Expert review of NRC by 404_Not_Found

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INTRODUCTION

The app that was reviewed was the NRC app by NRC Handelsblad. The NRC app is a free app which can be used to read the most recent digital version of the NRC newspaper. It is also possible to buy a subscription which allows the user to read an up to two week old version of the newspaper. It also allows you to archive the newspapers so that they can be read without an internet connection. The app claims[1] that the reading experience is very close to that of the regular newspaper.

This review focuses on finding shortcomings in key features of the app and will do so by using a heuristic evaluation[2]. It will draw conclusions from these evaluations and attempt to propose solutions for said shortcomings. The heuristic evaluation will be done by three separate evaluators and the results will be combined so that most usability problems will become apparent.

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[1] play.google.com/store/apps/details?id=com.twipemobile.nrc
[2] nngroup.com/articles/ten-usability-heuristics/

PERSONAS

Motivation

The NRC app is most likely to be used by the more intellectual user of all ages, excluding children. For the purpose of this review three personas have been created to best represent the diversity of the target audience.

Mark

Mark is a twenty-year-old computer science student who participates in several extracurricular activities e.g. the debate group. He is very involved in politics and is a member of the local political party. Because of his age and study, he is someone who uses his android phone on a daily basis and thus has a lot of experience with such technology. He is a fast learner, and has used several similar apps in the past e.g. De Telegraaf[3] app. For his debate group and wanting to stay aware of what goes on in the world, he reads the local newspaper daily. Being a student, he cannot afford the daily paper version of the NRC which is why he chose for the app instead.

Donna

Donna is the secretary of a fairly well known lawyer. She spends most of her time at work, or in the train to and from work, and would like to read the newspaper while on her way to work. She also uses her computer a lot for her job, i.e. a digital calendar and word processing. The android device is new to her, since her firm uses Windows Phones exclusively. She does however, have quite some experience with her Windows Phone. She purchased a tablet for the sole purpose of reading the newspaper. The paper version of the NRC was no option, since it would arrive daily when she had already left for work.

Froukje

Froukje is a seventy-two-year-old mother of three who has spent her life working as a teacher in the local school. She went into retirement at the age of sixty-five and has spent the last few years in her apartment. She has little understanding of technology, but was given an old android phone by her son. With the intention of making it easier for her to stay in touch, and reading the latest newspaper. The last piece of technology she handled was a Windows XP machine in conjunction with her Nokia 8210[4].

HEURISTIC EVALUATION

Setup

Each of the three evaluators will approach each of the scenarios while keeping the personas in mind. They will attempt to keep the expertise and understanding of the device of said personas in mind and will attempt to find problems. The scenarios that have been chosen for this review are the following:

Scenario 1

This scenario is designed to see how easy it is to find articles regarding a certain subject. The task is fairly simple: find the latest article regarding the earthquake in Nepal[5].

Finding important news easily is very important since it will motivate users to keep using the app.

Scenario 2

The second and final scenario is changing the font size of the newspaper. It is a fairly simple task, but does represent something that a lot of people will want to use when reading the paper. Especially by older people or when on a smaller phone.

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[3] play.google.com/store/apps/details?id=nl.telegraaf
[4] en.wikipedia.org/wiki/Nokia_8210
[5] bbc.com/news/world-asia-32479909

Aggregated findings and their severity

Severity 1

The settings menu cannot be accessed once a user has selected the newspaper to read, this is only a minor inconvenience and does not hinder the functionality of the app. A user might have to look for the button, but should be able to find it without too much trouble.

The preview images in the tablet version flicker when the newspaper is being downloaded. This is only a small cosmetic problem and does not pose any problem.

The release date of the selected newspaper is in a different location depending on whether you are on a tablet or on a phone. This is such a small inconsistency that a user is unlikely to ever notice it.

The app is usable without any internet connection but shows an infinite loading circle on the start menu. This happens because the front page cannot be loaded without an internet connection. A small problem that most users would not mind.

The term "Download" is used instead of "Read" when trying to read the most recent version. This can be slightly confusing for users that have little experience with electronics.

It is not possible to go to specific pages, which is a small addition some users may appreciate.

The "Messages" option in settings should be "Notifications" otherwise it is not clear what is meant there.

