Beaver Neighbor Center

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1 INTRODUCTION

This paper concludes the process we have done for our project, Beaver Neighbor Center, in the CS565 Human-Computer Interaction class in Spring term 2022. Our project is designed as a seller-oriented trading platform for people who are in a hurry to leave Corvallis, so our project is to help those people find potential buyers and sell their products as soon as possible. Although there are many online shopping platforms existing nowadays [1], such as Amazon and eBay, those online shopping platforms are buyer-oriented. In other words, those platforms provide many selections for buyers to choose what to buy, and that makes it more convenient for buyers. However, Beaver Neighbor Center is a local-based platform designed for sellers who are graduated international students in OSU, and sellers can sell their items according to the buyers' posts (Figure 1) or wait for the potential buyers. Our online shopping platform provides more convenience and immediacy for people to trade their items, and people do not need to waste any time and worry about any scam happening during the buy and sell transaction.

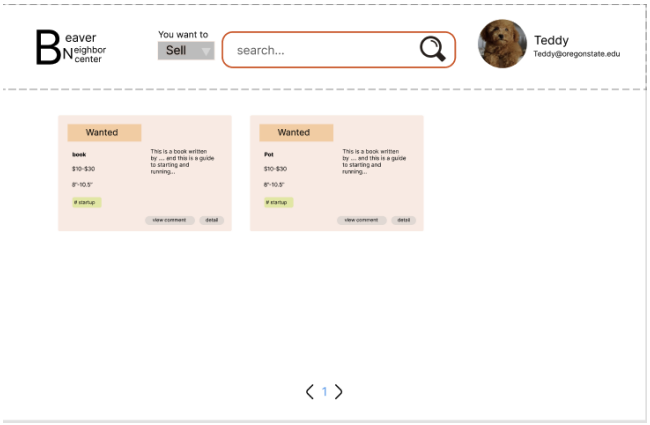

Figure 1. Buyers' post in the Wanted list page.

1.1 Motivation and Existing Problem

The reason why we design this local-based online trading platform is that we have found many issues with the second-hand trading group in WeChat. Specifically, there are hundreds of selling posts posted by different people in a day, but if buyers have a specific wish item that they want to buy, they have to first browse many unnecessary posts until they find their specific item. It might also waste a lot of time, and it might make the sellers who are about to leave lose a chance to sell their products. Moreover, after interviewing the graduated students, they always complain that if they cannot sell their products before they leave, they just have to throw them away or give them to friends for free. Therefore, the research question of our project is how sellers can increase the speed of sales when they are about to graduate and are in a hurry to sell the products. In our project, we provide two different ways for sellers to sell their products sooner. The first way is that sellers can make a post and wait until the buyers show up, and the other way is that the sellers can find the potential buyers according to the buyers' post on the wanted list page. The second idea is novel and beneficial for sellers and it is much different from other existing online trading platforms. It would not ask sellers to wait until buyers show up, and it, however, provides a chance for sellers to find potential buyers by themselves and sell products as soon as possible. Furthermore, our project focuses on the local area for graduated international students which means we just provide face-to-face transactions in the trading process. It benefits buyers and sellers who do not have to worry about any quality and scam issues during the transaction because both of them would check the products and negotiate the price face to face.

2 USERS

2.1 Target Users and User Needs

From the user research, our target user is mainly international students who are about to graduate and are in a hurry to leave Corvallis, so they need a platform to help them find potential buyers and sell their products as soon as possible.

2.2 Interesting Insights

After interviewing graduating participants, we have found some interesting insights from the sellers' side and buyers' side. Specifically, even if our project provides another way for sellers to find potential buyers, they would still worry about if they can sell their products at the price they expect. For the buyers' side, we found that every time when a buyer wants to buy a certain item, they would search and browse the products which have the lowest price.

3 PROPOSED APPROACH AND UI

Since we designed multiple interfaces followed by the principles mentioned in class [2], we will explain and discuss the improvement of the existing system and the solution to solve our user needs.

Allow users to switch interfaces between buyer and seller. because anyone can sell or buy things on our website. Users can switch with one click, the drop-down box, and the search box are relatively close, it confronts the Proximity principle. From the user's search logic, whether they want to buy or sell things, they can switch while searching, saving the time that spends on searching and switching the Entry. Figure 2 is the design of this function.

Figure 2. Switch buy/sell interface drop-down box.

