

#Redesign an immersive website by incorporating elements of enhancing the overall user experience.

Keywords: Immersive Website, User Experience, Web Design

Conceptualization

As a student at National Taiwan University, many of us have experienced purchasing campus souvenirs. Whether it's clothing, practical stationery, or other high-quality items, these emotionally connected items have a special meaning for students on campus. However, upon reviewing the current NTU merchandise website, the rigid and templated design gives off a rough and lifeless impression. Therefore, our team aims to create a design-oriented website platform using an immersive approach and a storyline-like direction to enhance the interface's usability and enjoyment.

To address this issue, our team intends to embark on a redesign journey by creating a visually captivating and immersive website platform. Our goal is to go beyond mere product purchases at the NTU Publishing Center. We aim to offer consumers a more gratifying and engaging experience, allowing these cherished memories to flourish and reach new heights.

Target Audience

Based on the statistical data of past consumers on the NTU merchandise website, the primary target audience is primarily comprised of current students, faculty, and some al

umni. However, with the recent surge in the cultural and creative trend, there is a growing interest among artistic and literary enthusiasts in acquiring high-quality lifestyle products as collectibles. Furthermore, National Taiwan University enjoys a reputable image and widespread recognition, attracting many consumers intrigued by the idea of purchasing NTU souvenirs. Therefore, these consumers, who appreciate and seek out cultural and creative merchandise, also represent a valuable potential target audience for the redesigned website. The team aims to create a distinct ambiance through innovative design and a focus on quality, captivating the attention of both the target audience and potential customers, and ultimately motivating them to make purchases.

User Testing

(1) Evaluation Method

Our team utilized a heuristic evaluation method to assess the prototype of our website design across 10 dimensions, including:

- Visibility of system status
- Match between system and real world
- User control and freedom
- Consistency and standards
- Help users recognize, diagnose, and recover from errors
- Error prevention mechanisms
- Recognition rather than recall
- Flexibility and minimalist design
- Aesthetics and minimalist design
- Availability of necessary help and documentation

Using a questionnaire format, the evaluation was conducted by six individuals, including team members and external participants. The rating scale ranged from one (strongly disagree) to five (strongly agree). The evaluation referenced the Heuristics Evaluation approach by Nielsen J. (2009) and consisted of a total of 58 items. Each participant provided ratings, and their usage time and behavior were recorded during the evaluation process.

(2) Evaluation Results and Discussion

The evaluation results indicate that the designed website prototype performed relatively well across the ten dimensions, with some areas for improvement. Specifically, the dimensions of Match between the system and the real world, Recognition rather than recall, and Visibility of system status demonstrated good performance. This indicates that the system design should align with users' existing knowledge, experiences, and habits related to similar products in their real-life context. By using familiar terms and concepts, users can operate the system smoothly based on their existing knowledge and experiences.

Moreover, the system design effectively reduces the need for users to rely on memorization by providing ample information throughout the interaction process. This includes the thoughtful use of visuals and accompanying text to convey meanings, eliminating the burden of remembering specific details. Additionally, the system demonstrated good readability by offering timely feedback and employing a clear menu design and a home button,

allowing users to clearly understand their progress within the interaction flow and preventing them from feeling lost.

Most of the dimensions received an average score of 4 or above (out of 5), indicating good performance. It should be noted that some respondents initially misunderstood the questions, but after clarification, they acknowledged that the team had indeed achieved the intended goals. However, there were slight deficiencies in the dimensions of User control and freedom, Flexibility and Minimalist Design, and Help and Documentation.

(3) Modification Approach

Our team has identified areas for adjustment and improvement in the web interaction design based on the evaluation results. The following modifications and refinements will be implemented:

Regarding the dimension of User control and freedom, the team will address the inferred possible reasons, which include:

- (1) The return or cancel function not being clearly visible.
- (2) Users are unable to easily undo their previous actions.

To address these issues, the following adjustments will be made:

- (1) Enhance the visibility of the return and cancel buttons to make them more prominent and easily recognizable.

As for the dimension of Flexibility and Minimalist Design, the team has concluded that most of the identified issues do not align with the project requirements or are unnecessary.

ry in the web design prototype. The reasons include:

(2) The web page interactions are already simplified, and each step is essential.

