

Innovative Gift Delivery Apps

Always Innovative, Comfort and Sustainability

Group:

**Ming Shern, Siew
Jue Wang
Richard Pranjatno**

Ideas

Innovative Gift Delivery Apps is a mobile app that sells a variety of gifts and delivers gifts to shoppers or helps to deliver gifts as an advocate for shoppers. Innovative Gift Delivery Apps helps to solve real world problems that online gift shopping hasn't developed to meet certain Shopper's goal which includes difficulty of wrapping a gift box and designing a gift card. Our Innovative Gift Delivery App specialize in augmented reality of gift box wrapping and gift card makers which will help users to wrap their own gift box and design a gift card respectively through apps itself. These idea stems from trouble of shopper dealing with wrapping gift box in reality which is time consuming and difficult to customize, and gift card maker allows shopper to create and design their own gift card which can be relatively difficult, messy and dirty in reality but apps we are about to introduce helps to assure them that messy and dirt are removable with ease.

Additionally, we find the finalised project idea could potentially bring about vast opportunity for us to apply what we have learned in usability. Firstly, Theory of actions which states users should be able to manipulate objects using actions corresponding to the real world. This is evident with augmented reality of gift box wrapping and gift card makers features in apps which allows users to manipulate objects with their hands which correspond to the real world. Additionally, Shneiderman8GR principles also apply here Permit Easy Reversal of Actions where design allows action to be reversible after actions have been executed. Furthermore, gift card makers will have undo actions which will remove previous actions and allow efficient restart instead of using eraser and the user may not know how long it takes and frustration stems from it.

Persona

Jessica Clark



Age: 22

Work: Student

Relationship: Single

Location: Princes Hwy, Clayton

"Gift Wrapping is hard with own hands and even harder when communicating with others to wrap gift the way you want"

Bio

Jessica Clark is a student and is an active club member who will need to wrap dozen of gift every now and then for competition rewards. She would love to delegate a software that allows her to snapshot gift box clearly so that gift shop can recognize it well and be able to avoid miscommunication when wrapping a gift box is delegated. Since the fund she used is a club funding, she have budget to amount of fund she can spend on gift. She has also recommend a notification feature which allows gift store to notify of her any sales promotion. This will allows her to take every opportunity to save cost of funding.

Goals

- To able to snapshot design of gift box.
- To able to customize gift box design.
- To able to quickly find the affordable gifts.
- To able to keep track of any sales promotion.

Frustrations

- Wrapping gift box is time consuming.
- Lack of freedom to design gift box.
- Difficulty to keep track of cheap gift.
- Sale promotion advertised without notifying users.

Preferred Channels

Mobile



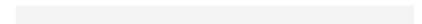
Email



Social Media



Advertisement



Brands



Darren Smith



Age: 32
Work: Software Developer
Relationship: In a Relationship
Location: Clarkson Court, Clayton

"Gift Card is a tool to convey story to loves one"

Bio

Darren Smith is a systems software developer and has been dating for the past couple years. He has been very used to texting, touchscreen and stylus on mobile devices and laptop and find it troublesome to handwritten them on gift card given how much time he had already spent on computer devices compared to pen and paper in past ten years and his partner has been complaining about his hand written output consisting of dirt and mess. According to him, eraser in software is much faster and easily used than real world eraser where it leaves dust and dirty. He's also very concerned about the gift brand he will be buying because brand that he recognize has good reputation of providing valuable gift to sweetheart.

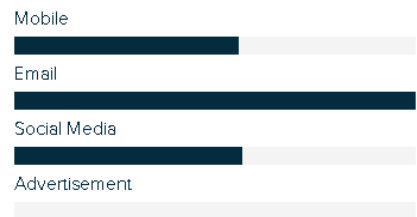
Goals

- To able to easily write content to gift card.
- To able to customize gift card design.
- To able to make online payment.
- To able to find Favorite brand product easily.

Frustrations

- Design of gift card is mess and dirty upon customization.
- Lack of freedom to customize the design of gift card.
- Payment method cannot be done via online payment.
- Unable to find favorite brand product easily and efficiently.

