



User Testing Report

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Executive Summary

Hipmunk.com offers comprehensive travel search through a “unique” display that makes it “easy” to visually compare results to choose the cheapest option. [1] By recruiting experienced users of online travel booking sites, this user test aims to discover usability issues that might be crucial to users’ experience.

Some of the diversity criteria for the recruitment of test users include specificity of flight preferences; complex/special needs; and frequency of flights. Possible users for this test of Hipmunk platform were gathered by use of strategies such as friends and family recruiting, proxy/snowball recruiting, and public advertisement on social network sites such as Facebook. Successfully recruited users were then presented with a set of eight representative tasks which test various functions essential to proper functioning of the site (searching flight information, looking up hotels, etc.). For the analysis of usability issues discovered during the test, recorded videos of sessions and logging sheets taken during the period were utilized. The analysis of each task for successful completion, timing, and errors result in the discovery of these issues within Hipmunk’s system:

1. Unclear features & Lack of documentation.
2. Interruption of user flow/ Inconsistent user flow.
3. Some inputs cannot be as specific as the user wants.
4. No proper feedback.

The user test of Hipmunk.com reveals that the site, even though it has been up and running for few years, still has some important issues to deal with in order to provide the best user experience. First of all, the result and analysis of this test recommend Hipmunk to provide a description of its functions directly on its pages and simplify its overall interface as well as some of its features. Second, Hipmunk should reduce the number of pop-ups and redirection to other sites in order to prevent interrupting user flow. Also, the system needs to provide support for different types of inputs so that users can choose instead of forcing them by giving them just one choice. Hipmunk currently lacks feedbacks, providing them can improve usability. Although these recommendations are not the solutions to every problem that exist within online websites, they can improve users’ experience significantly.

Introduction

Understanding Hipmunk

Hipmunk, founded in 2010 and headquartered in San Francisco, is a website that allows users to plan their trips by offering comprehensive travel search that ranges from commercial flights to hotels and car rentals. Its site states that it can “help [users] save time and money by comparing top travel sites to show perfect flight or hotel at the cheapest price.” Also, its “unique” display makes it “easy” to visually compare results. It also makes the bold statement that the site is “fastest, easiest way to plan travel.” [1] Hipmunk’s potential to be one of the leading sites in travel planning category has been proven when Concur, an SAP company, acquired Hipmunk in 2016.

Hipmunk has been chosen for this user test for the following reasons. First, the target population for the test is large and easy to recruit since many people have experience booking travel online, and do so regularly. Second, the site is available worldwide and offers search results in eight currencies. Third, its user interface uses some non-standard elements that differ from the most popular travel booking sites and therefore might present usability challenges for some users.

Objective & key questions of the test

This evaluation of Hipmunk system aims not to critique the platform; however, to improve its usability and in doing so, improve the traveling experience for people around the globe so that the search of travel information is effective and efficient. This study involves 3 main phases (Figure 1).

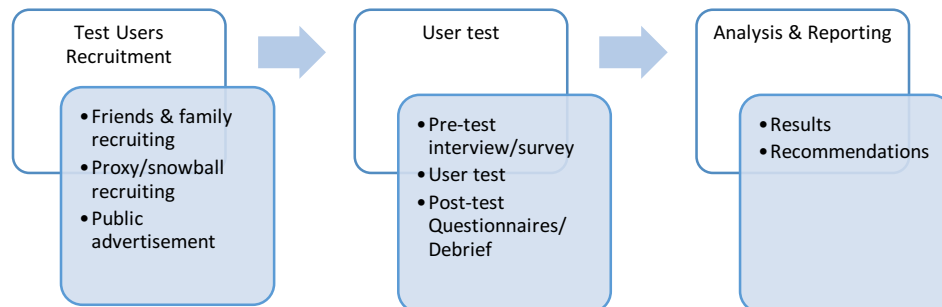


Figure.1: Test phases.

Successfully recruited users were presented with a set of eight representative tasks which test various functions essential to proper functioning of the site (searching flight information, looking up hotels, etc.). The goal of this project is to answer these questions:

- Can experienced users of online travel booking sites use Hipmunk to plan their trips?
- What problems do users encounter when trying to use Hipmunk to plan trips?
- How does it compare to well-known travel booking sites?

By seeking to see whether Hipmunk can provide answers to these questions, the test attempts to identify the “pain points” in planning trip experience through Hipmunk’s online website and test

out some design recommendations against them. For a site that offers unique user interface and features that can attract a lot of users, Hipmunk is surprisingly unknown to many people and has failed to establish itself as one of the mainstream sites for planning trips. This evidence indicates that there must be some issues present within users' experience that deter people from choosing this site. During the analysis phase of the study, heuristics, which are general set of efficient guidelines derived from a systematic review of usability problems, have also been applied to evaluate the issues discovered.

Methods

Testing Process

The test of Hipmunk's website was carried out in 3 phases:

1. User Recruitment
 - Define recruiting criteria with enough diversity so that it is possible to gain insight into how different types of users experience the site.
2. Usability Test
 - Recruited users are presented with a set of eight representative tasks that test various functions essential to the best experience of Hipmunk.
3. Analysis & Reporting
 - Analyze the test sessions and identify a comprehensive list of key usability issues.

Phase 1: User recruitment

The principal audiences are "experienced users of online travel booking sites. However, it also has to be people who are unfamiliar with the system this study examines. Therefore the recruiting criteria for users of this test are established as:

- Participants must have bought a plane ticket online in the past year.
- Participants must not have used Hipmunk before.

Within this target population, certain diversity criteria are required in order to diversify the participant pool. Diversity criteria are of interest because this study aims to gain an insight how different types of people will experience the same site. Therefore, people gathered for the purpose of participating in this usability test differ along two dimensions:

1. Flight Preferences.
 - A. Standard (no special accommodations).
 - B. Complex needs (dietary restrictions, travel with an infant, special needs, etc.).
2. The frequency of online flight bookings/planning.
 - A. 1~3 trips per year booked online.
 - B. 4 or more trips per year booked online.

With ideal recruiting criteria and dimensions of diversity having been defined, three recruiting strategies were employed. The first strategy attempted is friends & family recruiting taking advantage of test moderator's own social network. Simultaneously, proxy/snowball strategy is implemented in order to gain access to more diverse participant pool. Also, public advertisement on various Facebook pages of various college organizations was effective in allowing different types of people to become aware of this test (Figure. 2).

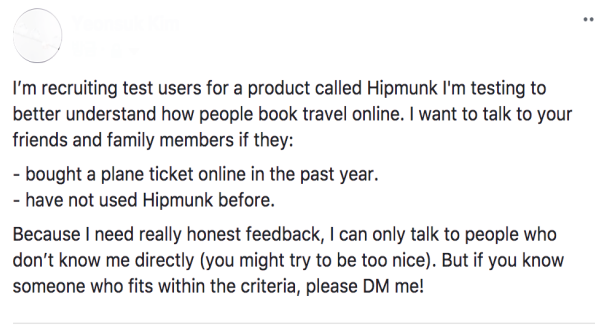


Figure. 2: Recruitment ad post on SNS (Profile picture and name edited out for privacy).

As an incentive for honest and detailed feedback from recruited users, gift cards were given to participants of the test. After 2 weeks of recruitment, a total of six users was gathered for the test of Hipmunk. While some users were tested in a private environment prepared for the sake of this test, some were tested in a public environment such as a café and library. Screen recordings of the test were taken using a software known as Jing.

Users, who participated in this usability test, were between age 21~28, with the sex ratio being 2:1. While three users were still in college, two were in the middle of graduate school, with one user being marketing expert working in the IT industry. Their job status, as well as their current age, indicates that these users are already well-familiar with online platforms such as the one this study is evaluating and have enough background information to be able to use an unknown system for the first time.

- User 1: Occupation- college student; Online travel booking experience-2~4 times per year; Travel reasons- personal trips (mostly domestic); Familiar with web/mobile platforms? Yes.
- User 2: Occupation- graduate student; Online travel booking experience-3~5 times per year; Travel reasons- personal & business trips (domestic & international); Familiar with web/mobile platforms? Yes.
- User 3: Occupation- college student; Online travel booking experience-1~4 times per year; Travel reasons- personal trips (mostly domestic); Familiar with web/mobile platforms? Yes.
- User 4: Occupation- college student; Online travel booking experience-2~4 times per year; Travel reasons- personal trips (mostly domestic); Familiar with web/mobile platforms? Yes.
- User 5: Occupation- college student; Online travel booking experience-4~6 times per year; Travel reasons- personal trips (mostly international); Familiar with web/mobile

platforms? Yes.

- User 6: Occupation- U.S. Army service member; Online travel booking experience-2~4 times per year; Travel reasons- personal trips (domestic & international); Familiar with web/mobile platforms? Yes.

Phase 2: Usability Test

During the usability test of Hipmunk, numerous instruments were implemented in order to get accurate results. The tools used during the session include:

1. User consent form (see Appendix A).
2. Pre-test questionnaires (see Appendix B).
3. Logging sheet (see Appendix C).
4. Task instructions (see Appendix D).
5. User test script for the test moderator (see Appendix E).
6. Post-test questionnaires (see Appendix F).

Phase 3: Analysis & Reporting

Screen and audio recordings taken during each test session, along with logging sheets, were analyzed for critical issues present within Hipmunk. After a comprehensive list of usability issues has been identified, those issues were distilled down to a list of key findings. Each task was also analyzed for successful completion, timing, and errors (Figure.3 and Figure. 4).

Task Completion Rate					
[Task 1]	Success without help	Success with help	Fail without help	Fail with help	Not attempted due to timing
User 1		✓			
User 2		✓			
User 3	✓				
User 4	✓				
User 5		✓			
User 6	✓				

Figure. 3: Task completion chart.

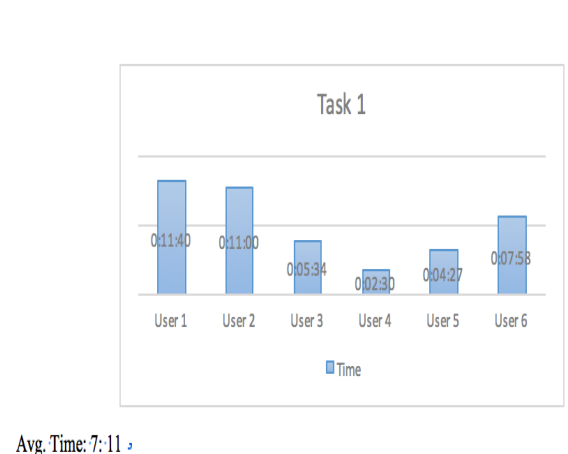


Figure. 4: Task timing graph.

Each key finding was then assessed from severity scale of 1 to 4. The significance of each level of severity is:

- 1 = cosmetic problem; no real usability impact.
- 2 = minor usability problem; fix if there is enough time.
- 3 = major usability problem; important to fix.
- 4 = usability catastrophe; imperative to fix.

In addition to severity scale, the 10 heuristics, which is an evaluation method developed by

Jakob Nielsen in 1994 in the work *Usability Inspection Methods*, is applied for the evaluation.

1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

Post-test questionnaires, which were filled out by users after the sessions, were used to compute the SUS (System Usability Scale) scores. Even though developed in the 80's, the SUS is highly reliable usability questionnaire that is widely used. It alternates between positive and negative question in order to make sure users are paying attention to the questions. General score levels of SUS reveal how “usable” the system is:

- 68 is “average.”
- Below 50 is “failing.”
- Above 80 is “an A.”

Another definition for System Usability Scale is “perceived usability.” Perceived usability correlates weakly with task performance, meaning that people can perform well on tasks but still think a system is not usable. Whether people will choose to use a system in the future also depends on its perceived usability.