(3) The menu selection on the web page prioritizes breadth rather than depth, eliminating the need to combine a series of options into a shortcut.

Therefore, no specific modifications are needed in this aspect.

Concerning the dimension of Help and Documentation, the team will address the inferred possible reason, which is:

(1) Insufficient help prompts and explanations in the system.

To address this, the following adjustments will be made:

- Provide clear and concise textual instructions to guide users in case of errors or confusion during the operation.

These modifications aim to enhance the user experience and address the specific areas identified for improvement based on the evaluation results.

Design Concept: Immersive Website

The concept of an immersive website goes beyond incorporating dynamic animations to make the interface lively and enhance user experience. It aims to create a sense of elegance and sophistication in the interface design. For instance, one of the dynamic effects of immersive websites is "transitioning." This effect is applied when switching between different pages, utilizing shape transformati

ons, zooming, or offset transitions to add depth and interactivity to the interface. By engaging users' senses and reducing cognitive barriers, immersive effects enhance the overall user experience.

Another aspect of immersive website design is the utilization of expanded space. Due to the limited screen real estate, it can be challenging to present a large amount of information on a single interface. However, immersive effects allow for interactive messages to be revealed through mouse interactions or scrolling actions. Even with a minimalist interface, these effects enable the presentation of additional information, alleviating users' reading burden and focusing their attention.

However, it's important to avoid overusing special effects and transitions in immersive interfaces. Sometimes, in an attempt to create an immersive experience, websites may neglect essential elements such as clear navigation and accessibility. Excessive use of effects can lead to confusion and hinder users' ability to navigate the interface. Therefore, our approach is to embrace the immersive trend while maintaining a balance. We will incorporate interactive elements and immersive effects, but in a way that complements the overall user experience without overwhelming or confusing users.

By combining immersive design elements with user-friendly interface principles, our goal is to create an immersive website that provides users with an interactive and visually ap

pealing experience, while still prioritizing usability and ease of navigation.

Prototype

After referencing immersive interface designs and analyzing the NTU Press Center website, we have created the following visual representation. Our main objective was to create an immersive experience where users can scroll through the page and explore the content. The prototype includes the following sections: "NTU Press Center Home Image," "About Us," "Latest News," "New Book Releases," "Publications," "NTU Merchandise," and "Contact Us."

In the "NTU Press Center Home Image" section, we incorporated a sliding motion effect to showcase different images of NTU, allowing users to switch between them. The "About Us" section, we redesigned it to highlight three main areas: Publishing, Marketing, and Services. We added arrow indicators in the bottom right corner, providing visual feedback when clicked. The "Latest News" section underwent a layout redesign, and we considered incorporating button-based navigation to scroll through the news. In the final design, we implemented a horizontal scrolling effect with floating text descriptions that appear when the mouse hovers over the news items, creating an interactive experience.

The "New Book Releases" section was designed to enable left and right scrolling. W

hen users hover over book images, they will enlarge and float upwards, emphasizing their quality and aesthetics. In the "Publications" section, we decided to focus on the product interface and omitted dynamic responses upon hovering over items. For the "NTU Merchandise" section, we drew inspiration from immersive Japanese website designs. The left side features a simple introduction, while the right side showcases products in a scrolling manner. Users can preview product images by hovering over them, adding an interactive element to the experience. We successfully implemented this effect in the final design. Lastly, the "Contact Us" section is located at the bottom of the page, providing users with basic contact information.

As for the "NTU Merchandise Store," our initial intention was to categorize and refine the products from the original NTU Press Center's homepage. In the prototype, we divided the immersive interface into two halves, allowing users to scroll and slide through the content. However, in the final design, we made adjustments to the layout and fully presented the subsequent shopping process, incorporating some dynamic effects throughout the user journey.



