Tae & Plé

Gaeloideachas: *Guth don Oideachas lán-Ghaeilge agus Gaeltachta*

Scoil Oilibhéir

Dé Máirt, 27 Feabhra 2024

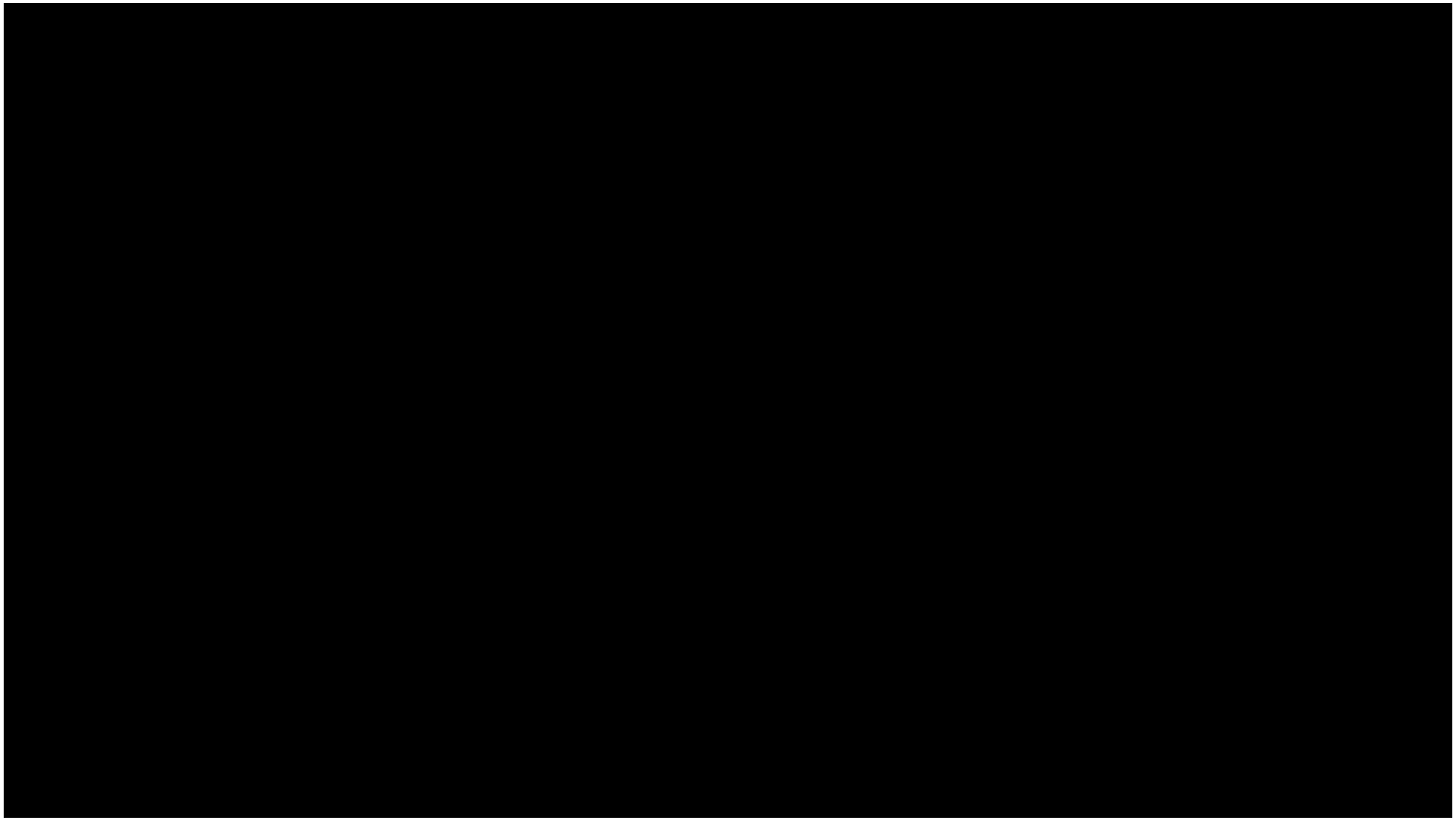
Neasa Ní Chiaráin, abair.ie

Coláiste na Tríonóide

Coláiste na Tríonóide, Baile Átha Cliath
Ollscoil Átha Cliath

An Roinn Turasóireachta, Cultúir, Ealaíon, Gaeltachta, Spóirt agus Meán
Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media

Cé muidne?



