

U-Haul Usability Evaluation Report for Moderated Sessions

May 23, 2011

Team H

Executive Summary

Introduction

The goal of this study was to identify usability and user experience problems with the U-Haul web site. Five participants, with average to high web savvy, were each asked to complete seven tasks based on a standard scenario that involved obtaining a truck to move from Pittsburgh to Colorado. Participants were asked to think aloud as they worked. Problems were identified from verbal comments as well as observations of the participants' interactions with the U-Haul site.

Major Findings

Positive Findings

- Participants were able to complete most tasks successfully
- The FAQ provided useful information efficiently for a task that perceived as difficult by 3 of 5 participants
- The reviews and information in the search results for sites was useful to planning with features and other information.
- The primary navigation tabs on the Home page were generally clear to this sample of users.

Major Usability Issues

About 70 problems were identified from this sample of five participants. The most serious issues -- ones that caused major errors, made extra work, confused the participants, or reduced the credibility of U-Haul -- are listed in Table 1. Some problems in Table 1 represent both serious individual problems and higher level issues that are based on multiple individual problems. The complete list of problems is found in Appendix.

Table 1: List of major usability problems identified during the U-Haul usability evaluation

Problem Area/Task	Problem Description	Severity
The layout and behavior of functions on the shopping cart page created problems for all participants.	Users inadvertently added extra items to their cart which they then had to delete; the accessories area was dominant visually and induced users to click on the Add to Cart button and add things that were not part of the task; To order a subset of accessories, users had to zero out most of the values in the accessories quantity field; the accessories area would refresh when users deleted something or move to another page which was very annoying.	Critical (A) <ul style="list-style-type: none">• Reduced credibility• Extra work to correct accidental additions• Increased chance of errors

		<ul style="list-style-type: none"> Annoyance that could drive people to another site
User experienced difficulty in Determining the appropriate size of a rental truck and storage unit	Most participants verbalized issues with estimating the optimal truck size and storage unit size for the apartment described in the scenario. Truck size is based on the dimensions of the truck and number of bedrooms, not the total number of rooms or the amount of objects in all the rooms. The consequences of renting a truck that is not adequate can cost money and be demoralizing. To estimate the size of a storage space, some math is required to determine if boxes and furniture will fit.	Critical (A) <ul style="list-style-type: none"> Extra cognitive work Increased chance of expensive errors
Searching for locations; results of search	There are multiple search fields for locating U-Haul locations, storage locations, and U-Box locations. Some fields ask for address and some for zip code and some both. Users asked if typing a complete address in would provide more specific information. The fields for searching were too short for complete addresses; some location results were sorted by distance, but did not have the actual distance.	Serious (B) <ul style="list-style-type: none"> Extra cognitive work Inconsistency
Finding information about Insurance coverage was a struggle for participants	This sample of participants spent much time trying to answer a question about a truck that was damaged and who was liable for the damage. The answer depended on whether they had chosen insurance already; finding the details took much movement through the site and PDFs with details.	Serious (B) <ul style="list-style-type: none"> Lack of understanding could be costly for renters Search time
Buy versus rent confusion	During the study, there were several instances where users were not clear if they were renting equipment (a utility dolly) or buying the equipment.	Serious (B) <ul style="list-style-type: none"> Credibility of the site

Participants

This study included 5 participants. Table 2 contains background information on the participants.

Table 2: Participant background

Participant Code	Gender-Age	Occupation	Web Savvy
M1	F-35	Quality assurance	Average
M2	M-25	Education	Average
M3	F-35	Customer experience	High
M4	M-35	Librarian	High
M5	M-45	Project manager	High

Procedure

The sessions were facilitated by a usability specialist who described the study and then left the room, leaving the participant alone. Once the study started, all communication between the facilitator and participant was through an intercom. The participant was asked to read each task aloud, rate the expected difficulty, and then complete the task. At the end of each task, the participants rated the actual task difficulty and how confident they were that they completed the task successfully. The sessions were videotaped and analyzed by a third party (Team H) for usability and user experience problems. The facilitator would intervene occasionally to provide an assist or point out something that might stall the task. At the end of the study, the participants were asked about their experience with the U-Haul site and given a chance to provide any final input about the study.

