

## Heuristic Evaluation of [Drop]

Evaluator #A: JE

Evaluator #B: LB

### 1. Problem

Drop is a gamified wateruse and watersaving tracking app, where users can log specific watersaving actions to accumulate “drops” that they can use to water a plant or purchase new plants and grow their garden.

### 2. Violations Found

1. 2-2: Match between system and real world

*Found By A, Severity 1*

The analogy of the system is strong: “drops” of water that you save in the real world become drops of water that you can use in the virtual world to water your virtual garden. This analogy falls through when users must use drops to “buy” plants, since we don’t use water to buy things in the real world. Mixed metaphor.

1. 2-1: Visibility of System Status

*Found by A, Severity 1*

The wording “Go to Drop” on the opening page does not communicate fully where the user will go when he presses the button. It is also relatively perfunctory, rather than encouraging/exciting for a new user. Maybe change to “Start your Garden”

1. 2-5: Error Prevention

*Found by A, Severity 3*

When new users sign up, there is only one box for email and password. If users mistype either, they will have trouble logging in the next time. Fix by adding another input box to validate the email and password entry.

1. 2-1: Visibility of System Status

*Found by A, Severity 1*

User may be confused at why the plants have different colored backgrounds. May need some memo for what the different colors represent when a user first gets on.

1. 2-7: Flexibility and Efficiency of Use

*Found by A, Severity 2*

For someone that uses Drop all the time, it takes a lot of touches to get to their checklist (Login--> hamburger menu --> My Checklist --> list item). I can’t tell from the prototype if they also will have to press “Tap Me” on the initial screen to move on or not, but that may be one more touch. For something that is pretty crucial to the behavior-changing aspect of the app, you should consider moving that feature more available.

1. 2-8: Aesthetic and Minimalist Design

## CS 147 Autumn 2014: Assignment 13

Instructor: James Landay

*Found by A, Severity 2*

The hamburger menu labels for “Available drops” and “Lifetime Drops” are very hard to read because of the low contrast. Fix by adjusting colors to increase contrast.

1. 2-4: Consistency

*Found by A, Severity 2*

The formatting for “My Checklist”, “New Tasks”, and “Completed Tasks” (what an item looks like when it is completed/checked or not) is different for each of the three screens. Fix by deciding on one scheme and applying it to all three lists.

1. 2-4: Consistency

*Found by A, Severity 1*

The button labeled “Find new Actions” takes you to a screen labeled “New Tasks.” Word choice (actions vs tasks) is inconsistent; should decide on one or the other.

1. 2-7: Flexibility and efficiency of use

*Found by A & B, Severity 4*

The Checklist navigation is buggy and incoherent. Hamburger menu “View Completed Actions” takes me to the New Tasks screen. Clicking on line items sometimes takes me to the “Information” screen and sometimes toggles the goal. It appears that “Older Tasks” and “Find New Tasks” are items on the Checklist rather than buttons. I assume that all of these are just medium-fi problems, but make sure to fix them so that the flow is clear for high-fi!

1. 2-1: Visibility of System Status

*Found by A, Severity 3*

I don’t know what it means for users to “check” an item on the New Tasks page. Does that mean they add it to their Checklist as a personal goal they intend to complete, or does it mean that they have done the action and receive Drops as a result? Fix this confusion by distinguishing the checklist in “My Checklist” from the checklist in “New Tasks” so that the consequence of tapping an item is clear.

1. 2-2: Match between system and real world

*Found by A, Severity 1*

When users “uncomplete” a checklist item (go from checked to unchecked), the font turns green. I don’t think that this is a good design choice because 1) green is often associated with positive environmental impact and 2) green often serves as positive reinforcement, even though marking an item as not complete in Drop should signal a negative behavior

1. 2-3: User control and freedom

*Found by A, Severity 4*

The hamburger menu doesn’t appear on “My Checklist”, “New Tasks”, “Information” or “Completed Tasks” pages, which means that the user cannot return to the main menu or the garden. Fix by adding back in the hamburger menu on every screen so the user can always escape.

1. 2-5: Error Prevention

*Found by A, Severity 2*

## CS 147 Autumn 2014: Assignment 13

Instructor: James Landay

How does a user “spend” a drop? Does watering decrement the drop count? If so, it would be easy for a user to accidentally use drops when they were not intending to in the current prototype because there is no clear labeling of what actions require dipping into the drop “bank.” Fix by adding labels and confirmations when users are about to lose hard-earned drops.

1. 2-8: Aesthetic and Minimalist Design

*Found by A, Severity 1*

The current page for “Customize My Plant” has about 1/3 of the screen covered by a green background and the buttons are off center. Looks a little janky. Fix by centering buttons (or redoing layout to be more structured) and making the background one color.

1. 2-4: Consistency

*Found by A, Severity 1*

The “Name Me” button looks like it is a different color green than any others in the app. Fix by making it more consistent with the rest of the color scheme.

