

## Heuristic Evaluation of Electrefy



### 1. Problem

We are evaluating the UI of Electrefy, a product for encouraging interactivity in large lecture settings by allowing lecturers to poll students for understanding.

### 2. Violations Found

#### STUDENT UI

Heuristic	Screen	Reason	Found By	Severity
H2-1	Answer Bolt Screen	Time left for voting not seen.	B	2
H2-1	Answer Bolt Screen	Unclear whether a student should or shouldn't take action when they first see the answer bolt screen.	AC	3
H2-2	My Classes	Meaning, purpose, and possible actionable events of the fraction and "Goal" percentage not apparent to new users.	BC	2
H2-2	Notification Screen	"Cancel" does not represent a valid action for the instructions given.	AC	2
H2-2	Answer Bolt Screen	The times being displayed are inconsistent and unclear. Formatting is different between entries and time elapsed looks just like time of day. Additionally, the seconds category provides little useful information as neither the student nor lecturer think of the lecture in terms of seconds elapsed.	A	2

H2-2	Answer Bolt Screen	Meaning of question mark and light bulb is unclear	ABC	3
H2-3	Answer Bolt Screen	Cannot change the vote after leaving this screen.	BC	2
H2-4	My Classes	Live course not on the top of the list.	B	2
H2-5	Answer Bolt	Previous bolts seem to be still accessible.	ABD	3
H2-5 (implementation)	Login	iPhone touch keyboard not showing up when trying to type.	B	0
H2-8	Answer Bolt Screen	Previous bolts not necessary for students.	BC	2

## LECTURER UI

Heuristic	Screen	Reason	Found By	Severity
H2-1	Current Lec	No confirmation message after clicking "Send Bolt".	BC	3
H2-2	Lecture Stats	Color scheme and 100% stack graph not visualizing the contrast between bulb and question directly.	ABC	3
H2-2	Lecture stats	No summary of the responses to a bolt for a given lecture (total bolts with a positive response)	C	2
H2-2	Course Stats	Numbers given are not actually averages.	AC	2
H2-3	Settings	No back button in the Settings page for quick back to the Current Lecture screen.	B	2
H2-3	Settings	Should not constrain user to defined times for responses	D	3

H2-4	Current Lec	Bulb and question icons are of different order in this screen compared to others.	B	2
H2-4	Schedule	Lectures are in chronological order while the users may want to access most recent ones first.	AB	3
H2-4	Multiple Screens	Inconsistent placement of settings button. Why can you get to settings from some screens but not others.	A	2
H2-4	Lecture stats	Coloring on question mark and light bulb icons not consistent with other screens.	C	2
H2-4	Lecture Stats	Settings button in Overall Stats screen but not Lecture Stats.	B	1
H2-4	Course Stats	Settings button not necessary here	D	2
H2-5	Current Lec	Users can send endless bolts that confuse the students!	B	4
H2-5	Settings	If attendance is low, randomly selecting bolt recipients may miss people who attend lectures.	B	3
H2-6	Schedule	Lecture names are not informative.	AB	3
H2-6	Schedule	Overall Stats button not apparent in the screen.	B	3
H2-6	Lecture Stats	Response rate or number of responses lacking.	B	3
H2-6	Current Lec	Status of the bolt is only known in settings	D	3
H2-6	Current Lec	Icon meanings are unclear	A	3
H2-6	Course Stats	Unclear hierarchy between item labels and button.	A	2
H2-7	Current Lec	Dynamic panel wraps around to the first or last bolt, and may cause confusion when swiping.	B	1
H2-7	Current Lec	Dynamic panel is an inefficient way to view bolt statistics. Doesn't have any	A	3

		indicator or shortcut for most recent bolt.		
H2-7	Schedule	Expandable menu may cause inefficiency when selecting.	B	2
H2-8	Current Lec	Numbers of total responses in the dynamic panel are unnecessary and can be deleted.	B	2
H2-8	Course Statistics	9/23 and 9/25 cannot both be Tuesdays.	AC	0
H2-8	Current Lec	Too many numbers that look like times on this screen.	A	3
H2-8	Overall Stats	Response rate and total number of responses can be merged into one line.	B	2
H2-8	Lecture Stats	Bolt numbers unnecessary.	ABC	3
H2-8	Course Stats	Date field is unnecessary, one button is fine.	D	1
H2-8	Current Lec	Lecturer does not need to see old bolts, while lecturing	D	2
H2-10	Overall Stats	Definition of Best and Worst lectures ambiguous.	BC	4

### 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]	0	0	1	2	0	3
[H2-2: Match Sys & World]	0	0	5	2	0	7
[H2-3: User Control]	0	0	2	1	0	3
[H2-4: Consistency]	0	1	5	1	0	7
[H2-5: Error Prevention]	1	0	0	2	1	4
[H2-6: Recognition not Recall]	0	0	1	5	0	6
[H2-7: Efficiency of Use]	0	1	1	1	0	3
[H2-8: Minimalist Design]	1	1	4	2	0	8
[H2-9: Help Users with Errors]	0	0	0	0	0	0
[H2-10: Documentation]	0	0	0	0	1	1
<b>Total Violations by Severity</b>	<b>2</b>	<b>3</b>	<b>19</b>	<b>16</b>	<b>2</b>	<b>42</b>



### 4 Evaluation Statistics

severity\evaluator	evaluator A	evaluator B	evaluator C	evaluator D
level 0	33.33%	33.33%	33.33%	0.00%
level 1	0.00%	66.67%	0.00%	33.33%
level 2	20.83%	41.67%	29.17%	8.33%
level 3	35.71%	35.71%	17.86%	10.71%
level 4	0.00%	66.67%	33.33%	0.00%
<b>total (levels 3 &amp; 4)</b>	32.26%	38.71%	19.35%	9.68%
<b>total (all levels)</b>	27.59%	39.66%	22.41%	10.34%

Evaluator	Violations found	Unique violations found	Cumulative Violations
B	25	25	25
A	16	10	35
D	6	5	40
C	14	2	42

**Number of Analysts vs. Violations Found**

