

MoveOn: A Digital Marketplace to Sell/Gift Your Items When Moving — Team Pollux

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Moving is complicated and stressful. Coordinating how to quickly sell or gift items the mover is not taking with them can bring unnecessary stress to an already stressful situation. This product aims to create an efficient workflow to unburden the mover in the task of selling or gifting items. There are solutions in the marketplace that allow people to buy/sell/trade (Craigslist, OfferUp, Facebook Marketplace, eBay). None of those solutions are well-suited to the task of selling multiple items in one transaction and including a timed element to the pickup. The current solutions create dissatisfied users and wasted time/effort on the part of the buyer to coordinate within an inefficient app. MoveOn has the opportunity to provide an excellent user experience tailored specifically to sellers who are moving. Automating key components of the logistics of the sale and distribution allows sellers to reduce their stress and find buyers who will treasure their new purchases.

KEYWORDS

Marketplace; Exploratory; Research; Application/App; Mobile

Introduction section

MoveOn is a cloud based application/website to help facilitate the sale and gifting of one's belongings in preparation of moving to a new living space. The website will allow users to list their belongings they need to get rid of, and other users can schedule a time to pick up and purchase those belongings. This will relieve stress to someone that is moving because they know that their belongings will be removed by the necessary deadline. Most people that are moving are willing to part with their belongings at a reduced price, so this reduced price will be the benefit and incentive for buyers.

Our users' core usability problem is: How can an individual efficiently coordinate the logistics involved in selling/distributing all the possessions they won't take with them when moving from one home to another?

The target audience for MoveOn will be anyone that is planning on moving soon and anyone that is in the need of any consumer goods. With our app the user will be able to post the items that they are looking to get rid of, they will be able to select a date they need the item picked up by. The other end of the app will be another user that wishes to receive the item, this user will select the item and choose what time and date they wish to pick that item. The user could be an 18-year-old that is switching apartments or moving out on their own for the first time, a military family of 5 that is changing duty stations, or even an empty nest couple that is downsizing from their single-family home to a retirement community. The user who will be looking to receive the item could be anyone that is in search of any item, this app is for any consumer.

This project has merit because of its ability to serve a variety of users. It could be used by graduating college students who are transitioning into a new life stage, newlyweds who would like to get rid of their previous belongings to obtain something new, families moving, and by the remaining friends and family members of a person who has passed away.

Background section

There is a great opportunity in the market.

COVID-19 has made a substantial impact on consumer behavior. McKinsey has reported that "40 percent of consumers are buying more online than they had previously done" and that these online marketplaces account for 50% of more than \$2 trillion in global sales. The same report highlights a consumer trend among millennials and Gen Z who value personalization in their online shopping experience and are turning to niche marketplaces to find that experience. [1]

Trust in these transactions is critical.

There is empirical evidence that peer ratings, reviews and recommendations from peers create a positive influence on users' decision to buy.[2] Studies have shown that creating social communication (messaging, ratings, reviews) on e-commerce platforms "increase buyer trusting beliefs towards sellers, which is a necessary precursor of online purchase." [2]

The core competitors in the marketplace

McKinsey surveyed the C2C digital marketplace in 2020 and identified the key companies in the space.[1] Our design will be informed by looking at what these platforms do well and what frustrations their users experience.



Fig. 1. Digital Marketplace Scope Matrix [1].

What our competitors do well and what frustrations their users

Reviews from users themselves also provides insight and secondary research on marketplace apps. Feedback reviews are essential in secondary research. Big marketplace apps such as Ebay and Amazon thrive on community-based reviews. They are successful because they have such a large base of users that generate many reviews per item. For new users looking to use Craigslist, the review section in the app store is a good indicator of the pros and cons of that marketplace app. These two apps are just a few apps we want to focus on since they have a large role in the buying and selling of used items.

