**ITIS 6400 Principles of Human Computer Interaction**

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**Class Activity – Usability evaluation**

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During this activity you will become more familiar with an evaluation design, usability testing and the way designers test usability of a product, in our case a website. First, evaluate the website <http://www.marcos.com/> (A pizza website). You are evaluating this site for general usability issues, as well as the specific goals of *efficiency, learnability, and appealing*.

**Part 1:**

In this part of the activity, your group will perform an evaluation. The goal of this activity is to understand the components of an evaluation design. Each team will have the following roles played by one of the members:

1. Usability Test facilitator: This person will describe the purpose of the usability test, give an overview of the web site being evaluated, and will describe each task to the participant.
2. Usability test participant: This person in the group will perform the tasks and talk or ask questions during the task.
3. All other group members should be Usability test note taker: This person will observe the participant and take notes on the parts of the task that the user found easy, hard, how long each task takes, and how many clicks each task takes

**Part 1: Answers:**

**Tasks: Please find our Answers here:**

The facilitator should ask the participant to perform the following tasks, on whatever device you choose (laptop, tablet, or phone). Afterwards, report the number of clicks and time for each task below:

1. ***Find out the phone number and location of the closest place.***
2. ***Figure out the cost of a large pepperoni pizza and family size Garden Salad.***
3. ***Decide if any of the specials would be a better deal for the same (or better) order.***

**Notes from the exercise: The number of clicks for each activity, usability problems noted and the user friction is noted here:**

1. Finding the location: university zip code: type the zip -> search : 2 clicks
2. Finding the location: university zip code: type the zip -> search : 2 clicks

Order pizza: online ordering--> start order : 2 clicks

delivery option: 2 clicks

Order As guest: 1 click

Address: 1 click

Pizza customization: 2 clicks

Start building: 9 clicks

Add to cart: 1 click

Checkout: 1 click

Skipped the ‘ No Thanks’

Add salad:1 click

Salad build: 2 clicks

Add to cart: 1 click

Checkout, has distracting Movie advertisement that needs additional click: 2 clicks

Place order: 1 click

To verify Orders placed: looking for this tab takes a while.

Also, ambiguous status of order displayed, on different status tabs.

3. Deals addition to existing cart: Go to hot deals: 1 click

Redeem: 1 click

Start building additional deal item/pizza: 5 clicks

Better deal and additional items added to the existing order.

**Interview: Please find our Answers here:**

The facilitator should then ask the participant to answer the following questions. After all are answered, you can summarize responses below:

***Did the tasks take less time than you expect, more time than you expect, or what you expect from this website?* If more, follow-up with why.**

Yes she expected the tasks to take less time to complete. She figured that ordering a pizza would only take a few minutes of her time instead of an hour of selecting options and browsing through the product. The website also gave pop-up that slowed the checkout process of buying the pizza. The pop-up window was asking her to add a movie with the order.

***If asked to describe this website in 3 words, what are the first words that come to your mind?***

Horrible, slow, and confusing

***What are aspects of the website that you did not like?***

Navigation, organization, too many advertisements for add-ons, and no proper user feedback.

***What are aspects of the website that you liked?***

Building and customizing the pizza was appealing, convenient and effective.

**Problems: note any user errors or usability problems you observed on this website. What did the participant find hard, and what was easy?**

* Entering the whole address to know the delivery location of the pizza is a pain
* The advertisement while checking out has no proper UI, it confuses the user as the close option is made seamless in the UI
* The status of the pizza order is shown ambiguously in two tabs.
* The offers applicable are not made easily accessible and visible.

**Part 2: Reflection**

This was a very simple sample evaluation. Reflect on what you can learn on how to design a better evaluation.

1. Tasks:
   1. **How much of the website did the 3 tasks lead the participant to explore?**

Only of a few of the navigation menu tabs were used in the given tasks.

* 1. **What were the drawbacks to the 3 tasks chosen?**

The biggest drawback is time consumption. All of these task take a decent amount of time to order a pizza and salad, then searching for hot deals.

* 1. **Any tasks that might be better for this website to get additional coverage or common behaviors?**

Using some more of the tabs in the navigation menu at the top of the screen.

Checkout should be made clear and without the add-ons and advertisement.

User action feedback and status should be conveyed effectively.

The site can make use of better navigation and information organization.

1. **How was each of the usability goals evaluated and measured?**
   1. **Efficiency**

The efficiency was evaluated and measured through the time and number of clicks it took to complete a task and even number of back buttons it took to complete a task because of ambiguous procedure.