Preferred Channels



Brands



Albert Jones



Age: 66
Work: Pensioner
Relationship: Married
Location: Springvale Rd, Glen Waverley

"People appreciate and never forget that helping hand especially when times are tough."

Bio

Albert Jones is a Pensioner and is looking for an apps that allows gift delivery to save the trouble of transporting gift to his friends or family and is an eco-friendly advocate because he believes that delegating gift delivery task to an organization will reduce car transportation in a location which promote sustainability. He would also love an ideal apps that help him to pinpoint a destination to which he wants to deliver accurately and would love customer help assistance feature in apps to assist him when time in needs. He also very fond of biometrics feature in apps to leverage the efficiency and satisfaction of performing any task on apps.

Goals

- To able to pinpoint delivery destination easily.
- To able to easily find gift with least delivery time
- To able to seek help on apps when trouble arises.
- To able to find gift with just voice command.

Frustrations

- Unable to deliver gift timely manner.
- Lack of customer help service.
- Lack of biometrics feature to help disability.

Preferred Channels

Mobile

Email

Social Media

Advertisement

Brands



User Stories

1	<p>As a Student, I want to ensure I can easily decide the design of the gift box so that the design of the gift box matches with how I want the gift box to look like when I purchase it.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none">- provide augmented reality in apps which allows users to create and design custom gift boxes.
2	<p>As a Student, I want to ensure I can take a snapshot of the gift box so that other people can and what the gift box should look like.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none">- provide export options to a file extension which allows users to show it to other people.
3	<p>As a Student, I want to ensure I can quickly find the most affordable gifts so that I can save money.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none">- provide a sort option that sort all products by price.
4	<p>As a Pensioner, I want to ensure I can quickly find gifts which take the least amount of time to deliver to a location so that I can obtain my gift as early as possible.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none">- provide a sort option that sort all products by delivery time.
5	<p>As a Software developer, I want to ensure I can easily decide the design and content of a custom gift card so that the design and content of the gift card matches with how I want the gift card to look like when I purchase it.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none">-provide utility which allows users to design a custom gift card in apps.-provide utility which allows users to add and modify content of a custom gift card in apps.

6	<p>As a Software developer, I want to ensure I can easily remove any work previously done on a gift card so that I don't spend a lot of time on removing anything on a gift card which I deemed unnecessary.</p> <p>Acceptance Criteria:</p> <ul style="list-style-type: none"> -provide utility which allows the user to remove previous work on a custom gift card.
---	--

User stories are chosen to help solve the idea which addresses real world problems when shoppers buy a gift. This can be seen by students, who have budget funds and will need to communicate efficiently with the gift store or our partner gift store on how the gift box should look like, pensioners, who want to deliver gifts efficiently and software developers, who want to design a gift card efficiently and cleanly. These personas and their user stories ultimately become a guide on how to design apps which answer our idea which we have stated earlier.

Evaluation Plan

In this section, we need to decide the testing method that verify correctness for the criteria of our participants. We considered two testing methods, usability test and A/B test and evaluate these two methods to decide which one would suit our project more. The participants should have background that is as close as the persona built as much as possible.

Usability test

Participants are requested to complete the given tasks (customize a gift box design and find an affordable gift), under our real time observation. Usability test that we conduct is known as guerrilla testing which user's informal feedback will be requested upon completing tasks. Thus, we will be able to pinpoint where they encounter problems and confusion. Then, we can jot down feedback which we believe part of design which requires improvement.

Advantage:

1. Direct feedback from target users to help the team make decisions easier.
2. Identify potential problems before the product is launched.
3. It minimizes the risk of product failing.

Disadvantage:

1. Testing is not 100% accurate of the real life scenario because these participants are only representative of some group of people while others may have different opinions.
2. Usability tests require a significant commitment by participants and they may lose interest along the way which can affect the credibility of the test.

AB test

AB testing is a method of comparing two versions of an app against each other to determine which version provides better usability. We provide our participants two or more versions of our app at random, and let them decide which one they like better.