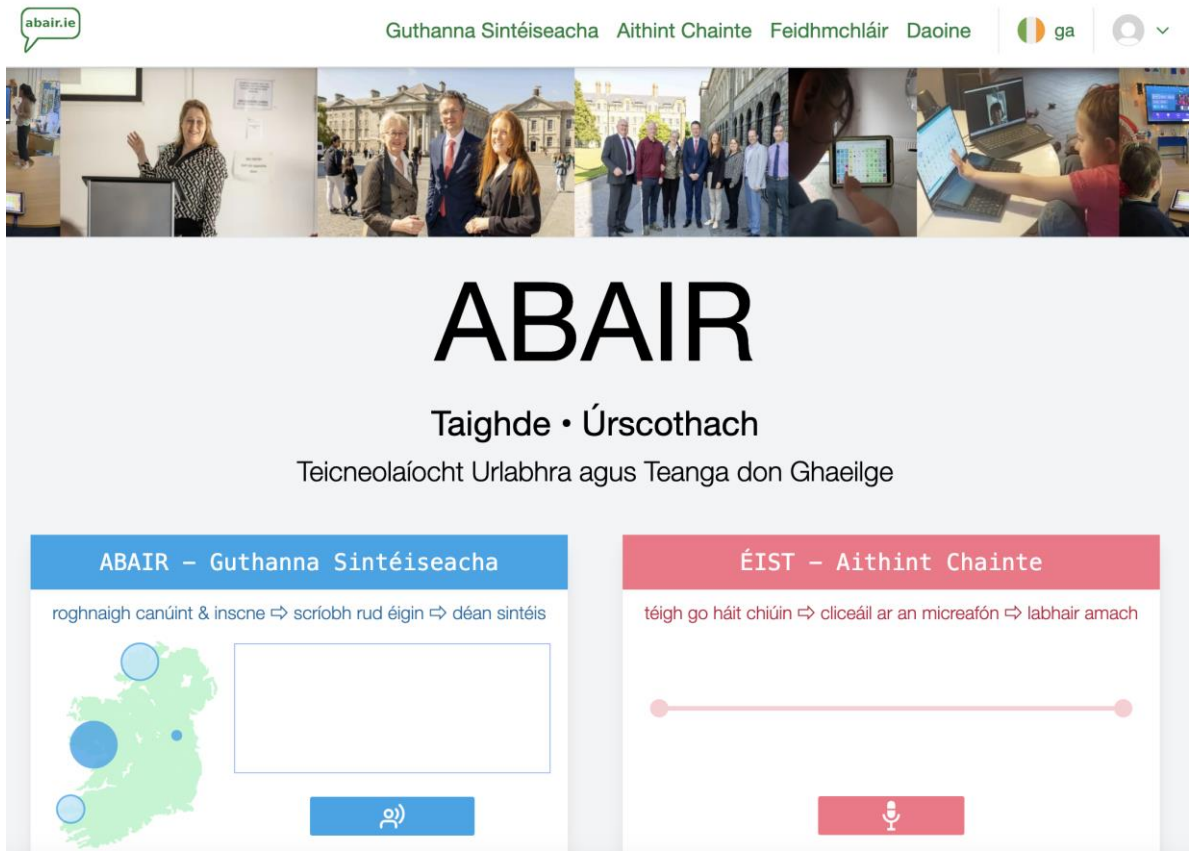
abair.ie

Aidhm
ABAIR.ie

Our mission at ABAIR is **to advance speech technology for Irish**.

We focus on creating robust **multidialect** speech **synthesis** and **recognition** tools, tailored to the linguistic nuances of Irish.

Our aim is to build **user-centric applications** that promote inclusivity, empower speakers and learners, and ensure the language's vitality in the digital age.

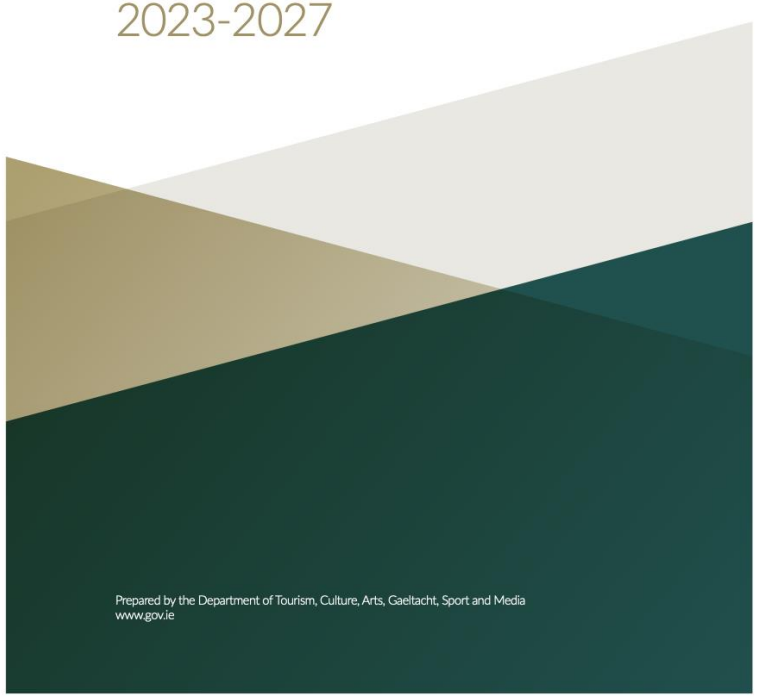


Ba cheart go mbeadh gach duine ábalta feidhmiú díreach chomh maith céanna **trí mheán na Gaeilge sa saol digiteach** agus is féidir trí mheán an Bhéarla / aon cheann de na mórtheangacha eile

Rialtas na hÉireann
Government of Ireland

Digital Plan for the Irish Language

Speech and Language Technologies 2023-2027

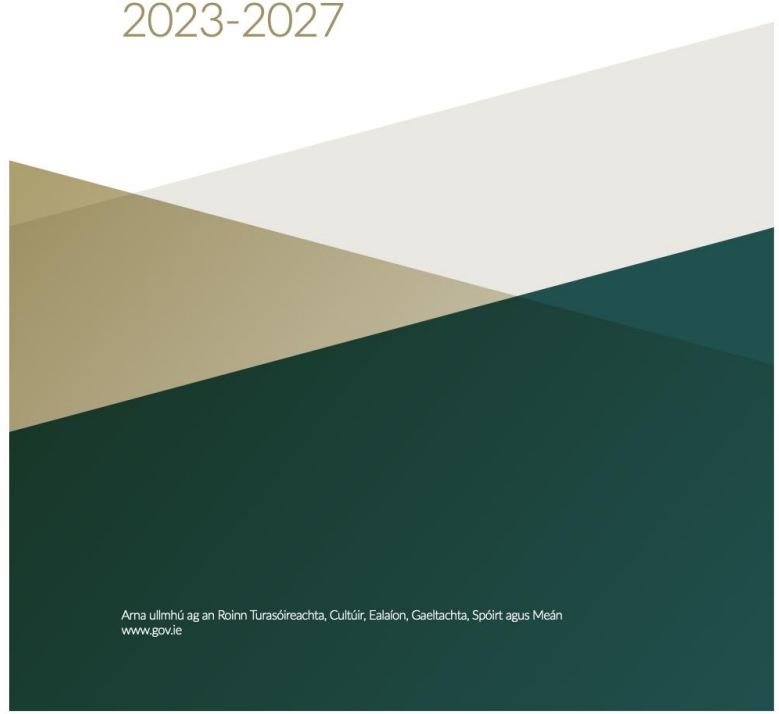


Prepared by the Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media
www.gov.ie

Rialtas na hÉireann
Government of Ireland

Plean Digiteach don Ghaeilge

Teicneolaíochtaí Urlabhra agus Teanga 2023-2027



Arna ullmhú ag an Roinn Turasóireachta, Cultúir, Ealaíon, Gaeltachta, Spóirt agus Meán
www.gov.ie

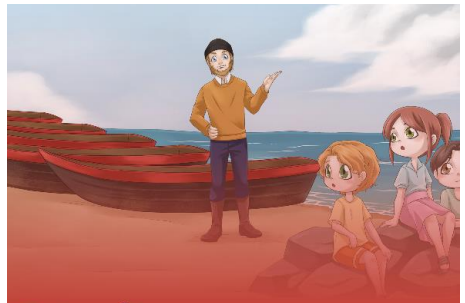
Tionscadail idir lámha...

