

# Assignment M2: Addressing Online Selling Platforms

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***Abstract***— In this paper we explore a project to redesign or design a new interface to address a task. Selling used items online is a popular activity that people use to rehome items they are no longer using. The motivation behind selling items is to make money and prevent items from ending up in the landfill which can have a negative impact on the environment. Current selling platforms require a large amount of time and knowledge making the process of selling tedious for already busy individuals. We will redesign an interface to address the task of selling or donating used items online. Our approach focuses on reducing the time and complexity to list and sell an item online.

## **1 NEEDFINDING PLAN 1: EVALUATION OF EXISTING USER INTERFACES**

Popular selling apps were chosen for evaluation. When evaluating these existing interfaces, observations were made on heuristics revolving around listing an item for sale.

### **1.1 Results**

Facebook Marketplace had a little store icon to represent the marketplace in the app. This differed from eBay and Grailed which has a price tag icon and plus icon respectively. Facebook Marketplace had a pop-up notifying users of rules and tips. Neither Grailed nor eBay had this feature. eBay has a search functionality that allows users to start their listing by finding a similar one someone else has already created. This is not a feature Grailed or Facebook offered. Both Grailed and eBay contained large blue buttons that users could click to start the listing process. The selling button for Facebook Marketplace was grey and blended in with the rest of the app. eBay does not allow a user to take a photo with their camera but Facebook Marketplace does. All apps allow a user to choose photos from their photo library. Inside the box where users could

describe their item, both Grailed and eBay provided a short description on what to include. None of the apps provided a clear definition of the categories for condition such as like new, used good, or used bad. Facebook Marketplace and Grailed guide the user through posting the listing by only having one subtask on the screen at a time. On the other hand, eBay is one form with all the subtasks on the same screen where you scroll down to get to the next subtask. Grailed is only focused on clothing while Facebook and eBay allow users to sell a variety of items.

### **1.2 Takeaways**

All three platforms have their pros and cons. I found the approach Grailed and Facebook used of only having one subtask on the screen at a time to be easier to follow. This approach is probably best for novice users but might annoy expert users who like to jump around. The feature of having the large blue button for listing an item makes it easy for novices and is something Facebook might benefit from. eBay's search functionality was very useful and cut down the time needed to write all the details of the listing. In addition, eBay has the superior data which allows them to recommend what price something should be listed at based on past trends. Out of all the apps, I think Facebook Marketplace is the friendliest for new users. However, the app could benefit from incorporating features from eBay and Grailed. In addition, since Facebook is also a social app, a user could become distracted by a notification during the listing process.

### **1.3 Biases**

One anticipated bias was confirmation bias. Since I am seeking to redesign selling apps it is possible, I was searching for flaws. I tried to combat this by looking for good features in one app and comparing those same features to another app. I do feel I could have done more to limit confirmation bias. Specifically, I could have asked an additional person to review the selling platforms. I also could have approached the evaluation from a more quantitative approach rather than qualitative.

## **2 NEEDFINDING PLAN 2: SURVEY**

A survey of 9 questions was posted on the class forum to get feedback on selling apps. In total 28 respondents answered the survey.

## **2.1 Results**

Of the 28 respondents to the survey 19 answered yes to the question asking if they use online selling platforms. The majority of users answered they use Facebook Marketplace (11), Craigslist (9), and eBay (10). In addition, two users answered they use Kijiji. When asked what motivated users to sell items, 16 users replied with some variation of getting money for the object. In addition, a significant number of respondents said they wanted to get rid of clutter or unused items. When asked to rate a statement on whether they find it easy to list items, 14 respondents selected neutral. Only 2 users answered slightly disagree. The rest of users answered agree or strongly agree. For users who don't currently sell online, when asked why not, responses were varied. Users stated time, not interest, they don't trust people, no items to sell, or too much work. When asked what items users were selling the responses were varied. Responses ranged from household items to electronics to furniture. Users were also asked if they prefer to donate or sell. Out of all respondents, 6 preferred to donate, 9 preferred to sell, 11 preferred a combination of donating and selling, and 2 stated neither. Finally, most users appeared to spend less than 1 hour selling items but there were 6 users who spend greater than 3 hours selling items.

## **2.2 Takeaways**

The dominate platforms for selling that appear to be used are Facebook Marketplace, Craigslist, and eBay. There were some region-specific apps mentioned that should be noted. This includes Kijiji, which is a Canadian selling platform, and OLX which is a selling platform popular in India. These apps would make sense for users wanting to sell locally in a country where the major platforms may not be as widely used. It would be interesting to see why users prefer using these apps but unfortunately that information was not gathered. Most people appear to be motivated to sell to make money. While this is not surprising, I did find it interesting that users did not include a motivation related to environmental impact. This suggest that is not one of the main motivations for selling for most users. Overall, users appear to find it was to list items on selling platforms. However, half of users were neutral potentially signaling they think improvements could still be made. The items being sold varied significantly which would explain why users did not mention using apps that only cater to one market like clothing. However, this could also just be because of the sample of users.

