

# Assignment M5

## Search Function for Coupang e-Commerce App

### CS6750 – Human Computer Interaction

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**Abstract**—This study examines opportunities to redesign the existing interface for the search function of the Coupang e-Commerce App by following a user-centered four-stage design life cycle. Coupang is the largest e-Commerce platform in South Korea by market share at the time of writing, in 2022, and the platform exists as a website and as an App. The four-stages in the design life cycle for this study are: Needfinding, Design Alternatives, Prototyping, and Evaluation. Participants for this study are all English-speaking adults.

#### 1. STUDY CONTEXT

For further understanding of the overall study context, please refer to *Appendix 6.1: Extended Abstract*, *Appendix 6.2: Study Context and Problem Space*, *Appendix 6.3: User Types*, *Appendix 6.4: Data Inventory*, and *Appendix 6.5: Defining Requirements*.

#### 2. QUALITATIVE EVALUATION – GUIDED SURVEY

##### 2.1 Guided Survey Method and Pragmatics

In this Evaluation stage of the study, a guided survey (a method of qualitative evaluation) was undertaken on the Wireframe prototype, refer to *Appendix 6.6: Guided Survey* and *Appendix 6.7: Wireframe Prototype*. It was initially planned to distribute an online survey to a large audience of participants (30+ colleagues, friends and family as in the Needfinding stage), however I felt it was necessary to guide participants through the survey in order to minimize social desirability bias (i.e. participants not wanting to say anything negative about a prototype I personally made) and resolve any confusion arising through the survey (this was something identified when trialing the survey). I believe this made it similar to a post-event protocol ran after mentally-simulating the Wireframe prototype search for a 'Playstation 5'. I endeavored to control any observer bias through

encourage any and all types of feedback and did not 'lead' participants to particular feedback answers. For this reason, 5 participants completed this Guided Survey, which is less than planned for an Online Survey. In saying that, I believe the Guided Survey process was run reasonably well.

This Guided Survey was modified from an original Evaluation Online Survey (developed in Google Forms) that was targeted at the same audience which completed a Needfinding Online Survey. This audience comprises mostly of English-speaking expats or English-speaking Koreans in South Korea who are my colleagues, friends or family.

## **2.2 Guided Survey – Summary of Results**

For raw and full extent of Guided Survey results, please refer to *Appendix 6.8: Guided Survey Full Results*

### *Understanding the Participant*

1. 20% (1) of Participants are 18-24 years old, 80% (4) of Participants are 25-34 years old.
2. 80% (4) of Participants use Android version of the App, 20% (1) of Participants use Apple iOS version of the App.
3. 40% (2) of Participants have used the eCommerce platform for more than 12 months, 40% (2) for 4-6 months, and 20% (1) for 6-12 months.
4. 40% (2) of Participants have used the eCommerce platform several times per week, 40% (2) once every two weeks, and 20% (1) less than once per month.

### *Evaluating the Wireframe Prototype*

5. English translation feature is beneficial: 40% (2) Strongly Agree, 20% (1) Agree, 20% (1) Disagree, 20% (1) Strongly Disagree.
6. English translation feature is well-designed: 20% (1) Strongly Agree, 20% (1) Agree, 40% (2) Neutral, 20% (1) Strongly Disagree.
7. Reduction of spam advertising is beneficial: 40% (2) Strongly Agree, 40% (2) Agree, 20% (1) Strongly Disagree.
8. Reduction of spam advertising is well-designed: 40% (2) Agree, 40% (2) Neutral, 20% (1) Strongly Disagree.

9. If the above features were implemented, I would use the App more often:  
60% (3) Agree, 20% (1) Neutral, 20% (1) Strongly Disagree.

*Table 1* — Question 10 from Guided Survey

**10. Things that work well**

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The toggleable English translation and the English/Korean button look both useful

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I enjoy that the english translation button is on the homepage and is a function directly related to the Coupang webpage rather than relying on google chrome to translate korean into english for me.

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I liked the overall idea, and think the implementation with defi-nitely improve the user experience in terms of convenience

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I like that the button is in English, this helps it attract attention from non-Korean speakers

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*Table 2* — Question 11 from Guided Survey

**11. Things that require improvement**

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The design of the interface still seems cluttered, even with less spam ads/promotion. Also the English translation quality needs work

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I would change the interface of the button by having the english float on top whilst the webpage is in english and vice versa.

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the rocket delivery buttons could also be in english to specify which button means what

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Translation quality and even with the reduction in advertising, there are too much information. Fonts are bad and the icons are very old-fashioned

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## **2.3 Guided Survey – Result Analysis**

The following analyzes the participant identity questions, comparing results of who the users are with the Data Inventory and Needfinding online survey. Similar to the Needfinding online survey, it was expected that this guided survey would concentrate on the under 50 years old age groups in South Korea. As outlined in Data Inventory, it is anticipated that most English-speaking users of Coupang in South Korea are pre-middle aged expats who either naturalize of

return to their home country. Therefore, it was expected that users would fall into the under 44 user age groups. It was surprising that most participants used the Android app, but this is likely a symptom of the small sample size. The reasonable spread of historical experience and frequency of use among participants captured a reasonable spread in levels of expertise and familiarity with the interface, from somewhat experienced to veteran users.