Findings and Recommendations

Summary Results

The analysis of video and logging sheets led to discovery of thirty-seven usability issues, which were later distilled down to a list of seven key findings: 1) Unclear description of features/functions; 2) Interruption of user flow; 3) Missing/ hidden Information; 4) Absence of support for multiple types of inputs/specific inputs; 5) No proper feedback; 6) Unique GUI causes confusion among users; and 7) Disordered steps/ wrong direction/ inconsistent interaction. Task completion rate, task timings, and error rates were measured so that perceived usability can be compared to actual usability.

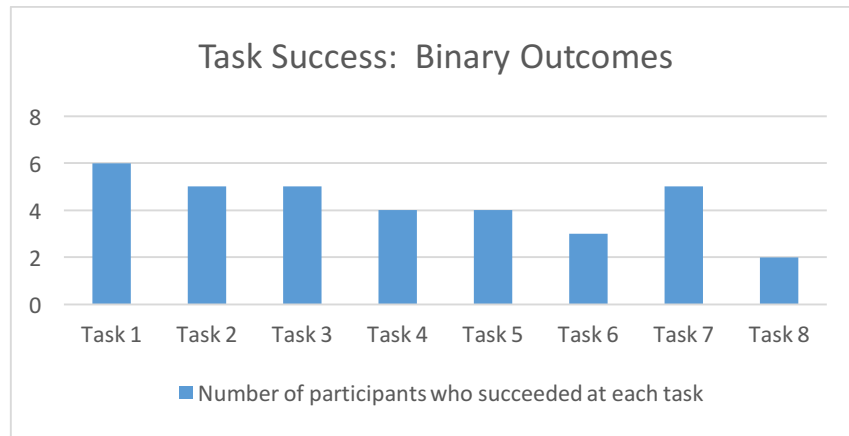


Figure. 5: Task success rate chart.

Six users attempted eight tasks, resulting in a total of 46 tasks tried during the test session (two users not tested due to timing/technical issues). Task 1 was the one users were most successful with, resulting in task completion rate of 100 percent. Users progressed easily up to the second task, which five of six users completed. Beginning in the third task, users revealed some levels of frustration; however, the majority (five to be exact) were successful. Completion rate of task 4 is $\frac{2}{3}$, showing some level of decline. Except for one user who did not try task 5 due to technical issues, four out of five users were successful. Task 6 happened to be the one with lowest completion rate of only 50 percent. With task 7, users demonstrated that they understood the site up to some degree by showing task completion rate of $\frac{5}{6}$. Not taking into account two users who did not try task 8, this task exhibited completion rate of 50% (2 of 4 users successful). Just organizing each task into whether a user has succeeded or failed reveals that majority of users are successful; however, this analysis does not expose the problems that lie beneath the surface.

In order to learn about the issues users had during the sessions, the completion level of each task is categorized into five levels. Each level of completion/failure is assigned a certain amount of points between 0~1 in order to calculate the accurate difficulty level of each function that task tests out.

1. Success without help (+ 1).
2. Success with help (+ 0.7).
3. Fail without help. (+ 0.4).
4. Fail with help (+ 0.1)
5. Not attempted due to timing, technical issue (+0).

Task Completion Rate Summary

	Success without help	Success with help	Fail without help	Fail with help	Not attempted due to timing	Total Score
Task 1	3	3	-	-	-	0.85/1.0
Task 2	2	3	-	1	-	0.70/1.0
Task 3	2	3	1	-	-	0.75/1.0
Task 4	2	2	2	-	-	0.70/1.0
Task 5	3	1	1	-	1	0.68/1.0
Task 6	3	-	3	-	-	0.70/1.0
Task 7	2	3	1	-	-	0.75/1.0
Task 8	-	2	-	2	2	0.27/1.0

Figure. 6: Task completion rate summary, non-binary outcome version.

General score levels of scoring portray how “challenging” each feature is defined as:

- Above or equal to 0.75: Good. Not much difficulty.
- 0.74 ~ 0.61: Quite difficult. Needs some thought before execution. Intermediate.
- 0.60 And below: Challenging.

As it can be seen from the chart above (Figure. 6), 4 out of 8 tasks prepared for users came under intermediate level, while only three tasks were easy and one challenging for most participants. This statistics provides the information that even the basic functions of Hipmunk is confusing and difficult for most users to use for the first time. People tend to abandon systems that present them unpleasant experience, meaning that even if the system is useful and full of interesting features, people will eventually abandon the system in the near future.



Figure. 7: Average task completion timing for the eight tasks.

Most users often do struggle with a new system. It may be completely new, or quite different from the already existing product. But users eventually discover how to use it sooner or later, it

is just a matter of time and patience. The problem occurs when user's perception of what a system's function does not align with what developers/designers intended during its production. For example, a user may believe that one is doing everything correctly because, so far, the system did not provide one with any signs of error. This kind of example is closely related to what happened during this study's test sessions.



Figure. 8: Error rate chart for the eight tasks.

Except for the first task, which took 7 minutes and 11 seconds to complete on average, users did not take so long to finish the other ones. In fact, average completion timing for all eight tasks is just 3 minutes and 28 seconds (Figure. 7). Interesting, because during 20 tasks attempted out of 45, users had to receive assistance from the test moderator. Also, of the 20 tasks that they received help with, three actually could not be completed (Figure. 6). Four out of five tasks that were completed under three minutes received a score below 0.75. Relatively short completion time also suggests that users were confident with the choices they were making and that they were doing things right. But, these tasks were where most of them failed without receiving assistance, denoting the fact there is an elementary issue to be solved with the system (such as wording, etc.). It would not be wrong to assume that most errors would occur in tasks that took longer, indeed, that is exactly what happened in task 1 and 3; however, that was not true for all tasks. Observing Figure. 8, it can be seen that task 8 and 7 comes in, respectively, second and third in terms of rankings for tasks where most errors occurred. All of these observations combined indicate that Hipmunk's feature and user's expectation of how it is supposed to work do not align side by side.

At the end of the tasks, each user filled out a post-test questionnaire, which was used to calculate the SUS score for Hipmunk. This after-test survey served as a good foundation for how much work this system still requires:

- | | |
|---------------------|-----------------|
| ○ User 1: 27.5 (F) | User 4: 70 (C+) |
| ○ User 2: 37.5 (F) | User 5: 68 (C) |
| ○ User 3: 62.5 (C-) | User 6: 59 (D) |

Average SUS score for Hipmunk resulted in a very low score of 54. This grade implies Hipmunk is currently located between being an “average” or a “failing” system. Most users felt that they had to learn a lot of new things before being able to take full advantage of the system. The test and statistical analysis that followed also reveal that Hipmunk requires a lot of adjustments and some fine-tuning to offer its users the best user experience.

Key Findings

Finding #1: Unclear description of features & Lack of documentation.

Severity: 3/4

Heuristic violated: (#3) *User control and freedom*; (#4) *Consistency and standards*; (#5) *Error prevention*; (#6) *Recognition rather than recall*; (#9) *Help users recognize, diagnose, and recover from errors*; (#10) *Help and documentation*.

Affected task #: 1, 2, 3, 5, 6, 7, 8.

Description:

Finding #1 deals with issues related to the absence of information that can be helpful to users who are as not familiar as the develop of Hipmunk. That happens to be the plain truth with almost any system. Users do not know how the system is supposed to work since they did not design it. What may be obvious to the designer is never the same to people who use it. Therefore, a designer must make sure that system is brilliant, but not too different from already existing systems so that users may take advantage of their established schema. The system can be still new and different compared to other ones; however, in such a case, a designer must provide enough information to users so that they may also understand. Most of the issues related to this key finding result from a lack of proper guidelines.

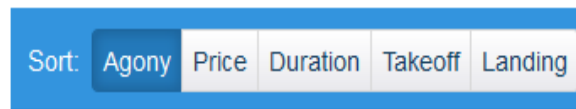


Figure. 9: “Agony” feature on Hipmunk.com

1. Inadequate description of “agony” function and why it should be used over other sorting features (Figure. 9).
 - a. Unlike other well-known travel planning websites, Hipmunk offers a unique sorting feature called “Agony.” Sorting features are essential in giving users the search results they are looking for. Therefore, if such function has a problem, the entire system will be affected. According to a short description that appears when a user hovers over the Agony button, Agony is “a combination of price, number of stops, and duration.” [1] Despite reading this short note, all six users commented something like, “What is agony? How can I trust it? How does it choose its best flight? What’s the formula behind it?” Because the pop-up does not provide information on how those three data were combined to give its result, users are not convinced they can trust it. In fact, some users even chose not to trust agony sorting feature, organizing flights by price instead. This issue

persisted throughout the entire test session.

- Heuristic #2: The term “agony” does not offer a sense of convenience to users. It can even cause some degree of discomfort.
- Heuristic #10: Information regarding agony function is not easy to search.

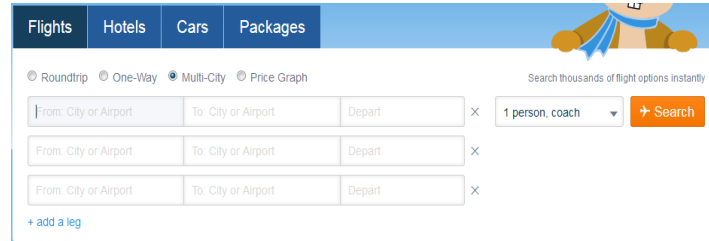


Figure. 10: “Multi-city” flight search option on Hipmunk’s homepage.

2. Absence of proper description of multi-city search & its availability (Figure. 10).
 - a. Another convenient feature that Hipmunk has is its multi-city function, allowing users to search flights from different cities simultaneously. There are two issues with this function. First, some users do not understand immediately what it does and so choose not to use it. Second, the existence of this function is not emphasized at all. Something that cannot be seen is as good as not existing.
 - Heuristic #5: Provide in-process feedback since users can easily make errors while using an unfamiliar feature.
 - Heuristic #10: Information about multi-city search function is hard to look up.




Figure. 11: Save flight option on flight summary information page.

3. Saving flights and editing them (Figure. 11).
 - a. In Hipmunk, there are three levels of saved information regarding user’s travel plan. First and the most upper level is “trip” category, of which name can be changed by users, and includes other sub-levels. Below the trip level is the “search” level, which stores information such as departure airport, arrival airport, and travelling dates. Lowest category is called “flight,” and stores information regarding time of the flight, name of the airline, and number of legs. The problem lies in the fact that this three-level relationship is not explained at all when users interact with the site. User 2 commented during the session: “I don’t know what ‘add this search to trip’ means... isn’t it the same thing as saving a trip? [...] If they are the same, why are there 2 choices with different wordings here? Confusing....” When users save a flight, they are inquired if they

wish to “create a trip.”

- Heuristic #4: Does not follow the standard method for organizing travel information.
- Heuristic #5: If a user makes a mistake and saves the wrong flight, editing the saved flight is difficult.
- Heuristic #6: Edit information should be visible to users.
- Heuristic #10: Documentation about organization of saved information is not provided.

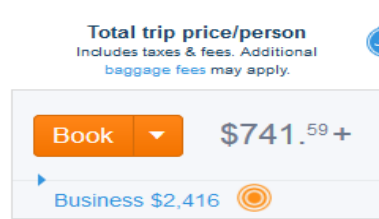


Figure. 12: “Book” flight option available on flight search result page.

4. Consequence of clicking “Book” button not clearly explained before the action is taken (Figure.12).
 - a. When a user has decided on which flight is the best, an orange “Book” button appears on the center of flight result page. This button exists on any kind of flight result page for one-way, round trip, and multi-city, meaning that it affects user’s experience in every flight search. This issue was first discovered when user 1 commented during the task, “When I wanted to book it, it ended up taking me to the United [airline’s] website” (Figure. 13).