Analysis

The data for this study were extracted from 5 videos that showed both the screen and the person's face. The analyst got familiar with the U-Haul web site, reviewed each of the 5 tapes twice, and took notes on usability issues, positive comments, suggestions for improvements, and bugs or problems with the test procedure. The criteria for defining usability problems were:

- Would the problem lead the user to find another company; Lost revenue for U-Haul
- Task success – did the participant complete the task successfully
- Hesitations or excessive search/understanding time
- Learnability – for a system that people might use a few times in their lifetimes, is the system geared toward first time users.
- Consistency in the interface – were objects or concepts referred to with consistency terminology
- Meaningfulness of the terminology – was the language in the user interface understood by the user
- Statements of frustration, annoyance, or anger
- Violation of a human factors or design principle (this might be something that is not mentioned by the participant, but would be a clear violation of an established human factors or design principle – for example, low contrast between text and background colors)
- The number of participants who encountered a problem and the analyst's belief about how the frequency of the problem with actual users
- Whether a problem was local (isolated to one area of the site) or global (found in multiple places)

Each problem was given a severity rating as defined in Table 3.

Table 3: Severity rating codes and descriptions

Rating	Rating code	Description
Critical problem	A	Causes frequent catastrophes. A catastrophe is a situation where the website “wins” over the test participant – that is, a situation where the test participant cannot solve a reasonable task or where the website annoys the test participant considerably.
Serious problem	B	Delays test participants in their use of the website for some minutes, but eventually allows them to continue. Causes occasional “catastrophes”.
Minor problem	C	Causes test participants to hesitate for some seconds.
Good idea	I	A suggestion from a test participant that could lead to a significant improvement of the user experience.
Positive finding	P	This approach is recommendable and should be preserved.
Bug	X	The website works in a way that’s clearly not in accordance with the design specification. This includes spelling errors, dead links, scripting errors, etc.

Results

The high-level problems were listed in the Executive Summary. The complete list of findings is shown below in Table 4. The table provides a list of unique problems, the sequence in which the problems were found, the severity of the problem, a description, and the approximate location of the problem on video, and the tasks where the problem was identified. Table 3 is sorted from most severe findings to least severe.

Table 4: Complete list of findings

Unique identification of the finding	Sequence number	Severity rating of finding	Description of finding	Participant code-Video locations
H45	45	A	States that at this point (working with the shopping cart page) she would give up on the U-Haul page and look for a more general search engine	M3-14:50
H48	48	A	Getting the information needed was difficult or very difficult and in the end she would empty the cart and start over	M3-16:45

H54	54	A	Accessories filled in default values when an item was removed from the cart (small boxes). "That is not good at all."	M3-24:22
H55	55	A	Complains about the list of accessories being filled in when items are removed from the cart; mentions that it might be a legal issue	M3-25:30
H57	57	A	Participant notes that at this point (trying to get the right accessories into her cart), she might just dump her cart and start over.	M3-27:08
H59	59	A	Mentioned that the Web site was "skeezy" because it tended to add items unexpectedly.	M3-29:55
H63	63	A	The answer to this task was not the nearest to the specified address. The answer here should be Fil Am Auto Repair Milpitas; but putting the zip code in gave a different location - Ami Petroleum Fremont	M3-37:45
H68	68	A	Annoying - no way to clear things out of the accessories list. The participant had to go into every field and zero items out.	M4-15:27
H73	73	A	Participant does not put in the correct drop-off location so gets local rates	M5-5:36
H77	77	A	Chooses 4 days for the truck but doesn't realize that this is for a local truck and not one that will be driven cross country.	M5-8:20
H87	87	A	Participant has extra items because of the interaction with the accessories field on the cart page.	M5-29:52
H46	46	A	Facilitator asks about what is in the cart: Participant notes that a lot of stuff appeared in her cart and she wasn't sure how it came to be in the cart	M3-15:50
H70	70	A	Annoying that the accessories on the cart page were reset when he moved away from the page and came back again.	M4-16:16
H85	85	A	On prompt from facilitator, the person re-does the accessories and then does an Add to Cart without zeroing things out.	M5-27:00
H03	3	B	Truck size based on inside dimensions and # of bedrooms rather than on total number of rooms or other measure; not clear what is included other than bedrooms; uncertainty about necessary size	M1-6:29
H08	8	B	Cart had 2 dozen furniture pads that the participant did not recall ordering; wasn't sure if this was "part of the deal" and if she had to "go with it."	M1-11:48

