

iRead4Skills:

Enhancing Literacy through Intelligent Tools

Raquel Amaro

NOVA University Lisbon

THE iREAD4SKILLS PROJECT

iRead4Skills: *Intelligent Reading Improvement System for Fundamental and Transversal Skills Development*

Main results

- Open access intelligent system that **evaluates texts complexity** and **suggests the appropriate readings** according to the user literacy level & assists trainers and text producers in **creating or adapting texts** with the appropriate level of complexity.
- Languages: French, Portuguese and Spanish



THE iREAD4SKILLS PROJECT

Main goals & impact

- Help **low-literacy individuals to autonomously access reading materials** interesting to them
- Help **teachers & trainers select relevant reading materials** for low-literacy adults
- Help **teachers, trainers & content producers to adapt written materials** for low-literacy individuals
- **Motivate and improve reading skills & access to information and culture**



CONSORTIUM



Raquel Amaro

iRead4Skills Project Coordinator, NOVA FCSH Portugal



Regina Duarte

Ministry of Education Portugal



Thomas François

UCL Team Leader, Belgium



Xavier Blanco

UAB Team Leader, Spain



Jorge Baptista

INESC-ID Team Leader, Portugal



Marcos Garcia

USC Team Leader, Spain



Franz Clément

LISER Team Leader, Luxembourg



João Almeida

MindShaker Team leader, Portugal



ADVISORY BOARD



Luís Rothes

PIAAC, OCDE, Portugal



Cécilia Märki

SVEB FSEA, Switzerland



Anne Mességué

ANLCI, France



Zoltán Várkonyi

ESBN, Hungary

ETHICS BOARD



João Queirós

PIAAC, OCDE, Portugal



Ulises Cortés

UPC, Spain.



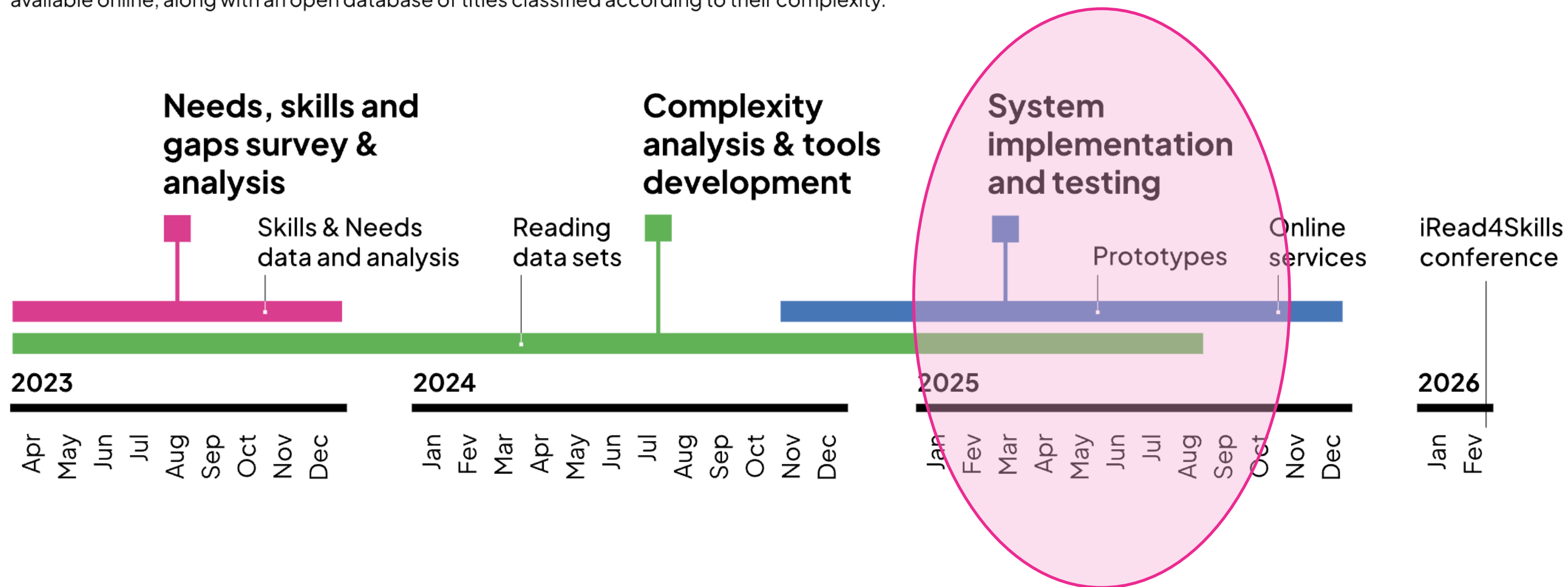
Dagmar Monett Díaz

HWR Berlin, Germany



Project Timeline

Departing from information and data collected collaboratively, we will conceive and develop an intelligent complexity classifier and writing assistant that will be freely available online, along with an open database of titles classified according to their complexity.