Preview the detail of a post. When the post is hovering, the pictures can be switched to the form of a carousel, and users can see more detailed pictures of the product without clicking on the detailed interface of the item. Figure 3 is the design of this UI.

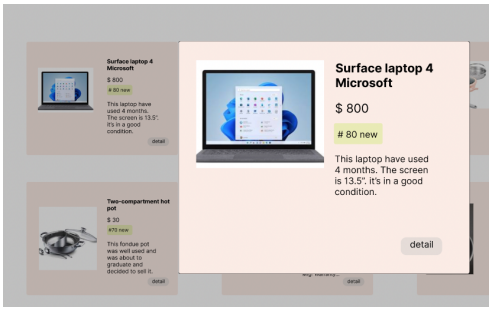

Figure 3. larger preview on hovering. The image will be shown as carousel.

Allow users to search by tags. Users can filter the search results by adding or deleting tags near the search bar. In our survey, some websites, such as craigslist, Facebook groups, and group chats, allow users to post posts but do not categorize these posts. When sellers are searching, they may only enter keywords and the entered keywords are different from mismatches in buyer's posts (buyers' descriptions of what they want are often vague, according to our survey), or some systems may not support vague queries, causing sellers to miss out on items they might be able to sell. Figure 4 shows the design of this feature.

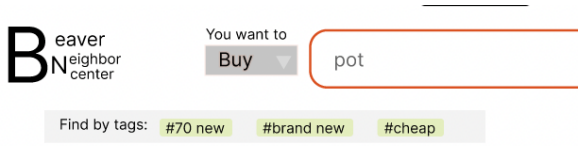

Figure 4. Filter items by tags.

Compared with the existing interface, we support users to upload items in batches. Usually, sellers may sell multiple products at the same time. When the seller finishes editing a product, there is no need to return to the previous interface and click post again, but directly click 'continue post' to continue editing. In user testing, our participants indicated that such a design would simplify their operation process, especially for a graduating student who has a lot of things to sell, for which he needs to continuously edit items, and this design can help them save time and reduce fatigue. Figure 5 is the design of this feature.

Figure 5. Continuously post button.

After the user completes the transaction(oral deal), we provide the user with a 'deal' option, which means that the user has made the deal. This will play a role in the subsequent development of the product. In the future if 'collect/star' functionality is added. Users also need to be notified if a product in a user's favorites is sold, not because the original user deletes the post that causes it disappears. Also, users can re-post this item if they cancel the deal for some reason. Figure 6 shows the design of this feature.

Figure 6. Continuously post button.

4 ITERATION

Since the second poster presentation, we have added the ability to filter search results by tag, and we have changed the color of the prototype from the original more contrasting color to a lighter one. We also added the feature that buyers can view the details of the seller's review items through the review link.

Based on feedback from the second poster presentation, we decided to decrease the current 70% transparency Beaver Orange to 10%, making the interface much clear and simple, especially compared to the past color. (Shown as Figure 7)

Figure 7. Lighted colored post

In the meanwhile, we add a zoom-in function, which could make users clearly see the details of the post. (Shown as Figure 2) In addition, we add a filter function that users can filter the search results according to their needs, and doing so can improve the efficiency of the search. Figure 3 shows the design of this feature.

From these changes, we realized that it is not enough to focus on functionality, but the aesthetics of the interface is also important and the #8: Aesthetic and minimalist design must be followed when designing the interface [2].

5 USAGE SCENARIO

Our website users can be divided into sellers and buyers, and both have similar user processes. One specific scenario for our target user is buyers post their requests and wait for sellers to respond and make a deal [3].

Assumed a buyer wanted to buy a used pot. He first entered the buyer's search page, entered "pot" in the search box, and clicked the search button, the page will jump to the search results page. There are many search results and this buyer only wants to see those posts that are about 70% new, so he clicks on the “70 new” tag. (This function is shown in Figure 4) and gets all the used pots posted with the tag “70 new”. Figure 8 indicates filtered results.