Geabaire

Gléas cumarsáide AAC le Gaeilge (Augmentative and Alternative Communication) do dhaoine gan urlabhra.

Léitheoir Scáileáin NVDA

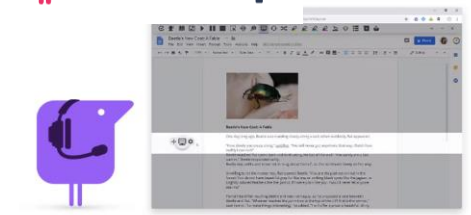
Breiseán le híoslódáil a cheadaíonn dóibh siúd le míchumas radhairc gach a bhfuil ar an scáileáin a léamh os ard

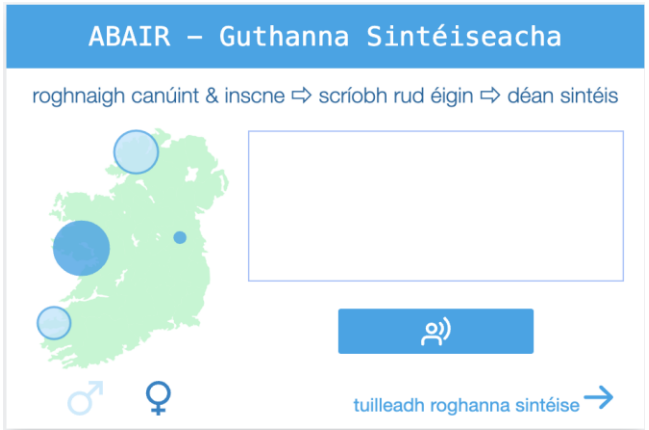


Mol an Óige

Áis d'fhuaimniú agus réamhlitearthacht na Gaeilge do dhaoine óga

texthelp®





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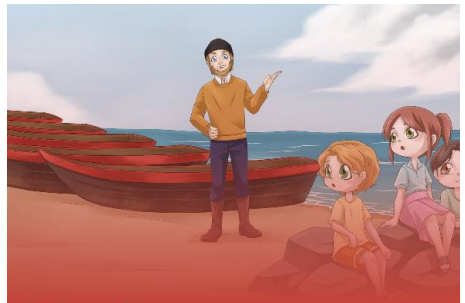