R&D QUESTIONS

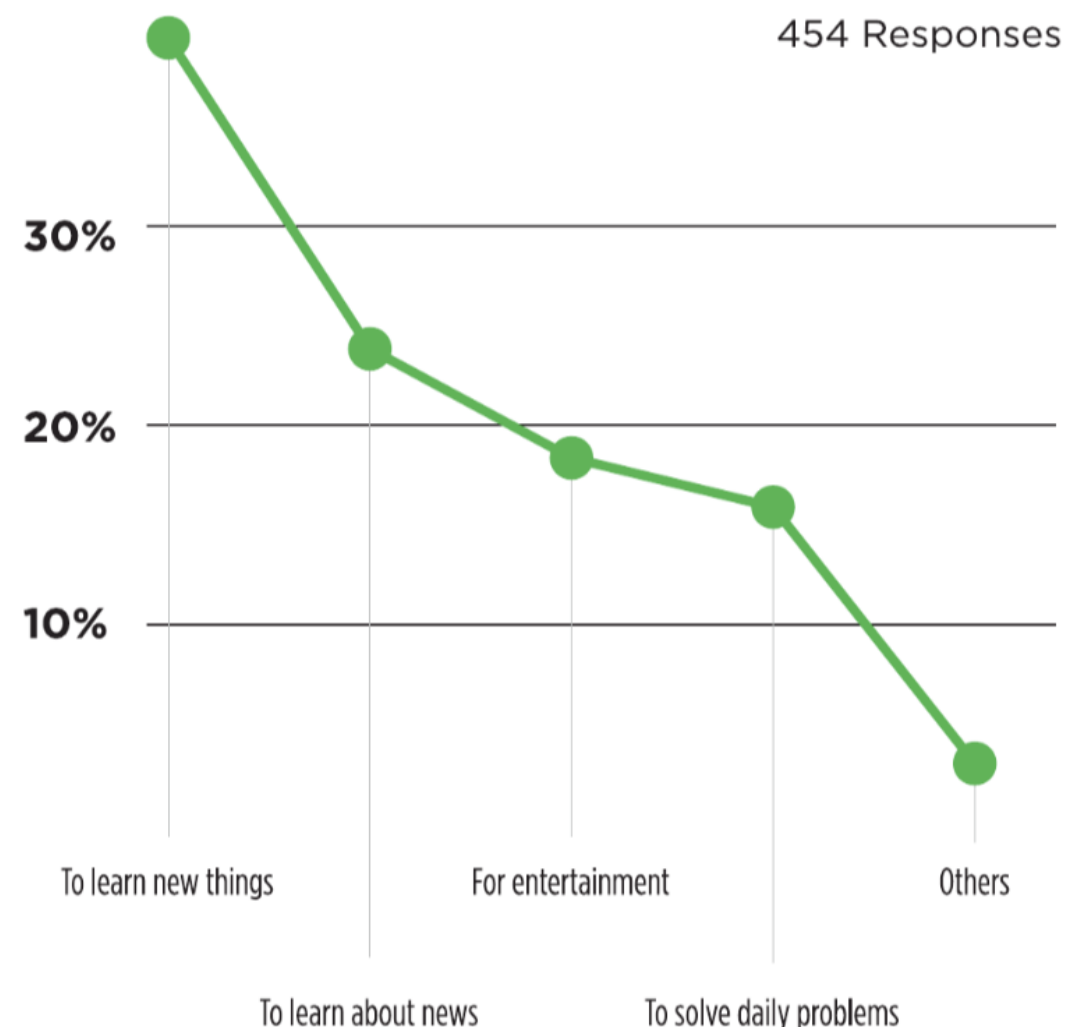
- What are the **features of text complexity** involved in the reading skills of **native adult learners**?
- How do **adult learners vs. trainers and specialists** perceive text complexity?
- How do NLP complexity analysis **systems perform/improve when developed cooperatively with their target users**?
- How to **design an inclusive and intelligent interface** with adequate and customised results for both learners and trainers?