The following analyzes the participant sentiment and qualitative feedback on the Wireframe prototype. The sentiment of the idea for the English translation feature was generally positive with 4/5 participants outlining they ‘liked’ the English translation feature in Q10. Positive sentiment was expected given that the English translation feature was designed specifically to benefit the English-speaking community in South Korea and the participants are from this community. However, Q5 and Q6 show only slightly positive sentiment towards the look and feel of this feature in the prototype: positive and negative (as well as neutral) responses tend to cancel each other out, which was unexpected. This highlights the design of the English translation feature has some deficiencies such as translation quality and the toggleable button suffers affordances, mapping and usability issues, which is mentioned in the participant negative criticism in Q11. For example, Participant 2 mentions *‘the English label should float on top (of the button) whilst the page is in English’*, which is actually what the prototype showed. This indicates some difficulty in interpreting the design of the toggleable button itself. By comparison, the reduction in spam advertising was considered mostly beneficial as seen in the sentiment of responses to Q7, which was expected. However, the extent of the reduction in advertising, and other information, was still an issue based on the sentiment in Q8 and negative criticism in Q11. Finally, participants were generally favorable of using the app more if English translation and less spam advertising were implemented as per the Wireframe prototype (Q9). This was expected given that these were key issues identified in Needfinding from the same user base.

#### **2.4 Guided Survey – Prototype Changes**

Based on the Qualitative evaluation results, the features of English translation and reduced spam advertising are key needs. However, it was identified that the reduction in spam advertising is actually a subset of a more general need to reduce screen clutter and information, and help reduce the cognitive load of users.

Therefore, a more significant UI redesign is required for the next prototype. Issues relating to screen clutter, too much information, unclear and unattractive icons and text were raised during Evaluation. Further to this, English translation quality needs to be enhanced for participants in later stage (and therefore end users) to be more confident in using feature. Additionally, the translation needs to be redesigned in line with usability, affordances, mapping and discoverability principles. A toggleable button for this feature, consistent with the existing UI design, was poorly understood and received, and should be redesigned along with the rest of the UI. For example, the new interface could feature clearer and larger labels underneath more visually-attractive icons.

### 3. PREDICTIVE EVALUATION – COGNITIVE WALKTHROUGH

A **Cognitive Walkthrough** has been undertaken on the **Catalogue, Samples and QR Codes** prototype developed in the previous stages of this study. This prototype can be viewed in *Appendix 6.9 Figure 5*. This prototype is, in essence, a low-fidelity physical/paper prototype that will make participants use their smartphone for QR codes in a catalogue with samples, where the researcher simulates the App's feedback to QR codes using 'Wizard of Oz'.

This prototype was targeted at older demographics and strongly leverages the several design principles to make the catalogue, samples and QR codes intuitive and easy-to-use. However, it was made clear through the cognitive walkthrough that there are significant barriers to use arising from the required usage of a smartphone (or tablet) and the Coupang App, and the numerous subtasks arising from these required interactions with the App. Of note, due to issues that may arise account or payment setup or mailing, users are required to utilize many functions within the App. The catalogue has a fairly restricted range of physical actions possible for users, however the introduction of smart devices into the action sequence expands the possible range of physical actions and errors considerably. On one hand, the catalogue prototype leverages: the consistency principle through similarities and familiarity of traditional catalogue telephone shopping; the principle of mapping through the familiar use of tables, pictures and samples within catalogue, along with the clear logical relationships between these elements; the affordances principle inferred by QR codes (i.e. scan this distorted/pixelated black-and-white square with a smart device camera). However, the catalogue prototype also forces users away from becoming experienced and

familiar with the App itself, thereby being contradictory to the invisibility principle. It is even less likely that users will gain invisibility through experience if the App is considered an accessory to the broader goal of purchasing products through this eCommerce company.

First, the user needs to make an account for Coupang via the App or web browser. If the App is not installed, there is a subtask of visiting the Apple Store or Google Play Store and downloading the App. The overall task includes operators such as: clicking, typed search, typing in identifying information, scrolling, reading/deciphering/infering (from Korean text). It is possible that a more tech-savvy (or Korean speaking) relative or friend could undertake this on the user's behalf. Knowing to sign-up for the catalogue service without the App itself requires a priori knowledge, presenting a barrier. Downloading the App from an App store or opening in the browser requires some prior experience or guidance. Typed search can be leveraged, but it is possible that users could recognize the App store icons from previous usage and know the website address roughly-speaking. I estimate about 75% of users could download the App successfully. The range of possible actions when creating an account is usually guided by the constraints and consistency principles (certain types of information are required and you cannot proceed without it, in a similar vein to other online or electronic banking services), however due to the sheer cognitive load and constant feedback cycles (high levels of attention) required, I estimate 50% of users could create an account without outside assistance.

Second, the user needs to enter their payment information on the App or website. Operators include: reading/deciphering terms and conditions (in Korean), clicking, typing name, address and credit card information, scrolling, retrieving ID and credit card details, comparing on-screen entered information to ID and credit card details. A branch of actions exists where entering payment information can be done with information from memory, rather than comparison with physical cards or bank books. Entering information from memory requires less attention than constant evaluation between physical cards and the interface-entered details. In saying that, although entering payment information benefits from the constraints and consistency principles, similar to the previous subtask (high cognitive load and constant feedback cycles), I estimate 50% of users could enter this information successfully.