Hang tight while we gather your flights...
JFK ⇌ CDG: Fri, Nov 17th – Sun, Nov 19th



Figure. 13: User’s screen when one clicks “Book” button.

User 3 also stated during task 1 that absence of description of “redirection to a different site” made the task more challenging than it should be. Sometimes, users were unaware that they were on a different site, continuing the task thinking they are still on Hipmunk.

- Heuristic # 3: Does not provide an emergency exit for users to return to Hipmunk.
- Heuristic # 5: Does not offer constraints on actions possible, making users prone to errors.

- Heuristic # 10: UI is not self-explanatory and lacks step-by-step instruction.

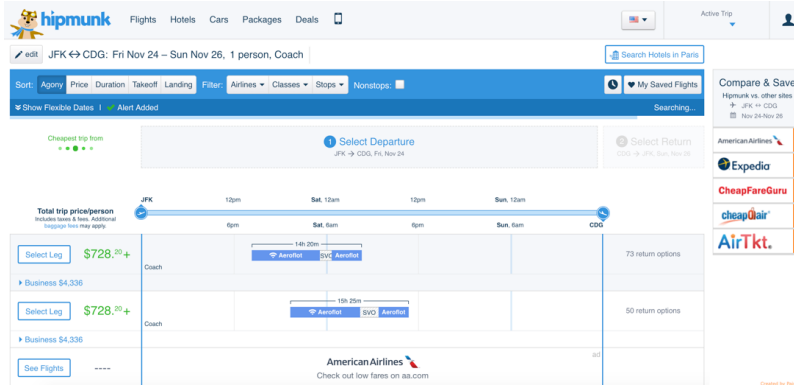


Figure 14: Typical flight search result in Hipmunk.

5. User interface layout of flight search result is difficult to comprehend (Figure 14).
 - a. Different user interface can allow the system to really stand out amongst its peers. But if the site's design is nothing like that of its competitors, it might require some explanation for users to understand. Design of Hipmunk can be "foreign" to new users, because its design is completely visual so that its customers may "quickly scan results without having to do a ton of thinking." [1] This documentation Hipmunk offers is difficult to find.



Figure 15: Time slider design.

6. Time slider's design is confusing (Figure 15).
 - a. User B commented during task 4, "I do not understand the layering... was expecting a time stamp that is linear." In this case, user B also had trouble understanding the layout of time slider bar. For example, they did not understand the fact that time and weekday located above the bar is for the departure time and that those below are for the arrival time. This failure to immediately understand the interface led to longer completion time.

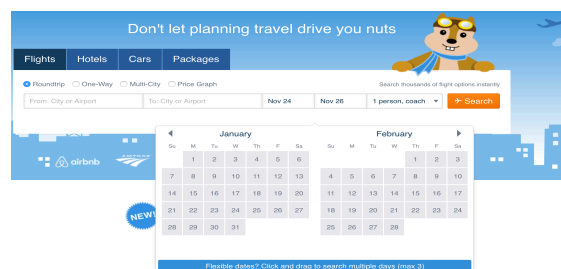


Figure 16: Hipmunk's calendar.

7. Users cannot see the year in Hipmunk's calendar (Figure 16).
 - a. For some reasons, Hipmunk's calendar does not describe the year it is currently on. This issue led to longer task completion time in many tasks, even leading to failure with some, because users did not know which year they were working in.
 - Heuristic #10: Calendar with just the month and the date is not enough for users.

Recommendations:

The main source of errors caused by this finding is lack of documentation and help at proper stages of users' interactions. Simple, but capable of affecting users' perceived usability severely. So does Hipmunk lack any kind of documentation? In fact, answer to that question is a "no." Hipmunk does have a page devoted to help users become familiar with its system; however, that page is hard to find. It is available in Hipmunk's blog, under the help tab. Most users are unwilling to spend extra amount of time to learn how to use the site when they are also busy planning their trip. Before learning about the system, most will just leave for a different site. In order to prevent users from abandoning the site, this issue must be solved. A thorough redesign of the information architecture should be undertaken, with special attention paid to offering appropriate help at proper page:

1. Provide description of "agony" function on flight result page (Figure. 17).

Figure 17 shows a recommendation for relocating the documentation for the "agony" feature. On the left, a blog post titled "What is 'Agony'?" explains that "Agony" is a combination of price, flight duration, and the number of stops. It is described as the unique and default sort option for flights. On the right, a screenshot of the Hipmunk flight search results page is shown. The search criteria are JFK to CDG, Fri Nov 17 – Sun Nov 19, 1 person, Coach. The results are sorted by "Agony". The page shows flight options from American Airlines and others, with prices and return options. An arrow points from the "What is 'Agony'?" page to the flight results page, indicating the recommendation to relocate the documentation.

Figure. 17: Recommendation for relocation of documentation for "agony" feature

- a. Redesigned information pop-up for agony sorting feature provides more detailed information. It also gives users to discover more about it by providing a link to Hipmunk's help page, saving users' time from searching for help.
2. Introduce users to multi-city feature upon their first arrival to the site & Re-organize its UI (Figure. 18).

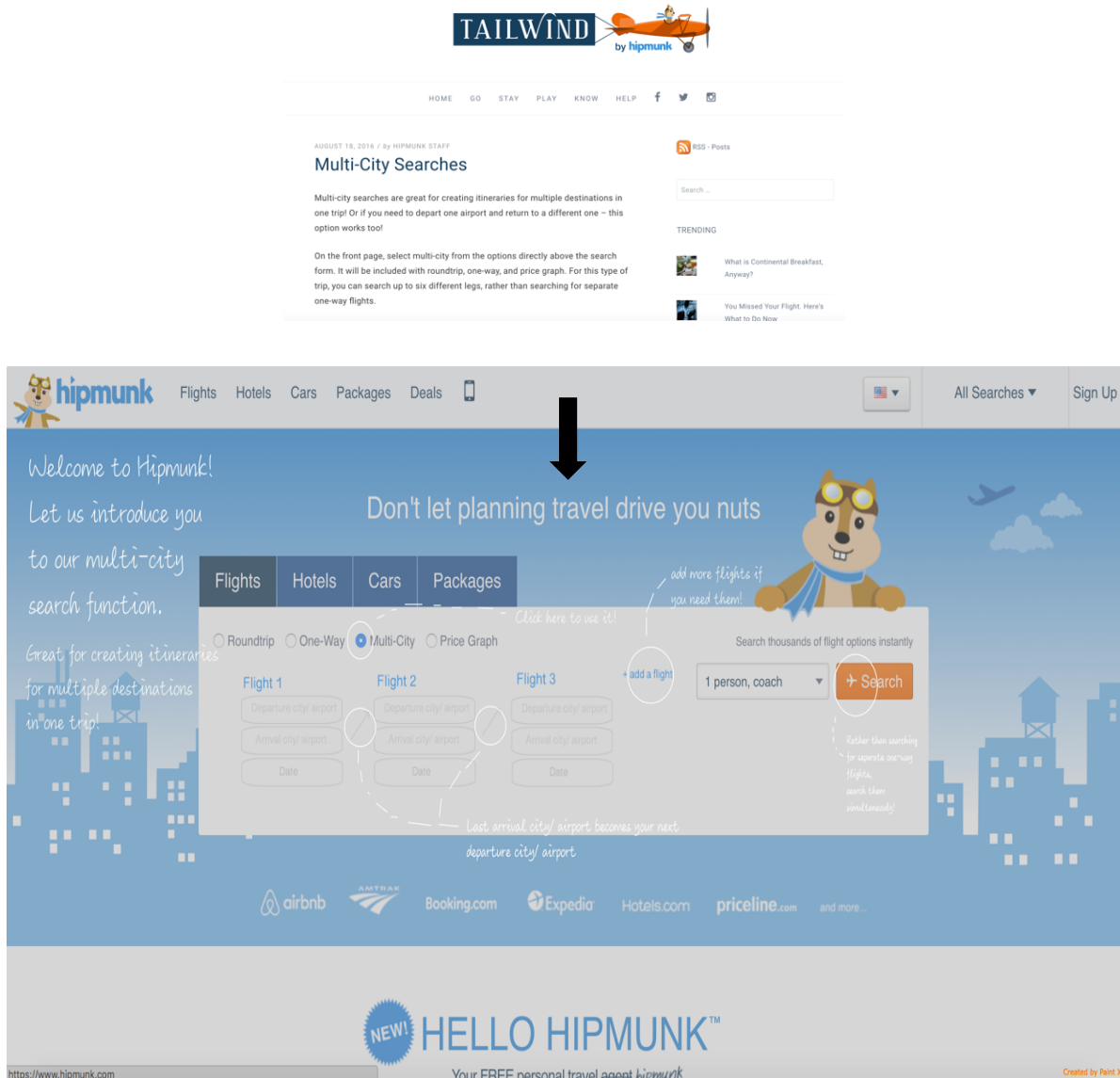


Figure. 18: Re-design of Hipmunk's multi-city tip page.

- a. Information in Hipmunk's separate help blog is relocated to Hipmunk's homepage, specifically in a pseudo-screen that users can get rid of by just clicking. Users do not have to waste time searching for help. In addition to this documentation pop-up, multi-search UI has been redesigned for clarification. The old horizontal display caused user 3 and 6 to make mistakes by entering the arrival city/airport below the departure city/airport. In order to prevent such errors from occurring, the horizontal tab has been re-designed into a vertical one, making each leg more distinguishable from the other.
3. Describe trip folders when user first saves a flight (Figure. 19).

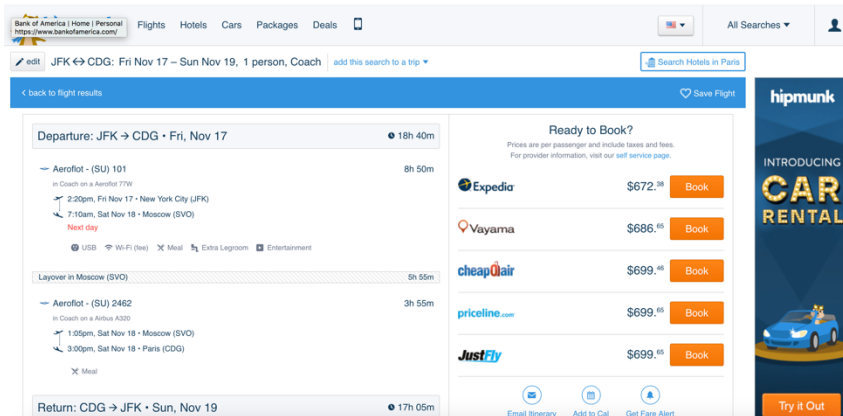


Figure. 19: Hipmunk's flight summary page.

- a. Probably the most suitable page to explain Hipmunk's trip folder feature is its flight summary page (Figure.19). When users decide that they wish to save the flight they just found, a pop-up appears that their flight has been saved. This pop-up is where users first encounter the phrase "add this search to trip" and are introduced to the concept of "trip folder." Explaining how its organization works can greatly enhance user's experience (Figure. 20).