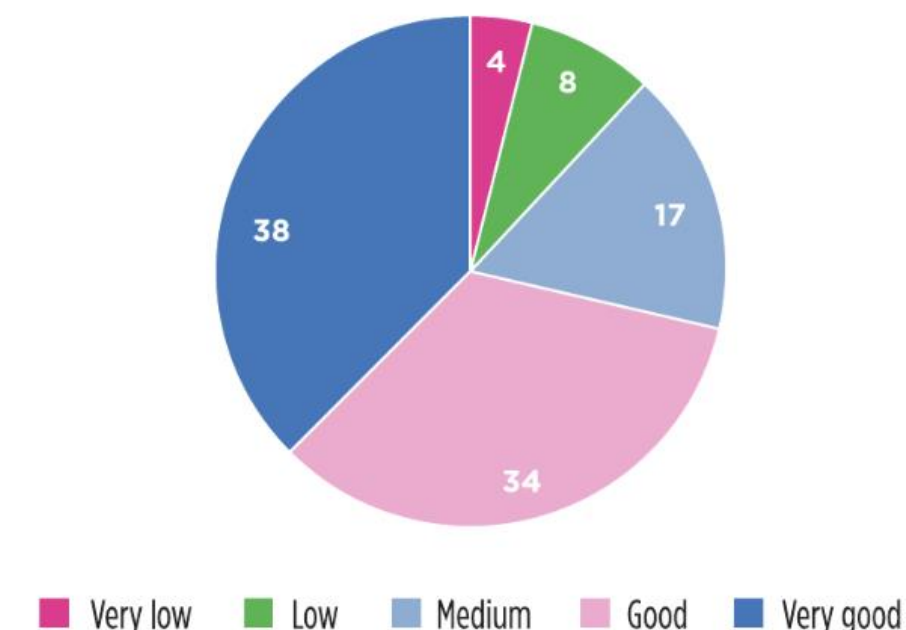
iRead4Skills SURVEYS

- Improved reading skills have a positive impact on other professional abilities, such as teamwork.
- Training increased awareness of literacy issues, though many respondents initially downplayed their difficulties.
- Employees who encounter reading difficulties at work are often hesitant to seek assistance.
- Respondents had mixed views on whether their reading difficulties caused other types of difficulties.
- Employed respondents agreed that their improved reading skills had a positive impact on other professional abilities.

WHAT DO LOW LITERACY PEOPLE READ FOR?

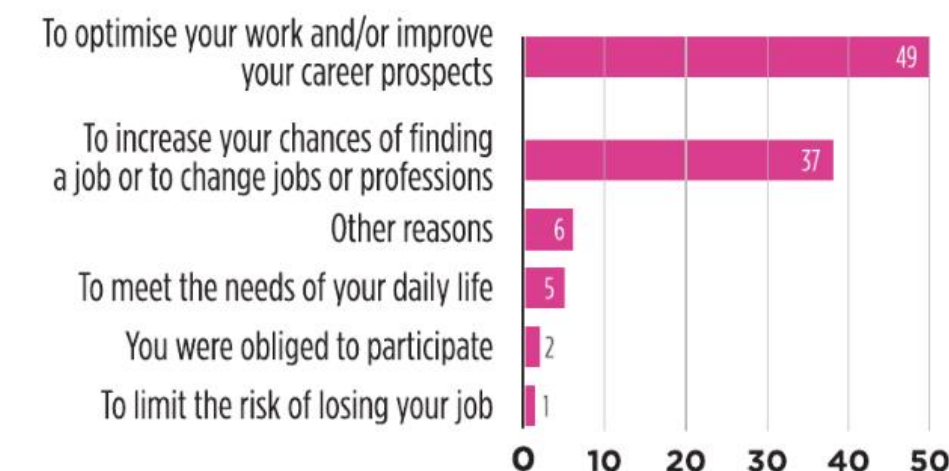


PRE-TRAINING PERCEPTION OF READING SKILLS IN RELATION TO EVERYDAY NEEDS (IN %)



Field: Respondents who expressed themselves on the adequacy of their reading skills and their everyday needs prior to training (n=277).