Third, the user opts in the catalogue service. Operators include: clicking, visual search, reading and identifying relevant icons, typing/confirming name and address information. A discoverable button and menu option will allow the user to discover this opt-in service within the App in English, along with English terms and conditions. Given the discoverable button will have clear affordances, and the entry of address information and T&Cs will leverage constraints and consistency principles, I estimate 75% of users could complete with subtask successfully. It is common in Korean apps to select address from a map and this strongly leverages the principles of affordances, consistency, mapping (strong logical connections) and constraints (limit possible actions).

Fourth, the user waits to receive a catalogue. Feedback or information on mailing times or frequency will be provided within the App in English (as well as a telephone service) to keep users updated on progress. I estimate 90% of users could complete this task, assuming they have enabled App notifications by default. Remembering that one is signed-up to this service requires an ongoing memory commitment.

Fifth, the user receives the catalogue. Operators include: retrieving the mail, taking the mail to an area with sufficient room for perusal. Collecting the mail is a familiar and consistent task and I estimate 100% of users could complete this task. It is possible that the catalogue is never received due to an incorrect address or logistical issues, and therefore users will require a method to check this through the App. I estimate 50% of users could actually confirm any mailing issues using the App.

Sixth, the user reviews the catalogue items and samples. Operators include: opening the mailed catalogue, reading the item names and details, testing the samples, contemplating any purchases decisions. As previously stated, the format of the catalogue leverages the principles of consistency, mapping and affordances. Each row of the catalogue corresponds to one item, so the logical connection exists between the relevant QR code, picture of the sample item, price and other details. I estimate 100% of users could complete this subtask successfully.

Next, the user decides on a purchase decision and seeks to make a purchase. Operators include: deciding on a particular item within the catalogue, opening the App on their smartphone, visual search for the associated QR code, point

camera at QR code, screen-click focus on the QR code, click QR code on screen, click confirm purchase in the App, continue this process until the minimum shipping requirements are met or all items desired are purchased. The QR codes offer a high level of affordance (to scan them from their items corresponding row using a smart device), however the requirement to confirm the order within the App and meet a minimum shipping level requires several feedback cycles and evaluation of the interface, makes this subtask somewhat cognitively difficult. In saying that, the level of evaluation of the interface and the number of feedback cycles are comparable to phone catalogue order with a company representative or a separate mailed order form. There may be accessibility principle complications due to the small screen real estate of using a smart device to evaluate the full order.

Of particular note, the above two subtasks may include a significant memory requirement if a user does all their purchasing after reviewing and considering all the items. Users may find physical workarounds, such as marking which items they want on the catalogue using a pen or pencil. In saying that, if purchasing is done after reviewing all items there is a memory requirement to remember which of the catalogue items are favorable.

Finally, the user awaits their deliveries and the next catalogue. Shipping tracking within the App requires the user to click on their account and then their 'order list' to track shipping. Although discoverable and in a logical location (mapping), it is not in a prominent location in the App. Therefore, I estimate 75% of users could complete this subtask. Primarily because they are invested in discovering shipping progress because they have already made the purchase.

#### **4. EVALUATION SUMMARY**

From the Empirical Evaluation, it is clear that any improvements to the existing App interface will hold benefit for other modes of delivery, such a mailed catalogue. Opening the door for further accessibility and flexibility within the overall eCommerce platform. It is also clear from the Qualitative Evaluation that there are large potential gains in creating a more user-friendly and intuitive App interface, in addition to the previously-proposed features of English translation and reduced in-App advertising clutter. These particular findings will help



shape further Needfinding exercises, Design Alternatives and Prototype Revisions. These are discussed further below.

In terms of Needfinding exercises, I would like to perform further online surveys to broadly reach the target user base and more in-depth interviews with participants. I would like to understand a clearer extent of the English-speaker user base's technical expertise and acceptance levels of using the App in order to understand if it is viable to pursue interface alternatives or services that exist outside of the App. Is it reasonable to assume that anyone without sufficient entry-level technical expertise or reluctance to use the App, can be supported by a friend or family member? Therefore, is it a fair assumption to focus solely on App improvements? Other key question points that require further clarification include: 'What improvements would you like to see to the existing interface (be specific)?' And 'What other interfaces do you think are designed better and can be pulled on for inspiration to improve the existing interface?'. Although these questions were included in the initial Needfinding online survey, more specific questions are necessary to encourage constructive feedback of the existing interface that is in dire need of improvement, or complete overhaul. With regard to the English translation, qualitative questions relating to the satisfactory level of English translation could be helpful. Finally, it might be also possible to do workshops with participants and have them brainstorm and/or drawn paper prototypes showing what key information should be included in a completely new version of the interface.