After each experiment, each participants' engagement with each app can be measured and collected on an analytics dashboard. We can then determine whether the change had a positive/negative affect on participants.

Advantage:

1. It allows us to make changes without impacting the overall usability.
2. It allows every component on the app to be tested.
3. It is easy to analyze as long as we have the correct participants.

Disadvantage:

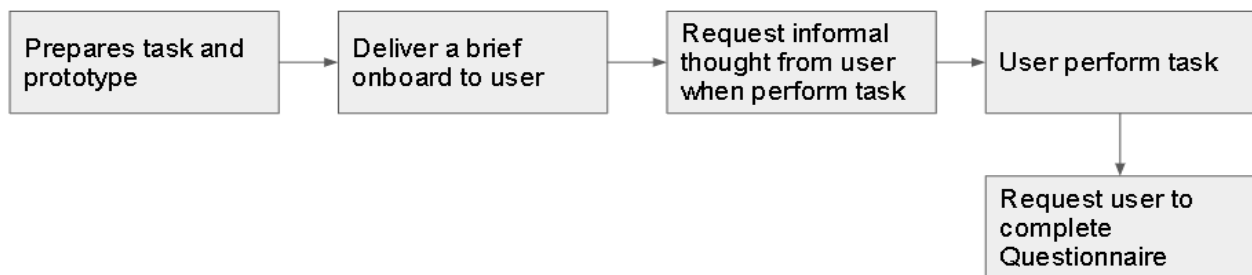
1. Unnecessary testing can be made. Even the slightest change in components can initiate a A/B testing, which potentially led our team to do too much unnecessary testing.
2. Waste of resources. By having multiple versions of the same app, it can be argued that we waste too much time/resource on the same page.

With this in mind, we decided that we can outweigh the advantages of usability test over disadvantages of usability test because nearly all test will have slight inaccuracy but guerrilla testing allows us to gather a group of people with common mind on how an app should design and significant commitment can be a factor that affect the testing but the risk can be mitigated with voluntarily request participant who is not in hurry or easily affected by long test and minimize the amount of work required for each participant. Therefore, we would implement usability tests instead of A/B testing because A/B testing would require extra resources to build alternative platforms and will have additional testing which could easily be tested on usability tests as well as persona we have built expecting mobile apps as platforms.

Participants selection

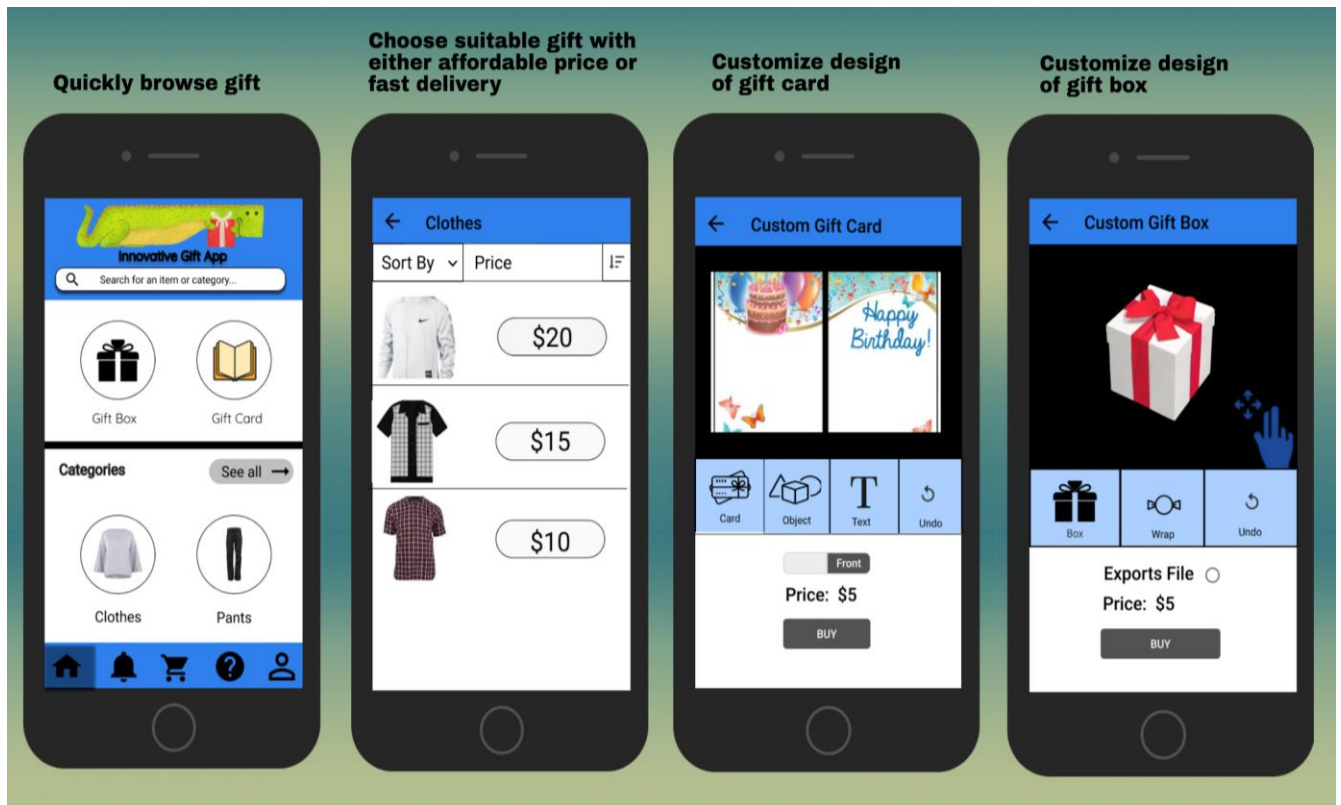
In order to gain accurate data, we made a criteria of participants selection.