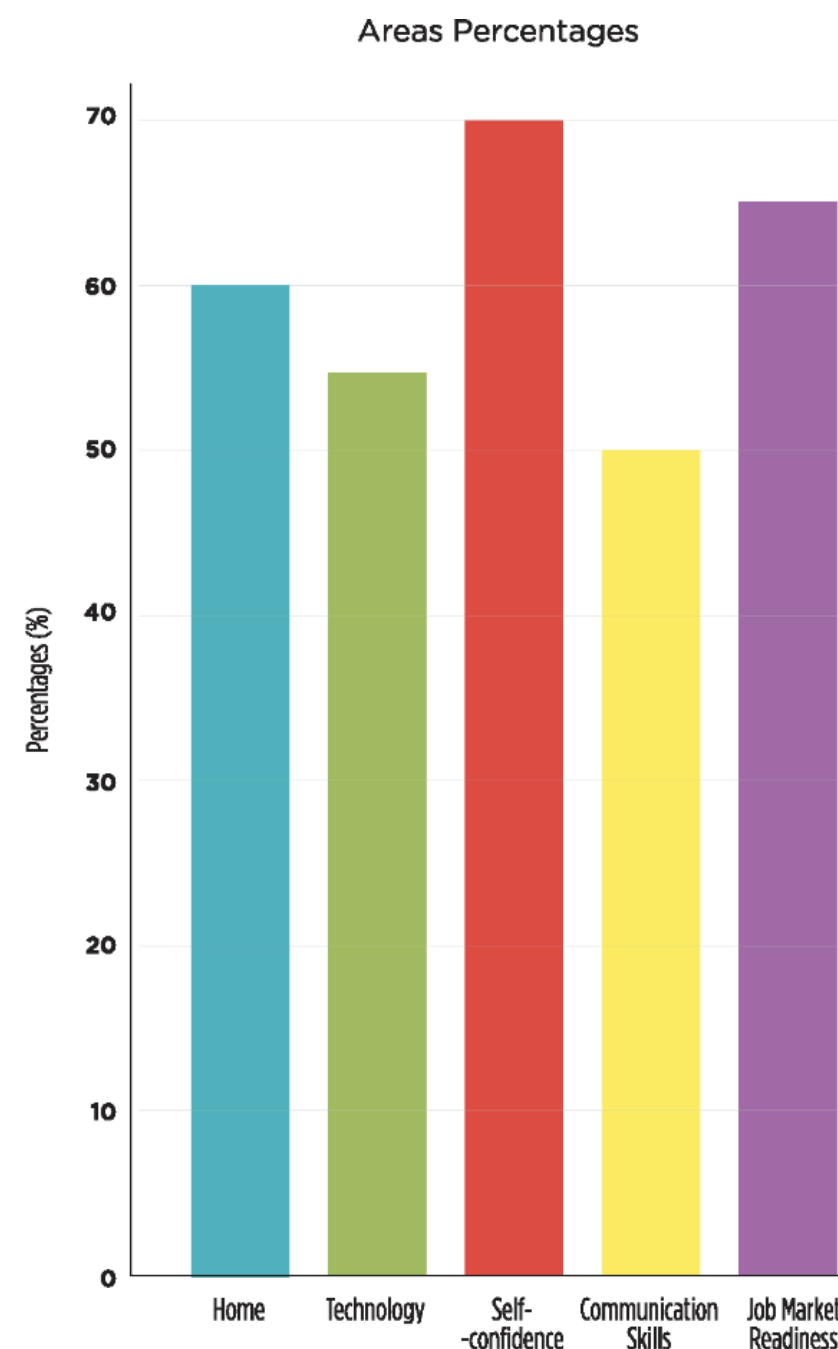
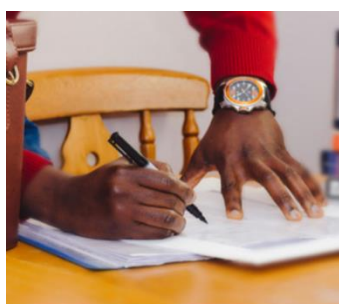
MAIN REASONS WHY RESPONDENTS TOOK THE READING COURSE (IN %)



Field: Respondents who provided information on their motivation to follow a training course (n=311)

iRead4Skills SURVEYS

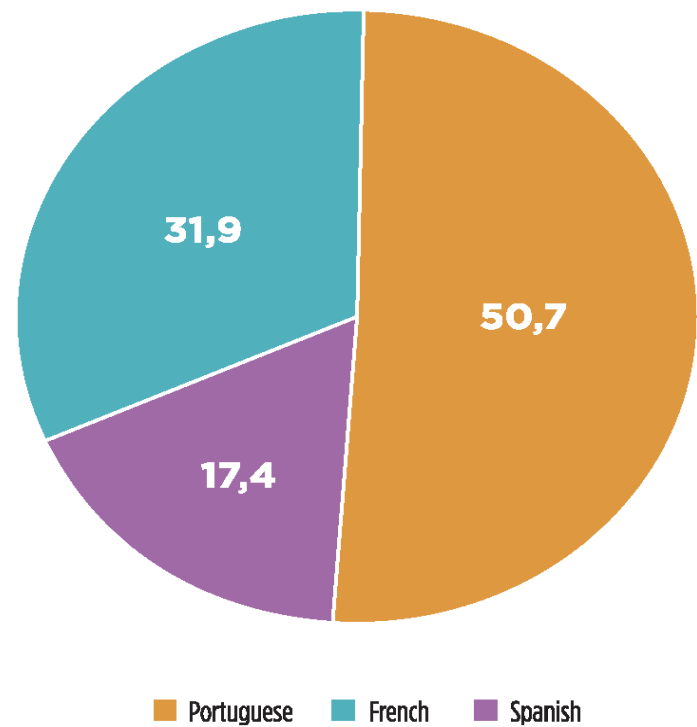
- Participants predominantly read to learn new things and stay informed.
- Lease agreements, advertisements, etc., are challenging, with many participants either not reading or fully understanding these.
- Transport timetables and disruption notices are generally understood, but specific information on strikes poses difficulties.
- Product packaging and restaurant prices are usually understood, though complex promotional materials are less accessible.
- Health-related texts, such as prescriptions and medical leaflets, are partially understood, highlighting a gap in comprehension that can affect personal well-being.