It would be beneficial to revisit the Wireframe prototype and improve the English translation quality, and not just simply use existing Apps such as Google translate or Naver Papago to perform the translations. Naturally, integration with an existing highly-automated translation service is the easiest way to achieve this, but this quality of translation was shown to be lacking. Therefore, it may be possible to get professionally translated prototypes and show these to new participants in a new round of Evaluation. Further to this, the design of the English translation button requires a redesign. The existing design leveraged a similar design to the Google Chrome translation feature, but was found to be confusing in Evaluation. As mentioned in Needfinding suggestions above, participants from further Needfinding could be utilized to provide suggestions on button design. Then, several different options of button design, rather than just one, could be developed for the next round of Prototyping. A higher-fidelity

limited working prototype of the translation feature with higher quality translations, and using within-subjects empirical evaluation of different button designs, could be highly beneficial for the next round of Evaluation. This would resolve confusion that arose when participants looked at previous Wireframe prototype. As also mentioned in Needfinding, a complete overhaul of the existing interface is worth investigating through the development of a new paper or wireframe Prototype. Needfinding participant brainstorming and workshops can be used to help form this interface overhaul. In summary, the English translation feature could be raised a level of fidelity and the investigation of a completely new interface design could be investigated at a low-level of fidelity.

In terms of Evaluation plans, the English translation feature as a limited working prototype can be tested using a within-subjects empirical evaluation of different English translation on/off button designs. Further to this, a post-event protocol can also be added after the within-subjects testing in order to qualitatively evaluate the English translation quality, thought and criticism about button design, and any other remaining issues with the interface. Next, I believe a Cognitive Walkthrough (predictive evaluation) of the new interface overhaul paper or wireframe prototype would be a beneficial next step of evaluation. Although prone to expert blindspot and the fact that not all issues will be identified, I believe it is prudent to perform a cognitive walkthrough with experts in order to identify where problems are likely to occur when using the interface overhaul that has been influenced heavily by the new round of user Needfinding. We will be redesigning a newer and more intuitive interface, and the cognitive walkthrough has particular strengths in identifying issues that may be encountered by a completely new novice user, as it covers the interface features, their cognitive queues and the resulting activations prompting user actions .

## 5. REFERENCES

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## 6. APPENDICES

### 6.1 Appendix: Extended Abstract

***Abstract***—This study examines opportunities to redesign the existing interface for the search function of the Coupang e-Commerce App by following a user-centered four-stage design life cycle. Coupang is the largest e-Commerce platform in South Korea by market share at the time of writing, in 2022, and the platform exists as a website and as an App. The four-stages in the design life cycle for this study are: the Needfinding stage, where research seeks to establish a comprehensive understanding of both the task and its users; the Design Alternative stage, where multiple preliminary ideas are formulated to tackle the task; the Prototyping stage, where alternatives with the most potential are developed into prototypes for future user testing; and the Evaluation stage, where user testing occurs on prototypes and user feedback is collected. Participants for this study are all English-speaking adults.

### 6.2 Appendix: Study Context and Problem Space

This portion of study created a plan for and undertook individual brainstorming to generate ideas for design alternatives. These design alternatives were then evaluated against selection criteria and shortlisted to three ideas to move forward to prototyping. Finally, these three ideas were developed into three prototypes of low to high fidelity (for academic purposes and exploration), and then evaluated.

The Data Inventory and Requirements from the previous portion of the study (as seen in *Appendices 6.4* and *6.5*, respectively) played a large role in framing: the initial brainstorming idea generation for design alternatives; the development of prototypes; and the evaluation of both design alternative ideas and prototypes.

Coupang is the largest e-Commerce platform in South Korea by market share at the time of writing, in 2022. Coupang is often referred to as the “Amazon of South Korea” (Heebs, 2021) because of its significant local market share, large variety and supply of available goods, low and competitive prices, short delivery times, significant logistics infrastructure, and ease-of-use owing to its online website and App. However, it has not held this mantle for a significant time. Coupang’s revenue has increased from 4,054 million USD in 2018 to 18,406 million USD in 2021, and its profit has increased from 189 million USD in 2018 to 3,109 million USD in 2021 (Coupang Inc., 2022).

This study seeks to examine opportunities to redesign the existing mobile App interface’s search function (depicted in Figure 2) or to discover alternative solutions to the search function. Due to the size and high usage of this e-Commerce platform within the domestic market, such opportunities yielded by the research could potentially have far reaching benefits. The study is limited to understanding the environment surrounding the use of the mobile App and does not include the website version of the e-Commerce platform.



*Figure 1 —* Coupang App Interface, Search Bar shown (Byun, 2022)

At a glance, the search function on the Coupang App is similar to search functions on other popular e-Commerce platforms such as eBay or Amazon. After completing a search for a particular product, closest or related matches for products from Coupang or other sellers are displayed.

At a glance, the App landing page is populated with banner advertising directly underneath search bar. Banner advertising usually relates to sponsored brands,

special deals or new proprietary offers from Coupang. Beneath the banner advertising are 10 icons including: product categories, current specials, Coupang Eats (a food delivery service similar to Uber Eats), and Coupang Play (similar to Amazon Prime video and gaming). Further beneath these 10 icons are further product spotlights.

Once a product is selected it is added to the user's shopping cart. From there, assuming the user wishes to proceed with a purchase or number of purchases, the user will then be prompted to organize shipping details, delivery methods and payment. Of particular note, Coupang offer 'Rocket Wow' delivery (similar to the Amazon Prime shipping service) which offers expedited shipping and no minimum shipping for a monthly fee.