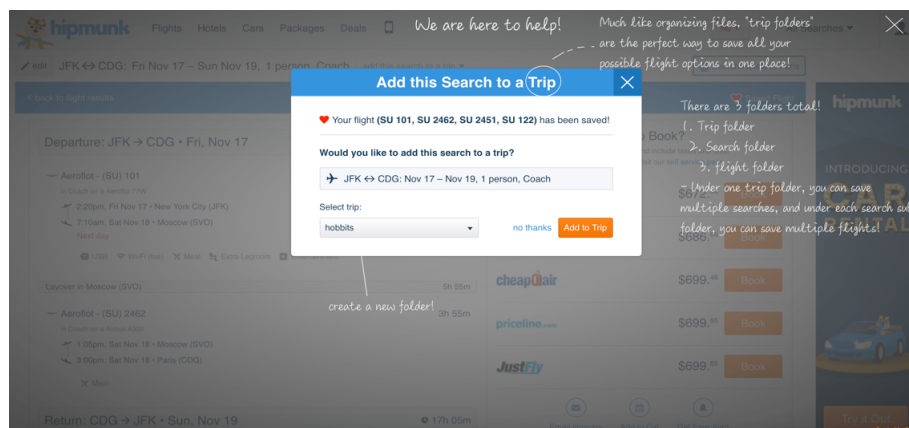


Figure. 20: Tip page recommendation for "trip folder" feature.

4. Pop-up with proper description appears when users "mouse-over" the Book button (Figure 21).

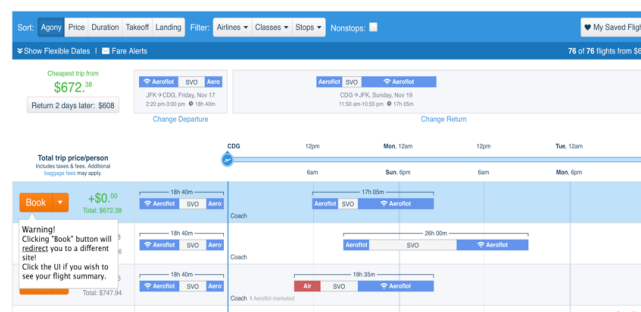


Figure. 21: Recommended design for "redirection to a different site warning" pop-up.

- a. In this case, a pop-up that appears only when users mouse-over the button is more suitable than the one that covers most of the screen and greys out rest of the area. Although other warning messages can also achieve the same objective, this kind of pop-up is most effective since all user has to do in order to get rid of it is just move the cursor.

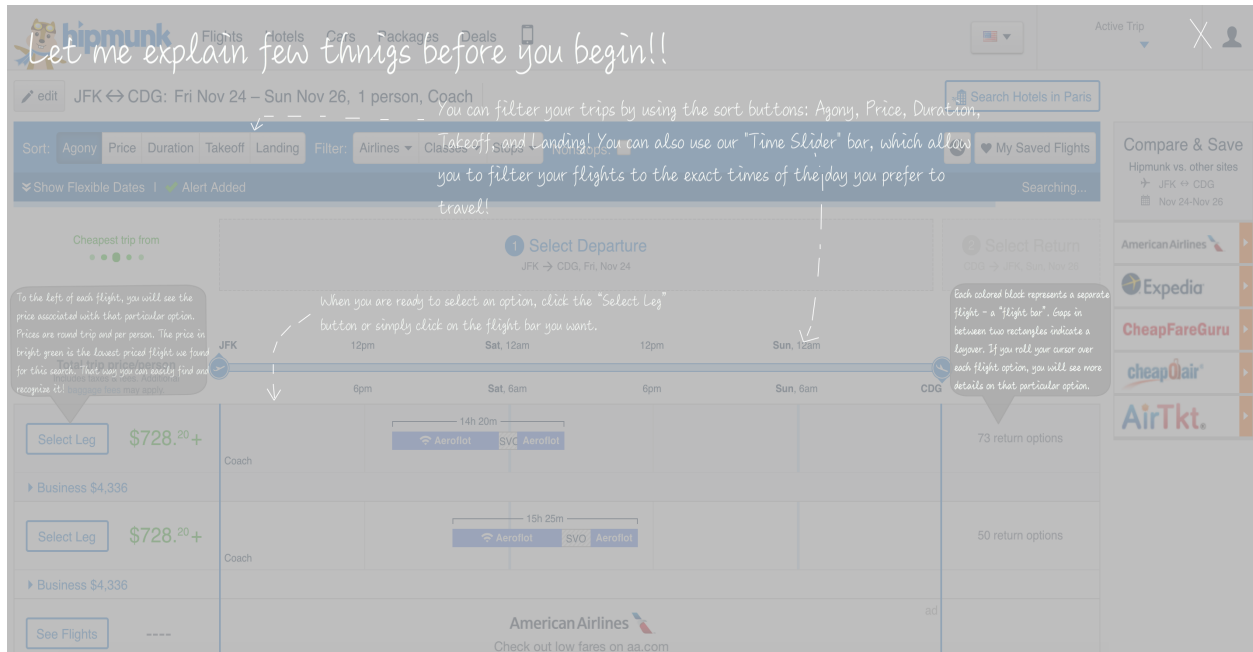


Figure 22: New tip page for understanding flight search result page. Tip page located in Hipmunk's blog is relocated to the actual site so that users do not have to look elsewhere to get help.

5. Help & documentation gray screen directly on top of the flight search result page (Figure 22).
 - a. Hipmunk's design is an effective tool in gathering users that are tired of clones of similar websites. Just helping users understand it by offering them so tips during their first try with the site can improve usability significantly. If it can be understood without difficulty, using it will be a great experience for users.

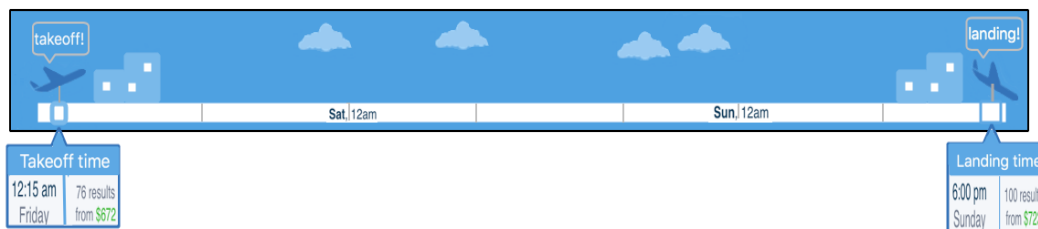


Figure 23: Recommendation for Hipmunk's time slider bar.

6. Time slider bar recommendation (Figure 23).

- a. Some users were confused by the design of Hipmunk's time slider bar because its takeoff and landing time and day is not shown clearly and easily distinguishable. By emphasizing two airplane icons that appear as though they are taking off and landing on either end of the bar and adding the date of departure as well as arrival near the bar, Hipmunk can improve usability of its time slider bar.



Figure 24: Recommendation for Hipmunk's calendar. Next to the month, year is added.

7. Recommendation for Hipmunk's calendar (Figure 24).
 - a. Proving users with the year along with the current calendar can greatly enhance users' experience while reducing the rate of errors.

Finding #2: Interruption of user flow/ Inconsistent user flow.

Severity: 2/4

Heuristic violated: (#3) *User control and freedom*; (#5) *Error prevention*; (#8) *Aesthetic and minimalist design*; (#10) *Help and documentation*.

Affected task #: 1, 2, and 6.

Description:

When users are going through a certain task in order to achieve their goal, the last thing system wants to do is interrupt their flow. Interrupting the smooth path, or if something does not seem right, users notice immediately and the flow is broken, which means that the experience is also momentarily damaged. These small incidences of friction/interruption are cumulative. The breaks in user's flow "weigh more heavily on the total experience than the positive, frictionless moments" [3]. Disorder, animation, advertisements (especially the kind where users may think "now what?", "how do I..." or "what's that?") may interrupt and be unsettling. Take out or improve that might cause friction.

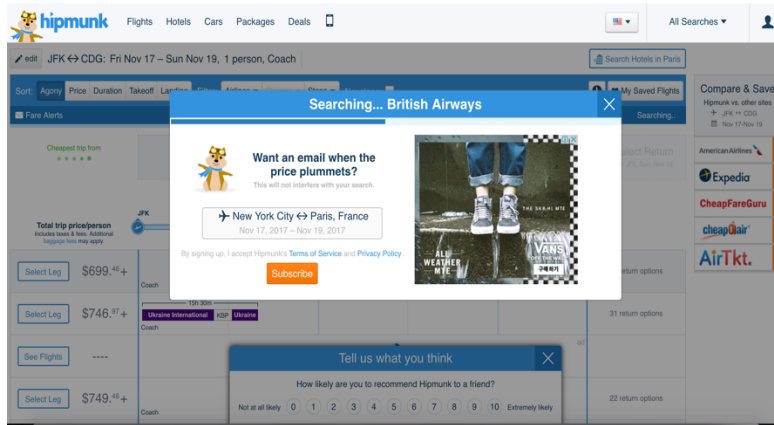


Figure. 25: Advertisement banner that appears during a flight search.

1. Advertisement banner interrupts user flow (Figure. 25).
 - a. Every time users search flights; an advertisement pop-up appears and takes up almost half of users' screens. Upon seeing this banner, user 2 commented, "What is this? I thought I was searching for flight options, but now I am asked if I want to subscribe to something." The problem does not lie in ads themselves, but in interrupting users' flow by asking them something they did not expect at all. Also, this banner prevents users from observing what is going on in the background by covering up the center of the page. Participants thought this banner was useless because the search continued even though they closed it, proving that it does not get in way of users' searches. As stated above, small occurrences of interruption add up. This banner appears every time users search for flights, causing them frustration as well as irritations.
 - Heuristic # 8: This banner contains information more than necessary for users.
 - Heuristic #10: Interrupts step-by-step process.

Recommendations:

Less is more: remove visual and navigational noise that might seem like disorder to users. If all interaction takes place on one screen and pop-ups that show up actually have a purpose, the quality of experience on the site can improve significantly. Redesign of information architecture, with special attention to continuous user flow, is necessary.

1. Removal of Subscribe banner and relocation of ad to the flight result page (Figure 26).

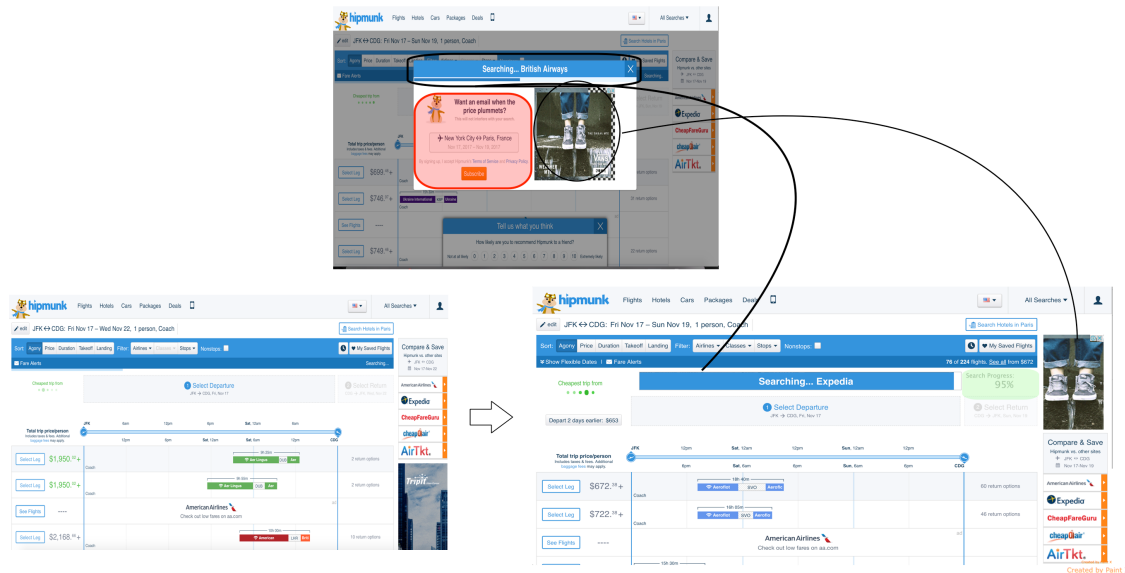


Figure 26: Re-design of “Search/Ad banner.” Red- that section has been deleted. Green-that part of the interface has been added as part of the recommendation. Black-relocated.