1. They must represent our personas.
2. They do not need to be experts in any field.



Standard procedure to conduct usability test

We will observe the participant interacting with the app prototype and make note of which aspects they found easy to use, as well as any points where they got stuck or confused. We will also collect quantitative data such as how long it took each participant to perform a task, whether they complete the task and so on. Then, conduct questionnaires after the participant has tested the app to gather more feedback or data. Essentially, we will be able to determine which parts of the app are well designed and clear to the participant, and which parts of the app that need to be redesigned or improved due to poor usability or navigation flow or anything else that makes it hard for the participant to complete their task.



User onboarding is the process of increasing the likelihood that new users to adopt some new technology

User onboarding is an important procedure because first interaction sets the tone for all future interactions, and even the most successful apps have a huge user drop-off rate. User onboarding can help prevent some of that drop off. We will present onboarding to participant so that they will not drop off and not confuse with new technology.

Our app has two major focuses: one is to ensure the customer finds the clothing gift and be able to easily keep track of the affordable price, and allows the customer have the freedom to customize a gift box design. We want our participants to focus on these two requirements, and thus we came up with two tasks:

1. you want to find the clothing gift with the most affordable price.
2. you want to find a gift box and be able to decide the design of the gift box

The tasks are dedicated to Jessica's persona. The first task relates to finding the most affordable price for a gift and second task relates to being able to decide the design of the gift box.

Lastly, We need quantitative data and qualitative data to be a key performance indicator to measure the effectiveness, efficiency and satisfaction for design of the prototype to evaluate the usability of the apps.

Quantitative data

1. Task success rate - rate of success that a participant completes a task.
2. Time on task - time taken for a participant to complete a task.
3. Use of search vs. navigation - amount of proportion that participant required to complete a task via search against amount of proportion that participant required to complete a task via navigation.

Qualitative data

1. Think out loud protocols - observe and jot down participants' thoughts on their actions.
2. System Usability Scale - satisfaction scale made by participants

System Usability Scale Questionnaire

On a Likert Scale of (1-5) rate your reaction on our app.

I think that I would like to use this system frequently.

1 2 3 4 5

Strongly Disagree Strongly Agree

I found the system unnecessarily complex.

1 2 3 4 5

Strongly Disagree Strongly Agree

I thought the system was easy to use.

1 2 3 4 5

Strongly Disagree Strongly Agree

I think that I would need the support of a technical person to be able to use this system.