### **6.3 Appendix: User Types**

Coupang primarily serves the domestic market (South Korea) and the website and App are only available in the Korean language. However, international shipping is available for users to various locations such as Canada, the US and Europe. Therefore, a majority of users are based domestically within South Korea and there is a smaller international base of users.

In order to register an account with and use the Coupang App, a user requires an Android or iOS mobile device, a bank card or credit card capable of online purchases, a cell phone number, their name, and a suitable address. This means that users could potentially be anyone in South Korea that fulfills these requirements.

In saying that, users of the Coupang App require a baseline technical proficiency in using mobile technology, the necessary expertise to download, open and operate a mobile app, and necessary understanding to complete account registration.

For the purposes of this study, all participants and user groups will be English-speaking adults.

Of note, those without sufficient Korean language proficiency (such as expats, international students and travelers) often use Google Chrome's in-built translation tool as a workaround on the Coupang website. However, it is not possible to open the App in a translated form. It is possible that these users may open the

website version in Google Chrome on their mobile device, with the translation functionality enabled.

The underlying motivations for a user to use the search function of the Coupang App is to search for products they may be interested in buying now or in the future. It is also reasonable that a user may also search for products on the e-Commerce App without a purchase decision in-mind. A user may simply be searching to gain an understanding of product prices and product variety.

#### **6.4 Appendix: Data Inventory**

##### **Users: Who are the users? What are their ages, genders, levels of expertise?**

Refer primarily to Online Survey Summary, and Interview Summary for supporting information. As a result of only performing this survey in English, the users are English-speakers in Korea who primarily rely on their English ability, not being able to take advantage of using Korean in the Coupang app. Ages are primarily 18-44 and excludes older demographics. Levels of expertise are intermediate to advanced based on duration of using the apps, web browsers and particular devices. Gender was not covered. I was very restricted with identifier collection so as to enhance participation. A larger survey could take place with a longer duration which also includes more identifiers such as heritage/race and gender.

##### **Environment: Where are the users? What is the environment?**

Refer to both Online Survey Summary and Interview Summary. This is primarily at home, but also takes place at work, while shopping at other locations and while commuting to a lesser, but still significant degree. There were no identifiers to establish if participants had families and thus likely more background distractions. A larger survey could take place with a longer duration to cover this.

##### **Context: What is the context of the task? What else is competing for users' attention?**

Refer to both Online Survey Summary and Interview Summary. At home, home chores or family could be a source of divided attention. While shopping at another location, having other items in mind is another source of divided attention. While commuting, paying attention to one's surrounding and not missing their stop or boarding the correct bus/train is a source of divided attention. Within the

app itself, some survey respondents highlighted that banner advertising and pop-ups are distracting and this results in divided attention.

**Goals: What are their goals? What are they trying to accomplish?**

Refer to the Interview Summary. To buy an item, or to compare prices of an item.

**Needs: Right now, what do they need? What are the physical objects? What information do they need? What collaborators do they need?**

Refer to the Interview Summary. Users require: the Coupang app or a web browser; internet connection; and smartphone device, tablet or computer with power; a goal item in mind; and money for the purchase of the item in mind. I asked no questions regarding collaborators, and so in the future, I could expand questions to cover who else is involved in making this part of the interface work as intended i.e. get the participants to attempt to identify the collaborators themselves. This would be very dependent on their level of expertise.

**Tasks and Subtasks: What are their tasks? What are they doing physically, cognitively, socially? What are the subtasks? How do they accomplish those tasks?**

As outlined in the Interview Results and Summary.

1. Need [insert item], triggered by memory or another action/observation.
2. Open app or browser and type web address.
3. Click search bar.
4. Search using English. Sometimes using predictive text or recommended search terms.
5. Look at results.
6. Compare prices of first 5-10 items.
7. Assess quality of first 5-10 items.
8. Compare price vs quality trade-off.
9. Decide on particular item.

As mentioned in Participant Observation, users are using their visual senses for input/out and touch input (clicking virtual buttons or typing) in order to utilize the app's search function. Furthermore, they solely use visual feedback to evaluate their actions, using a combination of textual language and pictures.

As identified in the Interview Results and Summary, using Coupang can be a subtask of cleaning the home and undertaking other home chores, or as part of a

bigger task of shopping. For example, when performing grocery shopping, the Coupang search function may be used to check or compare prices or availability of alternative products.

## **6.5 Appendix: Defining Requirements**

Improved English support – better accessibility for those reliant solely on the use of English. Ideally, in the form of a fully English version of the app. Meeting in the middle, search results featuring more English for evaluation. At the bare minimum, improving search term accuracy when using English.

Enhance usability – despite the application and the search function requiring minimal cognitive effort to use (according to the Needfinding), there are several sources of distractions within the app itself. There are many promotions, sales and pushing old-stock that are advertised as banner advertising and pop-ups, as evident from the survey results and participant observation. Investigating, less invasive and distracting alternatives of promotion would be ideal.

