. It makes the design process carry on effective information reconstruction and recirculation. Conscious or unconscious emotions can give real feedback to the interactive links, which can be widely used in the expansion of the service field. Some are listed as follows:

5.1 Offline Interactive Facilities and Services

Rich Media 2.0 can provide autocatalysis and effective information feedback at the beginning of the completion of facilities and services. As students, teachers, teaching materials, experience methods and social systems change with the service time, just as in case 3, only providing functional solutions is the bottom line to meet the needs, and providing a pleasant service experience can help us gain confidence, and helps us to know ourselves. As the carrier of information and the kind of service are changing with the times, we need to find ways to match the development of the times and the age of users, and to marry these with the content of the experience, such as in the Cocoa Bean project, mining the case of active experiences of 10–13-year-old children, and applying it to teaching contexts to achieve better service purpose. The out-standing significance of Rich Media 2.0 is to excavate a good cycle of evaluation and guidance services for testing offline interactive facilities and services.

5.2 Virtual Information Construction

Digital devices have become an important part of the current social information dissemination process. The convenience of information transmission and the information overload require efficiency and convenience of information construction and screening. Rich Media 2.0 is used to evaluate the location and rationality of on-demand information in the information service chain, therefore re-evaluating the user service experience. For example, in the case 4, it is observed that tourists are interested in auspicious beasts at this stage. We take this as the starting point for service design to meet the trend of the times and users' expectations. No matter what medium or method is used, the service provider determines what consumers can see and how to see it. We need to provide a complete user-initiated content production method to let users begin to intervene in content production. In this way, there is a move from the provider fully leading to the consumer also being involved in production; a move that lets users decide the time and intensity of experience according to their actual needs.

5.3 Digital Exhibition

How to present the information elements appropriately? The application of the digital exhibition maximises the service expectation of users. Rich Media 2.0. has brought about a new role for the value chain, and a redefining of the role and relationship of participants from all sides, so that the presentation mode is not divorced from reality and can be applied to new digitalization. For example, in the case of jewelry brand – the digital marketing construction of Beijing International Trade mall in case 5 - we let customers become members of the design link so they could jointly realize brand value, monitoring and analysis of user behavior in real time and thus accurately feedback their needs.

5.4 Three-Dimensional Urban Structure

Urban public life involves many participants, such as those in engineering, economy, environment, transportation, communication, education, medical treatment, etc. The service field is complex; the changing needs of users and the actual use environment will affect the service journey. By re-examining the relationship between knowledge and concepts in various fields, it is easy to highlight the breakthrough of the project and obtain new ideas to optimize the current situation. For example, in the regeneration plan of old town in Beijing case 2, providing a channel for users to communicate with each other helps to activate the whole regional service experience. With the continuous promotion of services, users' demands for services will change through the process of experience. It is possible to use Rich Media 2.0 to pay attention to this change and explore the multi-level of urban structure.

6 Testing Model

Thanks to the rapid development of the Internet, Internet companies have launched digital services such as virtual products. To ensure the maturity of such virtual products, they will be tested, or their trial versions will be launched. As with online members, there will be trial versions at the initial stage to provide customers with short-term exclusive services. The advantage is that this allows members to enjoy specific offers or exclusive products. This kind of virtual membership product is conducive to industry standardization and clarity of copyright.

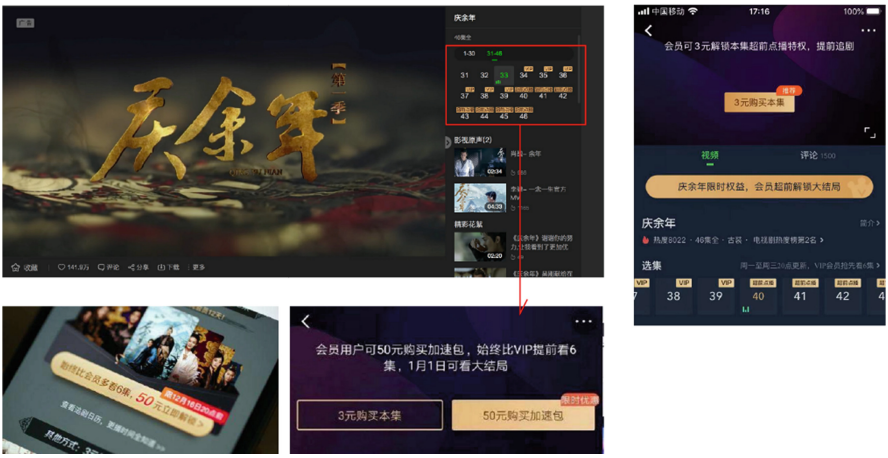

Fig. 8. The Interface of Iqiyi.

Recently, the novel adaptation of the ancient costume drama "Celebrating the Rest Year" was popular on iqiyi.com, and was sought after by many people. Iqiyi website launched VVIP service [7]. 'VVIP' means advanced on-demand, that is, based on a VIP watching six episodes first, members were able to watch six more episodes if they paid another 50 CNY as shown in Fig. 8. Therefore, when members realized there was an additional payment, it caused public outcry on the Internet. More than 4 W pirated links increased. The official media of the People's Daily said that this kind of service was an infringement of the rights and interests of consumers. Even as a trial version of the service, it harmed the brand on the network. For the interpretation of user sentiment, we used a combination of discrete model and dimensional model [8]. Six basic emotional states [9] were expressed in a dimensionalized way as shown in Fig. 9.