- a. Asking users to subscribe when they have not even seen their flight results are doing no more than degrading its usability. Especially if it is users’ first time using the system, it will just confuse them and might even cause them to abandon the site. Also, this banner is not the only place where Hipmunk asks users to subscribe, suggesting that this banner is the only place for this subscription feature.
- b. When someone searches for a flight, all that matters to the user is whether the site is actually working and searching for some answers. It is inevitable for sites like Hipmunk to have advertisements since they are probably the site’s main source of income. If it cannot be avoided, the best method to provide users with better experience is by ensuring they do not get in their way.

Finding #3: Some inputs cannot be as specific as the user wants.

Severity: 2/4

Heuristic violated: (#3) *User control and freedom*; (#7) *Flexibility and efficiency of use*.

Affected task #: 4 and 5

Description:

Criteria set by users for their travel plan matter the most. The budget can be pretty tight, or departure/arrival time might be important. Even though aesthetically pleasing UI can provide some degree of enjoyable experience, users will be dissatisfied if they are unable to adjust one of the criteria as specific as they want.

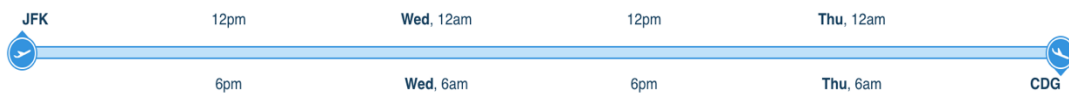


Figure 27: "Time slider" in Hipmunk's flight search result page.

1. Time slider feature (Figure 27) located on the flight result page is easy to use: one just has to slide right or left to adjust to suit one's needs. However, the slider is not the best tool when it comes to specificity. Users had trouble adjusting the time of departure and arrival according to their needs, causing longer task completion time and errors, which eventually led to failures.

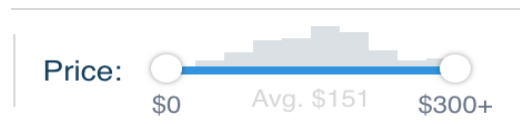


Figure 28: "Price slider" for hotels in Hipmunk.

2. The price range selector (Figure 28) for hotels also use sliders to adjust the price range. This feature also consists of same issues that the time slider feature has. Users have trouble adjusting the range according to their specific needs. Same issue that was discovered in the time slider bar occurs in price range selector bar for hotels: it is too sensitive and inconsistent. The degree by which price changes is inconsistent. Sometimes it changes by 1, then 2, and then 4. Maybe the price changes by the degree of \$1; however, that difference is too small to be perceived by users. Also, changing the price by \$1 is just too difficult to be achieved by users, possibly frustrating a lot of users.

Recommendations:

There are two ways to approach this issue: 1) Reduce time slider's sensitivity. 2) Another input option for users in addition to the slider.

1. Recommendation options for “Time slider” feature.

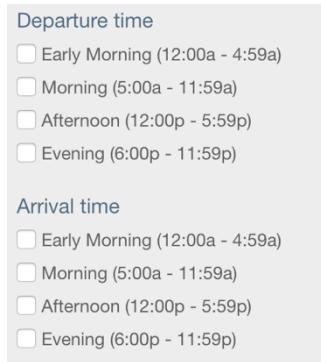


Figure 29: Time selection option (Expedia).

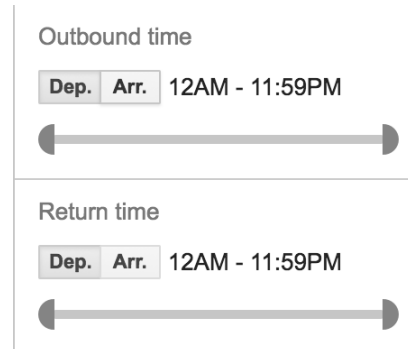


Figure 30: Time slider (Google Flights).

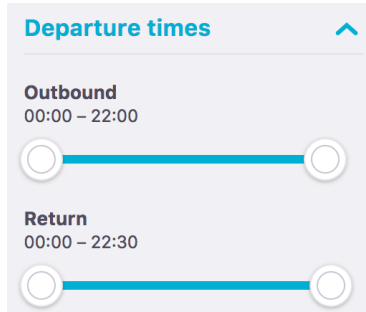


Figure 31: Time slider (Skyscanner).

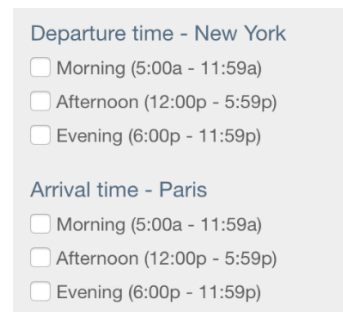


Figure 32: Time selection option (Travelocity).

- a. There are two main roads other sites have taken in implementing the time option in their sorting features: a slider or “check-box” (Figure 29~32). Other sites have also used sliders as their tool for allowing users to change the time of departure/arrival; however, there is a key difference between Hipmunk and other sites. That is: Hipmunk's time slider is way too sensitive, or too specific. Another way to say it is that while other sites allow users to adjust the flight time by 30 minutes or one hour difference, Hipmunk allows users to filter flights to the exact times of the day, up to a minute difference.



Figure 33: Recommendation for time slider bar. Users can sort flight time by 15-minute difference.

The first recommendation for this issue is making Hipmunk's time slider bar less sensitive/specific. Reducing the number of choices can also reduce user's

frustration. 15 or 30-minute difference should be more than enough to meet user’s needs (Figure 33).

- b. In addition to the time slider bar, another input method for departure/arrival time can be helpful in case the specificity Hipmunk currently offers cannot be abandoned.

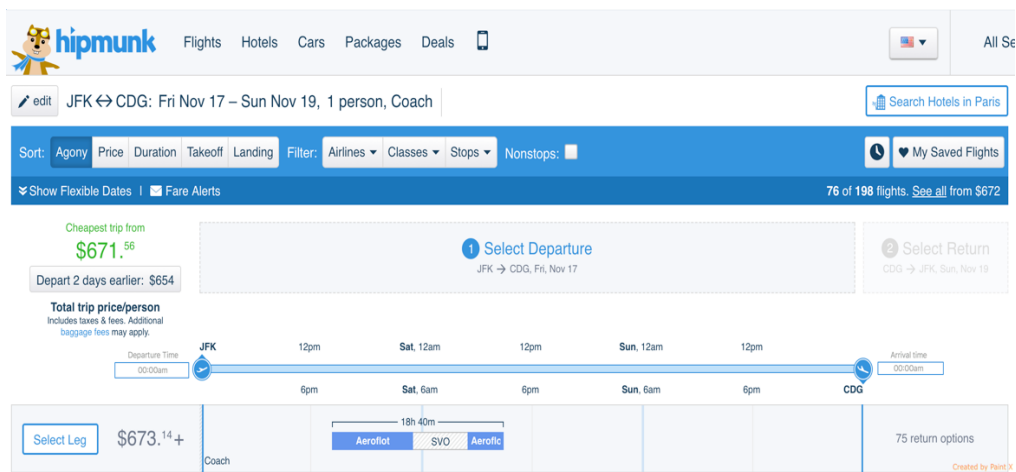


Figure 34: Fill out box for departure/arrival time in addition to the slider.

Convenience is in the eye of the beholder. Sliders are great for offering interactivity to users, but when it comes to specificity, it does a poor job. If sliders cannot be abandoned, the simplest solution to the problem is offering users another input method for departure & arrival time. Simply, allow users to “enter” their preferred time (Figure 34). Adjusting the slider according to their inputs can also inform users that their inputs have been received and processed.

2. Recommendation for price range selection feature for hotels.

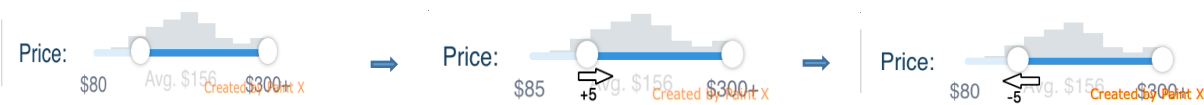


Figure 35: Recommendation for price range selection bar. Users can change maximum/minimum price at a consistent rate.

- a. The degree by which price changes is inconsistent. Reducing sensitivity, or setting exact amount of money which sliding changes, can increase usability for users significantly (Figure 35).

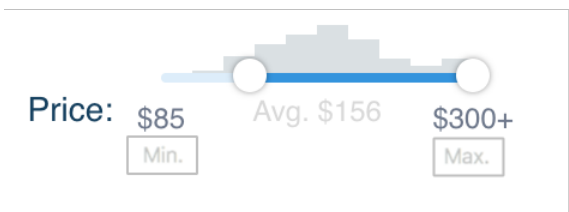


Figure 36: Another input option for price range selector.

- b. Providing another input option for price range can also reduce users' frustration (Figure 36). Still taking advantage of time slider's interactivity, adding a small fill-out box for prices can do the job. Some users may still feel like using the slider, but the box can help when the price user wants is very specific.

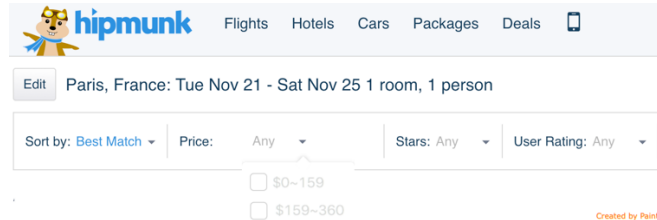


Figure 37: check-box option for price range selector.

- c. Another option is moving away from sliders to a check-box (Figure 37). This option can narrow down user's choices considerably by giving them few choices for the price range. Indeed, this method has been chosen by other well-known sites such as Expedia, Skyscanner, and Travelocity.

Finding #4: No feedback.

Severity: 3/4

Heuristic violated: (#1) *Visibility of system status*; (#5) *Error prevention*; (#9) *Error recovery*; (#10) *Help and documentation*;

Affected task #: 1, 2, 3, 6, and 8.

Description:

Although developers are already familiar with the system and capable of discovering the cause of errors, most of the users are not, and they will just abandon the system if they cannot quickly figure out what went wrong. Feedbacks act as warnings; however, sometimes they are also guidelines that help users during their journey along the system. Without these guidelines, users will get lost and may not be found ever again.

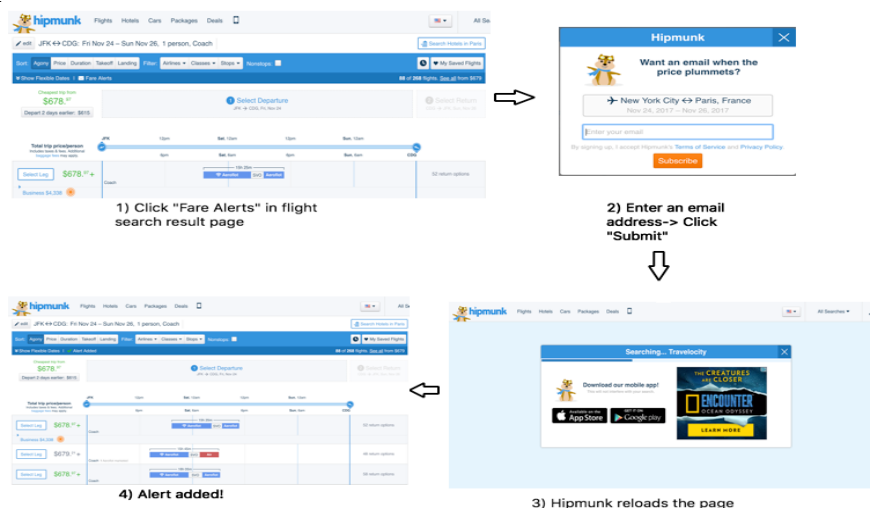


Figure 38: User flow for setting up fare alerts.