Severity 2

The "HELP" button is only available on the tablet version of the app. It contains useful information for both tablet and phone users and not including it in the phone version seems to be an oversight.

Due to the newspaper design certain articles have been split up into two separate pages in the phone version. As a result some titles and articles get cut off and continue on the next page requiring the user to swipe to the next page. A workaround the user can apply is holding the finger on the screen in the middle of the swipe to have both parts visible at the same time.

The app is only available in portrait on phone. While this was sufficient a few years ago most phones have become wide enough to accommodate the newspaper being in landscape.

Nowhere in the app is it suggested or indicated that a user can press on an image to enlarge it. Advanced users will expect the app to behave in this way, inexperienced users will not.

The app never tells the user that the newspaper is interactive. Oblivious users will never know it is even possible to press on articles to get a bigger view, nor that is possible to zoom in on the pages of the newspaper.

Severity 3

Pages will at random display an infinite loading circle which obstructs fluid use of the app. Less advanced users could be stuck waiting for it to load for extremely long times, expecting something to happen.

No search option to search through the entire newspaper for a specific topic or news article. This results in users spending more time searching content than reading it.

It is only possible to change the font size in the settings menu. Which is where you are least likely to need the setting in the first place. Inexperienced users will open an article, find they are unable to read it, and start looking for the setting. It's highly unnatural to have to go back to the main menu to open the settings menu and change to font size.

There exists a bug on tablet where a user will be unable to go to the next page. It's hard to realize this bug is happening and no obvious way to fix it.

The newspaper design goes heavily against the general concept of Android apps and results in various usability problems that could be avoided by using a more traditional design.

Severity 4
The app crashes at seemingly random moments, which sometimes makes it impossible to use. This should be addressed since it heavily affects the usability and general impression of the app.

CONCLUSION

The usability of the NRC app is currently not good. First and foremost the stability of the app is very low. A regular user is very likely to encounter multiple crashes or the user is not able to start the app at all. Another problem is the general unresponsiveness of the app. Swiping between pages has a noticeable delay even on modern devices. These two issues are for most people already sufficient to not want to use the app. The heuristic evaluation also shows that a lot of possible actions are not indicated anywhere which causes users to think it's nothing more than a newspaper. As a result users will miss useful features and will not see the use of having an app and would much rather read the paper newspaper. A digital version of a newspaper is generally cheaper to produce and can increase the amount of people subscribed to the newspaper.

Currently the app is only usable by a small part of the target groups. Only experienced phone users will be able to navigate through the app effectively. This means the target group which consists of middle age to older users will not be able to use the app. This target group is also affected by the somewhat hidden text size option.

Most issues are caused by the decision to go for a traditional newspaper design. The decision to disregard standard Android layout causes many navigation features to not have indicators at all. Keeping a traditional newspaper design seems to be a misguided attempt at familiarizing users with the newspaper app.

SUGGESTIONS

Fixing all of the mentioned problems may not be easy, but not changing the app is a bad idea. The most important change should be dropping the newspaper design and going to a more Android style app. While it is a feature that distinguishes the app from others it causes the app to lose a lot in usability. A majority of the problems can be solved by going to an Android style app.

Two others problems that should be tackled is the ability to change the text size without having to go through the settings menu and improving the stability of the app. An app that is not stable and crashes at seemingly random moments results in most users no longer wanting to use the app.
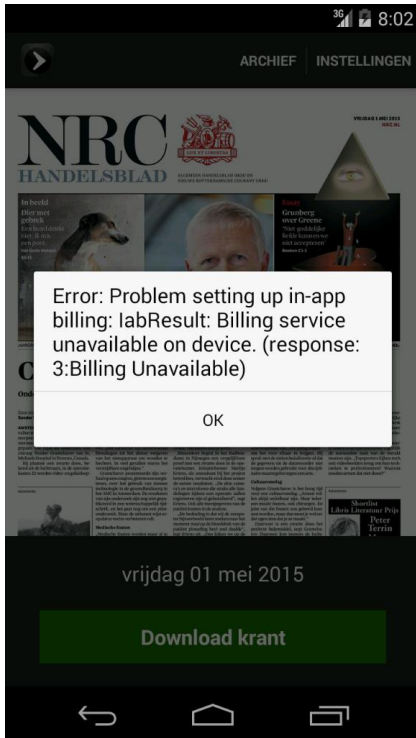
Apart from those major issues there are various small issues that can be solved to improve the usability of the app. Two examples are introducing the "HELP" button in the phone version and allowing users to use the app in landscape on their phone.