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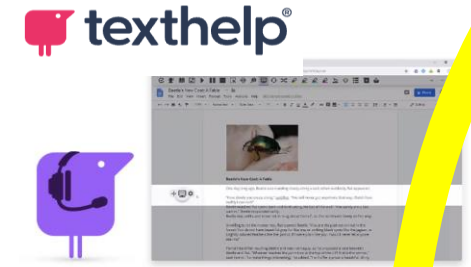
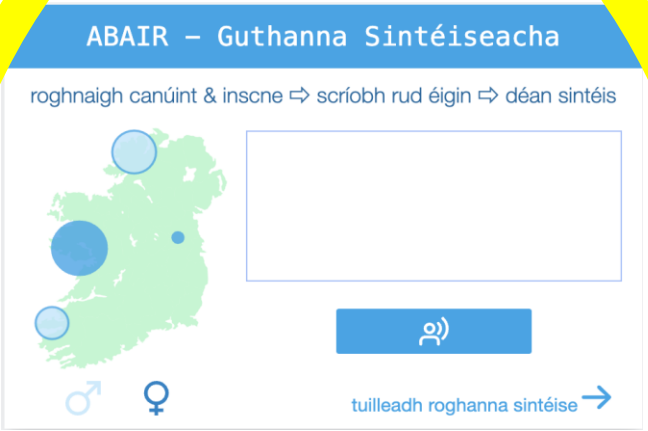
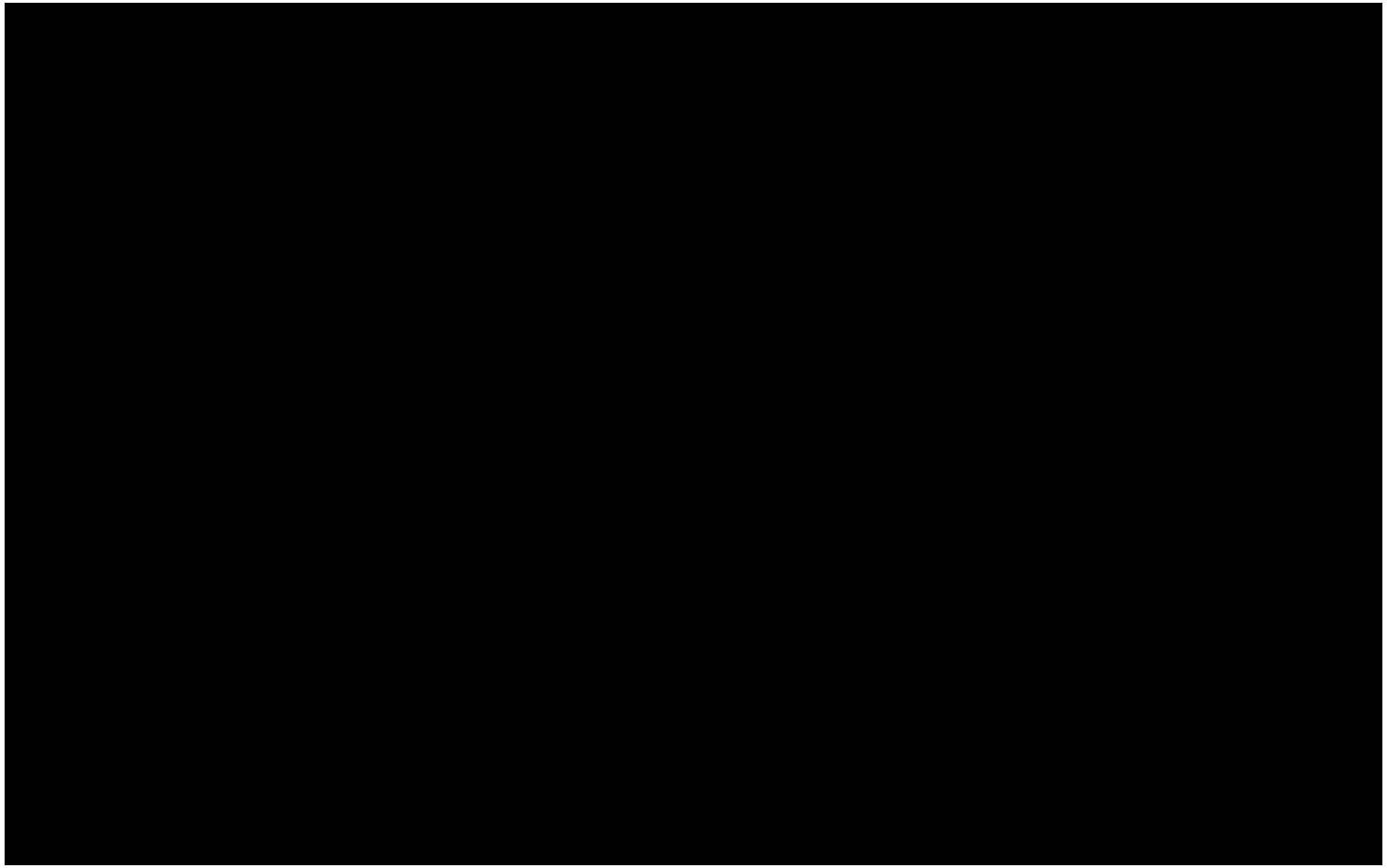
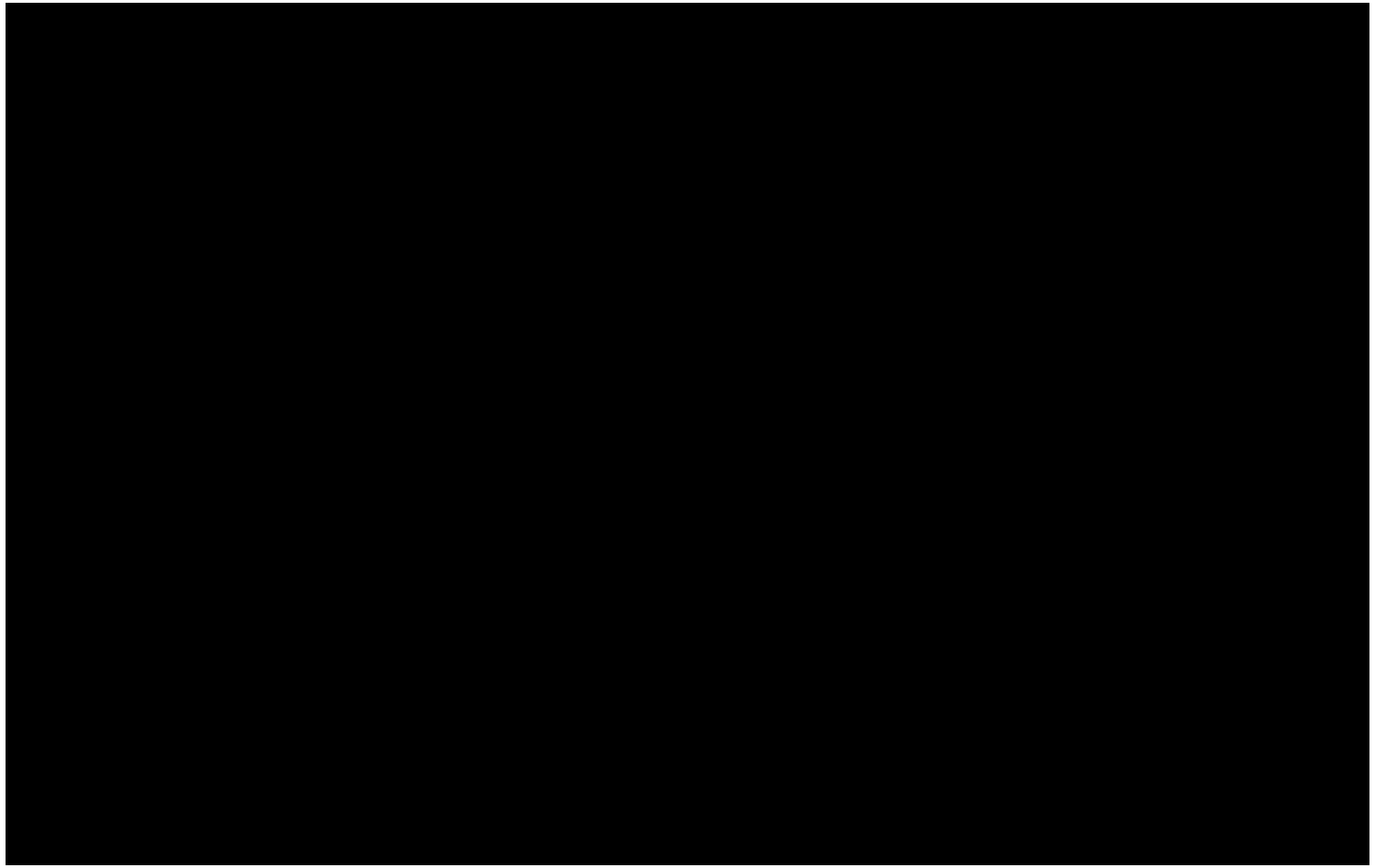




Conas an suíomh a úsáid – sintéis (TTS)