1. Fare alert does not have immediate feedbacks to users (Figure 38).
 - a. When users set up fare alerts, either in flight search result or flight summary page, there are no feedbacks until Hipmunk reloads the entire page. Since there are no feedbacks, users cannot be confident that their inputs have been received and processed properly, eventually causing them discomfort.
 - Heuristic #1: There is no immediate feedback.
 - Heuristic #5: Without feedbacks, users are prone to new errors.

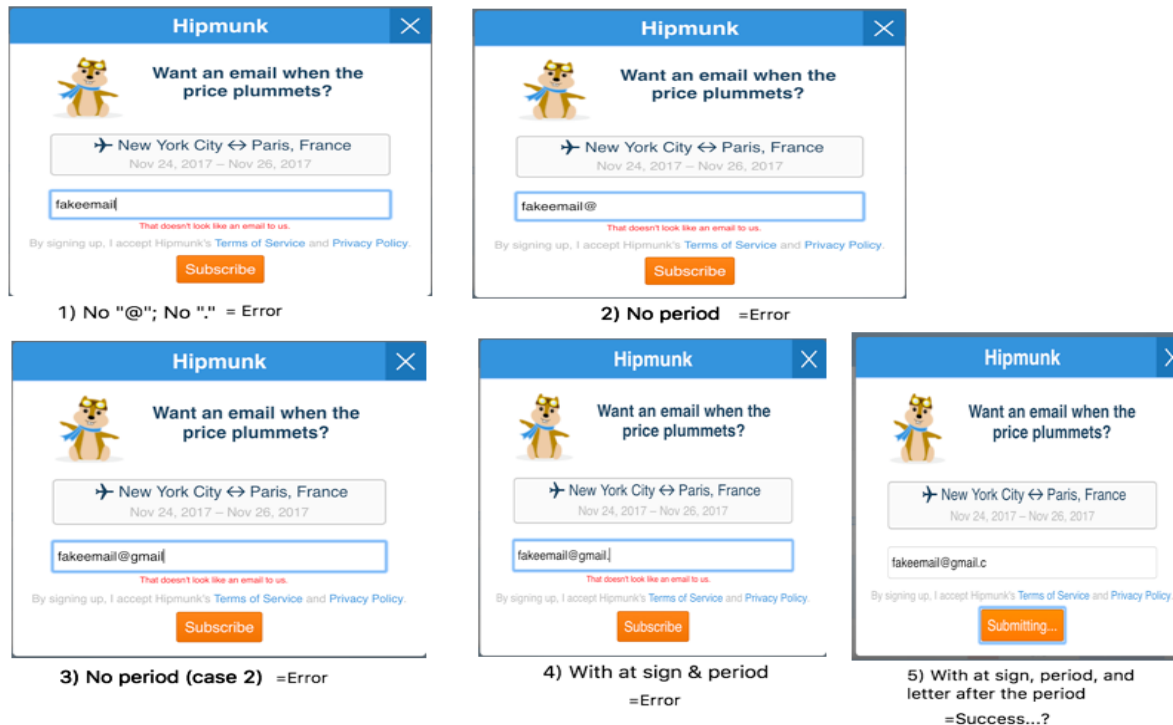


Figure 39: Fare alert error cases

- b. Also, Hipmunk's fare alert function is still vulnerable to "fake" email addresses. The general format of an email address is local-part@domain, of which a specific example is *jsamson@example.com*. An address consists of two parts: the part before the @ symbol (local-part), which "identifies the name of a mailbox," and the part after the @ symbol (domain name), which "represents the administrative realm for the mail box." [4] Apparently, this system accepts anything as an email address if the input contains: anything before @ symbol; the @ symbol; anything after the @ symbol; a period; and anything after the period (Figure 37). For example, something like 'a@b.c' appears to be a valid email address to Hipmunk.
 - Heuristic # 1: No feedback is provided; feedback is improper.
 - Heuristic #5: There are no constraints on what kind of inputs are

acceptable for the emails, leaving users vulnerable to errors.

- Heuristic #9: Once users submit their information, they cannot go back and edit them.
- Heuristic #10: There is no source of help that directs them to the page where they can edit information regarding fare alerts.

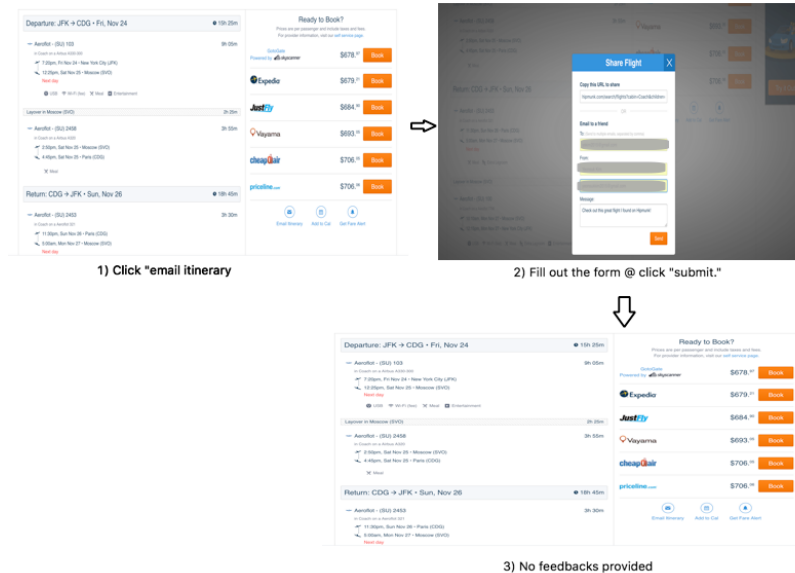


Figure 40: User flow for emailing itinerary to someone else.

2. Sending the flight information through emails does not return any form of confirmation (Figure 40).
 - a. Hipmunk allows users to send information regarding flights of their choice through emails, which is very convenient function in the case users are looking up flights for someone else.
 - Heuristic #1: No feedback is provided.
 - Heuristic #5: Does not make sure user has entered a valid email address. Hipmunk does not provide any form of error message.

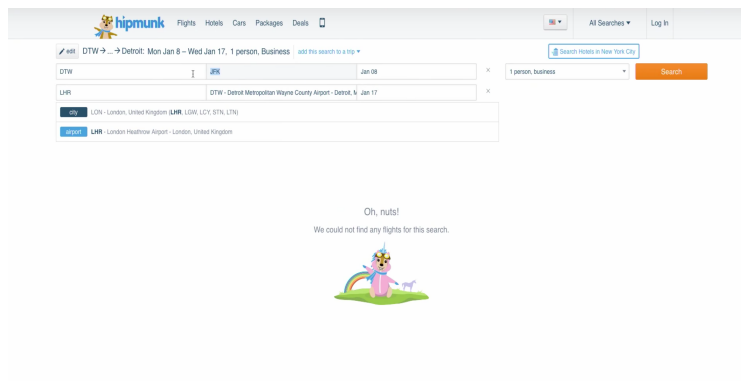


Figure 41: Typical error message in Hipmunk's flight search.

3. User's error message does not contain enough information regarding the error (Figure 41).
 - a. Error messages should not just state in plain language that something went wrong. Users are smart enough to know there has been an error if the result on the screen does not look like something they were expecting. More than just a declaration of errors, error messages should also help users in understanding the cause of errors and inform them of possible ways to fix those errors. This issue occurred when users made some mistakes during their flight search.
 - Heuristic #5: Error message should be detailed enough so that rate of errors will be reduced.
 - Heuristic #10: Message should contain information that can prevent future errors.

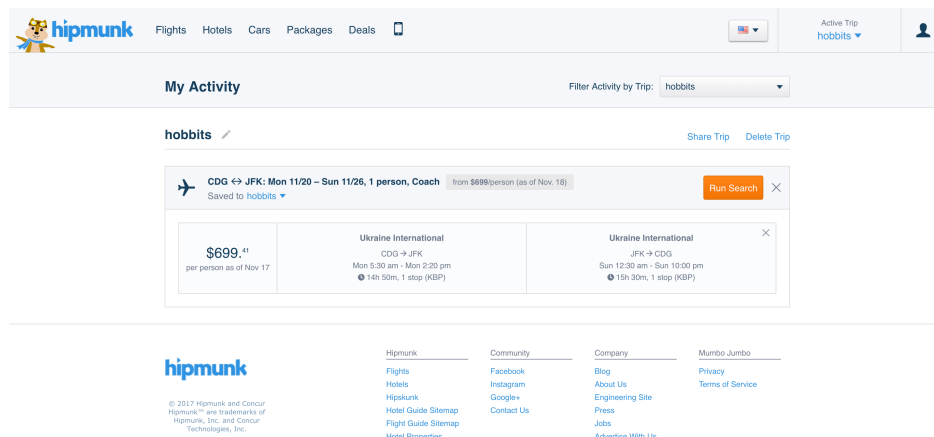


Figure 42: My activity page. Even though users can delete trips/flights, there are no options for editing them.

4. Feedback for editing saved flights (Figure 42).
 - a. When users edit the flights they saved under a trip folder, they want to be confirmed that their actions were appropriate and received by the site. Unfortunately, Hipmunk does not give users any feedback regarding editing saved flights. Users cannot be sure that they properly edited the flight until they actually go and check.
 - Heuristic #1: There are no feedbacks of any type (error, confirmation, etc.).
 - Heuristic #5: Confirming users' choices one more time before processing can reduce rate of errors. It is possible users were unaware they were editing previously saved flights.

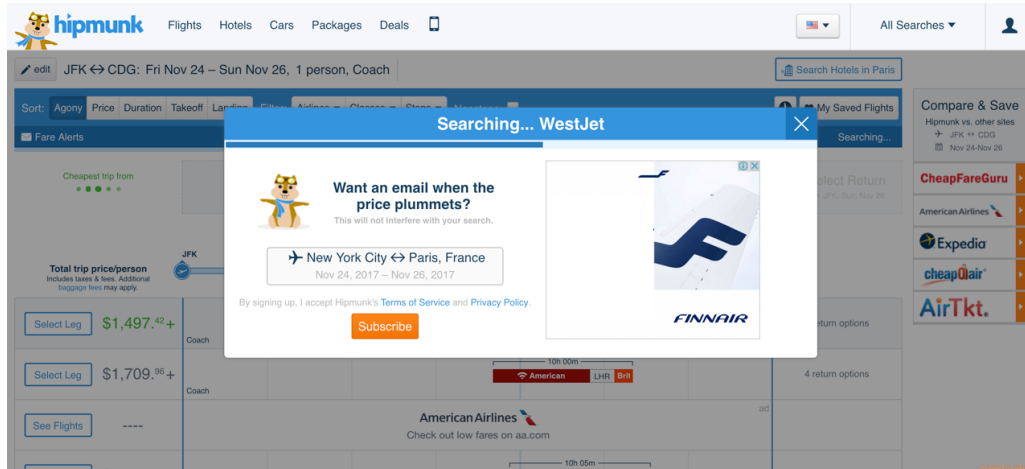


Figure 43: Search banner.

5. Feedback for what would happen if users closed the “search banner” (Figure 43).
 - a. Every time users search flight information, a pop-up that covers up almost a quarter of the page appears. At the same time it shows users some advertisement, it also asks users if they want to set up a fare alert by entering their email addresses.
 - Heuristic #1: Some users were reluctant to close the ad banner because they were afraid doing so would interrupt with their search and would not reveal the full result. When users close the banner, Hipmunk, in fact, does not provide any feedback.