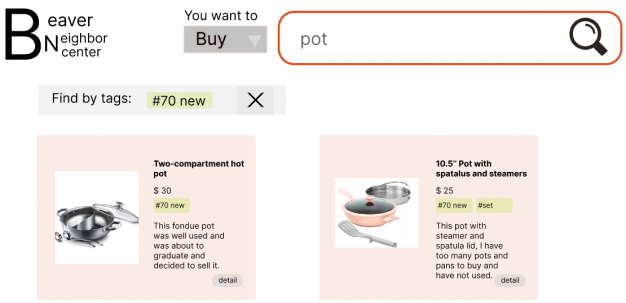

Figure 8. “70 new” used pot search results

The buyer was not satisfied with the pots he had posted so far, so he went back to his personal page, went to "My Wanted List", and prepared to make a new post. He clicked the "post" button, selected the category in the pop-up window, entered the title, budget, and item details description and edited the tags, clicked the “submit” button, and the webpage prompted "posting successful"(The success prompt is shown in Figure 5), he successfully posted the requisition.

Now all this buyer needs to do is wait for a seller who has a message for him that meets his needs. A few days later, two sellers left comments below this buyer's posting of a pot request. (Shown in Figure 9)

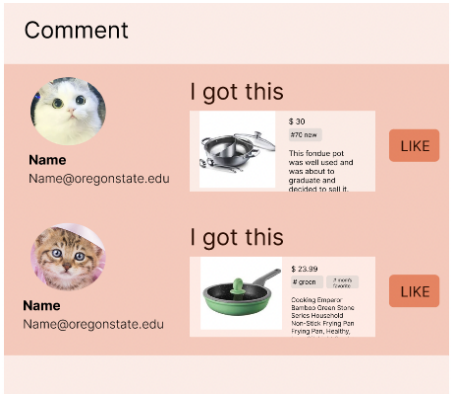

Figure 9. Comments left by sellers

This buyer thinks the pot in the first review looks good, so he clicks on the picture in the review to see the details of the pot, and after confirming that he wants to buy the pot, he clicks the "like" button. The seller of this pot will receive a system notification that someone wants to buy your pot. The seller can click contact to chat with the buyer, and if they complete the transaction, the buyer will return to his personal want list and mark the post as bought. (This function is shown in Figure 6) personal want list and mark the post as bought.

The video of this scenario is at the link below. https://media.oregonstate.edu/media/t/1_h4h3c5uj

6 DISCUSSION

The goal of this paper is to improve the transaction speed of sellers from the time they are on the shelves, but this paper does not take into account the time buyers need to buy the items. By the transaction method proposed in this paper, the waiting time for the transaction that was previously borne by sellers will be borne by buyers. Therefore, one of the limitations of this paper is that the buyers in this paper need to be users who are not in a hurry to get the item or have difficulty in buying the item directly to satisfy their needs, and these buyers are willing to take the time to wait for the right item.

Another limitation of this paper is the single transaction method. We designed the transaction method to be communicated by buyers and sellers through the platform, and both parties agreed on a time to conduct the transaction in person, which may not be so friendly to some users who do not want to conduct the transaction in person.

Currently, our websites enable users to finish the basic operations of buying and selling products. In the future, in order to support users to search in various forms, the system needs to contain the features that classify product types and allow users to search in various forms such as item types, keywords, dates, and publishers. We will also add favorites/collections and shopping carts, which let users can put the undecided items into the shopping cart/favorites list for later decisions.

Future work also includes how to ensure user experience at low user volumes. The work reported in this paper assumes that the website is working with sufficient user volume to support the site. As well as how to build on the original foundation to be more user-friendly to buyer users, the work in this paper focuses more on improving the seller's experience, and the improvement of the buyer's experience is a direction for future work to investigate.

In addition, future related work can embed the website mentioned in this paper into the personal homepage of Oregon State University students, which can improve the security of transactions and increase the usage of the website.

7 CONTRIBUTION STATEMENT

Everyone in the group has participated in the whole project and led the process in different parts.

Chi-Ho leads our team to finish the paper prototype and brainstorm. He first came out with the project direction and decided on the content. He is good at summarizing. He turns our thoughts into text and helps us expedite the project process.

Siming leads our team to write the document, he helps us organize the thoughts and collect interview questions. Jiawei contributes design ideas for prototypes and participants in the Figma design. She considers thoroughly and good at user testing. She noticed the flaws of the system and provides solutions.

Danlin leads our team to polish the designs and record the prototype demo. She is good at prototype making. She manages the schedule of meetings and project processes. The whole group participated in the improvement of the prototype and related discussions after project 6. The whole group participated in the preparation and presentation of the presentation. The entire team worked together on the final project documentation.

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