# **Heuristic Evaluation of [Kindergarten]**

## *1. Problem*

This is a heuristic evaluation for the kindergarten team and their medium-fi prototype. Their product is aimed at making in class quizzes and polls possible via their app, as well as making the process of connecting for office hours easier.

## *2. Violations Found*

**1. [H2-4 Consistency & Standards][Severity 1] [Found by: D, C, A, B]**

The interface should keep the color scheme consistent. The Add Class button is a pastel blue on the first page but when you click it, it turns into Apple’s delete-red. This is problematic for two reasons: first being no consistency in color scheme, and second because I’m scared to press Add Class when that color is usually associated with deleting things.

Fix: Choose a more progressive none “alert” color for your “Add buttons” and be consistent with the color scheme.

**2. [H2-10: Help & Documentation][Severity 2] [Found by: D, A]**

There is no documentation for how the tasks work. Even after reading the readme, I found a few minor parts to be troubling. You even have a task in this app (using it from Instructor’s POV), which I found to be the most complex, that is not even talked about in either the readme or report.

Fix: On the splash page, a small icon on the top that opens up to a minimalistic help screen.

**3. [H2-2: Match Between System & Real World][Severity 2] [Found by: D, C, A, B]**

I took this symbol directly from your app: . Real world conventions use this symbol to denote a place to find information (such as an information kiosk at a park). Your app uses this symbol to represent “instructor” instead - leading me to constantly pressing it and hoping for help to appear. I suggest finding a different symbol to reduce confusion, as I was certainly confused.

Fix: Use a more appropriate symbol or create a whole different control flow for instructors vs students. The later is preferred.

**4. [H2-6: Recognition Rather Than Recall][Severity 1] [Found by: D, C, B]**

Same violation as the one above, just a different heuristic being violated. The info symbol or any symbol is not a good way of differentiating classes I am an instructor for on a first glance.

Fix: Possible suggestions are to put Instructor and Student classes under different lists, or to use a different color scheme between the two.

**5. [H2-3: User Control & Freedom][Severity 3] [Found by: D, C]**

There is no “exit” for the mistaken choice of signing up for the incorrect class.

Fix: There should be a prompt before adding a class, or even better, an undo button that appears next to the newly added class on the homepage that disappears after a few seconds.

**6. [H2-3: User Control & Freedom][Severity 3][Found by: D, A]**

Similar to 5, there is no “exit”/undo if I accidentally sign up as an Instructor instead of Student.

Fix: Similar to 5.

**7. [H2-5: Error Prevention][Severity 3][Found by: D, C, A]**

There should be a prompt or code or something that only lets real instructors sign up as an Instructor to prevent students from signing up as instructors.

Fix: There should be a prompt to verify validity of instructors.

**8. [H2-4 Consistency & Standards][Severity 2][Found by: D, B]**

To go back from a particular class’ poll to the list of all polls on the class’ page, you press the back button in the top left corner. To go back from a particular class to the list of all classes on the main page, you press the home button at the bottom center of the page. This is not consistent.

Fix: I suggest putting the home button in the top left corner like the back button. I also suggest keeping it as the home icon rather than a back arrow to signify returning to the top level of your app screen hierarchy. This error also appears for quizzes.

**9 [H2-5: Error Prevention][Severity 3] [Found by: D, B]**

I can click on multiple options in the poll. Clicking one twice will make my checkmark disappear, which is correct, but clicking on two separate ones will keep both. While this may work for quizzes asking “Select all that apply,” (one of your examples), it does not work for the one that exists in the polls section. Error prevention would be to prevent this incorrect state from occurring.

The same issue happens on the quiz side.

In process of taking a quiz on a multiple-choice question, it is unclear whether the question is multiple choice multiple answer or multiple-choice single answer.

Fix: Multiple-choice multiple answer can be indicated with a list of open checkboxes and multiple-choice single answer can be indicated with a list of toggle radio buttons.

**10. [H2-3: User Control & Freedom][Severity 4][Found by: D, A]**

Technically there are two violations here but they are both for the same task and violate the same heuristic. After I finish a poll, my only option is to return to the home screen – the list of all classes.

Violation 10.a – No undo button in case I filled out the poll incorrectly.

Violation 10.b – Finishing a poll should return me back to the class the poll belongs to, not the home page that shows the list of my classes.

Fix: Add in the the things mentioned in 10.a and 10.b

**11. [H2-8: Aesthetic & Minimalist Design][Severity 1] [Found by: D, C, B]**

A general design gripe: the app constantly switches between a white base/blue highlight color scheme to a blue base/white highlight color scheme. While I can see that this is done for minimalism, it is a little confusing. It is difficult to see which pages might stem from others. Furthermore, with there being only a single shade of each of the two colors used, it is difficult to establish weight and hierarchy in your app’s design.

Additionally, the polls and quiz backgrounds are a dull blue. This is not exciting at all for a user participating and therefore might discourage participation.