* 1. **Learnability**

We also gauged this using number of movements over the web site and confusing contents. This hampers the learnability for simple tasks like place order. For instance placing the first order did not give an overall outline of the tasks due to the presence of too many activities and tabs involved, placing the order second time around was *not* intuitive and faster.

The learnability used the number of clicks to measure how long one task took. The next task took half the amount of time from using previous clicks. The website used errors to show me when I inputted the wrong text in the various text boxes.

* 1. **Appealing**

The site is complex in terms of organization of menus and information. This is not very appealing, as it introduces user friction because performing simple tasks needs too many user actions.

1. How else might you create measures for each goal?

Additional measures could be:

***Efficiency***: Completion rate, Think aloud observation, User experience surveys.

***Learnability***: Think aloud observation, Completion rate, User experience surveys

***Appealing***: Sensors for eye movement tracking, Sensors to measure chair pressure to gauge body posture/ user attention, User Satisfaction measure, User experience surveys, Facial recognition to measure user expression

1. Did you learn about any improvements to the site based on this small evaluation?

All the problems noticed by the user can be improved here.

* The site could be more appealing and more simple.
* When the user checks for the delivery location with his zip code it could instantly show the message that the delivery is not allowed at that location, rather than entering the whole address to check it.
* There should not be any advertisements at the checkout option
* After clicking the checkout the order status is not clearly mentioned or found
* Effective feedback can be used to improvise if the deals are applied or not
* The UI of the cart should be properly indicated to show what are the original items and what are items with deals

**Part 3: Design your own mini-evaluation**

Now you will design your own short evaluation, in a similar fashion. Choose any application on someone’s smartphone, preferably one that does not contain personal information.

Chosen app:\_\_\_\_\_\_\_\_\_\_Canvas\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Decide on three usability guidelines, the list on the next page provides some examples. Then decide how you will measure each guideline, through some combination of observing and interviewing the user:**

Efficiency - We will use time and number of clicks to measure how efficiency the app is for certain tasks.

Visibility - We will use any loading pages and loading circle to measure if the error has to wait for tasks completion.

Responsiveness- We will use eye tracking to measure the responsiveness of the application and features. Completion rate can be measured. And we will use emotional expression tracking to find

1. **Choose 3 tasks to ask someone to perform:**

Check grades for a certain class.

Find the To-Do items for all classes with only most recent results.

Check the inbox for messages from all classes.

1. **Choose a few questions to ask someone after the tasks:**

How quickly could you find your grades?

Did you find the assignments that are due soon?

Did you have any new messages in the inbox.?

1. **Finally, conduct the study. Again, you should have one Usability test facilitator, and at least one note-taker. Recruit one or two participants from classmates not on your team. Report on what happened and what you learned:**
2. Check grades:

click course: 1 click

scroll down to find the Grades button

grade tab: 1 click

scroll down to check Final grades to complete action

2. To-do items:

Home page: To-do items: Only 1 click to complete action

3. Inbox:

Home page : go to inbox: 1 click to complete action

We learned that checking the grades and inbox is a easy task because of icon familiarity. The To-Do feature was difficult to find because of icon was not familiar.

**Some Usability and User Experience Goals**

**Efficiency** – Time to accomplish the tasks.

**Learnability –** Time to figure out how to accomplish task. Assessing long-term usability of the system.

**Predictability** – System provides sufficient information for user to efficiently predicting the outcome of an action.

**Familiarity** – Leverages existing real world or domain knowledge (e.g., trash bin). User interfaces contains recognizable components. Interaction feels “natural.”

**Consistency** – Retaining the same layout/style/flow of interaction throughout the user experience. No abruptly changing menus or navigation windows

**Error prevention** – Provides constraints, help, examples, guides, warnings, etc.

**Recoverability** – Providing stages of interaction where steps can be undone or settings can be restored. Encourages experimentation.

**Visibility** – System provides sufficient information for user to efficiently evaluate what the current status of the system is (e.g., progress bars).

**Responsiveness** – Feedback is provided in a timely matter for the user to understand what the underlying system is currently doing

**Flexibility** – Supporting multiple user interaction methods for performing actions (input) and presenting information (output)

**Appealing** – Interface is aesthetically pleasing to the user

**Satisfying** – The user has a general positive feeling about performing the tasks

**Simple** – The user feels that the interaction is not complicated, and the interface is visually not cluttered

**Engaging** – The interface keeps the user’s attention and interest throughout the interaction