**Hong Kong Institute of Vocational Education (LWL)**

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**A. Driving Question**

How does good HCI design help Yummy Restaurant Group's system improve user satisfaction, and what advantages does it bring in this regard? (250 words)

Good Human-Computer Interaction (HCI) design plays a vital role in enhancing user satisfaction within Yummy Restaurant Group's system. By focusing on creating an intuitive and user-friendly interface, HCI design can provide several advantages that contribute to improved user satisfaction.

Firstly, a well-designed HCI ensures ease of use and efficient navigation throughout the system. Intuitive menus, clear labeling, and logical information organization enable users to quickly find what they need, reducing frustration and cognitive load. This streamlined user experience saves time and effort, leading to increased satisfaction.

Secondly, HCI design promotes consistency and familiarity. By adhering to consistent design patterns, visual styles, and interaction conventions, users can easily understand and predict how the system behaves. Consistency helps users build mental models of the system, allowing them to feel in control and confident in their interactions. This familiarity leads to a sense of comfort and satisfaction.

Thirdly, HCI design focuses on responsiveness and feedback. Providing immediate and meaningful feedback to user actions, such as progress indicators or confirmation messages, ensures users feel engaged and informed about the system's state. Feedback reassures users that their actions are being recognized and processed, enhancing their sense of control and satisfaction.

Furthermore, good HCI design considers the system's aesthetics and visual appeal. Pleasant visual design, appropriate use of colors, and appealing typography create a visually engaging and enjoyable experience. Aesthetically pleasing interfaces evoke positive emotions, making users more likely to engage with the system and feel satisfied with their interactions.

Moreover, HCI design emphasizes accessibility and inclusivity. By considering diverse user needs and providing options for customization, such as font size adjustments or color contrast options, the system becomes more inclusive and accommodating. This inclusivity fosters a positive user experience for a wider range of users, ultimately increasing satisfaction.

Overall, good HCI design within Yummy Restaurant Group's system brings advantages such as ease of use, consistency, responsiveness, aesthetics, and accessibility. These advantages contribute to improved user satisfaction by reducing cognitive load, providing familiarity, offering meaningful feedback, creating visually appealing experiences, and catering to diverse user needs. By prioritizing HCI design principles, Yummy Restaurant Group can enhance user satisfaction, leading to increased engagement, loyalty, and positive brand perception.

**B. User Analysis**

**User Characteristics**

1. Learning style:

The users are already familiar with the system, so the "do-then-read" learning style is suitable. This approach allows users to actively engage with the system and learn by doing. Clear and intuitive interfaces, contextual help, and interactive feedback will further enhance their experience and task completion efficiency.

1. Tool preferences

To facilitate ease of use for all users, we utilize widely recognized and commonly used control elements such as dropdown menus, buttons, checkboxes, and text input fields. These control elements are familiar and user-friendly, reducing the learning curve and enhancing the usability of the system.

1. Physical differences

To accommodate users with varying visual capabilities, our system incorporates large font sizes. This design choice ensures that individuals, including older adults, can easily read and interact with the content. Large fonts enhance legibility, reducing eye strain and improving overall accessibility. By considering the physical differences of our users and implementing measures like larger font sizes, we aim to create an inclusive and user-friendly experience for all individuals, regardless of age or visual abilities.

d. Cultural differences

To accommodate users with lower education backgrounds, it is crucial to use simple and clear language in the design system. Avoiding technical jargon and complex terminology ensures clarity and comprehension. Instructions, labels, and tooltips should be easily understandable and straightforward, guiding users through the system seamlessly. By prioritizing plain language and providing user-friendly guidance, individuals with lower education backgrounds can navigate the system with ease, reducing barriers and enhancing their overall user experience.

e. Knowledge of job

Our users primarily utilize the system for leisure purposes, it is essential to consider their knowledge and understanding of their recreational activities. The design should be intuitive and user-friendly, catering to their specific interests and hobbies. Providing clear and concise instructions, along with visual cues, will guide users through the system effortlessly. Additionally, incorporating personalized recommendations, interactive features, and easy-to-navigate menus can enhance their enjoyment and engagement. By considering their knowledge of leisure activities, we can ensure the system is tailored to their needs, enabling them to make the most of their leisure time and creating a positive and fulfilling user experience.