H12	12	B	Storage descriptions rely only on number of bedrooms and dimensions of space; scenario did not indicate the extent of furniture beyond "3 rooms" and later one bedroom.	M1-19:20
H13	13	B	User not sure of the store she had chosen earlier; noted that she didn't write it down.	M1-21:10
H15	15	B	Inefficient to "zero" out items in the "Customers who rented a ... needed:" area of the checkout page.	M1-24:14
H16	16	B	Have to read through lots of information regarding detailed coverage; would contact U-Haul directly; doesn't spell out task scenario so would call U-Haul and own insurance company	M1-27:46
H23	23	B	Truck size based on inside dimensions and # of bedrooms rather than on total number of rooms or other measure; not clear what is included other than bedrooms; uncertainty about necessary size	M2-8:40
H27	27	B	Storage descriptions rely only on number of bedrooms and dimensions of space	M2-18:15
H29	29	B	The Participant has to keep going from the packing supplies page to the cart page and then back again.	M2-27:28
H30	30	B	Not sure what the best category is for a "dolly" so not clear where to search for the device	M2-28:30
H34	34	B	Struggled trying to find damage coverage for scratched truck (task 6)	M2-38:25 (searched for a number of minutes here)
H53	53	B	Defaults for accessories is annoying and a pain; have to go through and zero out many items	M3-23:15
H56	56	B	Page gives the impression that she is buying the dolly; not clear if renting or buying	M3-26:15
H58	58	B	Additional rentals (dolly and furniture pads) missed in cart; would have expected pads and utility to show up as line items	M3-29:05
H60	60	B	Participant scrolling through insurance forms looking for information about damage to the truck and what someone would owe; spends much time looking at details of insurance policies	M3-32:00 (for several minutes)
H61	61	B	Not clear that "accidental damage protection" would cover knife vandalism.	M3-35:05

H67	67	B	Participant expresses some uncertainty about best size for storage area; would give a range here and let the movers decide. Mentioned doing math during the post-task rating	M4-10:20
H74	74	B	Participant expects to see U-Haul locations after inputting zip and pick-up date, but only sees types of trucks	M5-6:05
H79	79	B	Notes that the price of the truck was \$143.84, but that is the cost of accessories, not the truck	M5-12:22
H80	80	B	Notes that he left the drop-off the same as the pickup and with prompting went back and found prices for the cross-country trip.	M5-12:50
H86	86	B	Participant notes that the shopping cart is confusing because the total at the bottom is what is due today versus what is due in the store. Not really clear; the presentation is poor; wants a better itemization	M5-28:51
H90	90	B	Types in zip code to find a location in fremont, but that is not the correct answer which requires the full address	M5:34:30
H52	52	B	Participants notes that she would ask friends about their insurance so she declined.	M3-22:18
H01	1	C	Clicked multiple times in the dropoff location trying to input text in the textbox; didn't click on the checkbox first to enable field; recovered and entered the data	M1-4:40;
H02	2	C	Types in zip code, hesitates for a few seconds, then types in City and State	M1-5:00
H05	5	C	Preferred pickup field has "your address", but not sure what it requires - full address or only zip; zip may give too many locations	M1-7:52
H06	6	C	When you want to make a change in the pickup location field, a click removes the old data and requires a user to type in the full information rather than edit what is there. Took 3 times; annoying	M1-9:00
H10	10	C	Multiple address input fields under Storage; started putting zip code into the field for U-box. "I'm in wrong spot.	M1-16:20
H11	11	C	"Clunky" getting to the point of finding a storage unit.	M1-17:20
H20	20	C	Started to type in the full address, but then noted that it called for zip or city/state, not full address	M2-5:50