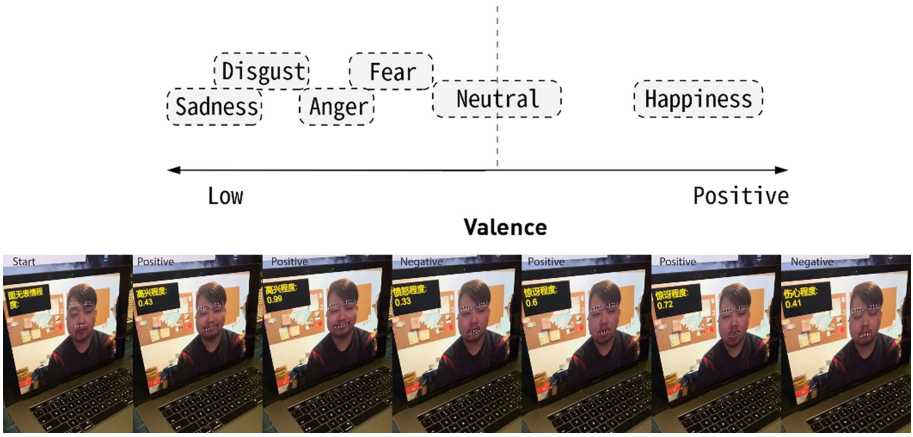

Fig. 9. (up) Construction of autocatalysis analysis model and (down) test

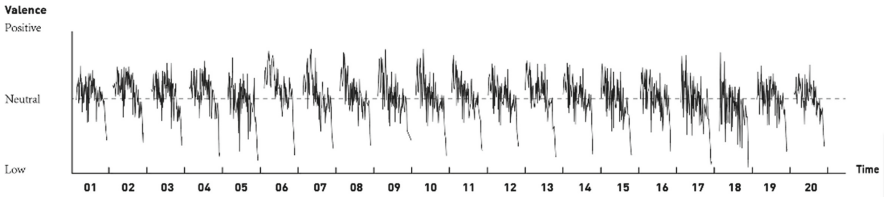

Fig. 10. Evaluation of the 20 participants by autocatalysis analysis model

For this situation, we tried to test with Rich Media 2.0 as shown in Fig. 10. On the one hand, real-time monitoring tools were used to check the problems. On the other hand, we were also able to deduce the solution according to the curve of emotional fluctuation. We chose people from different backgrounds who had not watched the film to participate in the experience. They watched with a VIP account until the last episode of the permission was available. The pop-up recommendation window of VVIP service would then pop up. According to the records, all 20 participants had fluctuating emotions at this time. Nine of them chose to close the page within five seconds. Every time the users interact with the information, they will have emotional fluctuations because of the pictures, words and other information in the service. This kind of emotion is the psychological feedback of customers' contact with products and services. The relationship between emotional fluctuation and time can form valuable information feedback of the user experience. Receiving emotional information from several different periods of the program will further help research and create an accurate and efficient database. According to the mood fluctuation chart, the problem-solving direction is not limited to the following two directions: firstly, a reasonable range of VVIP costs, and secondly, the role and permission assignments.

Ultimately, Iqiyi launched VVIP virtual products to enhance user experience. However, in the early stage of the trial version, Rich Media 2.0 was used as the testing methodology, reducing social impact. Through this, we were able to understand the user's emotions and psychology, and improve the project redesign.

7 Conclusion

This paper proposes a methodology for objectively evaluating user experience, which could be considered as a testing tool for information deviation caused by time evolution during the construction of media information. It is called Rich Media 2.0. Based on the designer research and the concept analysis of related cases, six elements of the design process are extended: need, fact, touchpoint, stakeholders, information on demand, autocatalysis. In addition, the applicable industries of four fields are expanded, such as offline interactive facilities and services, virtual information construction, digital exhibition, and three-dimensional urban construction. The accuracy of Rich Media 2.0 makes autocatalysis able to present the fluctuation of emotion directly during the process of emotion visualization, and hence, to explore customer psychology. The real-time nature of Rich Media 2.0 means its information feedback is not limited by time, but it rather can be used as a process of real-time emotional feedback. Its expansibility makes it possible to develop a wide range of industries. With the development of wearable devices, 5G technology and deep learning, the accuracy of emotion recognition will be improved. With the new technology and recognition dimension, the information of emotional feedback will be more accurate. Customers can also feedback more information, including age, gender, face value, face quality information and types.

By recognizing the value of Rich Media 2.0, we enhance media information construction and thereby create a better user experience. This methodology helps us to filter subjective information during the service process, and expand the scope sufficiently, as well as the dimension of the screening. Overall, this evaluation method can more accurately deliver feedback about the value in the service journey, hence providing a solid basis for redesign.

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