Fix: Be consistent with what your base and accent colors are, and furthermore choose a more vibrant combinations.

**12. [H2-2: Match Between System & Real World][Severity 1][Found by: D, B]**

You have a poll asking users to specify which questions they finished in OH listed as a Quiz. Personally, I feel this belongs in the Polls section – not Quizzes, so I consider this a violation of following real world conventions.

Fix: Put this particular quiz in the polls section and be consistent in wording between the two.

**13. [H2-3: User Control & Freedom] Medium Task [Severity 4][Found by: D, B]**

If I am taking a quiz, there is no undo/back button if I want to go back to the previous question. I am forced to move in the forward direction.

Fix: Implement undo button.

**14. [H2-1. Visibility of system status]  [Severity 1][Found by: D, B]**  
When I started Reading Quiz #2, I didn’t know that I wouldn’t be able to go backwards.

Fix: There needs to be some kind of messaging saying that once I start the quiz, I must finish it.

**15. [H2-2: Match Between System & Real World][Severity 4][Found by: D]**

When an instructor wishes to create a poll, you only show Add a Poll and Closed Polls. What about Created polls that aren’t closed (Open polls)? I feel this is a violation because you are missing a pretty big case.

Fix: Add this Open polls option

**16. [H2-3: User Control & Freedom][Severity 0] [Found by: D]**

When I create a poll/quiz, I might not want to take it right after I created it, so don’t force the instructor down this fixed path.

Fix: Give them the option to just go back.

**17. [H2-9: Help Users Recognize, Diagnose, & Recover from Errors][Severity 4][Found by: D]**

If the instructor accidentally clears a student from the queue or if a student accidentally removes himself or herself, how do we recover? This is a big problem.

Fix: Include undo button or confirmation page when removing.

**18. [H2-4: Consistency & Standards][Severity 0] [Found by: D, B]**

If a student wants to remove their name from the OH queue, they select their name from the queue, which puts a checkmark next to it, then they press Remove from Queue. If an instructor wants to remove a student, they press a minus sign, and that’s it. There should be consistency here.

Fix: Make both buttons the minus sign.

**19. [H2-10: Help & Documentation][Severity 0][Found by: D, B]**

Initially, I had no ideas what they big red blocks were on the Instructor’s OH page. It wasn’t until I pressed Show Interactions in proto.io that I learned these blocks were actually press-able buttons. There is no documentation telling me this, I would’ve skimmed over them completely, as they are not necessary but rather enhance the OH experience.

Fix: Add documentation for this.

**20. [H2-2. Match between system and the real world] [Severity 1][Found by: D, B]**

 On the CS147 office hours screen, why is the queue selectable? I shouldn’t be able to select someone else and remove them from the queue. The button should be changed to say something like, “Remove myself from the queue”.

**21. [H2-4 Consistency and Standards][Severity 1] [Found by: C]**

The office hour section in the instructor’s views does not display upcoming office hours. The student section conveniently shows the users the upcoming office hours but I feel that the instructors should also be aware of his upcoming office hours. It is consistent and helpful. Solution would be to minimize the two red “buttons” indicating availability and fit in upcoming office hours the same way it is shown in the student section.

**22. [H2-4 Consistency and Standards][Severity 2][Found by: ]**

The office hour section for students has a section header that says “office hour” but there is no section header in the office hour section for instructors. At a first glance, it is hard to tell that the user is supposed to tap on one of the two choices to alert the class. Add a header that says “Office hour availability”.

**23. [H2-4. Consistency and standards][Severity 1][Found by: B]**  
 Transitioning between screens going forward is done by fading, but going backwards is often done with sliding. Be consistent by using fading everywhere or sliding everywhere.

**24. [H2-4. Consistency and standards]  [Severity 1][Found by: B]**On the CS147 Reading Quiz #1 review page, the page slider with the three circles starts out white, but then on the next two pages it is blue. Make it the same color for all three.

**25. [H2-4. Consistency and standards] [Severity 1][Found by: B]**  
 On the CS147 Reading Quiz #1 review page, the font style used for the questions is different. The same is true of the colors for the answers. On the first page, the answers are gray. The second page they are green. The third page they are a different shade of green. Make it consistent.

**26. [H2-1. Visibility of system status] [Severity 2][Found by: B]**  
 When I finish the quiz I get a screen that says, “Thank you for your feedback” which doesn’t make sense because I didn’t provide feedback, I took a quiz. Change the screen to fit my current action.

**27. [H2-4. Consistency and standards]  [Severity 1][Found by: B]**  
The buttons inside of the instructor office hours screen that say “Office Hours are Empty” and “Office Hours are full” should have the same capitalization pattern. Make them consistent.

**28. [H2-8. Aesthetic and minimalist design]  [Severity 1][Found by: B]**  
On the instructor office hours screen, it says “Your Hours” but beneath that it has the location, and underneath that are the hours. Don’t put something between “Your Hours” and the actual hours.