Reading skills strongly impact self-confidence (70%) and job market readiness (65%), influencing home life, technology, and communication areas.

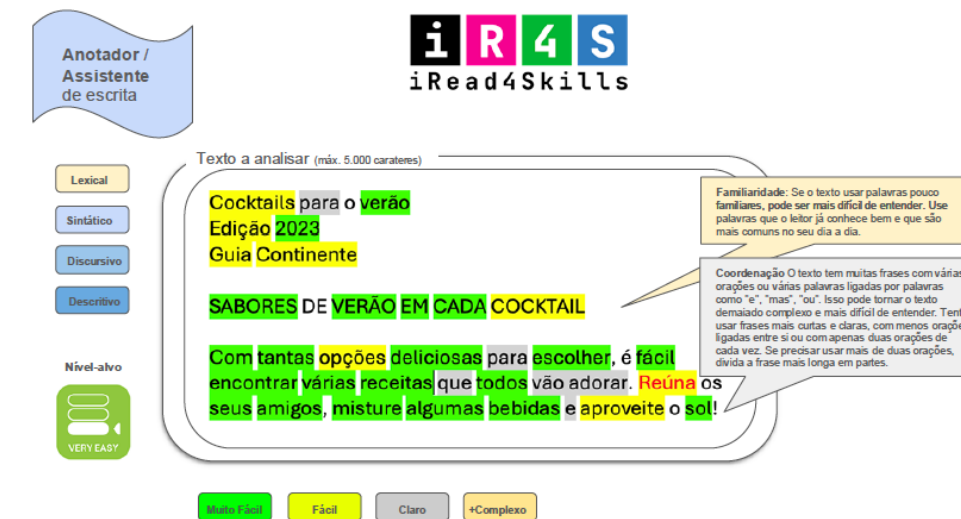
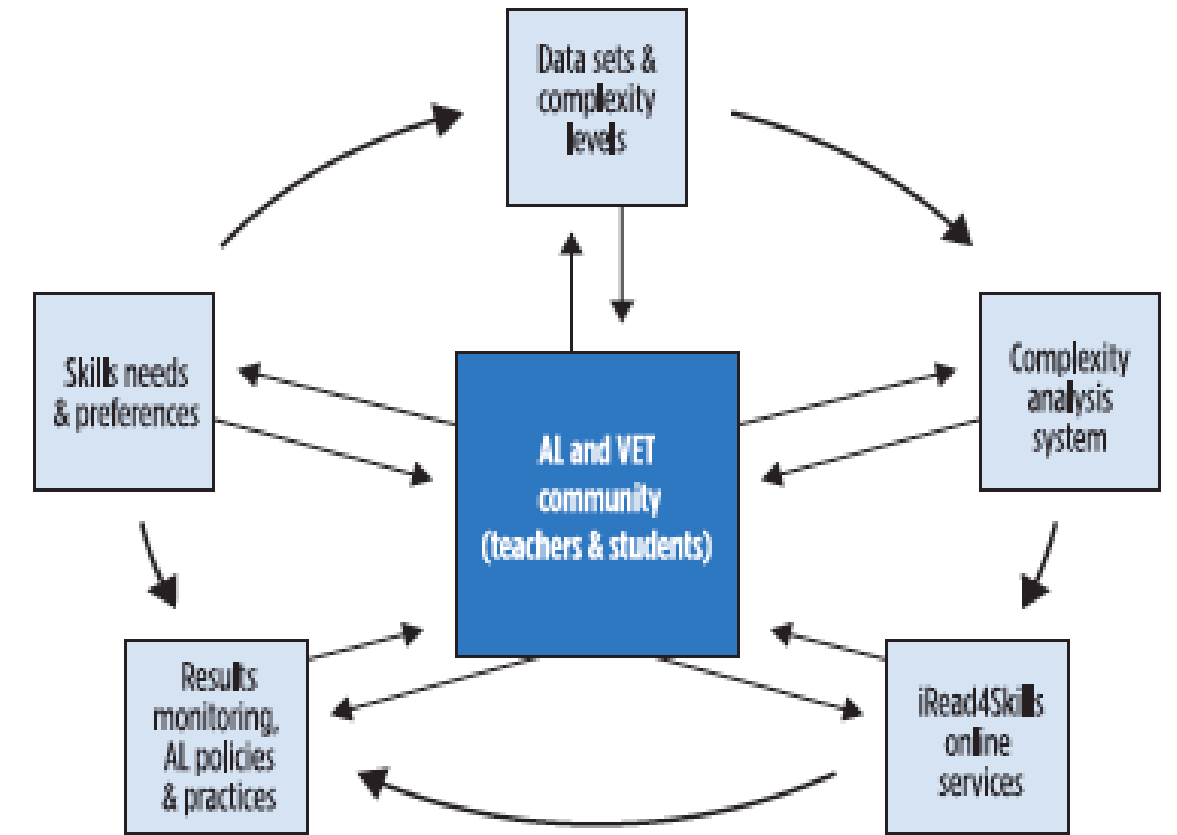
- Many participants reported that their reading difficulties negatively impacted their proficiency in other areas, such as math and technology skills.
- Personal confidence and job market readiness were also identified as areas affected by literacy challenges, with many respondents noting an improvement after receiving reading training.
- Despite the training, 40% of learners still found reading complex documents difficult, although they acknowledged improvements in related professional skills.