Recommendations:

1. Feedback recommendations for fare alerts.

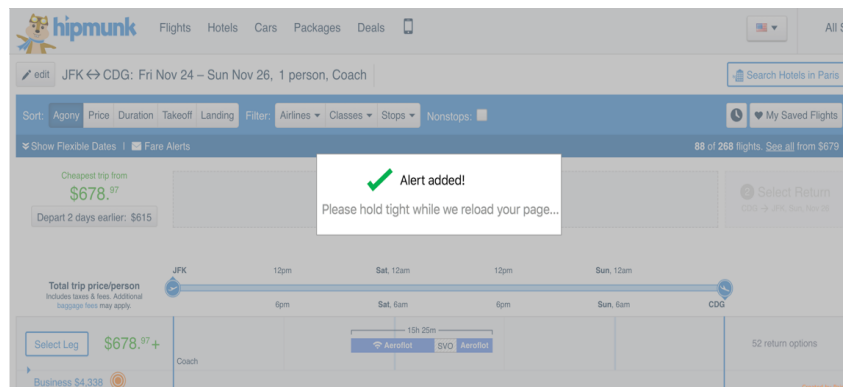


Figure 44: Confirmation message for fare alerts.

- a. Confirmation/feedback message before reloading the page (Figure 44): Message that confirms user’s action can improve usability by allowing user to be aware of system’s current status. If such feedback is provided immediately after user’s input, user can be sure that one did it correctly.



Figure 45: Error message for invalid email address.

- b. Error message in the case users enter invalid email addresses (Figure 45): Not only should the message tell user that there is an error with the input, it should also be capable of providing possible solutions to the problem. This error message also contains example texts as well as possible solutions.

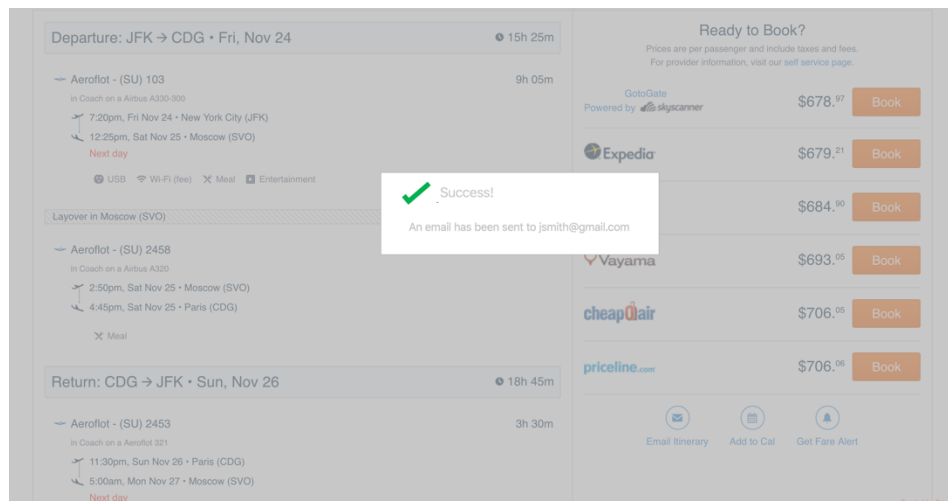


Figure 46: Confirmation message for emails.

2. Feedback recommendations for sending flight summary through emails.
 - a. Confirmation/feedback message that the email has been sent can greatly enhance user experience by informing users of what is going on currently (Figure 46). It also reduces the hassle of confirming that the email has been sent by contacting the recipient.

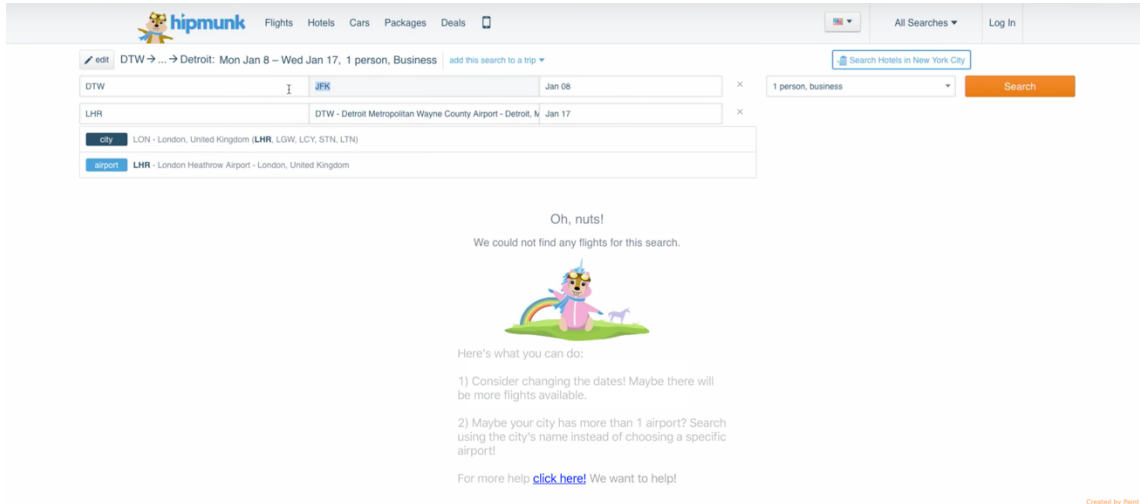


Figure 47: Detailed error page

3. Recommendations for the new error result page (Figure 47).

- Provide users with some recommendations for possible course of actions that they can take to get better results. Just in case they are not satisfied, give them a link to additional help page so that they might try the system again instead of abandoning it.

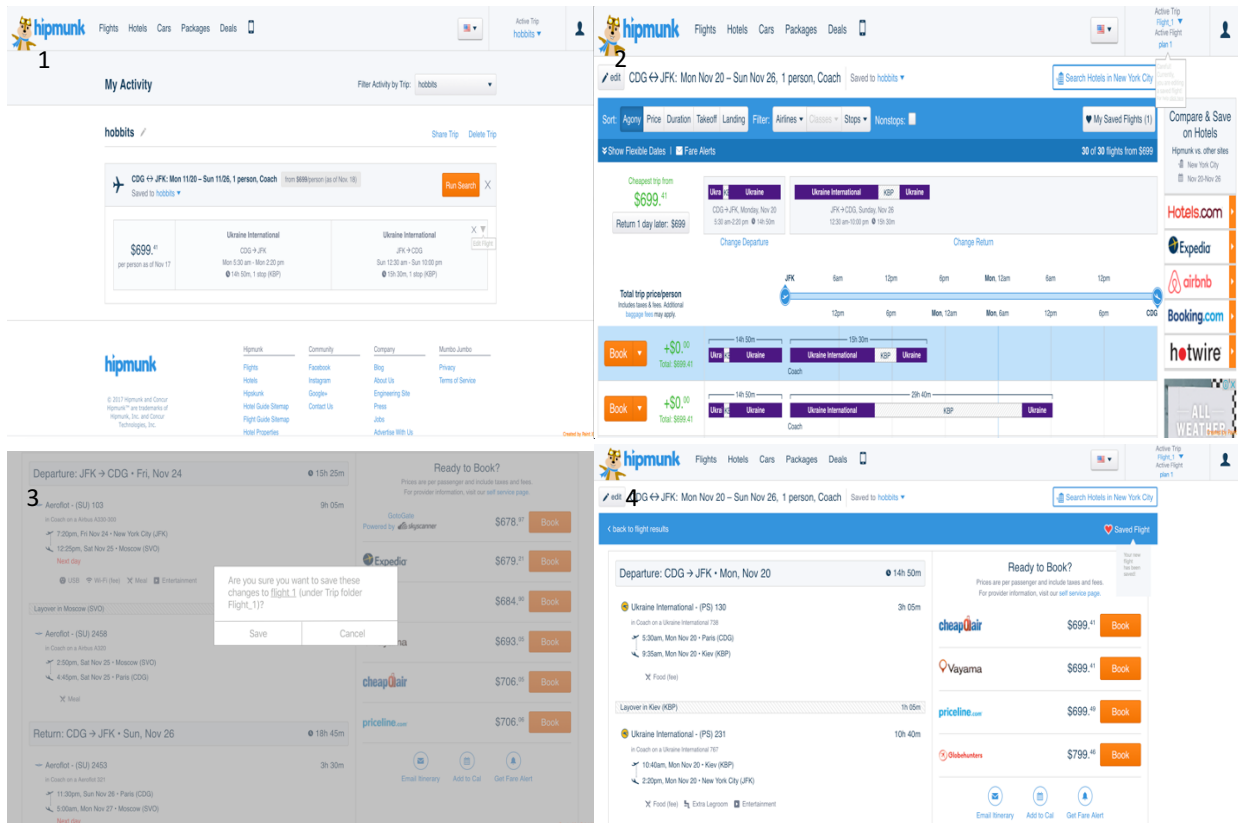


Figure 48: Recommendation for “edit saved flights” feature. 1) Addition of edit saved flight in My Activity page. 2) Addition of active flight tab under Active Trip and a notification message which warns users that they are editing a

saved flight. 3) Asks users to confirm their actions one more time before finalizing. 4) Confirmation message (feedback) provided at the end.

4. Feedback recommendation for editing saved flights (Figure 48).
 - a. Adding “Edit saved feature” can allow users to know that they are actually editing a saved flight instead of just searching again. Also, feedbacks at appropriate levels can also offer them a chance to go back, some emergency exits, and confirmation of their actions.

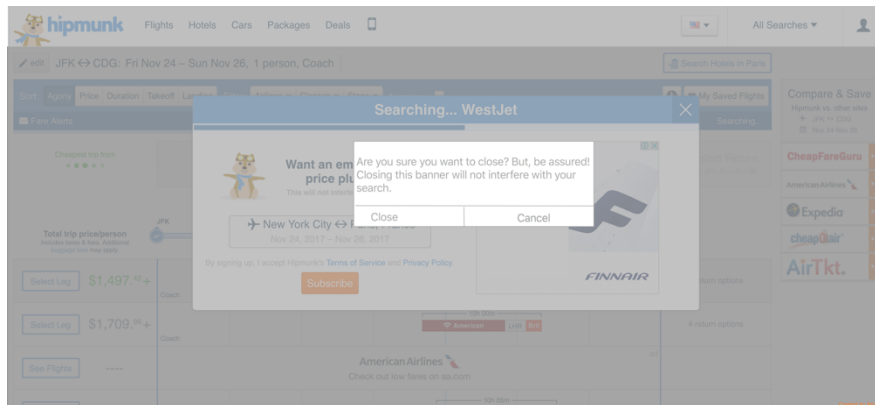


Figure 49: Search banner recommendation.

5. Recommendations for the search banner (Figure 49).
 - a. Give users a feedback message that appears when they attempt to close the search banner. Informing them that their actions will not interfere with their search and giving them a chance to stay if they wish.

Limitations

Although this study aimed to discover usability issues that exist in Hipmunk by means of user testing, certain issues might not have been discussed, or possibly even discovered, due to some reasons such as limitations of user samples (bias, size). It may have even missed certain features that are not so easily discovered. The users who participated in this research, are not a representation of all users of Hipmunk. Also, users' behavior might be different from that of “natural users” since most of whom tested during this research happen to be students. Indeed, merely being a subject in usability testing is enough to alter subject's behavior. During a usability test, “the subject's full attention is directed towards navigating the site; whilst this may make them more receptive to obvious flaws, there may be some problems that would only be stumbled upon by the less focused – and arguably more natural – user” [5]

Conclusion

The usability of the site called Hipmunk, which offers comprehensive travel search through a “unique” display that makes it “easy” to visually compare results to choose the cheapest option, was tested by means of user testing and analysis. The analysis of each testing led to the discovery of four main issues:

1. Unclear description of features & Lack of documentation.
2. Interruption of user flow/ Inconsistent user flow.
3. Some inputs cannot be as specific as a user wants.
4. No proper feedback.