### **2.3 Biases**

One bias that was anticipated was observer bias caused by leading questions. In order to combat this, I designed the questions to be neutral. I did this by providing another option when asking which platforms are used so as not to bias users towards only the ones listed. For a majority of the questions like what items are you selling or what motivates you to sell, I left the answers as open ended. This was to prevent biasing users towards answers I anticipated like being motivated by environmental factors. In addition, I asked an outside party to review the questions for biases. One issue I did notice after the fact that neither the outside party or I noticed was on the question asking, "how much time do you spend selling items?", I did not specify if it was per day, week, or month. I was focused on making sure the intervals did not overlap and missed that part of the question. As a result this may have resulted in different answers with users being biased towards how they interpreted the question.

## **3 NEEDFING PLAN 3: THINK ALOUD OR POST EVENT PROTOCOLS**

Users were asked to list a stuffed animal on Facebook Marketplace. During the process of listing the item, participants were asked to describe what they were doing and why they were doing it.

### **3.1 Results**

Users started by taking photos of the stuffed animal with their phone. They then navigated to the Facebook Marketplace icon in the Facebook app. One novice user noted that the icon was easy to find. During the process of listing the item when one user tried to access their camera roll Facebook froze. The user stated they could only guess the app froze because it stopped responding. They had to exit the app and start over. An intermediate user stated that it was not easy to give Facebook access to their photos on the iPhone app. In addition, they stated they had trouble scrolling through the photos. The user stated, "It was far too easy to select the wrong photos from my library and hard to uncheck the wrong photos." Another intermediate user stated that they had trouble joining additional Facebook groups to list their item. When they clicked on join group it led them to a page that said, "error fetching data." This page also had no back button and relied on the user knowing to swipe the screen to go back. Overall, both

novice and intermediate users stated they found it easy to list an item on Facebook Marketplace. When asked if they would sell again, they all said yes.

### **3.2 Takeaways**

Overall, this needfinding exercise demonstrated that Facebook Marketplace is fairly easy to use for both novice and intermediate sellers. Some improvements that could be made to the app revolve around the photo interface. Users had trouble either giving Facebook access to photos or uploading photos easily. In addition, the app cropped the photo incorrectly once the item was posted which users found confusing and annoying. This suggests that the biggest improvement to the app would be making it easier to upload photos. There are things Facebook does well which are important to note when redesigning the selling app. Facebook appears to do a great job of guiding users through the process of selling. One particular thing to note is a pop-up message at the beginning of the process providing tips and rules. Overall, users appeared to enjoy their experience using Facebook Marketplace except for the few bugs encountered and difficulty uploading photos.

### **3.3 Biases**

One bias that was anticipated was recall biases. This is why a think aloud approach was chosen over just an interview. By having users actually go through the process of listing an item and discuss what they were doing and why, we were able to get feedback on the minute details involved in the task. Another bias that was anticipated was confirmation biases. In order to combat this, I paid attention to signs that I may be looking for parts of the app users were struggling with. When I noticed this thinking, I asked users to describe their current feeling about the task they were performing. This allowed me to pay attention to what the user was actually feeling rather than what I was observing. In most cases when I thought users were struggling at a particular point, they actually stated the current part of the task was easy.

## **4 DATA INVENTORY**

Popular selling apps were chosen for evaluation. When evaluating these existing interfaces, observations were made on heuristics revolving around listing an item for sale.

#### **4.1 Who are the users?**

Users range from novice to expert. The survey shows that most users spend less than an hour selling items. However, some users spend greater than 3 hours selling items. While one survey question did seek to understand how much time users are spending potentially indicating their expertise this does not fully answer the question of who the users are. The survey should have asked respondents for their age and gender. In addition, there should have been a question asking users to rank their expertise in listing items to sell online. Moving forward, I would want to create a new survey asking for a bit more background on who the users are.

#### **4.2 Where are the users?**

Geographically users are located across the world in America, India, and Canada. This is present in the apps that users stated they used in the survey. Some users specifically mentioned apps that are popular in India or Canada. Most users stated they were selling household items. This suggests that users are typically at home listing items online. Additional survey questions could have been asked to dive deeper into the environment of users.

#### **4.3 What is the context of the task?**

This question was not accurately assessed. When performing the evaluation of existing interfaces, I noticed that since Facebook is a social media platform users could get distracted by a notification while listing an item. However, we do not know other things in the environment that are competing for the user's attention. For example, do they have kids running around the house while they are listing items? Are they performing other tasks while listing items? In the future, I would add additional questions to the survey to gather this information.