**Techniques for observing and listening to users**

Talk right after

Restaurant Manager:

Feedback from restaurant manager suggests that the system should be colorful to attract customers. Additionally, they recommend using restaurant-specific images on the main page to create a more engaging experience.

Restaurant staff:

The restaurant staff suggests increasing the font size of order content and quantity information in the system to facilitate easier order management. This would help the restaurant staff in efficiently organizing and fulfilling orders.

Delivery personnel:

Delivery personnel provide feedback requesting the system to have alarm notifications indicating when they can pick up orders. They also emphasize the importance of real-time timing updates without any delays, allowing for more efficient delivery operations.

Online Survey

‧The students from IVE Mr. Lee suggest that including pictures in the restaurant menu would be beneficial. It adds visual appeal and makes the menu more enticing.

‧Mr. Leung suggests increasing the size of the buttons for easier use.

‧Ms. Chen recommends incorporating customer reviews and ratings into the restaurant menu. This helps customers make informed decisions by considering others' experiences and opinions.

‧ Mr. Ng proposes integrating a "Specials" section in the menu, featuring limited-time offers, seasonal dishes, or chef's recommendations. This adds excitement and encourages customers to try new or exclusive items.

‧Ms. Kwok suggests adding allergen information to the menu, highlighting common allergens such as nuts, gluten, or dairy. This helps customers with dietary restrictions or allergies make informed choices.

**Environment Analysis**

In 2019, the percentage of restaurant orders placed online exceeded the quantity placed verbally over the phone”. The increasing preference for online ordering indicates a change in consumer behavior. Customers are looking for convenience, speed, and flexibility in their food ordering experience. The online food system should cater to these needs by providing a user-friendly interface, quick and secure payment options, and customizable order options.

For staff members of the restaurant, who will be logging in and accessing the system using company-provided computers, the system should be compatible with desktop devices. This ensures that staff members can efficiently manage orders and perform necessary tasks using the computers provided by the company.

On the other hand, customers have the flexibility to browse the online ordering system through desktop devices. Therefore, it is essential for the system to be responsive and adaptable to different screen sizes and resolutions. By selecting Bootstrap for the front-end development of the site, the online ordering system can effectively support desktop devices, providing a seamless experience for customers.

Reference:

Dealey, N. (2022). Importance of Online Food Ordering System for Restaurants [LinkedIn post]. Retrieved from

<https://www.linkedin.com/pulse/importance-online-food-ordering-system-restaurants->

**Recruiting Users**

Restaurant Staff:

As the system is being tailored for the specific needs of Yummy Restaurant Group Limited, it would be beneficial to invite their staff members to regularly test the system. This allows for real-time feedback and ensures that the system aligns with their daily requirements. Staff members can provide valuable insights into the usability and functionality of the system from an internal perspective.

Customer:

Create an online survey to gather feedback from a broader customer base. This can be shared through social media channels, email newsletters, and the restaurant's website. To incentivize participation, customers can be offered a discount of HKD $50 on their next order upon completion of the survey. This will encourage customers to provide valuable feedback while also providing them with an incentive to continue using the system.

Delivery Personnel:

To ensure the smooth integration of the online ordering system with the delivery process, it is important to involve delivery personnel in the testing phase. They can provide feedback on the functionality of the system from a delivery perspective, such as order management, navigation, and communication. By actively involving delivery personnel, any potential issues or improvements related to their role can be identified and addressed.