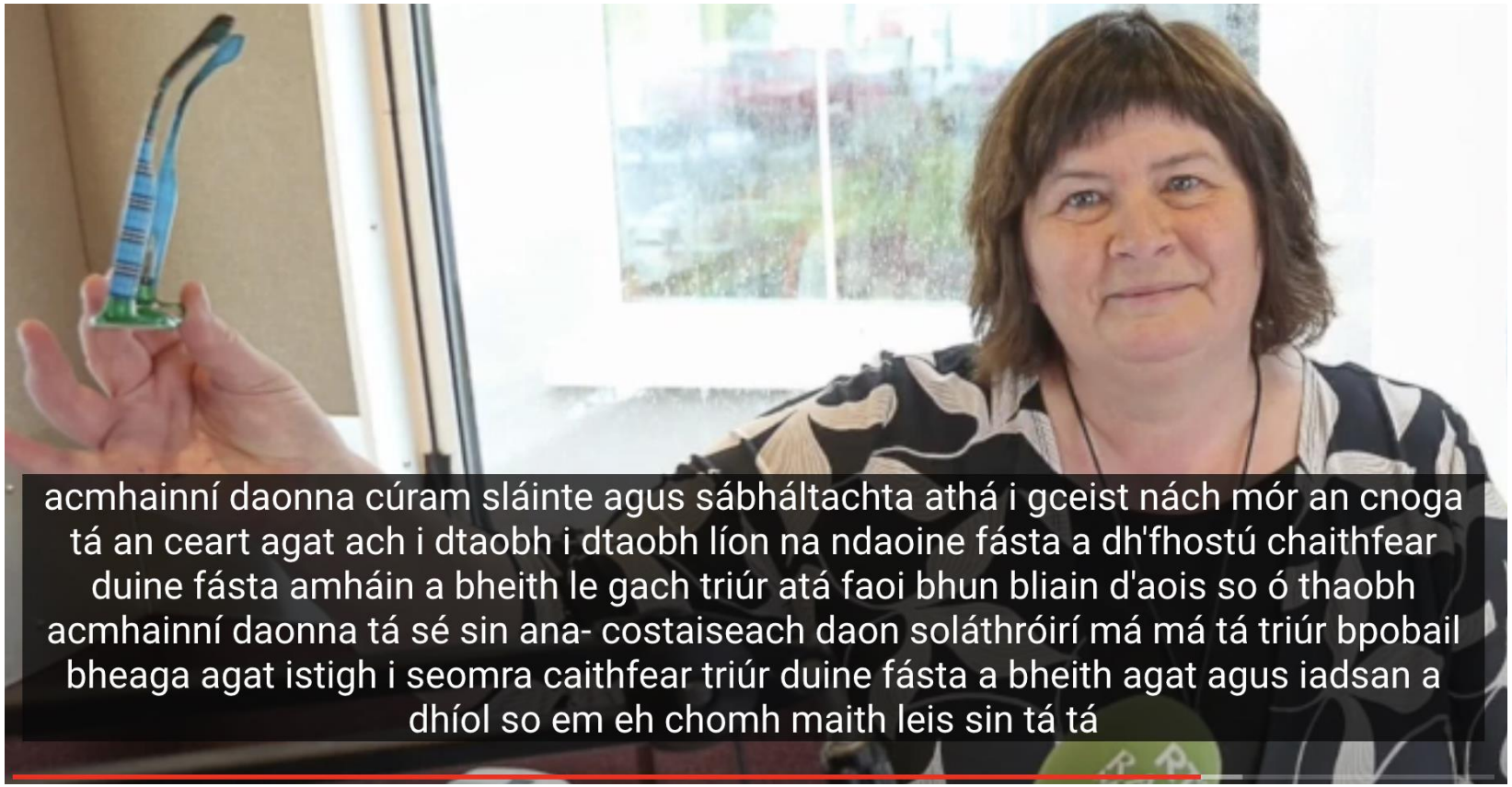


Conas an suíomh a úsáid – aithint chainte (ASR)



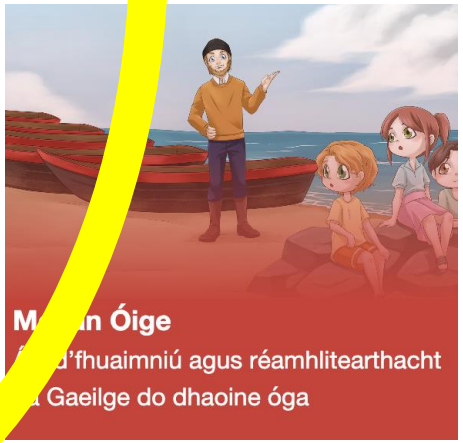
Féidearthachtaí ★ ★ ★ (ASR)

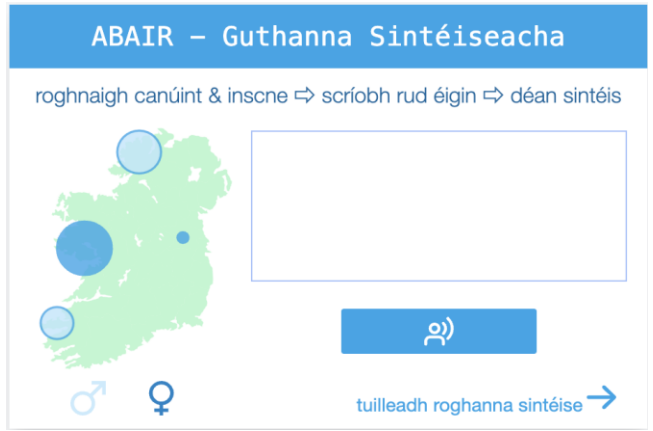
https://youtu.be/61rpxHndpK0?si=Zwo3_ku_q1xaWcj2



Gníomhaíochtaí cruthaitheacha – m.sh. litriú le páistí óga

Tionscadail idir lámha...





Geabaire –
AAC don Ghaeilge

- Aip siombail-bhunaithe…
- …a labhraíonn amach focail agus abairtí le guth sintéiseach ABAIR
- Cumarsáid le duine ar bith, áit ar bith
- Tuiscint ar ghnéithe séimeantacha, comhréire agus moirfeolaíochta na Gaeilge san áireamh
- Taighde atriallach ar siúl faoi láthair -> (labhair le Julie anseo anocht!)

