

Expert Review by RSI

Introduction

The app we will be reviewing is 4 pics 1 word. It is a simple game which shows the player four pictures. These four pictures have one word in common: home, for example, or water. The player has to enter this word, and if they are correct they will advance to the next level.

The app prides itself on being easy to use and not having required registration.

In this review we will present three personas which might use the game and show the results of the heuristic evaluation we performed. We will close this review with a conclusion and suggestions to further improve the game.

Personas

4 pics 1 word is a simple game similar to the well-known app Candy Crush. Just like Candy Crush, this app is used by a varied target audience because everyone likes to play simple games when they get bored. Some examples of people who might use this app are:

- **The bored teenager.**

Teenagers will play this app because they typically have quite a bit of free time, which they enjoy wasting by playing mindless games like this one. They'll also enjoy the graphics and the gratifying *ding-ding* noise you hear when you're correct.

- **The soccer mom.**

The soccer mom wants to relax by playing games that aren't too complicated to take a break from her kids and responsibilities.

- **The senior citizen.**

The senior citizen will play this game because their children downloaded this game for them and the game is easy enough for them to use. They have a lot of free time and this way they can stay busy.

Heuristic evaluation

When you play for the first time, the app presents a player with pop-ups that use an easy question to explain the interface, for example, after pressing PLAY you see a pop-up saying "Tap a letter to enter it into the next empty field".

To conduct our heuristic evaluation, we had three evaluators try out the app for an extended time period.

Scenarios:

- You know the answer and fill it in.
This is a straightforward scenario – the app has already explained how to interact with the interface as described above, so you just tap the letters in the right order. As soon as all available letter slots are filled in and your answer is correct, you advance to the next level.
- You want to correct your answer.
You tap the letter you want to remove. It disappears from the 'answer' section and reappears in the 'available letters' section. The next letter you click appears in the leftmost empty slot, which is likely the one which used to hold the letter you just removed.
- You ask for a hint.
When you can't figure out a level, there are two kinds of hints you can choose. Each has its own button next to the 'available letters' section. One will put one of the letters in the right place; the other removes one of the letters you don't need for your answer. There's also a button at the top of your screen, with a number showing the amount of free hints left. In-app purchases let you buy more hints if necessary.
- You share the app with your friends.
When you want to share the app with your friends, you press one of the social media buttons located to the right of the pictures. There's a Facebook, WhatsApp and Facebook messenger app. When you tap the icon you want to use, a pop-up appears on the screen asking if 4 Words 1 Pic is allowed to open up that app. When you click yes, you're taken to it and select the person you want to recommend the game to. You then automatically send them the link.

Aggregate findings

- Visibility of system status

There is a lot of advertising going on between levels. This is mostly self-promotion, asking people to either rate the app in the app store, buy other games by the same developer or buy more hints. It's quite annoying as it distracts from the game and, when clicked, will take the user to a different screen. Especially elderly people may not understand immediately what's happening and accidentally make in-app purchases. The color of the boxes your answer letters appear in is very similar to the background color, making them difficult to see.

- Match between system and the real world

It is not immediately clear what the number in the red star means. With experience it becomes clear that it is your current level, but that is not obvious, as your current level is never depicted by a star.

The green hint icons don't have an obvious meaning. However, the meaning behind the icons is described very well by pop-ups when clicking them.

- User control and freedom

When changing your answer there is no "erase all letters" button: you have to click on each letter individually.

There is no Stop button on the "You guessed correctly"-screen, only a continue button. This also encourages people to keep playing without any pauses. This isn't a very humane design choice, as humane games present clear moments to pause the game.

- Error prevention

There is a lot of advertising in this app and it's easy to click on things you didn't mean to click on. This is annoying for all users.

- Flexibility and efficiency of use

It is not possible to modify the settings of the game to tailor it to advanced users or beginners. Therefore beginning users, like the senior citizen, will enjoy the simplicity of this game, but advanced users, like teenagers, may get bored after a while because of a lack of

- Aesthetic and minimalist design

There is a shadow effect on all buttons. Making every button an even color will make the game look more modern and improve on a minimalist design.

The red star to indicate the level could be a shape that is less complex, like a square or a circle. The color of the background and answer boxes is too similar.

- Help and documentation

The information about the developer as well as contact information and such is not too easy to find, buried in several subfolders somewhere in the app's Settings. While understandable (who would ever need to look at the credentials of a simple game app such as this?) it can be annoying for certain people, such as reviewers trying to find the credentials page.

Problem classification

We will give the problems listed above a number which corresponds to how severe we think the problem is. We looked at each problem, evaluating how frequently they occur, what the impact of the problem is, and if the problem is persistent.

1. Minor problems

Lack of credentials isn't a problem which many users even care about. This means the frequency and impact of the problem are very low.