In terms of pros for using Ebay, buyers mentioned that they enjoy the cheap prices on used items, and being able to buy from large sellers that have gathered a large sum of reviews, making the buyer feel comfortable with making their purchase [3]. These users also enjoy the large range of items available on Ebay. One review mentioned that having so many sellers creates competition which lowers the prices even further [3]. Sellers enjoy Ebay because it is a quick way to acquire new customers, and provides large exposure to their products. Another review mentioned it is quick and easy to become a seller via Ebay [3]. Another user mentioned that unlike Amazon, sellers do not have to worry about Ebay selling the same item [3].

There were also many cons to using Ebay from buyers and sellers. Both types of users mentioned that there is no customization (saved searches, saved pages, collections) [3]. Another review mentioned that there were insurance policy loopholes which created a lack of trust [3]. In terms of user interface, there was one review that mentioned there was no feature to hide products or sellers from the app [3]. For sellers, a review mentioned that there were seller fees, even if an item isn't sold [3]. Another review mentioned refreshing and syncing items to be sold was difficult and buggy [3].

Craigslist had some similarities for pros and cons when compared to Ebay. Looking at the feedback reviews there were some unique ones that were tailored only to the Craigslist app. One

review mentioned that Craigslist had good tools for setting a location range for items, allowing users to find items in the area effectively [4]. Another feedback mentioned that the design was simple and not confusing to use. In terms of cons, there was a review mentioning that deleting items from the cart is complicated [4]. In addition, there were multiple reviews regarding the difficulty of posting photos of items, going back to the previous page, and not being able to search multiple categories at once [4].

Method section

Research questions

The main question we hoped to answer during our research was what motivated users to use marketplace apps when it came to buying and selling items. We decided to focus our questions on 3 areas of online shopping: buyer experience, seller experience, and app usage. For the buyer and seller questions, we wanted to learn about our users' experiences, good and bad, as well as their preferences for using specific buying/selling applications. Questions for app usage centered on what features were important to a user for any app. We hoped that a broader question involving non-shopping apps would lead to insights on user experience and what made an app pleasant to use.

For all our questions, when our interviewees touch on a subject we wanted to discuss more, we developed follow up questions to gather more details. Our last question focused on a presentation of our app proposal to our interviewees to gather feedback for any additional features or concerns they might have should they use our app. By asking this particular question, we hope to begin improvements on our proposed application at the beginning of its development.

Research methodology

Interview Type: Semi-Structured Interview

As exploratory research, the flexibility to let the volunteers elaborate and explain is very important, however to be able to compare results from multiple interviews a framework of questions is necessary. For these reasons we performed semi-structured interviews, with a list of questions written ahead of time, but the interviewers also asked unplanned questions to give the volunteers the opportunity to elaborate or explain their reasoning.

Interview Length: 30 - 45 Minutes

To prevent exhausting the volunteers with questions, the aim was for the interview to last between 30 and 45 minutes. The actual time spent in each interview varied due to the nature of the semi-structured interview.

Interview Locations: In Person / In the Wild

As we conduct the interviews with our subjects, we have paid close attention to the environment where we will conduct the interview. Our goal is to find a location where the subject is comfortable, relaxed and able to answer freely.¹ For many of the interviewees, this took place in their homes.

Interview Data: Notes and Audio

During the interview, the interviewer would ask questions, and the interviewee would respond. Followup questions would be asked at the interviewer's discretion. The interviewer took notes live

¹ Pernice, K. (2018, October). User Interviews: How, When, and Why to Conduct Them. Nielsen Norman Group. <https://www.nngroup.com/articles/user-interviews/>.

while listening to the responses, but also made an audio recording of the entire interview to refer back to if necessary. At this point there is no plan to transcribe these interviews, so the only data of the interviews are the notes taken and the audio recordings.

Interview Dates: April 22, 2021 - April 25, 2021

The interviews all took place between the dates of April 22, 2021 and April 25 2021. For specific dates of each interview, see the Participant Description section below.