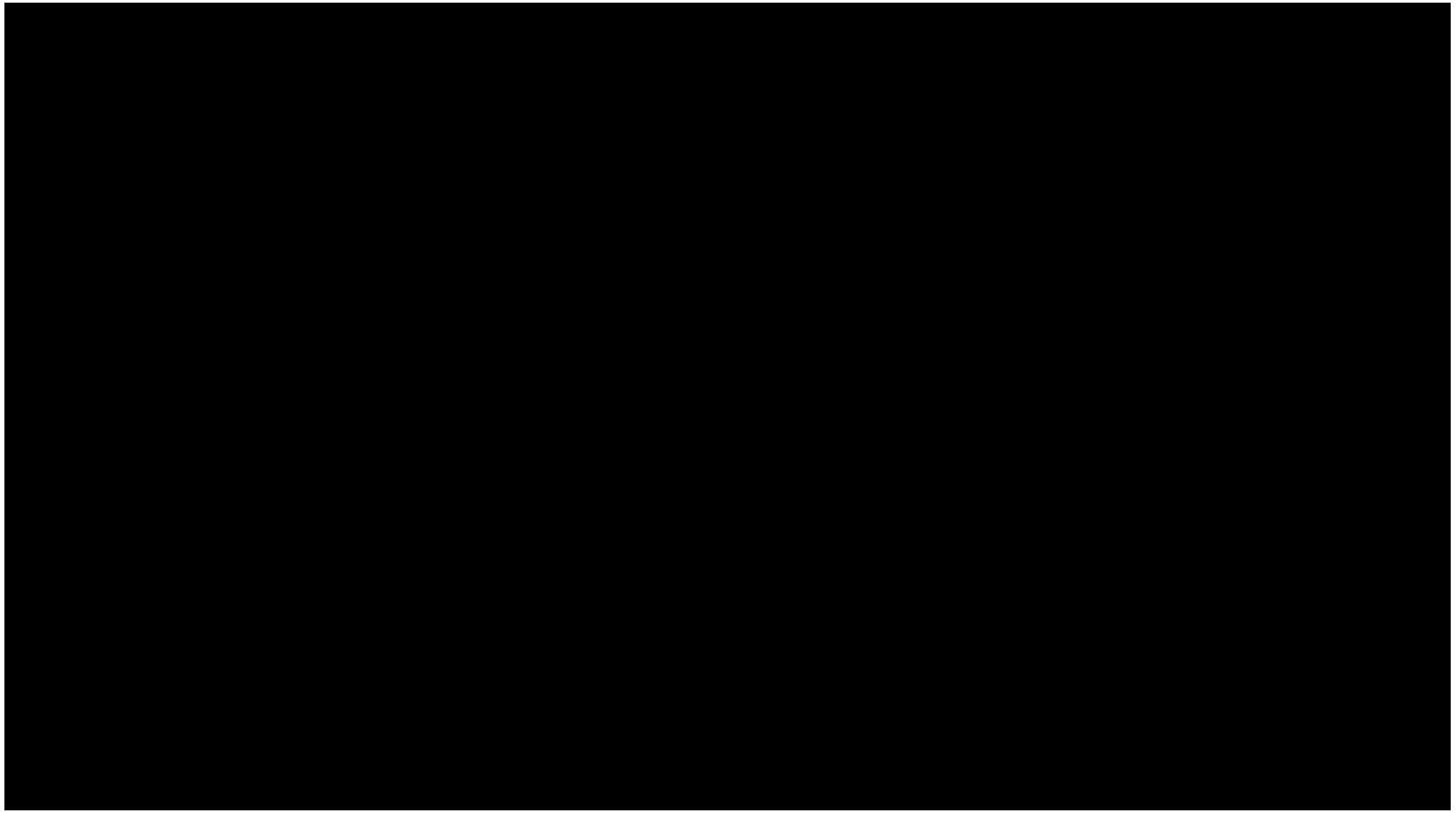
Féach: abair.ie/en/geabaire/support

Geabaire – AAC don Ghaeilge

- A symbols-based app…
- …with ABAIR TTS as voice output
- Communication with anyone, anywhere
- Incorporates Irish language semantics, syntax, morphology…
- Prototype testing currently underway -> (try it out / speak to Julie about it here this evening!)

Féach: abair.ie/en/geabaire/support

Geabaire – AAC don Ghaeilge



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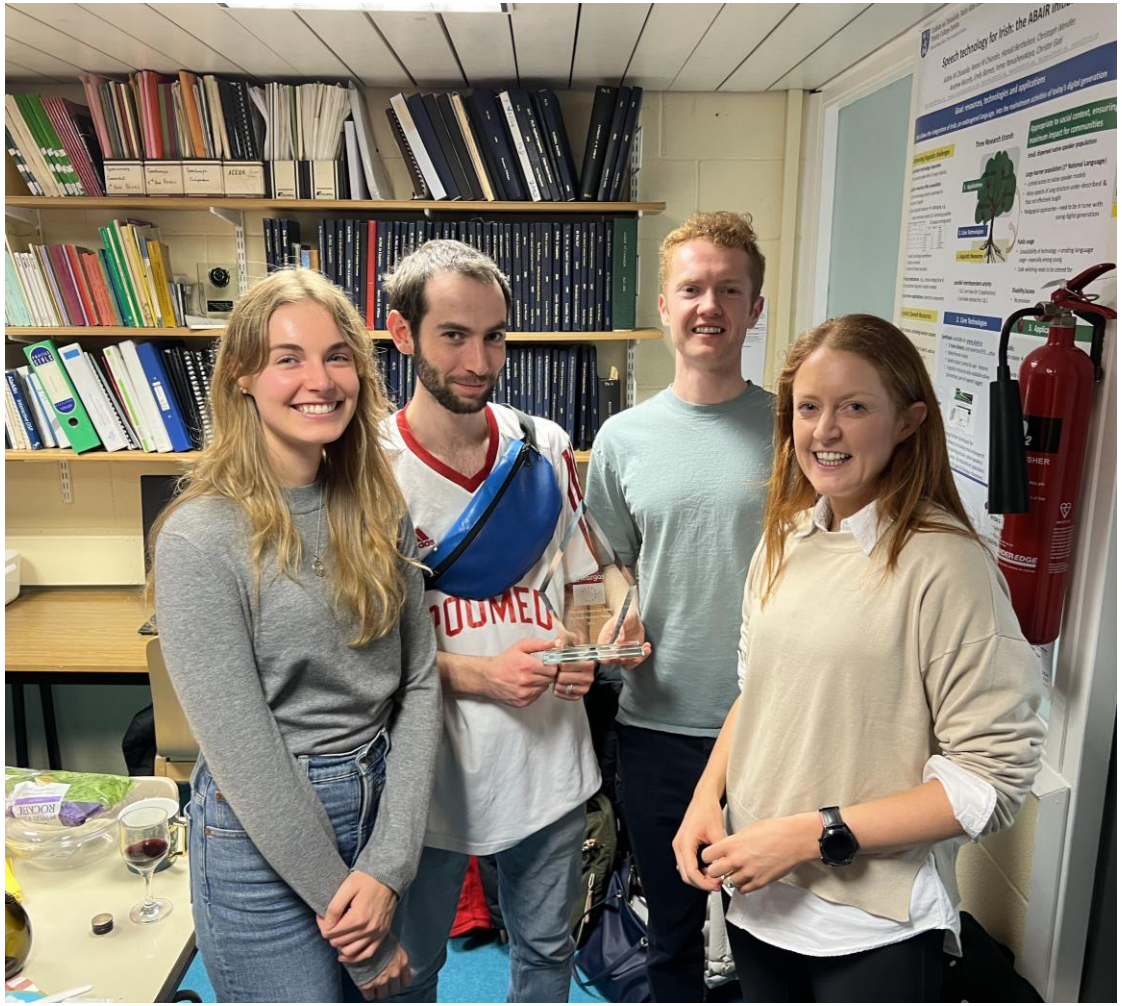