The green hint icons don't have a meaning that is immediately clear. However, the meaning is explained when clicking the buttons every time, so this problem is not very persistent. Some users might not think the icons are weird at all, as shown by the fact that most of our evaluators did not think this was a problem. This same logic applies to the red star indicating the level. The number of the level does not impact the gameplay at all, so this problem is very minor.

The design is not very up to date, as shown by the shadow on every single button. Because this is only a cosmetic issue, we think solving this should not be a priority.

2. Below average problems

The success screen does not have a stop button. Players can click the continue button and then click the back button to solve this, but having one less button press would be nice. Not a very impactful or frequent problem. Considering the humane design implications, we decided this was slightly more important than the minor problems.

3. Above average problems

There is no "Remove all letters" button. Because guessing letters is an important part of the game, we think this is a frequent and persistent problem. The impact is somewhat low, because letters can still be deleted one by one, but the extra amount of time this takes hurts the user experience.

4. Major problems

The large amount of advertising on the app is something that continued to be a problem throughout the evaluations, which makes it the most frequently appearing and most persistent problem. As said above, this is also a very impactful problem, because less experienced users might accidentally make in-app purchases, exit the app when they did not want to and this takes away from the user experience in general. We think this is currently the most severe problem for this app.

Lack of customizability is something experienced users will think is a major problem. The inability to change the background color, show or hide animations, show or hide the "You guessed correctly" screen or make any significant changes to the user interface at all might mean that people who frequently use this app will get bored very easily and abandon it. The ability to change the background color is especially important, because some users might find the answer boxes difficult to see. The frequency, impact and persistence of this problem are high enough that we rate it as a major problem.

Conclusions

This app advertises as being simple fun for everyone and this is certainly true. The app is easy to use even for beginning users. There is a good match between the system and the real world. All the text shown to the user is user-oriented and easy to understand.

The interface of the game is kept very simple. The screen shows everything you need to know and nothing more. For example when you play the game you see all 4 pictures and the available letters while you try to find the answer. This means it is very difficult to get stuck somewhere. However if you do have a question you have a problem. There is no visible documentation about the game and the help menu is hard to find.

There also isn't a lot of customization in this game. The settings menu is hard to reach and there aren't a lot of options to choose from anyway. It would be nice to be able to choose between difficulty settings or shorter or longer words. On the graphics side it may be an idea to add the option to choose between certain backgrounds or if you want to show animations between levels or turn them off.

A big drawback of this game is the overabundance of advertisements shown. You are constantly interrupted by advertisements and it is easy to click on them accidentally.

Suggestions for further development

Our first suggestion is to turn the number of advertisements shown down. This will interrupt the gameplay less, which might encourage users to keep playing the game for longer periods of time, which means that they eventually will see the same number of advertisements, or even more.

Secondly, we would like to see more options for customization. Especially the options to change the background color, or even choose your own background from a picture that is currently on your phone are high on our wish list. Other customization options we would like to see are to turn animations on or off and to hide the "You guessed correctly" screen, which will speed up the gameplay for experienced users.

Finally, a "Remove all letters" button is something that will immediately affect gameplay and will be used frequently. Therefore, it might be a useful feature to implement.

Appendix

List of usability problems found by Ilse:

- User control and freedom, Visibility of system status

There is a lot of advertising going on between levels. This is mostly self-promotion, asking people to either rate the app in the app store, buy other games by the same developer or buy more hints. It's quite annoying as it distracts from the game and, when clicked, will take the user to a different screen. Especially elderly people may not understand immediately what's happening and accidentally make in-app purchases.

- Help and documentation

The information about the developer as well as contact information and such is not too easy to find, buried in several subfolders somewhere in the app's Settings. While understandable (who would ever need to look at the credentials of a simple game app such as this?) it can be annoying for certain people, such as reviewers trying to find the credentials page.

List of usability problems found by Stephanie

- Error prevention

There is a lot of advertising in this app and it's easy to click on things you didn't mean to click on. This is annoying for all users.

- Flexibility and efficiency of use

You cannot modify the settings of the game to tailor it to advanced users or beginners. Therefore beginning users like the senior citizen will enjoy the simplicity of this game, but teenagers may get bored after a while.

When changing your answer there is no "erase all letters" button, you have to click on each letter individually.

List of usability problems found by Rick

- Visibility of system status

The color of the boxes your answer letters appear in is very similar to the background color, making them difficult to see. This makes it unclear what number of letters the answer has, which is essential to the game. For example, someone might try to enter Bicycle instead of Bike or the other way around.

- Match between the system and the real world

It is not immediately clear what the red star is for. After using the app for an extended time period, however, it became clear that this indicates the current level. A red star isn't something that is normally used in games to indicate the current level. I would suggest changing it to a circle or a square (A star also isn't a pretty or simple shape to look at) and at the letters Lvl in front of it.

- Flexibility and efficiency of use

There is no Stop button on the "You guessed correctly"-screen, only a continue button.

- Aesthetic and minimalist design

There is a shadow effect on all buttons. Making every button an even color will make the game look more modern and improves on an minimalist design.