**Task Analysis (HTA)**

1.1Register

0. In order to register, you can choose from three options: Restaurant, Customer, or delivery personnel.

1.Navigate to the main page of the site.

2.Select the create account option that corresponds to your role

(Restaurant, Customer, or Delivery personnel).

a. Fill in all the relevant information requested in the registration form.

b. Click the "Create" button to complete the registration process.

c. Check your confirmation message.

Plan 0: Do 1-2

Plan 2: Do 2a-2c

**Customer**

2.1Order Food

0. Order Food

1. Fill in username, password, and click ‘Login’ as a customer

2. Click on the "Restaurant List" on the navigation bar

3. Choose a restaurant

4. Select items from the menu

a. Specify the quantity of each item

b. Add selected items to the cart

5. Click the "Checkout" button to proceed to the cart page

6. Provide delivery information

a. Enter the delivery address

b. Provide contact details

c. Select a payment method

7. Click the "Checkout" button to submit the order

Plan 0: Do 1-7

Plan 4: If changes are needed in step 4, Do 4a-4b

Plan 6: If changes are needed in step 6, Do 6a-6c

2.2.View order

0. View Order Record

1. Navigate to the main page of the site

2. Fill in your username and password, then click on "Login" as a customer

3. Click on "Order Record" on the navigation bar

4. Click on "Order Detail" for a specific order record

5. View the order content, including details such as items ordered, quantities, prices, and any additional information related to the order

Plan 0: Do 1-5

**Delivery Personnel**

3.1 Accept Order

0. Accept Order

1. Navigate to the main page of the site

2. Fill in your username and password, then click on "Login" as a

delivery personnel

3. Click the 'Order List' Check for new orders

4. Click 'Food list' to view its details

5. Click on the "Accept" button to

6. Show confirmation message.

Plan 0: Do 1-6

3.2 View Order History

0. View Order History

1. Navigate to the main page of the site

2. Fill in your username and password, then click on "Login" as a delivery personnel

3. Click on "Order History" on the navigation bar

4. Click on "Order Detail" for a specific order record

5. View the order content, including details such as items ordered, quantities, prices, and any additional information related to the order

Plan 0: Do 1-5

**Restaurant**

4.1View order

0. View Order Record

1. Navigate to the main page of the site

2. Fill in your username and password, then click on "Login" as a restaurant

3. Click on "Order Record" on the navigation bar

4. Click on "Order Detail" for a specific order record

5. View the order content, including details such as items ordered, quantities, prices, and any additional information related to the order

Plan 0: Do 1-5

4.2 View Order History

0. View Order History

1. Navigate to the main page of the site

2. Fill in your username and password, then click on "Login" as a restaurant

3. Click on "Order History" on the navigation bar

4. Click on "Order Detail" for a specific order record

5. View the order content, including details such as items ordered, quantities, prices, and any additional information related to the order

Plan 0: Do 1-5

4.3Create, Edit, Delete food item

0. Restaurant Create, Edit, Delete Food Menu

1. Navigate to the main page of the site.

2. Fill in your username and password, then click on "Login" as a restaurant.

3. Click on 'Food List' on the navigation bar.

4. Create a new food item.

a. Click on the "Add New Food" option.

b. Fill in the details of the new food item, such as name,type,

description, price, and image.

c. Click 'insert' to create a new food item.

5. Edit an existing food item.

a. Click on the 'Edit' option.

b. Update the desired details, such as name, description, price,

type, image .

c. Click 'Modify' option to save the changes to update the food item.

6. Delete a food item.

a. Click on the 'Delete' option.

b. Confirm the deletion when prompted.