Strongly Disagree 1 2 3 4 5 Strongly Agree

I found the various functions in this system were well integrated.

1 2 3 4 5

Strongly Disagree Strongly Agree

I thought there was too much inconsistency in this system.

1 2 3 4 5

Strongly Disagree Strongly Agree

I would imagine that most people would learn to use this system very quickly.

1 2 3 4 5

Strongly Disagree Strongly Agree

I found the system very cumbersome to use.

1 2 3 4 5

Strongly Disagree Strongly Agree

I felt very confident using the system.

1 2 3 4 5

Strongly Disagree Strongly Agree

I felt very confident using the system.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

I needed to learn a lot of things before I could get going with this system.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

Submit

Evaluation Results

We provide System Usability Scale Questionnaires for our participants to complete after they have completed their task. These questionnaire should be short, succinct and simple since our participants are not an expert. However, they should yield the information for us to uncover breakdowns of design on innovative gift apps.

1. System Usability Scale Testing

- Our goal is to achieve a score of above 68 to have our app's usability considered above average
- We had six respondents to test out our app with the SUS template questions
- First five respondents gave an average score of 75. This was above 68, which indicates that our app's usability is just decent enough to be above average, but can be improved.
- Sixth respondent gave a score of 57.5. This score was lower than all the previous respondents, and was below 68. This could be one issue where the participant doesn't know how the app works just by looking at it, and improvement to the design of the app is expected .

Our SUS Scale average is 72.08, which means that our app's usability is above the average scale. In a grading percentile this is similar to a B-grade. The score indicates that our app will be easy to use and learn.

2. Observation data

Task 1: You want to find the clothes gift with the most affordable price.

Quantitative data

1. Task success rate: 5 out of 6 participants were able to complete the task with no issue, but one participant had trouble completing the task due to being unable to find a sorting feature before looking for a gift.
2. Time on task: The difference between the quickest and slowest completion time is 8 seconds which was quite a delay. This indicates there are still rooms for us to ensure our design could help participants to perform tasks efficiently..
3. Use of search vs. navigation: the portion of search to navigation is 1:5 which shows that search feature is used less often than navigation when finding a gift and affordable price.

Qualitative data

1. Think out loud protocols: 5 out of 6 participants could understand the purpose of design and how to use them and no indication that any design has confused them or frustrated them but 1/6 participants indicate they had had an attempt to search for a feature which finds an affordable gift before finding a category. The participant who failed the task was due unavailability for the sort button at home page. The sort button only appears after participants enter the clothing gift selection page. This suggests consistency is needed throughout multiple pages; we should place a sort button near the search bar to allow the participant to sort the gift by available sorting options.

Task 2: You want to find a gift box and be able to decide the design of the gift box.

Quantitative data

1. Task success rate: 6 out of 6 participants were able to complete the task with no issue..
2. Time on task: The difference between the quickest and slowest completion time which is about 10 seconds which was quite a delay. This indicates there are still rooms for us to improve so that our design could help participants to perform tasks more efficiently.
3. The portion of search to navigation is 3:6 shows that search feature is used less often than navigation when the participant wants to customize the design of the gift box.

Qualitative data

1. Think out loud protocols: The task was completed without issue, they could understand the purpose of design and how to use them. This is because we used icons to represent gift boxes, with text down to provide informative feedback on what functionality can be used. Each section is divided with rigids for further clarity. A participant mentioned he was confused after clicking the box icon to change the box design with various different designs but only one of them works and other did not work. This is due to incomplete implementation which did not respond to participant action. Most participants would have to click an example of design which works and continues where the issue has been solved and faces no further confusion other than an incomplete implementation. They also seem to praise that feedback is given when the design of the gift box has changed since they want to know when the design of the gift box has changed completely and what they need to do to continue using the apps.

Affinity Mapping for User Pain Point

User cannot interpret meaning of tab bar icons

What are these options
and what happened
when we click it ?

User cannot find sorting feature

Odd, wouldn't it be
easy to find affordable
gift before choosing
the category gift ?