1. 2-10: Help and Documentation

*Found by A, Severity 1*

The user will be confused about how to “purchase” plants or add them to their garden because 1) there is no navigation button which takes the user to a garden “store” and 2) it is unclear whether “View Other Plants” displays other plants (besides the starter plant) in the user’s garden or displays plants that are available for purchase. Fix by either adding a distinct “buy plant” page/wizard or by adding more affordances to the screen that have those features already.

1. 2-9: Help Users Recognize, Diagnose, and Recover from Error

*Found by A & B, Severity 1*

User may be confused by how tasks are represented on the “Completed Tasks” page. Can you uncheck these tasks? If you do, do you lose drops (are drops subtracted from your bank?)? May need a confirmation message, more descriptive instructions, or a different representation of the user’s history so that a user does not accidentally uncheck a task

1. 2-4: Consistency

*Found by A, Severity 2*

The ordering scheme on the Checklist screens is not clear. If it is supposed to be chronological, make sure to be consistent by making the items appear in order of descending recency.

1. 2-8: Aesthetic and Minimalist Design

*Found by A, Severity 2*

The date labels on each of the tasks seem to clutter the screen with text. Is it relevant/necessary to have the date the action was assigned on My Checklist? Fix by removing dates from My Checklist or making a cleaner structure so that the text of the task itself is emphasized

1. 2-4: Consistency

*Found by B, Severity*

Seems redundant to have view checklist and view completed actions. If you check off an item, where does it go? Is it added to the Completed Actions list? Inconsistent to have both.

1. 2-10: Help and Documentation

*Found by B, Severity*

Need some “how to use” area, maybe at the bottom of the hamburger menu. In particular, novice users won’t know how often do you need to water the plants, how to add a task, etc.

1. 2-8: Aesthetic and Minimalist Design

*Found by B, Severity*

On the Customize My Garden/See Other Plants screen, the text alignment is off. Some labels are centered and others are right-justified. One possible fix is to use a grid system to structure layout.

1. 2-3: User control and freedom

*Found by B, Severity*

Sign-out button is broken. User should be able to return to the sign in screen.

### 3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]		2		1		3
[H2-2: Match Sys & World]		2				2
[H2-3: User Control]				1	1	2
[H2-4: Consistency]		2	2	1		5
[H2-5: Error Prevention]			1	1		2
[H2-6: Recognition not Recall]					1	0
[H2-7: Efficiency of Use]			1			2
[H2-8: Minimalist Design]		2	2			4
[H2-9: Help Users with Errors]				1		1
[H2-10: Documentation]			2			2
<b>Total Violations by Severity</b>	<b>0</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>2</b>	<b>23</b>

### 4 Evaluation Statistics

<b>severity \evaluator</b>	<b>evaluator A</b>	<b>evaluator B</b>	<b>evaluator C</b>	<b>evaluator D</b>	<b>evaluator E</b>
level 0	0%	0%			
level 1	87.5%	50%			
level 2	87.5%	62.5%			
level 3	60%	40%			
level 4	100%	60%			
<b>total (levels 3 &amp; 4)</b>	71%	29%			
<b>total (all levels)</b>	83%	40%			

<b>evaluator # Ex. C</b>	<b># problems found Ex. 7</b>	<b># problems remaining &amp; problem IDs Ex: 5 (1, 7, 11, 13, 17)</b>
A	19	19 (most found )
B	9	5 shared with A. 20, 21, 22, 23 unique



List of Violations

## ***Severity Ratings***

- i. don't agree that this is a usability problem
- ii. cosmetic problem
- iii. minor usability problem
- iv. major usability problem; important to fix
- v. usability catastrophe; imperative to fix

## ***Heuristics***

### **[H2-1: Visibility of System Status]**

- keep users informed about what is going on

### **[H2-2: Match Between System & Real World]**

- speak the users' language
- follow real world conventions

### **[H2-3: User Control & Freedom]**

- "exits" for mistaken choices, undo, redo
- don't force down fixed paths

### **[H2-4: Consistency & Standards]**

### **[H2-5: Error Prevention]**

### **[H2-6: Recognition Rather Than Recall]**

- make objects, actions, options, & directions visible or easily retrievable

### **[H2-7: Flexibility & Efficiency of Use]**

- accelerators for experts (e.g., gestures, kb shortcuts)
- allow users to tailor frequent actions (e.g., macros)

### **[H2-8: Aesthetic & Minimalist Design]**

- no irrelevant information in dialogues

### **[H2-9: Help Users Recognize, Diagnose, & Recover from Errors]**

- error messages in plain language
- precisely indicate the problem
- constructively suggest a solution

### **[H2-10: Help & Documentation]**

- easy to search
- focused on the user's task
- list concrete steps to carry out
- not too large