I believe functionality and learnability are fairly well performing at present. If better English support is offered, the learnability aspects will be taken care of. The core features of the application appear to perform well, it is simply the periphery features that require improvements.

## **6.6 Qualitative Evaluation - Guided Survey Form**

*User Evaluation - Coupang Search Function, Google Form*

<https://forms.gle/72aj22RbHXSdfbyF8>



## 6.7 Appendix: Wireframe Prototype



Figure 2 — Landing Screen Korean (top), Eng-transl (bot)

쿠팡 찾기 | 입점신청 | 로그인 | 회원가입 | 고객센터

카테고리 | **coupang** | 검색 | playstation 5 | 마이쿠팡 | 장바구니 | English Auto Translate

현재 > 'playstation 5'

**필터**

- ☐ 로켓
- ☐ 로켓야우한 보기
- ☐ 로켓직구만 보기
- ☐ 브랜드
- ☐ C-제어기
- ☐ 무료배송
- 카테고리**
- 전체
- 로켓직구
- 가전/디지털
- 취미/취미
- 생활용품
- 문구/오피스
- + 더보기
- 브랜드**
- ☐ 조이트론
- ☐ 플레이스테이션
- ☐ 소니
- ☐ Techline
- ☐ 스냅 케이스
- ☐ 이이네
- + 더보기
- 상품 상태**
- ☐ 새 상품
- ☐ 박스 훼손
- ☐ 재포장

**'playstation 5'에 대한 검색결과**

연관검색어: playstation 4 playstation 5 pro xbox series x playstation 4 pro ps5 playstation 5 사전예약 playstation ps5 nintendo switch xbox ps5playstation 5

✓ 우량 협업순 | 낮은가격순 | 높은가격순 | 판매량순 | 최신순 | 36개씩 보기

**Seagate FireCuda 530 Heatsink M.2 NVMe SSD (PS5 호환), 4TB**  
무료배송 수요일 6/29 도착 예정

**1** **2** **3**

**무로배송**  
PS5 듀얼센스 충전거치대 듀얼 차징 과충전 과전압 방지 기능  
36% 30,000  
**19,000원**  
수요일 6/29 도착 예정  
★★★★☆ (1)  
👉 최대 950원 적립

**무로배송**  
PS5 플레이스테이션5 플스5 디스크에디션 새상품 + 소니 듀얼센스 무선 컨트롤러 포함 2인셋  
**938,870원**  
수요일 6/29 도착 예정  
★★★★★ (13)  
👉 최대 46,944원 적립

**무로배송**  
플레이스테이션5 PS5 플스5 디지털 버전 정발 새상품 + 추가 듀얼센스 포함 새제품  
**840,110원**  
수요일 6/29 도착 예정  
★★★★★ (3)  
👉 최대 42,005원 적립

**무로배송**  
PS5 플레이스테이션5 플스5 본체 디스크에디션 새상품  
**758,810원**  
수요일 6/29 도착 예정  
★★★★★ (3)  
👉 최대 37,940원 적립

AD (5)

Favorites | Apply for a store | login | Sign Up | Service center

category | **coupang** | all | playstation 5 | My Coupangshopping basket | ENG | English Auto Translate

rocket delivery | Rocket Fresh | biz Coupang Biz | rocket fastball | gold box | Wow member discount | Event/Coupon | special exhibition | travel/ticket

all > 'playstation 5'

**filter**

- ☐ 로켓
- ☐ 로켓야우bay view
- ☐ 로켓직구bay view
- ☐ 브랜드
- ☐ C-제어기
- ☐ FREE Shipping
- category**
- all
- rocket fastball
- home appliance digital
- Toys/hobbies
- Household goods
- Stationery/office
- + View more
- brand**
- ☐ Joytron
- ☐ playstation
- ☐ Sony
- ☐ Techline
- ☐ snap case
- ☐ hey
- + View more
- product status**
- ☐ new product
- ☐ box damaged
- ☐ recack

**Search results for 'playstation 5'**

Related search terms: playstation 4 playstation 5 pro xbox series x playstation 4 pro ps5 playstation 5 pre-order playstation ps5 nintendo switch xbox ps5playstation 5

✓ Coupang Ranking | low price | high price | in order of sales | latest order | View each 36

**Seagate FireCuda 530 Heatsink M.2 NVMe SSD (PS5 Compatible), 4TB**  
FREE Shipping Expected to arrive Wednesday 6/29

**1** **2** **3**

**FREE Shipping**  
PS5 DualSense Charging Cradle Dual Charging Overcharge Overvoltage Prevention Function  
36% 30,000  
**19,000 won**  
Expected to arrive Wednesday 6/29  
★★★★☆ (one)  
👉 Earn up to 950 won

**FREE Shipping**  
PS5 PlayStation 5 PSS Disc Edition New Product + Sony DualSense Wireless Controller 2 inset  
**938,870 won**  
Expected to arrive Wednesday 6/29  
★★★★★ (13)  
👉 Earn up to KRW 46,944

**FREE Shipping**  
PlayStation 5 PSS PSS Digital Version Original New Product + Additional Dual Sense Included New Product  
**840,110 won**  
Expected to arrive Wednesday 6/29  
★★★★★ (3)  
👉 Earn up to KRW 42,005