**29. [H2-6. Recognition rather than recall] [Severity 2][Found by: A]**  
 On the add class screen, I can’t tell just by looking at the toggle, which one is selected. I have to click on the toggle first to figure out which color means it’s selected. Make it more obvious which side is selected.

**30. [H2-10 Help and Documentation] [Severity 4][Found by: A]**

When going through the poll creation page, it is very confusing and difficult to figure out how to create questions. What does response mean? Why does add response take me to a new quiz? Why does being done mean going back to the main page. It is difficult to gauge what each section and function mean, so it would be good to help out the intended user (middle aged – old) professors by providing a short instruction list.

**31. [H2-7 Flexibility and Efficiency of Use] [Severity 1][Found by: A]**

In the upcoming office hour section of the OH Main Page, the interface seems to lock in three upcoming office hours. This limits users who wants to see further ahead. This could be done by making it scrollable from left to right and to indicate that it is scrollable from left to right, leave one circle half covered at the right edge of the interface. This often indicates that there is more to the right.

**32. [H2-2: Match Between System & Real World][Severity 3][Found by: A, C]**

After the user searches for their class in the “Add a Class” screen, the UI adds the right intended class. Right now the UI assumes, the user and UI will always be agreement with the exact names of the classes.

Fix: Much like the Facebook “Friend Search”, the UI should have a dynamic dropdown of matches based on the current user input in “Find Your Class” textbox.

**33. [H2-1: Visibility of System Status][Severity 2][Found by: A, C]**

The UI doesn’t have any indication of where the user is in the process of adding a class (This is applicable when doing a poll or quiz). This is violates the heuristic because UI’s should always let the user know where he/she is in any given process.

Fix: Add a simple progress bar at the top on the UI screen indicating where the user is in the process of adding a class/polling/quizzing.

**34. [H2-3: User Control & Freedom][Severity 2][Found by: A, C]**

The UI offers no way for the user to leave/edit a class that they may have added by in error.

Fix: Add an edit mode option at the top of the “Class Home” that would allow the user to delete/edit their enrollment in their classes.

**35. [H2-2: Match Between System & Real World][Severity 1] [Found by: A]**

The color scheme/design of “Class Home” screen along with much of the UI indicates nothing about the application being academically related.

Fix: Add aesthetic elements to your UI that relate your UI with the domain that its concerned with. In this particular UI’s case, incorporating “an apple/a notepad/a pencil” … something that connotes academic, as a subtle aesthetic would be nice.

**36. [H2-8: Minimalist Design][Severity 1][Found by: C]**

The design under the polls of a particular class shows closed polls. If a poll is closed, then it is not relevant and should not be displayed.

Fix: Remove the closed polls category and only show polls that the user can actually participate in.

**37. [H2-7: Flexibility & Efficiency of Use][Severity 2][Found by C]**

Realistically, the queue in the office hours screen will be really large, and under the current screen, this will require the user to scroll continuously to get the information on that page.

Fix: Either make the queue its own scrollable screen or make the queue scrollable within the current 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] |  | 1 | 2 |  |  | **3** |
| [H2-2: Match Sys & World] |  | 3 | 1 | 1 | 1 | **6** |
| [H2-3: User Control] | 1 |  | 2 | 2 | 2 | **7** |
| [H2-4: Consistency] | 1 | 5 | 2 |  |  | **8** |
| [H2-5: Error Prevention] |  |  |  | 2 |  | **2** |
| [H2-6: Recognition not Recall] |  | 1 | 1 |  |  | **2** |
| [H2-7: Efficiency of Use] |  | 1 | 1 |  |  | **2** |
| [H2-8: Minimalist Design] |  | 3 |  |  |  | **3** |
| [H2-9: Help Users with Errors] |  |  |  |  | 1 | **1** |
| [H2-10: Documentation] | 1 |  | 1 |  | 1 | **3** |
| **Total Violations by Severity** | **3** | **14** | **10** | **5** | **5** | **37** |

*4 Evaluation Statistics*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **severity\evaluator** | **evaluator A** | **evaluator B** | **evaluator C** | **evaluator D** |
| level 0 | 0 | 2 | 0 | 3 |
| level 1 | 3 | 10 | 5 | 6 |
| level 2 | 4 | 4 | 4 | 3 |
| level 3 | 3 | 1 | 3 | 4 |
| level 4 | 2 | 1 | 0 | 4 |
| **total (levels 3 & 4)** | 5 | 2 | 3 | 8 |
| **total (all levels)** | 12 | 18 | 12 | 20 |

|  |  |  |
| --- | --- | --- |
| **evaluator # Ex. C** | **# problems found Ex. 7** | **# problems remaining & problem IDs**  **Ex: 5 (1, 7, 11, 13, 17)** |
| D | 20 | 20 (21-37) |
| B | 18 (overlapped with above) | 8 (29-37) |
| A | 12 (overlapped) | 5 (30-35) |
| C | 9 (overlapped) | 2 (36-37) |