CO-CREATION & COOPERATION PROCESSES

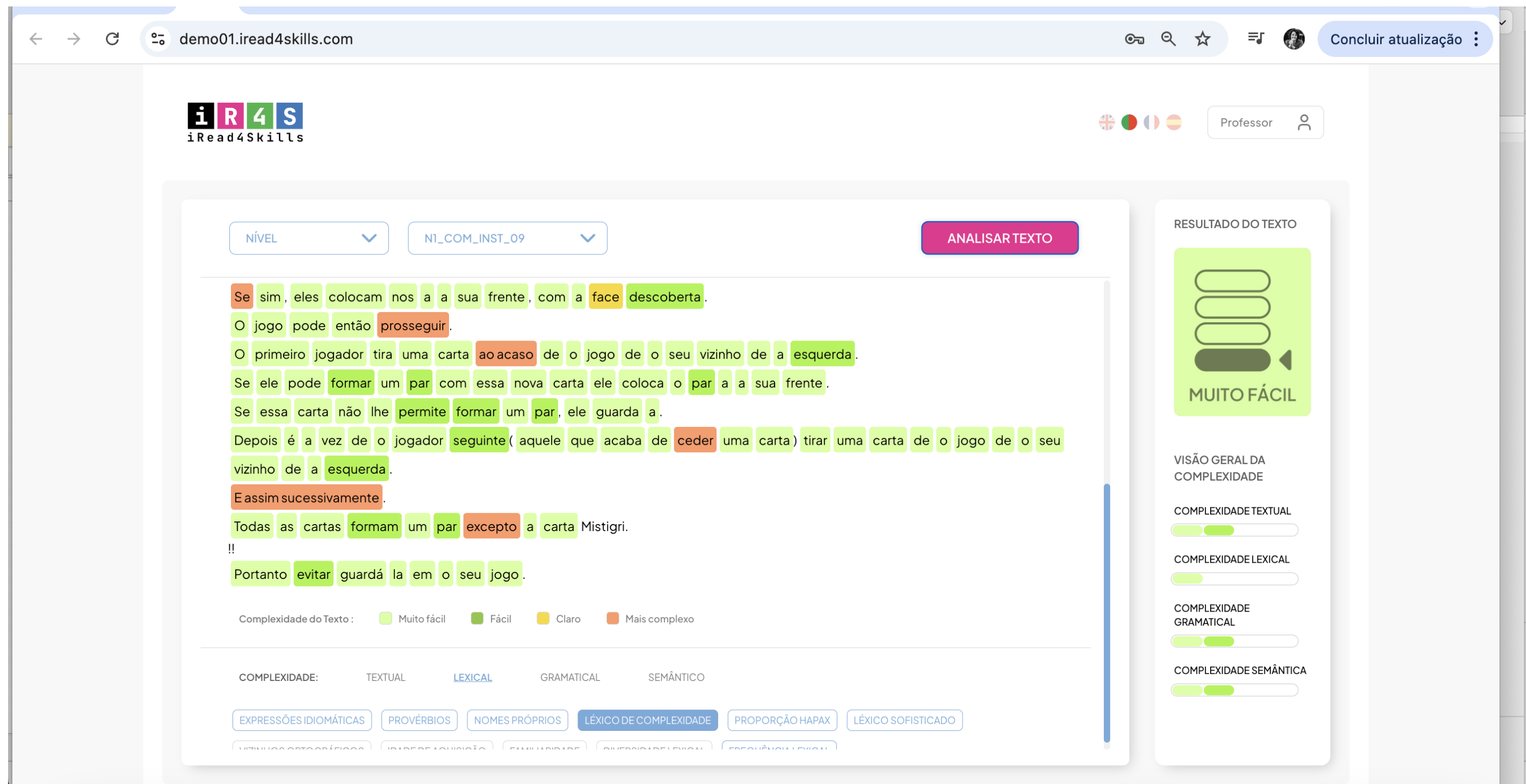


Engaged entities, per language.

- Co-creation workshops
- Pilot testing & design.
- Large-scale testing with students and trainers