H21	21	C	When you want to make a change in the pickup location field, a click removes the old data and requires a user to type in the full information rather than edit what is there.	M2-6:00
H24	24	C	Preferred pickup field has "your address", but not sure what it requires - full address or only zip; zip may give too many locations	M2-9:50
H26	26	C	Not sure what the red pin icon is meant to represent	M2-16:40
H31	31	C	Not sure how to select a dolly on the Dollies and furniture pads page; boxes for selection are missed by the user	M2-28:50
H32	32	C	Terminology - Hand truck in "moving & lifting tools"; utility dolly elsewhere	M2-31:56
H33	33	C	Terminology - Furniture pad versus quilted pad versus moving blankets; "never heard of moving blankets"	M2-34:14
H35	35	C	Location is sorted by distance, but doesn't indicate actual miles.	M2-44:00
H37	37	C	Uncertainty about meaning of the pin icon. "I think this is where their house is, the pin point."	M3-5:40
H38	38	C	Looking for a place to get an answer to the question about the driver's license; looks several seconds before finding the FAQ link and getting the answer.	M3-8:44
H39	39	C	Mentions that finding a storage unit of the correct size should be easy "except for the math".	M3-10:05
H40	40	C	Participant expresses uncertainty about looking for stuff in the location or read more about storage facilities; starts out with location.	M3-10:45
H41	41	C	Types zip code into U-Box field rather than the self-storage field; catches the error quickly	M3-11:15
H43	43	C	Rates are not immediately available, have to go to each page and look at the "little tabs, it's not that easy"	M3-12:52
H44	44	C	First choice might be too big; not certain about what size of storage unit is close; mentions the math issue	M3-13:20
H47	47	C	Mentions random handling fee; wanders what it is for	M3-15:57
H50	50	C	Truck is out for 6 days and not sure if that is needed; wondered how that could be changed	M3-20:56

H62	62	C	Participant was not clear whether Safemove was separate from U-Haul	M3-36:25
H64	64	C	Clicked in the dropoff location trying to input text in the textbox; didn't click on the checkbox first to enable field; recovered and entered the data	M4-3:40
H66	66	C	Tried to scroll page, but was on the map and scrolled the map	M4-8:27
H69	69	C	Terminology - Furniture pad versus quilted pad versus moving blankets; "never heard of moving blankets"	M4-15:58
H75	75	C	Discusses truck size and considers the Studio/Apart truck the right size, but notes that it might be worth an extra \$10 a day to get the 14 foot truck.	M5-6:50
H76	76	C	Not sure why prices are different at different locations for the same company	M5-8:00
H81	81	C	Confused - not sure why a U-haul representative will call him	M5-14:43
H82	82	C	Not sure why it didn't ask where the Denver, CO drop-off would be.	M5-15:16
H83	83	C	The map didn't pop- up at first, but Participant finds the link to the map.	M5-23:10
H84	84	C	Not sure if a furniture pad is the same as a quilted pad. Terminology	M5-26:00
H89	89	C	Had selected Safemove rental coverage so expects that it would be covered for scratch; would call or catch;	M5-33:10
H04	4	I	No caution about underestimation of the size of the truck was presented to the participant	M1-7:20
H22	22	I	Participant suggests that instructions be put outside the text box so he can provide the right information; hard to remember	M2-6:09
H42	42	I	Unsure about how storage units are related to U-Haul; mentions using another search engine that is not affiliated with U-Haul	M3-12:40
H49	49	I	Description of hours does not explicitly note pick-up times (there is a note about 24 hour drop-off)	M3-18:45
H65	65	I	Expected to put in date of turn-in of truck	M4-3:57
H71	71	I	Location is sorted by distance, but doesn't indicate actual miles.	M4-24:55
H07	7	P	Reviews of stores with features is good	M1-9:45
H09	9	P	Frequently asked questions had information about the need for a special license	M1-13:45
H14	14	P	Message about duplicate truck appears - good message to warn users	M1-23:00