7. Repeat steps 4-6 as needed to add, edit, or delete multiple food items.

Plan 0: Do 1-7

Plan 4: if need creating a new food item (Step 4), do 4a -4b

Plan 5: if need editing an existing food item (Step 5), do 5a-5b

Plan 6: if need deleting a food item (Step 6), do 6a-6b

4.4 Choose delivery personnel

0. Choose delivery personnel

1. Navigate to the main page of the site.

2. Fill in your username and password, then click on "Login" as a restaurant.

3. Click on 'Choose Delivery Person' on the navigation bar.

4. Click on "Choose" for a specific person

5. An alert box appears asking, "Are you sure to choose?"

6. After confirming the selection, a confirmation message displays:

"Delivery Person chosen successfully."

Plan 0 : Do 1-6

4.5 View delivery person list

0. View delivery person list

1. Navigate to the main page of the site.

2. Fill in your username and password, then click on "Login" as a restaurant.

3. Click on 'Delivery Person List' on the navigation bar.

4.View the delivery person from the restaurant

Plan 0: Do 1-4

**C. Web Design Concepts**

Mental Model

一張含有 文字, 螢幕擷取畫面, 字型, Rectangle 的圖片

自動產生的描述

一張含有 文字, 軟體, 螢幕擷取畫面 的圖片

自動產生的描述

Customers may only read the food names and not have a clear understanding of the actual contents, it would be beneficial to incorporate food images alongside each food item. This visual representation can help customers get a clearer idea of what the food looks like and make more informed choices. By including food images, the system aligns with users' mental models of associating visuals with food items, making the ordering process more intuitive and visually appealing. This approach can enhance the user experience and reduce any potential confusion or uncertainty about the food options available.

In order to address the issue of customers not being aware if they have successfully placed an order, it would be helpful to implement an alert message that displays the order details immediately after each successful submission. This alert message serves as a confirmation and reminder to the customer, providing them with the necessary information about their order. By incorporating this feature, the system aligns with users' mental models of expecting feedback or confirmation after completing an action. This proactive approach ensures that customers are aware of their order status and reduces any potential confusion or uncertainty.

Affordance

一張含有 文字, 功能表, 室內, 速食 的圖片

自動產生的描述

一張含有 文字, 功能表, 室內, 速食 的圖片

自動產生的描述

The developers of the website had a primary goal of prioritizing user-friendliness and easy comprehension. To achieve this, they implemented several design elements.

Firstly, all form fields were clearly labeled, ensuring that users understand what information needs to be entered in each field. This simplifies the form filling process and reduces confusion.

Secondly, button affordance was emphasized during the registration process. A visually distinct and labeled "Register" button with a contrasting color was used to clearly indicate that clicking or tapping on it would initiate the registration process.

Furthermore, success alerts were incorporated to provide confirmation upon successful submission and processing of a form. This assured users that their submission was successful and that their action had been completed.

Users could easily navigate, understand, and interact with the site's functionalities, enhancing their overall user experience.

Content Organization

一張含有 文字, 螢幕擷取畫面, 數字, 字型 的圖片

自動產生的描述

In the content organization of the system, contents are classified based on their corresponding functions. Users can utilize the navigation bar to access different functional interfaces. For example, a customer can use the navigation bar to access the "Restaurant List" page to choose from different restaurants. They can also access the "Order List" page to view their orders, sorted by time from the most recent to the oldest.

Visual Organization

一張含有 文字, 螢幕擷取畫面, 軟體, 網頁 的圖片

自動產生的描述

一張含有 文字, 螢幕擷取畫面, 標誌, 字型 的圖片

自動產生的描述

Alignment - All form are centered and aligned. All text is aligned on both the right and left-hand side of the document.

Consistency - Consistent color tones are maintained across the website for a harmonious visual experience. The primary button and delete button align with this color scheme. The primary color emphasizes important elements, while default colors ensure visual consistency and user-friendliness. This creates a cohesive and visually appealing interface for users.

Navigation

一張含有 文字, 螢幕擷取畫面, 數字, 字型 的圖片

自動產生的描述

In the system, hierarchical navigation is utilized to display all the functions based on the user's role. Additionally, the system also includes the display of the user's name and the current time for the user.