Participant description

We surveyed 5 people. In selecting our research candidates, each of our interviewers found a user that fell within our target audience to interview. In doing so, our selection of users happened to all be female. While this unfortunately does not give a diversity of genders, they did vary in many other factors such as age and geographical location. Therefore, despite the lack of gender diversity, the interviewees still provided a breadth of experience and insight.

Our study participants provided their consent via a verbal consent after the interviewer read the text of the consent form (see Appendix). The interview only moved forward if the subject verbally consented to participate in our study.

- Margerie
 - Margerie is a caucasian female in her early 70s, living in North Texas. She is a retired nurse, and is married to a retired Air Force Veteran. She grew up in a small Texas town, moved many times across the country with her husband and their two children during military service spanning over 30 years. The interview was conducted at Margerie's home on April 24, 2021. Consent was obtained after showing her a digital consent form, and confirming consent verbally to Interviewer, Caitlyn.
- Lizzy
 - Dr. Lizzy McStuffins 39 y/o Caucasian Female, Lizzy is currently a major in the United States Air Force. Her profession is a Mental Health Nurse Practitioner she has been in the medical field for 14 years and in the Air force for 12 years. Due to her years in the Air Force, she has moved 7 times in those years. She provided consent by signing the created interview consent form.
- Juniper
 - Juniper is a 33 year old Caucasian female from Oregon. She currently works as a middle school special education teacher. She grew up in a small town and is currently planning a long move into another state. The interview was performed in her home by Kevin Neiger on April 24, 2021. She verbally confirmed consent after viewing a digital version of the consent form, and having the form read outloud to her. The interview with Juniper lasted for 36 minutes.
- Tiffany
 - Tiffany is a 25 year old asian female from Illinois. She currently works in IT at a large corporate company and just had a move last October. She has moved twice in the last 10 years both times from apartment to apartment. The interview was conducted at Tiffany's home on April 25, 2021 She provided consent by signing the created interview consent form.
- Rose
 - Rose is a 42 year old caucasian female living in Southern California. She is not a digital native, but has used smartphones and online marketplaces since 2007. She works in non-profit management where she uses digital productivity tools daily (Office, Slack, budgeting software). She has conducted three interstate moves and several moves within a given city (moving from one apartment to another). The interview was conducted on April 24 2021 in Rose's home by Chris Mosier. She provided verbal consent to be interviewed after reviewing the consent form attached in the appendix (the verbal consent was recorded).

Interview Guideline

As researchers, we're using this exploratory user research to determine the needs assessment of our target audience. The focused inquiry of these questions will inform our designs.

Our goal was to focus the subject's experience as a seller, their experience as a buyer in these marketplaces, the subject's evaluation of the current competitors in the space (FB Marketplace, OfferUp, Next Door, Craigslist) and their preferences for a variety of interactions our app would conduct (notifications, communication with other party, payment methods).

The questions began very open-ended to warm up the participants, establish rapport and prime their memory. As the interview continued, we drilled into more specific details. As interviewers, we were listening for the participants' needs: why they used their apps to sell/buy items, we listened for the participants' pain points as a user. We attuned to what their answers revealed about their behavior and preferences.

Due to the semi-structured nature of the interviews, the exact questions asked varied from one interview to another. However, every interviewer began with the same list of questions. To see this list of questions, see "Interview Questions" in the Research Materials section of the Appendix.

Results Analysis

Our team conducted semi structured interviews where we had a list of 14 questions with follow up questions to get more detailed answers. We compiled interview results into a google doc where we were able to analyze each interview. We then met as a team to formulate our key findings, which then allowed us to determine what the key insights are. We broke down the remaining sections and assigned individual team members to fulfill specific tasks to complete the research and insight portion of this design process.

Key findings section

Our team drew from five interviews with our proposed target audience to identify the five Key Findings for our team to focus on while developing MoveOn.