H18	18	P	U-Haul Sites are ordered by distance which is good	M1-29:55
H25	25	P	FAQ useful for license information	M2-12:17
H51	51	P	Warning message about multiple trucks; good feature to protect against having multiple vehicles in the cart.	M3-21:08
H72	72	P	Participants like the calendar feature for the pickup date.	M5-5:12
H78	78	P	"Nice" that the list of accessories showed up	M5-10:05
H88	88	P	Likes that when you delete stuff, it disappears rather than just leaving a zero.	M5-30:21
H17	17	X	Find a U-Haul Location search field too short for address	M1-29:30
H19	19	X	Arrows for calendar widget for moving by month did not appear initially.	M2-4:40
H28	28	X	Price for storage is listed as 0.00 USD; user doesn't understand why there is no monthly price	M2-20:20
H36	36	X	Information was already filled in (procedural D12error - site wasn't purged after a previous participant possibly).	M3-4:43

Appendix 1: Tasks Used for the Evaluations

Scenario: Your friends Mike and Anna are about to move from Pittsburgh, PA to Denver, CO. They have an apartment in Pittsburgh consisting of a living room, a bedroom, a kitchen, and a bathroom. They want to find the cheapest service for the move to Colorado. They expect to make the move themselves with some help from a few friends.

They are planning to move out on April 14th and they expect the trip to take 3 days.

The couple plans to return to Pittsburgh after 2 years so they want to rent a self storage unit in Pittsburgh for the stuff they don't need in Denver.

Task 1: The couple needs a truck that is suitable for all the furniture and belongings in their 3 room apartment. Please find the total price the couple will have to pay for the truck.

Note: They are moving on April 14th from Darlington Rd. in Pittsburgh, PA 15217 to Emerson St. in Denver, CO 80218

Task 2: Before you go any further, you want to check if Mike and Anna need a special driver's license to drive the truck across country. Where would you find that info?

Task 3: They also need an indoor storage unit in Pittsburgh that can hold 10 moving boxes (18" x 18" x 16") and a large fridge. Find the per month cost of the storage.

Task 4: You have a few questions that the U-Haul website hasn't answered. Please find the phone number for the U-Haul pickup location closest to the couple's home on Darlington Rd. in Pittsburgh, PA.

Task 5: The couple has decided to rent the truck. Please book the truck you found the pricing for earlier. In addition, please order 20 large moving boxes, 15 small moving boxes, a utility dolly, and a dozen moving blankets.

Note: Please stop when you reach the "Billing Info" page. Do NOT submit the order.

Task 6: During the move, an unknown person scratched the truck in several places, probably with a knife. An auto body technician has estimated that the repair will cost \$2,000. Since you helped the couple book the truck, they called to find out if they are liable for repair costs. And if so, how much will it cost?

Task 7: You were impressed with U-Haul during your friends' move and you are considering U-Haul yourself. Find the nearest U-Haul pick-up/drop off to your home.

Note: You live at 48105 Warm Springs Blvd., Fremont, CA 94539.

Appendix 2: Pre-Task Difficulty, Post-Task Difficulty, and Confidence Ratings

During the study, participants were asked to rate the expected difficulty of each task before the started, the actual difficulty after they finished each task, and their confidence about whether they completed each task successfully. In the table below, TD1 is the pre-task difficulty rating, TD2 is the post-task difficulty rating, Dif is the difference between the pre- and post-task ratings, and C is the confidence rating that the participant completed the task successfully. M means that the facilitator missed asking for the rating.

Task #	Participant 1				Participant 2				Participant 3				Participant 4				Participant 5			
	TD1	TD2	Dif	C	TD1	TD2	Dif	C	TD1	TD2	Dif	C	TD1	TD2	Dif	C	TD1	TD2	Dif	C
1	4	6	+2	4	4	2	-2	6	5 or 6	7	+1 or +2	7	4	6	+2	6	6	3	-3	5
2	3	7	+3	7	2	6	-4	6	3	5	-2	7	6	7	+1	7	6	7	+1	7
3	5	5	0	4	6	1	-5	M	6	2 (or 1)	-4 or -5	1	5	4	-1	5	6	7	+1	7
4	5	6	-1	6	7	7	0	7	6 or 7	7	+1 or 0	7	6	6	0	7	7	7	0	7
5	5	6	-1	6	6	3	-3	4	4	2	-2	3	6	4	-2	6	7	6	-1	5
6	4	M	M	M	2	2	0	3	1	2	+1		3	4	+1	6	6	M	M	M
7	6	7	-1	6	7	7	0	6	7	7	0	7	7	6	-1	7	7	7	0	7