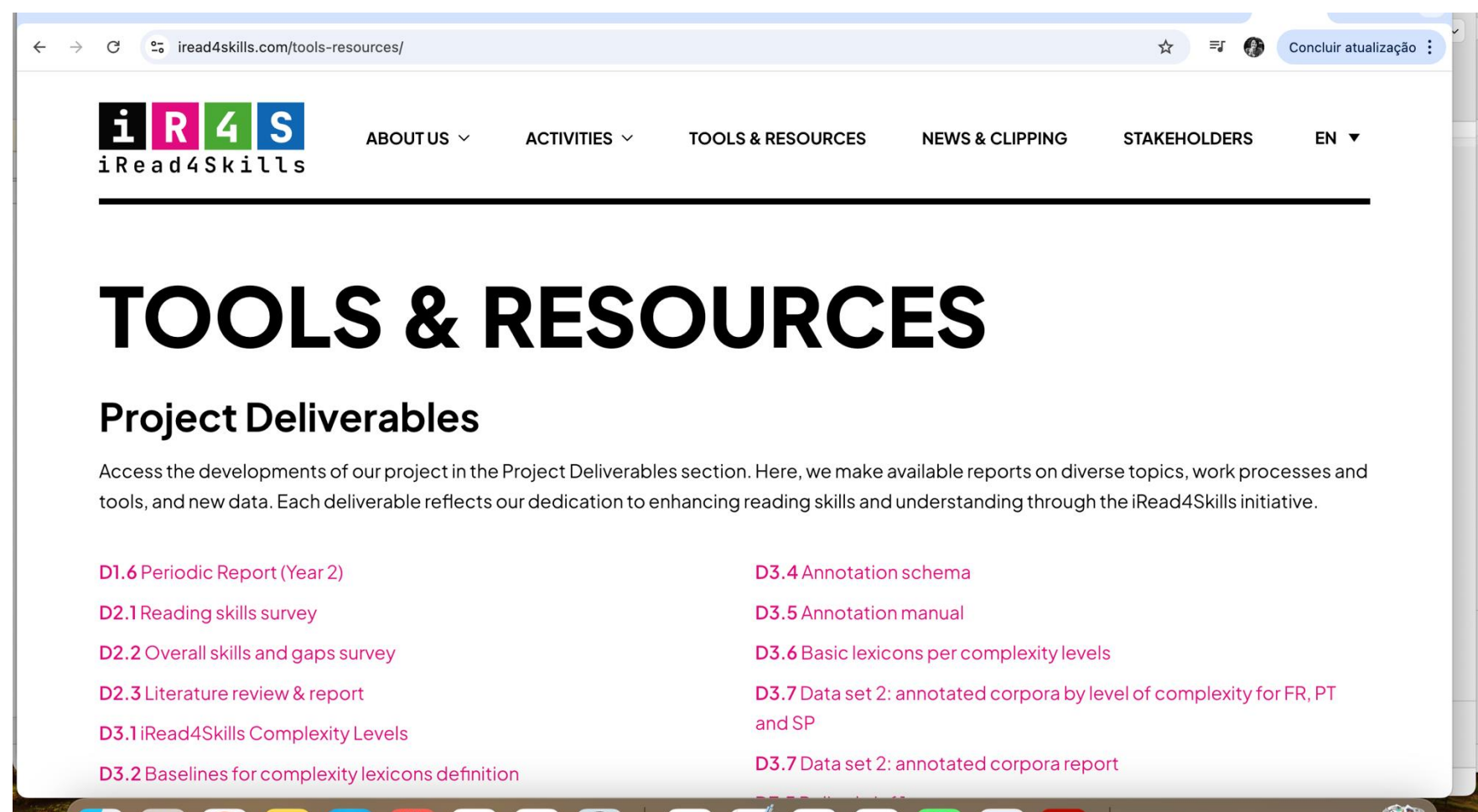


DEMO - try it at the Marketplace



The screenshot displays the iRead4Skills web application interface. At the top, there is a navigation bar with the iR4S logo, language selection icons (UK, FR, ES), and a user profile labeled 'Professor'. Below the navigation bar, the main content area features a text analysis tool. On the left, there are dropdown menus for 'NÍVEL' and 'N1_COM_INST_09', and a pink button labeled 'ANALISAR TEXTO'. The central text area contains a paragraph of Portuguese text with words highlighted in green, orange, and red. Below the text, there is a legend for 'Complexidade do Texto' with color-coded boxes: green for 'Muito fácil', dark green for 'Fácil', yellow for 'Claro', and orange for 'Mais complexo'. At the bottom, there are tabs for 'COMPLEXIDADE: TEXTUAL, LEXICAL, GRAMATICAL, SEMÂNTICO' and several filter buttons like 'EXPRESSIONES IDIOMÁTICAS', 'PROVÉRBIOS', 'NOMES PRÓPRIOS', 'LÉXICO DE COMPLEXIDADE', 'PROPORÇÃO HAPAX', and 'LÉXICO SOFISTICADO'. On the right side, a sidebar titled 'RESULTADO DO TEXTO' shows a green progress indicator and the text 'MUITO FÁCIL'. Below this, there are four sections for 'VISÃO GERAL DA COMPLEXIDADE' with sliders for 'COMPLEXIDADE TEXTUAL', 'COMPLEXIDADE LEXICAL', 'COMPLEXIDADE GRAMATICAL', and 'COMPLEXIDADE SEMÂNTICA'.

FIND THE PROJECT RESULTS



zenodo

JOIN US JUNE, 16th



PROJECT MEETING

Join us for the project meeting on July 16th, 2025, taking place at the Universidad de Santiago de Compostela in Santiago de Compostela, Spain, or attend online via Zoom.

EVENT DETAILS

Date: July 16th, 2025

Location (Hybrid): US Compostela, Santiago de Compostela, Spain and Online.

OPEN SESSIONS | JULY 16

11h00-11h30 | CITIUS - Centro Singular de Investigación en Tecnoloxías Intelixentes
iRead4Skills Project presentation - Marcos G. Gonzalez (USC)

11h30-12h30 | CITIUS - Centro Singular de Investigación en Tecnoloxías Intelixentes
