

## Prototype

clicked is an app that permits the anonymous communication of confusion or uncertainty in a classroom setting, avoiding the embarrassment of asking a question aloud.

## Violations Found

1. [H2-1: Visibility of Status]  
After you submit a question or confusion report, there is no acknowledgement of the receipt of this information, nor is there any sense of next steps. This could be something as simple as “Thanks for asking your question! The teacher will get to it soon.” This constitutes lack of visibility of status because this interface could be misconstrued as simply not working (ie the question just isn’t submitting, for instance).
2. [H2-3: User Control & Freedom]  
Users (teachers) are confined to entering just 3 topics, which then limits the number of things that students can be confused about. Could more fields be added? This also limits the format of questions asked – perhaps the “do you have any other questions” feature can be emphasized? This format should be highlighted.
3. [H2-7: Flexibility and Efficiency of Use]  
There are a lot of click-throughs on various buttons required to use this app. For efficiency of use, it would be advisable to have the app “remember” where the user was the last time the app was open. (This is also admittedly hard to replicate in a medium-fi prototype).
4. [H2-8: Aesthetic and Minimalist Design]  
While the aesthetic on the medium fi prototype was relatively uncluttered, were more classes or more questions were to be added to the home screens of each interface, it would get very crowded quickly. The text size should be made bigger on these screens, and consider aggregating categories of classes or questions so they are easier to sort through.
5. [H2-5: Error Prevention]  
I noticed that whenever a student taps into a class, they are immediately directed to the confused/understand screen. This is in contrast to the teacher interface, where the teacher is prompted to initiate the class. The student interface should be altered to account for the possibility that class is not in progress currently; if the interface were to run without doing this check, it could cause errors.
6. [H2-1: Visibility of Status]  
No record of questions that have already been asked exists in the student view as per this medium-fi prototype. Perhaps previously asked questions should be shown in the student view as well so that (1) students can know that their

questions have been received and (2) duplicate questions can just be upvoted rather than repeated.

7. [H2-10: Help & Documentation]

The first few times a user uses the app, the jump from tapping into a class to being presented the confused/understand button is jarring and unintuitive. One helpful feature here could be to introduce a help button or provide further explanation by means of the layover format used in the teacher view to

8. [H2-8: Aesthetic & Minimalist Design]

This may have been the intention, but some features of the app design seem to invoke a “toy” aesthetic, perhaps targeted at very young children. Using just two colors has this effect, and all the buttons are large with heavy lines. If this was not intended, I would suggest adding a color and lightening up the lines throughout the interface.

9. [H2-4: Consistency and Standards]

On the teacher interface, it is confusing that the directions tell the user (teacher) to enroll students directly, and to distribute a code that will permit students to enroll. These directions seem inconsistent. I would pick one approach and stick to it, and eliminate the conflicting directions.

10. [H2-1: Visibility of Status]

The image shown while the teacher was lecturing, of a satellite scanner, is not a good match for the actual status of the app at the time, which is passively collecting questions. I would replace this image with an animation or picture that better represents what is actually going on during this phase of app use.

11. [H2-3: User Control & Freedom]

If used frequently, this is the sort of app that could get very cluttered very quickly. An option should exist for a user to delete old lecture data, leave a class, or collapse old classes together so that the number of options is not overwhelming.

12. [H2-3: User Control & Freedom]

Based on the PowerPoint and website description of this product, one compelling feature of this product was the teacher being able to visualize data collected during lecture. This is clearly hard to create for a medium-fi prototype, but should be included in later prototypes. In the medium-fi prototype, at least some acknowledgement of this option should have been present by means of a button or overlay.

13. [H2-7: Flexibility and Efficiency of Use]

The classroom setting is unpredictable and requires flexibility to be built into to any app that is used in that context. Teachers should have the option to pause lecture, tell the app when a concept is being repeated, or summon questions on the fly during the lecture if that is something they would like to do. All this could be facilitated by adding relevant buttons on the “lecturing now” screen.

### Summary of Violations

Category Number	Violation	Number of Violations
H2-1	Visibility of Status	3
H2-2	Match System & World	0
H2-3	User Control & Freedom	3
H2-4	Consistency & Standards	1
H2-5	Error Prevention	1
H2-6	Recognition not Recall	0
H2-7	Flexibility & Efficiency of Use	2
H2-8	Aesthetic & Minimalist Design	2
H2-9	Help Users with Errors	0
H2-10	Help & Documentation	1

### Recommendations

The main issues as far as user interface for this app were clustered around a lack of visibility of status for the user and limits on the freedoms and controls that users had. Perhaps this is the by-product of the fact that this app has not yet been field tested, but several quite obvious features like being able to pause a lecture or delete an old one were absent, and can likely quite easily be added. More broadly, the user interface could be improved. The boxy format of each class, each question, and each category within each question is redundant, and can probably more cleverly be presented. Moreover, as mentioned above, the use of heavy fonts and just two colors gave the app a “toy” aesthetic, which may have been the intention. Even if it was, it seems like this aspect of the UI could be toned down or altered on the teacher interface. The teacher interface should be more clearly differentiated from the student interface as well. Overall a great app with a lot of potential – I’m very excited to see how this turns out!