Fios: grúpa taighde FRT-chliste

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FIoS: An Sprioc

Develop intelligent tutoring systems with the latest developments in speech and language technology for Irish at their core

- make available banks of high quality, carefully curated learning resources that can help teachers with lesson preparation
- track student progress, difficulties and errors, going through structured subject content to provide feedback and adjust the level of difficulty to create an optimal learning path
- gather learner corpora
- design suitable interventions, e.g. to promote phonological awareness among learners

scealai.abair.ie

Ardán foghlama leis na teicneolaíochtaí urlabhra & teanga ina chroílár

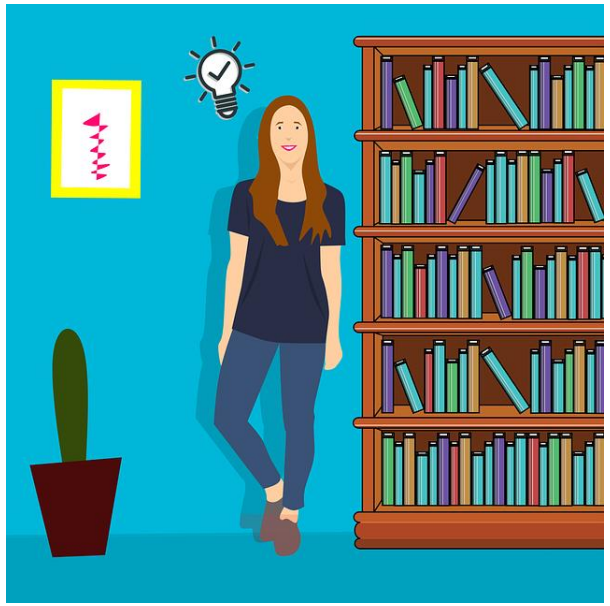
An Irish iCALL platform with speech & language technologies at its core

An Scéalaí *‘the Storyteller’*

An Scéalaí: cé dó é?

iCALL Research & Irish Speech and Language Technology

Foghlaimeoirí + Múinteoirí: autonomous reflective language learning practice integrating the 4 language skills
...Neamhspleáchas a chumasú



Taighdeoirí: corpora - offers insight into autonomous language learning processes ... inform curriculum development

Forbairt ar **theicneolaíocht na hurlabhra**: to cater effectively for learners, real world use -> need to gather large amount of learner data

An Scéalaí – ardán oideachasúil

Platform development

Holistic

4 skills – speaking, writing, listening, reading

Integrating speech and language tools to provide a rich learning environment for the autonomous learner as well as for class groups