User cannot change design of gift box

Hmm, why some
design not working ?

Tried 3 time already,
yet clicking some of
these design not
working.

I wonder if these app
are even complete
since clicking these
design not working

User cannot use sorting feature

Hmm, why sorting
button not working ?

Tried 3 time already,
yet clicking all of
sorting option not
working.

I wonder if these app
are even complete
since clicking sorting
options not working

Think out loud protocol Summary

Report

The first evaluation method was the System Usability Scale testing. At this stage, we received usability feedback from 6 respondents, and our calculated average SUS score shows that our participants are satisfied with the design of our app. The testing method also helps us to gain an insight on where our system's usability stands, and areas we should improve on. We can raise the score further by upgrading our system's usability through removing unnecessary tools, and/or reaching the desired task faster by minimizing the steps to perform it.

The second evaluation is quantitative data collection. At this stage, we record whether participants complete tasks, amount of time they spend on a task, and proportion of search used against navigation used. Then, we observe that all participant could complete the task even though they runs into issue while performing the task and there's noticeable delay while performing task due to confusion and delay in completing find a gift box and be able to decide the design of the gift box than find the clothes gift with the most affordable price which makes sense since the find a gift box and be able to decide the design of the gift box task takes longer time to complete. The participants also tried to use the search feature at some point because they couldn't find the right tool to complete the task but it was less often than people who went with the navigation feature all the way.

The think out loud protocol further strengthens our hypothesis that we need to improve the design based on quantitative data collection. The finding of protocols shows that participants have faced multiple issues which include: cannot interpret meaning of tab bar icons, cannot change design of gift box, cannot find sorting feature and cannot use sorting feature. The recommended solution on improvement for design which participants have found problematic is changing the design of the app to mitigate the problem our respondent has faced in the past. Thus, we propose several redesigns that will help to achieve the goals.

First redesign will be that we modify textual representation on tab bar to have better meaningful text and possibly longer text such as text for 'box' be changed with 'box design'. Furthermore, onboard interface should be an option at all screens so that participants can roughly understand the flow of the apps as well as some misunderstanding occurring on apps.

Second redesign will be that we can fully implement the sorting feature and change different designs to allow participants to interact with other options or we could also provide an interface which provides feedback for participants that the feature which they interact with is incomplete and they must choose other options to continue. The feedback provided redesign here is favourable since we only aimed to ensure participants understand the design that we come up with and are comfortable with design as well as feedback given should be consistent throughout the entire app when participants are on different screens.

Final redesign will be that sorting options should be provided at the home page to allow participants to interact with options to sort gifts by price before choosing a category of interest since some participants may just prefer an affordable price at all cost and might not even consider the gift category they choose.

In conclusion, we learned the importance of not relying on assumptions when it comes to designing for users. When we decided to move the sorting feature off the home page and locate the feature onto the category page, it wasn't universally agreed and will have to be redesigned for improvement in usability. As designers, it can be so easy to assume what is best for the product, but we need to remember that we are not designing for ourself or sake of providing functionality, but for our users. Persona also serves as a useful guide to design an app so that it will be feasible to capture the desire of the user. Furthermore, user onboarding also proved that the majority participants we encountered quickly understood and were comfortable with the design of our app which prevent them from being confused with apparent new technology which they are not aware of and will not drop off as soon as they start the test.

Appendix



Observations Assessment

Observations Assessment is an Assessment which helps facilitator(not user) to record the quantitative and qualitative data

Task 1 - find the clothes gift with the most affordable price.

Task 2 - find a gift box and customize the design of the gift box.

Did participant complete Task 1

☐ Yes

☐ No

Did participant complete Task 2

☐ Yes

☐ No

The time taken to complete Task 1

Your answer

The time taken to complete Task 2

Your answer

The number of navigation needed to complete Task 1

Your answer

The number of search needed to complete Task 1

Your answer

The number of navigation needed to complete Task 2

Your answer

The number of search needed to complete Task 2

Your answer

Joint down the thought of users when they perform entire task 1

Your answer

Joint down the thought of users when they perform entire task 2

Your answer

Submit