The user testing of Hipmunk.com revealed that the site, even though it has been up and running for few years, still has some important issues to deal with in order to provide the best user experience. First of all, Hipmunk lacks the description of its functions and overall interface. Second, Hipmunk should reduce the number of pop-ups and redirection to other sites in order to prevent user flow. Lastly, the system needs to provide more feedback to users’ actions. Although these recommendations may not be solutions to every problem that exist within online websites, they can improve users’ experience significantly.

References

- [1] “Cheap Flights, Cheap Hotels, and Travel Search.” *Hipmunk*, www.hipmunk.com/.
- [2] Nielsen, J. (1994) Heuristic Evaluation. In J. Nielsen. & R.L. Mack (Eds.) *Usability Inspection Methods*. New York, NY: John Wiley & Sons.
- [3] Peep LajaPeep Laja the founder of CXL, a renowned conversion optimization champion. He was nominated as the most influential CRO expert in the world. After running the CXL agency arm for 5 years, he started CXL Institute where data-driven marketers get tr, et al. “Build It with the User in Mind: How To Design User Flow.” *CXL*, 13 Sept. 2016, conversionxl.com/blog/how-to-design-user-flow/.
- [4] “Email Address.” *Wikipedia*, Wikimedia Foundation, 16 Nov. 2017, en.wikipedia.org/wiki/Email_address.
- [5] “The Limitations of Usability Testing.” *Usability Testing Experts*, 5 July 2016, www.usability247.com/blog/limitations-usability-testing/.

Appendices

A. User consent form

Consent Form

I agree to participate in the study of Hipmunk.com being conducted as part of the edX course UX 504x: Evaluating Designs with Users.

I consent to the recording of this test. This recording will be used for research and product improvements only.

I understand that participation in this usability study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator.

Please sign below to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

Date: _____

Please print your name: _____

Please sign your name: _____

Thank you!

We appreciate your participation.

B. Pre-test questionnaires

Pre-test Questionnaires

1. Have you used Hipmunk before?

a. Yes b. No

2. Tell me about the last trip you planned.

3. What so you usually use to plan your trip?

4. What is your primary purpose for travelling?

a. Personal b. Business c. Other: _____

5. What is your primary concern when you search for your flight?

6. What is your budget?

\$ _____ ~\$ _____

7. What information is the most important when you are planning your trip?

8. How often do you travel?

C. Logging sheet

User Test Logging Sheet

Test Name:

Logger:

Participant ID:

Date:

Task Number:

Task Success:

Clock Time	Event Code	Notes
	TASK START	Be sure to log start time for syncing later

D. Task instructions

Task 1

Your manager asks you to help her plan a few trips for the company. She has heard of a website called "Hipmunk" that can help and encourages you to use it.

Plan a round trip from Detroit to Atlanta for under \$250.00 (or the next cheapest price) from January 16, 2018 to January 19, 2018. Email the itinerary to hipmunkusertest@gmail.com

Note - Unless otherwise specified, any arrival/departure time is okay

Task 2

4 people from the Chicago office want to attend a conference in New York from January 8, 2018 to January 10, 2018. What is the cheapest total price of the trip?

Task 3

Your manager wants to join the Chicago team in New York (your office is in Detroit), but then she wants to go to London for a week then return to Detroit. She plans to fly business class for the entire trip. What is the cheapest price for her trip?

Task 4

The L.A. office manager has a meeting in New York on October 16, 2017 at noon. She wants to leave on October 15 after 9am, and can arrive anytime before 9am on the next day. How many flight options do you have?

Task 5

Help your manager book a place to stay from October 16-18. Find the top rated hotel that has wifi for under \$350/night in New York City.

Task 6

You want to surprise your family with a visit over Christmas but money is tight. Set up a fare alert for a trip from Detroit to Seattle from December 22, 2017 to December 26, 2016.

Task 7

Good news! Your parents decide to pay for your flight home. Save the flight you just planned, so your parents can access it later (you share an account with them). Name it "Family Trip"

Task 8

After seeing your itinerary, your parents decide they want to you come home for at least a week. Access your saved flight, and change the dates from December 22 to January 4.

E. User test script

User Test Script

Pretest Checklist

- Clear cookies
- Login with email: (See Note** Below) password: (See Note** Below)
- Remove login saved memory
- Double check success criteria
- Print task instructions, one per page
- Print post-test questionnaire
- Print logging sheet
- Print this Test Script
- Start screen recording

Note**: You need to create a new test email account to provide to the user. See User Test Plan for details.

Posttest Checklist

- Stop recording, save audio and video to backup drive
- File informed consent form
- File logging sheet

Introduction to demo

Moderator (with a big smile!): Thanks for coming in today! We're constantly trying to improve our product, and getting your frank feedback is a really important part of that.

The goal for today's session is test the website - Hipmunk. I'm here to learn from you so I'll ask a lot of questions, **but I'm not testing you**. There are no right or wrong answers.

I'll start this session by asking some background questions. Then I'll show you some things we're working on, and ask you to do some tasks. As you work on the tasks, please **think aloud**. This means that you should try to give a running commentary on what you're doing as you work through the tasks. Tell me what you're trying to do and how you think you can do it. If you get confused or don't understand something, please tell me. If you see things you like, tell me that too. I want to emphasize that, **you won't hurt my feelings** by telling me what you think. In fact, frank, candid feedback is the most helpful.

User Test Script

If you do get stuck, I'm going to try not to answer your questions or tell you what to do. I'm just trying to see what you would do if you were using it on your own. But don't worry—I'll help you if you get completely stuck.

Do you have any questions before we begin?

Consent Form

Present Consent form, summarize it, and obtain signature

Pre-test Questionnaire

1. Have you used Hipmunk before?
2. Tell me about the last trip you planned.
 - a. What do you usually use to plan your trip?
 - b. What is your primary purpose for travelling?
 - c. What is your primary concern?
 - d. What is your budget?
3. What information is the most important when you are planning your trip?
4. How often do you travel?

Task Instructions

Print tasks and present them, one at a time. Read each task aloud and give the printed sheet to the participant.

Debrief

1. Review parts of the test where the user struggled: What difficulties did you have on ____? I noticed you struggled with____, can you tell me what happened? You paused here, tell me more about that.
2. **Preferences:** What did you think of the site? What did you like/dislike? Which parts of this page are most/least important to you?
3. **Changes:** If you had 3 wishes to make this better for you, what would they be? Why?
4. **Understanding:** How would you describe this to a friend?
5. **Use Cases:** Under what circumstances would you use this? Why?

Conclusion

This has been incredibly helpful. Today, you mentioned...[Moderator: Try to briefly summarize some key parts of the discussion or issues.] Your input is really valuable for

User Test Script

me and the team as we think about the next steps for these ideas. We really appreciate your taking the time to come in, and answering all of my questions. Thanks SO much!

[Moderator: Give participant incentive gift, if appropriate.]

F. Post-test questionnaires

Post-test questionnaire

Answer the following questions based on the scale of 1 -5 where 1 is strongly disagree and 5 is strongly agree

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

1 2 3 4 5

2. I found the system unnecessarily complex

1 2 3 4 5

3. I thought the system was easy to use

1 2 3 4 5

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

1 2 3 4 5

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

1 2 3 4 5

6. I thought there was too much inconsistency in this system

1 2 3 4 5

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

1 2 3 4 5

8. I found the system very cumbersome to use

1 2 3 4 5

9. I felt confident using the system

1 2 3 4 5

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

1 2 3 4 5

G. List of usability issues.

1. Description of “agony” feature.
 - Which user had this issue: user 1, 2, 5, 6
 - task number: 1,2
2. Opening a new tab when users click “Book.” Users were unaware that they were being redirected. Have to click GUI to be taken to the summary page.
 - Which user had this issue: user 1,3,4, 6
 - task number: 1,2
3. Ignorance of “Multi-city” function
 - Which user had this issue: user 1, 3, 5, 6.
 - task number: 3
4. Ignorance of sorting feature.
 - Which user had this issue: user 1, 2, 4.
 - task number: 3
5. Confusion with the dates. Users cannot see the year on the calendar.
 - Which user had this issue: user 1, 2, 4, 5.
 - task number: 1,3, 4
6. Summary of total number of flights available are hard to see. Many just ignored it.
 - Which user had this issue: user 1,4, 6.
 - task number: 4
7. Confuses ratings with stars
 - Which user had this issue: user 1, 3, 5.
 - task number: 5
8. Manually entering departure & return date results in an error.
 - Which user had this issue: user 1, 5.
 - task number: 6
9. Accessing saved trips and editing it.
 - Which user had this issue: user 1,3, 6.
 - task number: 8
10. New, unnecessary ads & pop ups prevent constant user flow.
 - Which user had this issue: user 1, 2, 6.
11. Hard to find things & directions.
 - Which user had this issue: user 1.
12. Users thought they can set up fare alert option just from the flight search result.
 - Which user had this issue: user 1, 3, 5.
 - task: 6
13. Save flight option is not available until user actually chooses a flight.
 - Which user had this issue: user 1.
14. Options change every step. What users learned in the past to use the site like this was not applicable.

- Which user had this issue: user 1, 4.
- 15. Flight search opens a new Hipmunk tab with different dates selected.
 - Which user had this issue: user 2.
 - task number: 1
- 16. Time is so small that it's hard to read.
 - Which user had this issue: user 2, 6.
 - task number: 1
- 17. No feedback that the email has been sent.
 - Which user had this issue: user 2.
 - task number: 1
- 18. No feedback is provided when user edits the search option in flight result page.
 - Which user had this issue: user 2.
 - task number: 2.f
- 19. Entering dates manually & calendar function cannot be used simultaneously
 - Which user had this issue: user 2, 5.
 - task number: 3
- 20. Over-layering of time and weekday confuses users.
 - Which user had this issue: user 2, 5, 6.
 - task number: 4
- 21. Hard to select specific time for departure & arrival by dragging.
 - Which user had this issue: user 2, 4.
 - task number: 4
- 22. The banner which shows up during a flight search prevents users from seeing what's going on in the background.
 - Which user had this issue: user 2.
 - task number: 6
- 23. Confusion with Log in/ Sign up
 - Which user had this issue: user 2, 4.
 - task number: 7
- 24. Asked to put an email in the pop up.
 - Which user had this issue: user 3
 - task number: 2
- 25. Specific feedback for user's error is absent.
 - Which user had this issue: user 3
 - task number: 3
- 26. The information presented on the page is hard to understand because of its organization and lack of clear guideline.
 - Which user had this issue: user 3, 5.
- 27. Why does the banner with ads show up during a search if exiting from it does not get in way of the search.

- Which user had this issue: user 3,4
- 28. Using compare option on the Homepage takes user to a new tab.
 - Which user had this issue: user 4, 6
- 29. Multi-city search: Puts destination city in departure city section
 - Which user had this issue: user 3, 4, 6
 - Task 3
- 30. Cannot edit multi-city search to one-way/round trip on search result page.
 - Which user had this issue: user 1, 4
 - Task 4
- 32. Cannot enter exact price for hotels.
 - Which user had this issue: user 4, 5
 - Task 5
- 33. Feedback that fare alert has been set up is absent.
 - Which user had this issue: user 2, 4
 - Task 6
- 34. "Add this search to trip" wording is confusing.
 - Which user had this issue: user 4, 6
 - Task 7
- 35. Validation for correct way of completing task 8.
 - Which user had this issue: user 2, 3, 4
 - Task 7