#### **4.4 What are their goals?**

This question was answered thoroughly through the survey. The survey asked what motivated users to sell items. Most users stated a motivation related to receiving money. Users also stated that they simply wanted to get rid of unused items or unwanted gifts. One user mentioned that they had to move and needed to sell items they could not bring. Another individual simply stated that they wanted to make the items useful to others. Another motivation listed was selling

items for a small business. As you can see users can have many goals that result in the task of selling an item. However, most users appear to have the goal of making money from items they no longer need.

#### **4.5 What do they need?**

This question was answered through the think aloud needfinding exercise. Through observing users list an item and describe what they are doing and why, I was able to gather information on what users need to complete the task. Users need to be able to take photos of the items and add those photos to the selling app. As a result, they needed the app to connect to their photos or camera. In addition, users needed the physical object they wanted to sell in front of them so they could take pictures of it. Users also needed a Facebook account in order to access Facebook Marketplace. An iPhone or smartphone was needed to access the app.

#### **4.6 What are their tasks?**

The user's task is to list an item. This question was explored through the think aloud needfinding exercise. Physically users are taking a picture of an item using their phone and posting it to an app. Through having users explain what they were doing we were able to answer where cognitively doing. Users were following the prompts on the app screen to fill in information on their item. During this process they had to think about the condition of the item, what they wanted to price it at, and how to describe the item to potential buyers. There was not a lot of social interaction involved in the task of listing an item.

#### **4.7 What are their subtasks?**

In order to list an item users must take pictures of the item, select the items condition, describe the item, list a price for the item, and select which Facebook groups to post the item to. These subtasks were observed using the think aloud needfinding exercise and the evaluation of existing user interfaces. Users accomplish their subtasks by following the prompts from the app. In order to take pictures, users must place the item in a neat environment to make the object look nice.

## **5 DEFINING REQUIREMENTS**

The new selling interface must have functionalities such as allowing photos to be taken or uploaded and posting an item to multiple channels, so it receives a large number of views. In terms of learnability goals, the interface must alert users to the rules of the platform so they know what they can and cannot sell. In addition, tips and descriptions need to be provided for each of the item fields so users know how to fill in the information. The interface must be accessible to all ages and expertise levels. It must be compatible with all types of smartphone operating systems. Users' privacy must be maintained to prevent scams and improve trust among sellers and buyers.

In order to measure the success of the prototype it would be ideal to time users to understand how long it takes them to list an item. In addition, measuring criteria like having less than a certain number of steps in the process would help measure complexity. Measuring how many views an item is getting helps us to measure if we have met the functionality of promoting the item to multiple channels.

Both learnability and efficiency are important for our interface. Users stated one factor in not selling items was a lack of time. Reducing the time for novices would encourage more users to sell items online.

## **6 CONTINUED NEEDFINDING**

In the next iteration of needfinding I need to gather additional data about who my users are and what their environment is like. These questions were not answered initially and could be discovered through an improved survey. During the process of the think aloud exercise users had the most difficulty with the photo portion of the listing. I would like to dive further into exploring what exactly users would like to see improved when adding photos to a listing. This could be discovered through interviews. In addition, some users mentioned that lack of trust in others is why they do not sell items. I would like to further explore this topic to see if fraud prevention in selling apps is a pain point. This could be achieved through a survey and/or an interview.



## 7 REFERENCES

1. Becker, J. (2020, June 1). *21 Surprising Statistics That Reveal How Much Stuff We Actually Own*. Becoming Minimalist. <https://www.becomingminimalist.com/clutter-stats/>.
2. Rosenberg, C. (2019, September 23). *The Clothes You Donate Don't Always End Up on People's Backs*. Treehugger. <https://www.treehugger.com/clothes-you-donate-dont-always-end-peoples-backs-4863686>.
3. Joyner, David, director. *3.3: Needfinding and Requirements Gathering*. <https://edstem.org/us/courses/5912/lessons/14030/slides/70691>.

## 8 APPENDICES

### Survey Questions

- Do you use online selling platforms to sell items?
  - Yes or No
- Which online selling platforms do you use to sell items?
  - Facebook Marketplace, Depop, Grailed, eBay, Craigslist, Etsy, Poshmark, Discogs, Other, I sell items offline, I do not sell items
- If you answered other what are the names of the other platforms you use?
- What is your motivation for selling items? If you don't currently sell items what would motivate you to sell?
- What is your level of agreement or disagreement with the following statement? "I find selling platforms easy to use to list items"
  - Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree
- If you do not currently sell items online, what prevents you from doing so?
- What items are you selling online?
- Do you prefer to donate or sell items?
  - Sell, Donate, Sell and Donate, Neither
- How much time do you spend selling items?
  - 0 hours, Less than 1 hour, 1 – 2 hours, 3 -5 hours, More than 5 hours