**FREE Shipping**  
PSS PlayStation 5 PSS Main Unit Disc Edition New Product  
**758,810 won**  
Expected to arrive Wednesday 6/29  
★★★★★ (3)  
👉 Earn up to KRW 37,940

There are no records

Figure 3 — Search Results Example with Eng-Transl (bot)



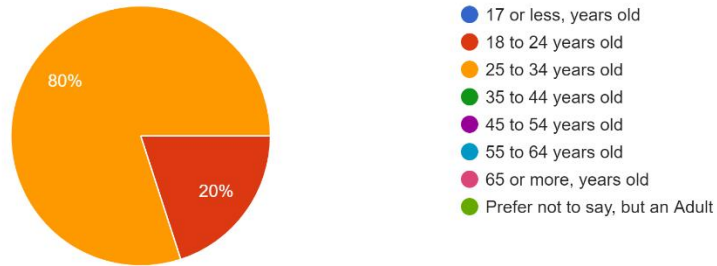
## 6.8 Appendix: Guided Survey Full Results

[https://docs.google.com/spreadsheets/d/1N1XLxl-BuVEEYK3x1\\_UoIv69HzLcX8Nw6nGcvwI-y8iU/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1N1XLxl-BuVEEYK3x1_UoIv69HzLcX8Nw6nGcvwI-y8iU/edit?usp=sharing)

### Section 1. Understanding When and Where you use Coupang

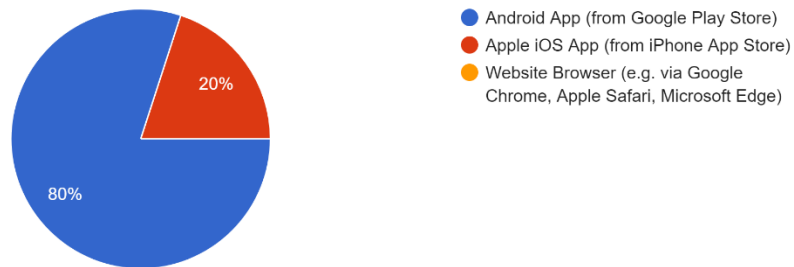
1. What is your age group?

5 responses



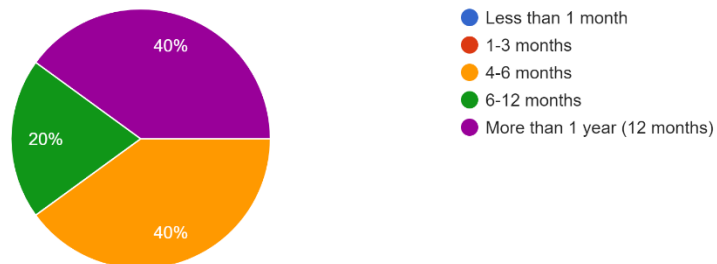
2. On what platform do you usually use the Coupang search function?

5 responses



3. How long have you been using Coupang / the Coupang search function?

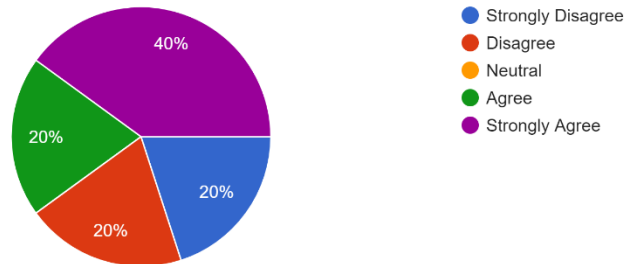
5 responses



4. On average, how often do you use the Coupang search function? Pick the closest choice.

5. Read the following statement: Compared to the existing App, the English translation feature is beneficial to English-speaking users.

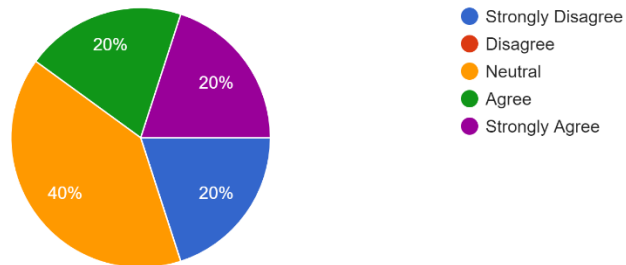
5 responses



## Section 2. Prototype User Evaluation

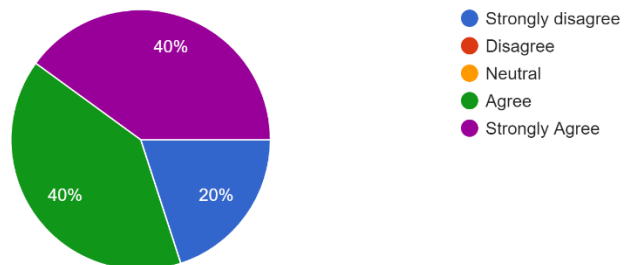
6. Read the following statement: The English translation feature is designed well (easy to find, easy to use and stylistically consistent).