Key Finding 1: Users were worried about their safety, including personal safety and privacy information.

Users had a major concern regarding the safety of their personal information and also had concerns about their personal safety. One interviewee preferred in app messaging which is implemented by apps like AirBnb opposed to exchanging phone numbers. Another user had concerns about linking their banking information to the app and preferred linking a third-party app like Venmo or PayPal. The most common concern amongst the interviewees was the concern that when they execute the transaction that they will be safe. The users preferred features like vetting and the ability to leave reviews of users. A favorite feature that was mentioned by Rose was in NextDoor where you get vetted as a person that lives in that neighborhood. Another feature that was mentioned by Lizzy was in apps like AirBnb and Yelp. In these apps' users were able to write reviews on the transaction and able to provide feedback about that user. When users have a higher review score the users will have a higher level of trust in that transaction.

Key Finding 2: Users were annoyed by bots, scammers and trolls that can be common on marketplace applications.

A common complaint among our users is that many marketplace applications are plagued with illegitimate accounts. These accounts came in various forms known as "Bots", "Scammers", and "Trolls".

Bots are automated accounts that use the platform in a malicious or undesirable way. Users complained about bots that tried to steal their personal information by utilizing the messaging

features, often sending repeated unwanted messages to the same users. Another complaint about bots was their repeated postings of the same items. In this complaint users were frustrated by seeing the same posting repeatedly, making it more difficult to look at other postings.

Scammers are users that try to use the platform to steal, trick, or coerce other users to give them money, goods, or personal information. This is an obvious problem for those that fall for the scams, but users complained that even obvious scam attempts were a problem. Seeing scam attempts decreased trust in the site as a whole, and annoyed users with the surge of messages that can come from scammers.

Lastly trolls are users that would send messages in an attempt to elicit an emotional response, normally anger, instead of trying to arrange a transaction. These users waste the time of others and can be very frustrating to deal with. Lizzy described a frustrating experience in which she was trying to sell something on Facebook marketplace, and other users began commenting and messaging just to hassle her.

Key Finding 3: Users find it difficult to find an appropriate price for their items.

Our interviews revealed a specific pain point that users experience when it comes to pricing their items: users don't have the tools to accurately price their items to maximize the sale price while ensuring there is consumer demand at that price point.

Users struggle to find an attractive price for their items. In our interviews, they wondered if there will be enough people to see the item in order to sell it? If it doesn't sell or garner enough views is that because it's because it's priced poorly? This user feedback indicates that our app should include a "suggested price" feature that provides users with some data (selling price of similar items that have sold recently) to assist users with this pain point.

Users also expressed a concern that price is not the sole driver to use the platform. Users indicated that if an item doesn't sell, they would be interested in donating items. This suggests that when listing an item, users would be interested to tag items as "donate this if it doesn't sell" which could create a second marketplace within our app to increase the chance of a seller off-loading the item.

Key Finding 4: Users experience difficulty navigating through the marketplace when searching for particular items.

Users found difficulty navigating through the app because of varying layouts and items were not properly organized. Juniper mentioned that although she uses many different apps on a daily basis, if an app was too different and hard to use, she deleted the app. Other interviewees mentioned that an in person shopping experience was pleasant because items in a store are all sectioned and organized. Notable apps that were mentioned in the interviews with difficult experiences were Craig's List and Facebook Marketplace. On a buyer's side, Craig's List was considered unorganized because the location for information about an item was inconsistent across sellers. For Facebook Marketplace, on the seller's side, items needed to be "boosted" in order to stay at the top of the search, or have their price updated to show up toward the beginning of the search results.

Key Finding 5: Users don't want unnecessary notifications.