Web Design

(1) Layout Design:

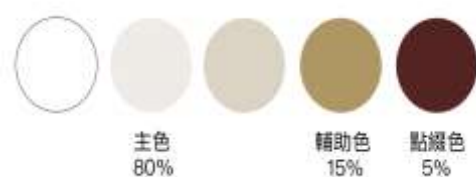
For this design, we took inspiration from the desktop version of the NTU Press Center website, targeting a common 3:2 aspect ratio

for notebook computers with a resolution of 1440x960 pixels. Our aim was to maintain the professional and innovative image of the NTU Press Center, and we chose a sleek and minimalist style, incorporating the popular trend of flat design in web design. However, to enhance the visual appeal and address the issue of a monotonous interface, we experimented with various layout designs on the homepage.

Since the homepage of the website follows a one-page scrolling format, we utilized different layout designs to distinguish between sections and provide users with a diverse visual experience while browsing. This approach not only creates an immersive effect but also offers flexibility and aesthetic appeal in presenting information on the website.

To ensure a refined user experience, our team paid close attention to the details of the design. We primarily used a sans-serif font for the website, but we added a handwritten font as an accent to inject liveliness and sophistication into the layout. Additionally, elements such as images and buttons feature rounded corners, contributing to a consistent and cohesive appearance throughout the design.

(2) Color Guidelines:



(Figure 4-1)

To achieve a harmonious and consistent look, we established color guidelines for the web design, as depicted in Figure 4-1. The main color palette of the website consists of white and beige tones, serving as the background color and primary color blocks to create a clean and minimalist ambiance. We also retained the original color choices from the NTU Press Center website, incorporating gold and burgundy as complementary and accent colors (as these colors represent NTU's official colors). These colors are strategically used for certain headings and buttons to highlight important information. Furthermore, text colors are differentiated using grayscale tones to effectively convey the hierarchy of information. For instance, headings are presented in the deepest black, while the content below them utilizes lighter shades of gray, ensuring clarity in information presentation.

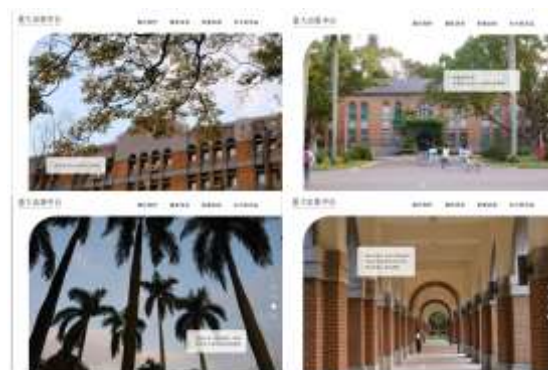
(3) Interaction Design and Interface Optimization:

To create an immersive website experience, our team focused on improving the information layout and incorporated various interactive design elements to enhance the user experience. Here are the key interactive design and interface enhancements of our final prototype:

1. Homepage Cover Interactive Design

Upon entering the website, users are greeted with a photo cover of the NTU campus. By clicking the circular dots on the right side, users can scroll through different images accompanied by text message boxes. This interactive design creates a conversational conte

xt between the website and the user, allowing users to gain insights into the Press Center's information while adding a sense of interactivity and enjoyment.



(Figure 4-2)

2. Cursor Hover and Button Click Feedback Design

We implemented feedback designs for almost all clickable elements on the webpage. When the user's cursor hovers over a specific element, it responds accordingly, providing visual cues to indicate its clickability. Upon clicking a button, it generates a noticeable change, confirming that the website has received the user's command. For example, in Figure 4-3, when the cursor hovers over the arrow button, it transitions from an outline to a solid fill design and displays the handwritten word "more," suggesting to users that they can click to access additional information. Figure 4-4 illustrates the contrast between the cursor hovering over and not hovering over a news article, where the image's color tone changes and the complete title is displayed.



(Figure 4-3)



(Figure 4-4)

3. Improved Product Display in the Souvenir Store

Our website design focused on enhancing the product display in the souvenir store, specifically addressing the drawback of separate listings for identical products in different colors. This approach made the product page appear cluttered and made it challenging for users to differentiate and find specific products. Our team implemented the following improvement to address this: similar products are now grouped within a single container, showcasing all available color variations. Users can click on a specific color variant to directly navigate to the purchase page for that style. This organizing method allows users to easily distinguish between different product types at a glance while providing a comprehensive view of all available styles for each product. This enhancement improves the efficiency of product searching and creates a cleaner layout for the page.



(Figure 4-5)