Expert review 1

Erin van der Veen

SCENARIO 1

On the first launch I was greeted by the following screen.

Mark and Donna would quickly realize that this message is unimportant and that they could just press OK. Froukje on the other hand doesn't speak English quite as well, and is intimidated by the message, the nummers and parentheses.

This runs into the first usability heuristic: "Help users recognize, diagnose, and recover from errors". Error messages should be explained in plain language, prefferably the native language of your user base. Moreover, they should suggest a solution. The only option given in the error message is "OK", this is not a solution and doesn't help the user.

I press "OK" and continue with my task. "Download krant" is the only sensible option given to me, thus my choice is easy. At this point in time, I run into second error message:
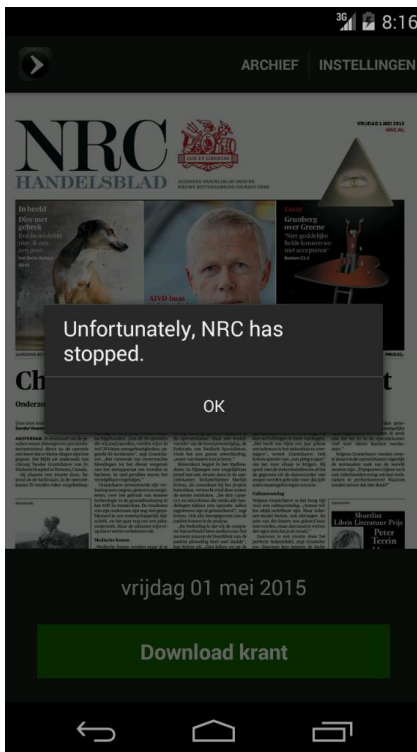
This error message has the same heuristic problem as the previous message. It's uninformative and doesn't help the user solve the problem. This error is handled by android, and is not the app's fault. It does show problems with the "Error prevention" heuristic. This is the second error in as many interactions.

Relaunching the app, and assuming it doesn't crash, brings us back the the main screen. We press "Download krant" and the newspaper shows up. From here finding the latest article about the earthquake in Nepal is easy since it's on the frontpage.

SCENARIO 2

Starting off at the main screen of the app. We can easily identify the settings menu, it's on the top-right of the screen. Pressing it reveals the neat settings menu grouped by category. This is in conflict with the "Consistency and standards" heuristic. To demonstrate:
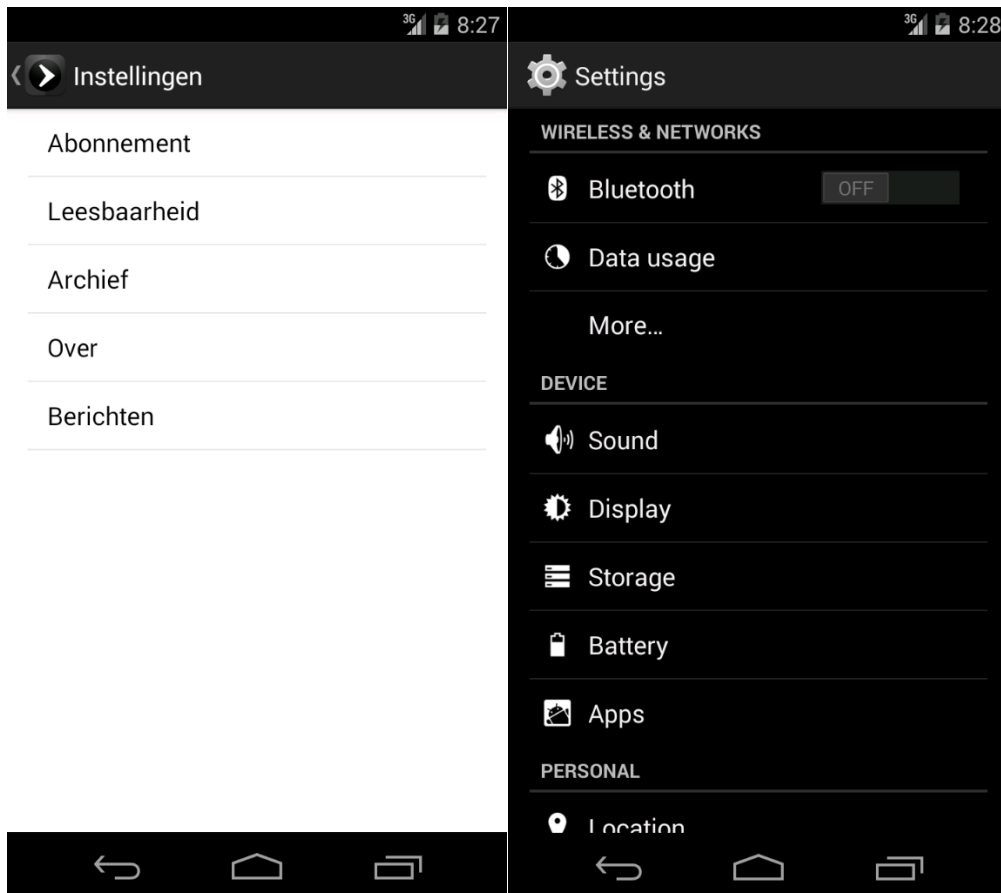
On the left we have the settings of the NRC app, on the right the default android settings. Abstracting from the fact that the android settings are in English and the NRC settings are in Dutch, we notice one key difference. In the android menu, settings are grouped under a header, which is in contrast with the NRC menu, where every category opens a new menu.