Users get annoyed by too many notifications, especially if some of these notifications are unnecessary or not important. Tiffany mentioned that she enjoys control over what notifications show up from apps like Instagram for instance, where there is an in-app setting to turn off notifications for comments, likes, and direct messages separately, whereas another app she uses doesn't give her the flexibility and option to choose what she receives. Several other interviewees mentioned that the notifications were a turn off for them as well, and they would go as far as to not use the app completely based on unnecessary notifications. Users who would use a marketplace app would want the important notifications such as sales, price changes to items they are following, in-app messaging with a buyer/seller.

Remaining interview results

- In our marketing/branding we will want to be mindful of how to position the buyer role in our product. My interview participant thought you could only participate in the marketplace if you were moving. She thought buyers are limited to if you were moving and needed to buy things for the new house/apartment (rather than seeing that anyone interested in second-hand items might be a buyer). That misunderstanding would drastically limit the target audience of buyers in our marketplace.
- Another key finding that was discovered during the interviews is that the users would like to have an option on how they wanted to receive payment for that transaction. Some users preferred to pay using cash, some users do not want to accept checks, other users preferred to pay using venmo or apple pay. Rose stated, “that is where I get concerned about too many connections [to my bank account]”. If the seller only will accept a certain form of payment, then it will be listed in the posting.
- One user mentioned wanting to give first preference to friends and neighbors. The reason behind this desire was in their experience neighbors and friends resulted in faster pick up and delivery times.
- Interviewee Tiffany mentioned the most important thing when using a marketplace app is that items are displayed with good quality photos. She mentioned that numerous times she would see an item that is promising but due to the photo quality, it made her skeptical on whether she should buy it or not. Having a requirement to post good quality photos for items helps both buyers and sellers, and could potentially make a user’s experience skimming through items better as they won’t have to stop and focus on a photo just because the quality was subpar.

Remaining Observational results

We did not conduct any observations. We conducted five interviews as noted above.

Key Insights

Our five Key Findings provided a deep well of data that our team used to discuss and brainstorm our Key Insights. We focused our decision-making on key insights derived from our participant’s articulated pain points and current challenges.

Key Insight 1: Ratings/reviews and in app messaging can be used to alleviate safety concerns.

The way that will resolve some of the safety concerns that were discovered in the key findings portion of our research. We will implement a rating/review system in our app. The users will be able to rate the user they conducted business with providing feedback on the transaction. The users will receive a rating from each other, if a user had a lot of positive reviews the user will feel a higher level of security. Users will be allowed to read reviews from users’ previous transaction so they could judge for themselves. We will also implement an in-app messaging feature. With the implementation of this feature the users will not need to disclose any of their private information like phone number or email. Providing these features, we are hoping that the users will feel that their information and their safety will never be at risk while using MoveOn.

Key Insight 2: Requiring linking a Facebook, Apple ID, or Google account to create and login to the MoveOn app will decrease bots, scammers and trolls

As stated in the Key Findings, users of marketplace applications are concerned about others maliciously using the site. To address these issues, we will require users to link a Facebook account, Apple ID, or Google account to sign up for our service. This allows our service to use those others as a means to validate users. If a user is banned from our service for malicious use, they will be unable to create a new account without also creating a new account on Facebook, Apple or Google. While it is possible for malicious users to create new accounts on those services, the additional barrier can act as a deterrent.

Key Insight 3: Provide “suggested or comparative pricing” data when listing an item.

Users expressed concern over the pricing of their items: if it's too high, buyers may ignore their listing. While if it's too low, the seller won't maximize their return. To address this user concern, the MoveOn app will include a suggested price to the seller when they list an item. The suggested price will be driven from data in our marketplace of comparative sale prices for items.

Additionally, we will implement a feature that is part of eBay's seller marketplace to have sellers default to “automatically lower the price at intervals” when they initially list an item. We plan to set the lower price feature at “10% price reduction every 7 days item is listed”), but we will study the buyer behavior and adjust to optimize the sale price.

Key Insight 4: Keep the app simple and not clutter.

