Abstract
We present DysWebxia, an eBook reader for iOS which modifies the form and the content of the text. This tool is specifically designed for people with dyslexia according to previous research with this target group. The settings are customisable depending on the reading preferences.

Categories and Subject Descriptors
H.5 [Information Interfaces and Presentation]: User Interfaces—Screen design; K.4 [Computers and Society]: Social Issues—Assistive technologies for persons with disabilities

General Terms
Design, Experimentation, Human Factors

Keywords
Reading software, dyslexia, readability, Spanish iOS.

1. INTRODUCTION
Around 10% of the population has dyslexia, a reading disability that negatively affects a person’s ability to read and comprehend texts. Since certain text alterations can impact the reading performance of people with dyslexia, several specialized reading tools have been developed for this target group. Here, we present the first iOS reader for Spanish texts for people with dyslexia. The tool is strictly designed based on findings from previous research using eye-tracking with people with dyslexia.

2. WHAT IS NEEDED?
We present the features which, to the extent of our knowledge, lead to a significant improvement of the reading performance of people with dyslexia.

3. OTHER READING TOOLS
In Table 1 we compare the features of the two most popular reading applications—Kindle reading software1 and iBooks2—and five specific reading software for people with dyslexia. These are: the Mozilla Firefox extension Firefixia [12], SpeechWord [3] for MS Word, IDEAL eBook Reader3 for Android [5], and the web service Text4All4 [13].

Other parameters which did not lead to significant effects are column width, line, word and, paragraph spacing [10]. However, these are covered in the recommendations [2] and in some of the reading tools described in next section.
### 4. DYSWEBXIA READER

DysWebxia reader for iOS combines all the required features that lead to a better readability for people with dyslexia in previous studies as well as most of the parameters found in the recommendations [2] (Figure 1).

For the user interface design, we first performed a competitive analysis of existing reading tools to understand the user interface and user-system interaction conventions that prospective users might expect to find in our system, followed by the creation of sketches and mock-ups.

For the implementation we used the Apple iOS SDK, building an iOS application in Objective-C from the ground up. Given a text file (pdf and epub formats), we are able to render it to the user and then display synonyms for words that appear in the text.

### 5. REFERENCES


### Table 1: Summary feature comparison. The asterisk (*) means that the feature is under development. Required features, the ones which lead to significant results, are marked in bold.

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![Figure 1: Screenshots of DysWebxia iOS reader.](image-url)