Finding the setting itself is easy, I press "Leesbaarheid" and am greeted by two options. "Kwaliteit krantenpagina's" and "Lettergroote atikeltekst" which is set to "Normaal" by default. I set it to default and return to the newspaper.

Upon opening the newspaper Froukje would be quite surprised that the size of the letters didn't actually change. The name suggests that the size of the font of the articles changes, which is true. It's just that the deffinition of the word "article" can differ from person to person. Froukje might not even realize that she can click on articles, since it's not explained anywhere.

GENERAL THOUGHTS BY EXPERT

1. I was unable to download the newspaper, most likely because I tried to download it pretty early in the afternoon. But instead of telling me why I can't download the paper, it will just bring up a menu where I can log in. This doesn't tell the user why he/she can't download, and only makes the app more confusing to use.
2. When I'm reading a newspaper the settings button is not visible. The only way to get to the settings menu is by closing the newspaper and going to the main menu.

3. This is the main menu of the tablet app, which clearly shows the HELP button. This button is not available on phones.

PROBLEMS BY SEVERITY

1. Settings button not available while reading the newspaper.

1. Today's title is in different locations depending whether the app is opened on phone or on tablet.

1. Downloading the newspaper causes flickering of the images on the main menu.

2. The "HELP" button is not available on phones.

2. Reading an article that is spread over two pages requires going back and forth, sometimes paired with having to wait for it to load.

3. There exists a bug on tablet where it's impossible to go to the next page. This can be found by switching between dual page view and single page view.

4. The frequent errors that make the app impractical to use.

Expert review 2

Oussama Danba

SCENARIO 1

Launching the app brings you to the front page of the newspaper where you get multiple options. You can decide to download the latest newspaper, go to the app settings or read a newspaper from the archive. Here we run into the first usability heuristic: "Match between system and the real world". While Mark and Donna would have no problem with the term "Download", Froukje might get confused. The term "Download" could be replaced with "Read" which would make it more understandable for Froukje.

The first thing you see after opening the newspaper is the front page and the section you're currently in. Since the earthquake in Nepal is the top story right now it can immediately be found on the front page. However the default text size is too small to properly read it and thus requires the user to zoom in first or press on the article text. Zooming in on a picture is fairly easy to understand for all of them, although Froukje might prefer a set of buttons for zooming in and out. It is also not clear that it is possible to press on articles to read them in a new window. This is a problem for all of them since there's no indication that this is possible. This is another usability problem, namely: "Recognition rather than recall"

In the case you pressed on an article, the pressed article fills up your screen. Here you can read the article in a good text size and view the image better. In case there's multiple images this is displayed by dots under the image. Users who are familiar with apps such as Mark and Donna realize they can swipe to the next image. Froukje is likely to never notice the dots and thus won't try to swipe. It is also possible to press on the image giving you the ability to zoom in. There's no indication that this is possible. Exiting the article can be done in two ways which are pressing on the button in the menu bar and pressing the back button. Both are common Android behavior.