5 responses



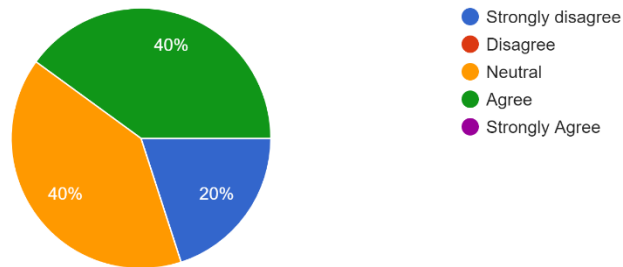
7. Read the following statement: Compared to the existing App, the reduction of spam advertising is beneficial to users.

5 responses



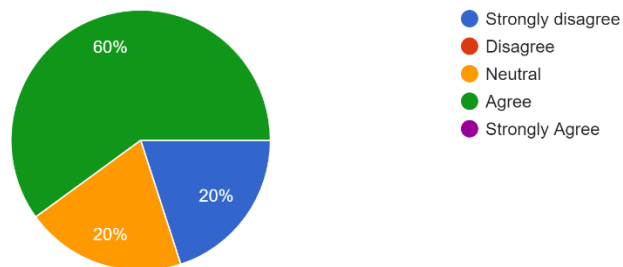
8. Read the following statement: Compared to the existing interface, the reduction of spam advertising is designed well.

5 responses



9. Read the following statement: If Coupang incorporated the prototype's new features (English Translation and reduced Spam Advertising), I would use the Coupang more often.

5 responses



10. What, if any, aspects of the prototype interface do you like -or- do you think work well? (Type N/A if nothing)

|  |
|--|
| The toggleable English translation and the English/Korean button look both useful  |
| I enjoy that the english translation button is on the homepage and is a function directly related to the Coupang webpage rather than relying on google chrome to translate ko-rean into english for me. For example, when I press translate and then I have a popup that asks for extra information or is a confirmation pop-up this will not be translated until I go back to the google chrome translate page and undo translation and then redo with the new korean text on the page. After pressing translate any new text will not be automatically translated in most cases. |
| I liked the overall idea, and think the implementation with definitely improve the user experience in terms of convenience.  |
| I like that the button is in English, this helps it attract attention from non-Korean speakers   |
| Fonts are bad and the icons are very old-fashioned   |



11. What, if any, changes -or- additional improvements would you like to see made to the prototype interface? (Type N/A if nothing)

|   |
|---|
| The design of the interface still seems cluttered, even with less spam ads/promotion. Also the English translation quality needs work |
| I would change the interface of the button by having the english float on top whilst the webpage is in english and vice versa.        |
| n/a   |
| the rocket delivery buttons could also be in english to specify which button means what   |
| Translation quality and even with the reduction in advertising, there are too much information  |

## 6.9 Appendix: Low-Fidelity Physical / Paper / Wizard of Oz Prototype

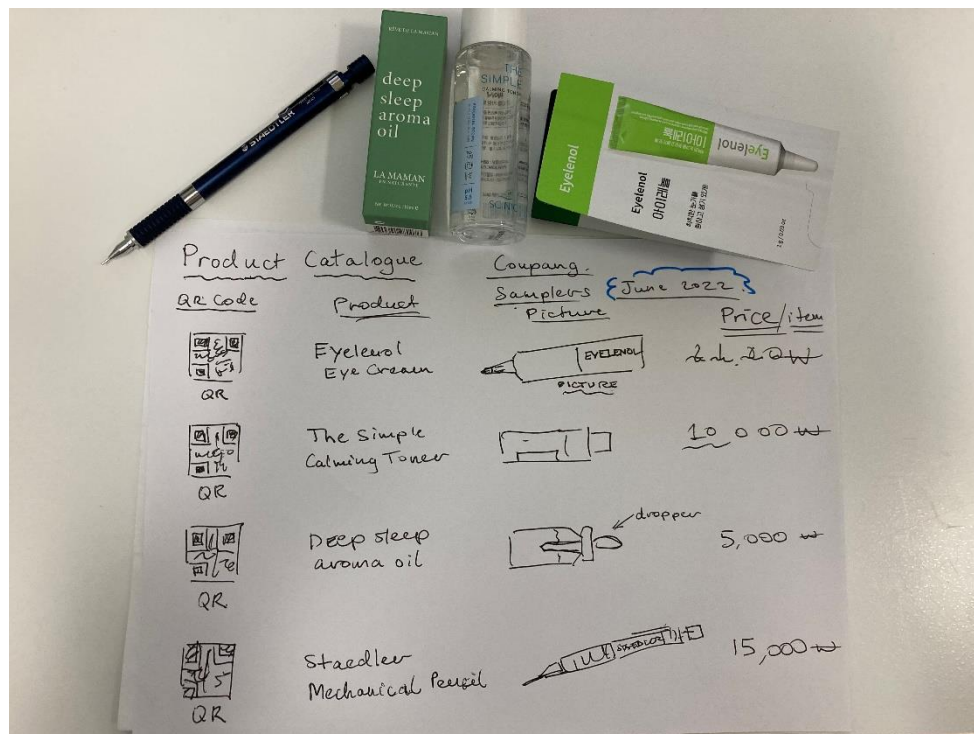


Figure 5 — Product Catalogue, Samples and QR Codes