### Survey Results in CSV Format

response,Q1,Q2,Q3,Q4,Q5,Q6,Q7,Q8,Q9

- 1, Yes, Other, tradsey, "item not needed, make some money back", 3, too much work, handbags, Donate, Less than 1 hour
- 2, Yes, Craigslist; Other, Kijiji, Make them useful to others ;, 4, None available for selling, furniture; books ; electronics , Sell and Donate, Less than 1 hour
- 3, Yes, Facebook Marketplace; ebay; Craigslist,, get some money back, 4,, books, Sell, Less than 1 hour
- 4, No, I do not sell items, NA, NA, 3, I'm not interested, None, Neither, 0 hours
- 5, Yes, Facebook Marketplace; ebay; Other, Mercado libre, "I mostly sell items that don't use anymore, or to make an upgrade(renew) certain items for example: laptop, videogame console, cellphone ", 2,, Mainly tech devices , Sell, 3 - 5 hours
- 6, Yes, Facebook Marketplace; ebay; Craigslist; Etsy,, To get rid of clutter / unused items and make back some of my money in the process (or occasionally if I see a profit)., 3,, Personal Items I no longer use, Sell and Donate, 1 - 2 hours
- 7, Yes, Facebook Marketplace; ebay; Craigslist,, Earn income, 2,, Household items, Sell, 3 - 5 hours
- 8, No, I do not sell items,, get rid of stuff and get back some money, 3, don't trust people online,, Sell, More than 5 hours
- 9, Yes, Facebook Marketplace; Grailed; ebay,, I want that money, 5,, old computer parts or old clothes or old furniture, Sell and Donate, Less than 1 hour
- 10, Yes, Other, OLX (popular in India), i sell mostly the used items which i don't need anymore., 4, NA, Used ietms - mostly electronic and furniture, Sell, 1 - 2 hours
- 11, No, I do not sell items,, higher financial reward, 3,,, Neither, 0 hours
- 12, No, I do not sell items,, I like to donate rather than selling, 3, I like to donate rather than selling, None, Donate, 0 hours
- 13, Yes, ebay,, Get rid of clutter and make some money , 4,, "Old games, books, consoles, usually electronic equipment ", Sell, 3 - 5 hours
- 14, Yes, Facebook Marketplace,, Profit,,,, Sell and Donate, Less than 1 hour

- 15, Yes, Facebook Marketplace; Craigslist, I moved to another place and needed to sell some old stuff or things I cannot move., 3, "I have sold TV, bed, table, lights.", Sell, More than 5 hours
- 16, No, I do not sell items,, n/a, 4, Don't want to sell my things,, Donate, 0 hours
- 17, Yes, Facebook Marketplace; ebay; Craigslist; Other, OfferUp, "Local reach and no high-end expectations. Items are mainly sitting there at home, I can get some value back", 3, "Anything, mainly work tools and other used home items", Sell and Donate, Less than 1 hour
- 18, No, Other, expatriates, make use of stuff i don't want anymore, 3, home appliances and pieces of furniture, Sell and Donate, Less than 1 hour
- 19, Yes, Craigslist,, to get money for things i don't want, 3, anything i don't want, Donate, Less than 1 hour
- 20, Yes, ebay; Other, "Blocket, Tradera, ", "If I am not going to use something in the coming year, I usually try to see if I can sell it. Better to have cash on hand than stuff I never use. If it turns out I need it in say 1.5 years again, I can go out and buy a similar item when I need it", 3, "Electronic goods, accessories", Sell, Less than 1 hour
- 21, Yes, ebay,, Clean out unused items in apartment and make some money, 4, "Furniture, unused gifts, old tech devices", Sell and Donate, Less than 1 hour
- 22, No, I do not sell items,, reasonable compensation, 3, time,, Sell and Donate, 0 hours
- 23, Yes, Craigslist; Etsy,, to clear home, 2,,, Sell and Donate, 1 - 2 hours
- 24, No, I do not sell items,, If I cleaned out my house and had a bunch of things to get rid of that I thought I could make money on. If I had some sort of small online business., 3,,, Donate, 0 hours
- 25, Yes, Facebook Marketplace; Other, Kijiji, To get a good value for used items, 5, "Camera, camera accessories, furnitures", Sell and Donate, Less than 1 hour

26, Yes, Facebook Marketplace; ebay; Craigslist; Etsy,, "To get rid of house clutter, and also to make money.", 4,, "household stuff we no longer want: beds, chairs, etc. Coin business (trade dollars, seated liberty dollars, etc)", Sell and Donate, More than 5 hours

27, No, I do not sell items,, I rather donate items that I do not use to GoodWill. , 3,,, Donate, 0 hours

28, Yes, Facebook Marketplace,, No longer need the item., 4,, "Furniture, used goods.", Sell, Less than 1 hour