Ethical AI: Balancing Innovation and Responsibility in High-Performance Systems - Ulises Cortés (UPC)

14h00-14h30 | CITIUS - Centro Singular de Investigación en Tecnoloxías Intelixentes
iRead4Skills in Practice: Showcasing System Capabilities - Luis Correia (Mindshaker)

14h30-15h00 | CITIUS - Centro Singular de Investigación en Tecnoloxías Intelixentes
Insights from PIAAC: Ethical Challenges in Adult Education and Literacy Assessment - João Queirós (PIAAC)

For more information or registration, please contact iread4skills@fcs.unl.pt



OPEN SESSIONS

Consortium Meeting & Progress Meeting

Hybrid Sessions | University of Santiago de Compostela and Online



July 16 | 11h00-11h30



iRead4Skills Project presentation
Marcos G. Gonzalez (USC)

July 16 | 13h30-14h00



iRead4Skills in Practice: Showcasing System Capabilities
Luis Correia (Mindshaker)

July 16 | 11h30-12h30



Ethical AI: Balancing Innovation and Responsibility in High-Performance Systems
Ulises Cortés (UPC)

July 16 | 14h00-15h00



Insights from PIAAC: Ethical Challenges in Adult Education and Literacy Assessment
João Queirós (PIAAC)





EBSN QUESTIONS

- How to make written content accessible without disrespecting people's intellectual capacities, including the metalanguage we use in the tools? (it cannot all be in audio or video...)
- How to use the current digital environment to enhance reading skills?

THANK YOU!

Raquel Amaro

raquelamaro@fcsh.unl.pt

CONTACTS

✉ iread4skills@fcsh.unl.pt

🌐 iread4skills.com

SOCIAL MEDIA

X <https://twitter.com/iRead4Skills>

f <https://www.facebook.com/iread4skills.com>

in <https://www.linkedin.com/company/iread4skills/>

▶ <https://www.youtube.com/@iRead4Skills>



Part of this research is supported by the Portuguese national funding through the FCT – Portuguese Foundation for Science and Technology, I.P. as part of the project UID/03213 – Linguistics Research Centre of NOVA University Lisbon (CLUNL).