In the case you want more information about the situation in Nepal you will have to go through the newspaper to find it. This means you have to swipe through every page before you find it or go directly to the section you want. Here you encounter the unresponsiveness of the app. Swiping from page to page is slow and often not functional at all. Swiping to different pages can cause the app to crash spontaneously without any indication why. When swiping you will also realize you're reading more than one newspaper since some of the sections are in the NRCQ.

SCENARIO 2

The only way to change the text size is by going to the settings in the main menu and finding the text size option. This is no problem for Mark, Donna might struggle to find the option and Froukje will never know the option exists. This is a problem since Froukje is the one to most likely change the text size since older people generally have more eyesight problems. Changing text size is a task that should be always available and should not require going into the settings. This is a usability problem.

GENERAL THOUGHTS BY EXPERT

1. Only available in portrait on phones. With the size of phones nowadays reading in landscape might be preferred.
2. Articles that are two pages wide are cut off in the middle. This means titles that are somewhat long require the user to switch pages multiple times to read it.
3. No way to go to specific pages. This requires the user to sometimes swipe a lot to get to a page.
4. Pages sometimes display an infinite loading circle. The page does not load after ten minutes of waiting and requires the user to restart the app completely to start loading.
5. Front page displays infinite loading circle when no internet connection is available.
6. Newspaper design is distracting and only hinders the user when trying to read articles. It is a misguided attempt at familiarizing the readers with their newspaper app.

PROBLEMS BY SEVERITY

1. Front page not loading when there's no internet connection available.

1. "Download" instead of "Read".

1. No way to go to specific pages.

2. Pages being cut off in the middle.

2. Only available in portrait on phones.

2. No indication of available options once the newspaper has been opened.

2. No indication an image can be pressed to view a bigger version.

2. Text size only available in settings menu.

3. Pages sometimes display an infinite loading circle.

3. No indication you're reading multiple newspapers.

3. Newspaper design is unnecessary and hinders usability.

4. Swiping is unresponsive and can crash the app.

Expert review 3

Kris Elsinga

SCENARIO 1

When the first screen appears there are several options: Archive, settings and download paper. As a computer science student Mark quickly decides to download the paper. Donna has quite some experience with computers and also downloads the paper. Initially Froukje doesn't quite know what to do, but she presses the big green button in the hope that will do something. That is the first usability heuristic: "Match between system and the real world" For older people it may not be clear what the "Download" button does.

The front page opens. Nepal is front page news so it's easily found. But the font is too small to read the article. Mark and Donna pinch out to zoom in, but Froukje has no idea how to zoom in. She presses on the article and it suddenly enlarges. She accidentally figured it out. There could have been a small tutorial to show the different things you can do within the app at the first launch of the app.

SCENARIO 2

The font of the text is a bit too small for all three. They want to change it. Mark goes back to the home screen and finds the settings button. There he goes to readability and changes the font size. Donna figures it out without too much difficulty. Froukje doesn't know how to go back to the first screen, she presses the home button and accidentally closes the app. She starts it again and finds the settings button. She tries the readability button since it's what she is looking for. And she manages to change the setting. Even though it wasn't quite the right way, she did find the settings. But it would have been better if there had been a slider so the setting was available everywhere on the paper and immediately being able to see the difference.

GENERAL THOUGHTS BY EXPERT

1. Not able to jump to a page number, you have to swipe it all.
2. No search button to search for specific topics, news or articles.
3. No tutorial for less experienced people.
4. The messages option in settings is misleading, it should be notifications
5. When opening a specific article, the layout is completely different. Why have 2 different layouts.

PROBLEMS BY SEVERITY

1. No tutorial on using the app for inexperienced people.
2. No search option to search in all paper for a specific topic, news or article.
3. Not being able to jump to a page.
4. No zoom slider
5. The layout of the paper changes.
6. The messages option in settings should be notifications.