To help our users have an excellent experience on our app as both a seller and buyer, we plan to utilize categories and filters to help customize searches. Categories could be applied to an item as the seller is posting it to the marketplace. They would be able to label the type of item, it's color, and condition, plus any other categories we determine are useful such as a brand name. A filter would be available to buyers to allow them to search for items based on the categories we've implemented as well as a price range filter. A third resource we would like to implement is a “saved search”. This would save the arguments of a search for a user so that they can research for an item with updated results. This would be useful for someone who is looking for a particular item, and if what they are looking for is not currently available, they would be able to search for it again at a later time. We hope that providing these options will keep our application easy to use and prevent items cluttering the user's window.

Key Insight 5: At signup, have a question(s) that assess what level of notification the users want..

In order to provide a simple and clutter free experience, we also need to avoid unnecessary notifications. We plan to implement questions at signup that assess the level of notification a user wants. By getting the notification preference out of the way in the beginning, the user will experience the app the way they want to experience it, with notifications they deem most valuable and worth being notified by the app. This prevents the user from seeing unnecessary notifications from the get-go, which will give them a better first impression of the app as well.

Appendix

Consent Form

We used the Trinity College Dublin School of Social Work and Social Policy content form as a model to build our form. [5]

MoveOn App

Consent to take part in interview research

- I..... voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I understand that I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- I have had the purpose and nature of the study explained to me in writing and I have had the opportunity to ask questions about the study.
- I understand that participation involves answering a series of questions in regard to moving experiences, app uses and customer/seller experiences.
- I understand that I will not benefit directly from participating in this research.
- I agree to my interview being audio recorded.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview which may reveal my identity or the identity of people I speak about.
- I understand that disguised extracts from my interview may be quoted in the design and prototype reports for this app.
- I understand that if I inform the researcher that myself or someone else is at risk of harm, they may have to report this to the relevant authorities - they will discuss this with me first but may be required to report with or without my permission.
- I understand that under freedom of information legalization I am entitled to access the information I have provided at any time while it is in storage as specified above.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.



Spring 2021 cs352 team Pollux

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Signature of participant

Date

Signature of researcher

Date

Research Materials - Interview Questions

1. Have you ever moved and needed to get rid of items?
 - a. If so, how did you get rid of them? What was frustrating or difficult about it?
 - b. What went well?
2. Have you ever used an online marketplace to get rid of an item or buy an item. If so, what did you use and how was your experience?
3. Have you ever purchased used items online?
 - a. How was that experience?
 - b. When you're buying or selling an item. what is your preferred method to communicate with the other party (in-app messaging, texting, email, phone call, other...)?
4. Are there any marketplace apps that you prefer to use, why those apps?
5. What do you think is missing from online marketplace apps?
6. What do you think is important when using a marketplace app?
7. What marketplace apps have resulted in a poor experience, and why?
 - a. How difficult was it to add an item to be sold?
8. What other apps do you use on a daily basis?
 - a. What kind of features do you feel are user friendly when using these apps?
 - b. How do you feel about notifications?
 - c. How do you feel about facial recognition?
9. How confident do you feel in purchasing something online, and what could you make you feel more confident/safe?
10. How many times have you moved residence in the last 10 years?
 - a. How far was the distance?
 - b. What were the circumstances of your move (downsizing, moving out of parents, apartment?)
11. If you were unable to sell your items before moving, what did you do with them?
12. What type of items are you looking to buy or sell?
13. When purchasing a used item online, what is your preferred payment method?
 - a. Is this different if you are the one selling the item?
 - b. How comfortable are you with linking an app to your bank account/ PayPal? Do you currently have any apps on your phone linked to a bank account/PayPal?
14. If an app existed with a focus on helping people sell their belongings when moving, would you use it for buying, selling, or both?
 - a. What would you think of a feature that allowed you to post an item for sale before it would be available to be picked up, allowing buyers to reserve the item ahead of time.
 - b. How would reviews and ratings for buyers and sellers influence your buying and selling?

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