Intelligent-CALL -

Corrective feedback to learners

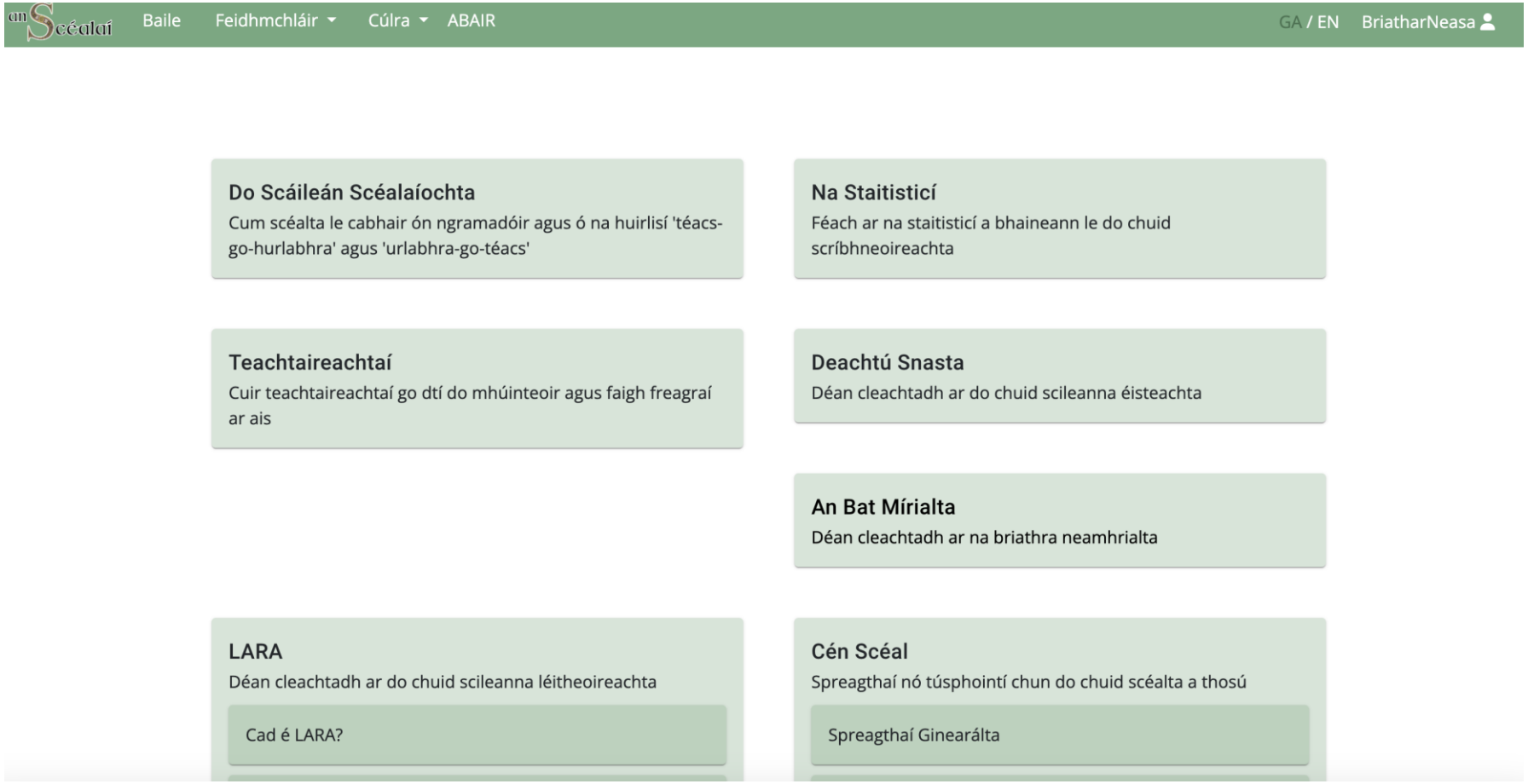
Gathering empirical data as learners engage with the platform

This is a growing platform, which is becoming 'cleverer' as it grows

Summary: the *An Scéalaí* approach

- Spelling is a phonic rule: it's to do with the sound
  - ✓ Writing is essentially sound based and makes the phonic regularities of the spelling system come to life
- As learners practice writing they're encouraged to think of spelling as a phonic-based system
  - ✓ not purely a spelling rule you have to learn
- **The heart of what An Scéalaí is about**: to develop writing and spelling in a way that is totally linked to the sound
- This is where the *An Scéalaí* approach of **integrating speech technology as core** alongside NLP capabilities is so important!

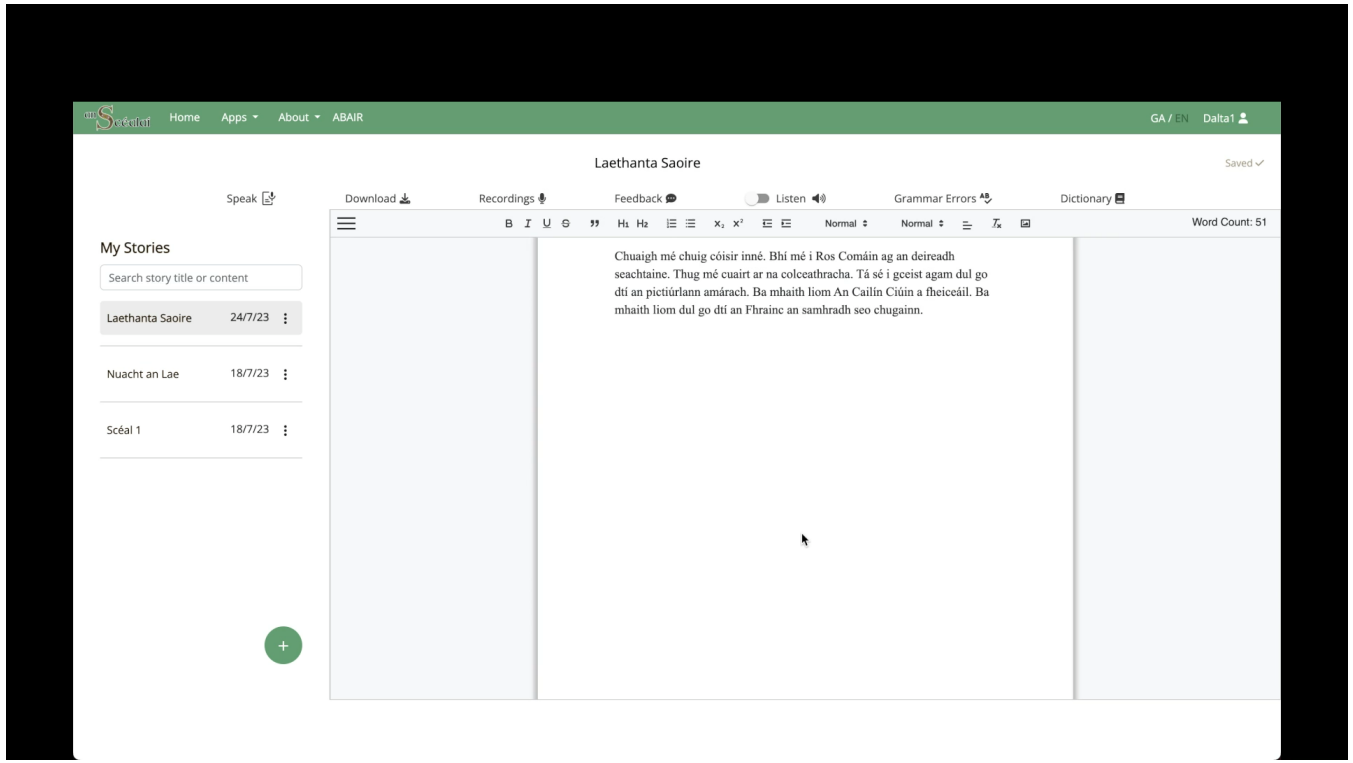
Feidhmchláir éagsúla



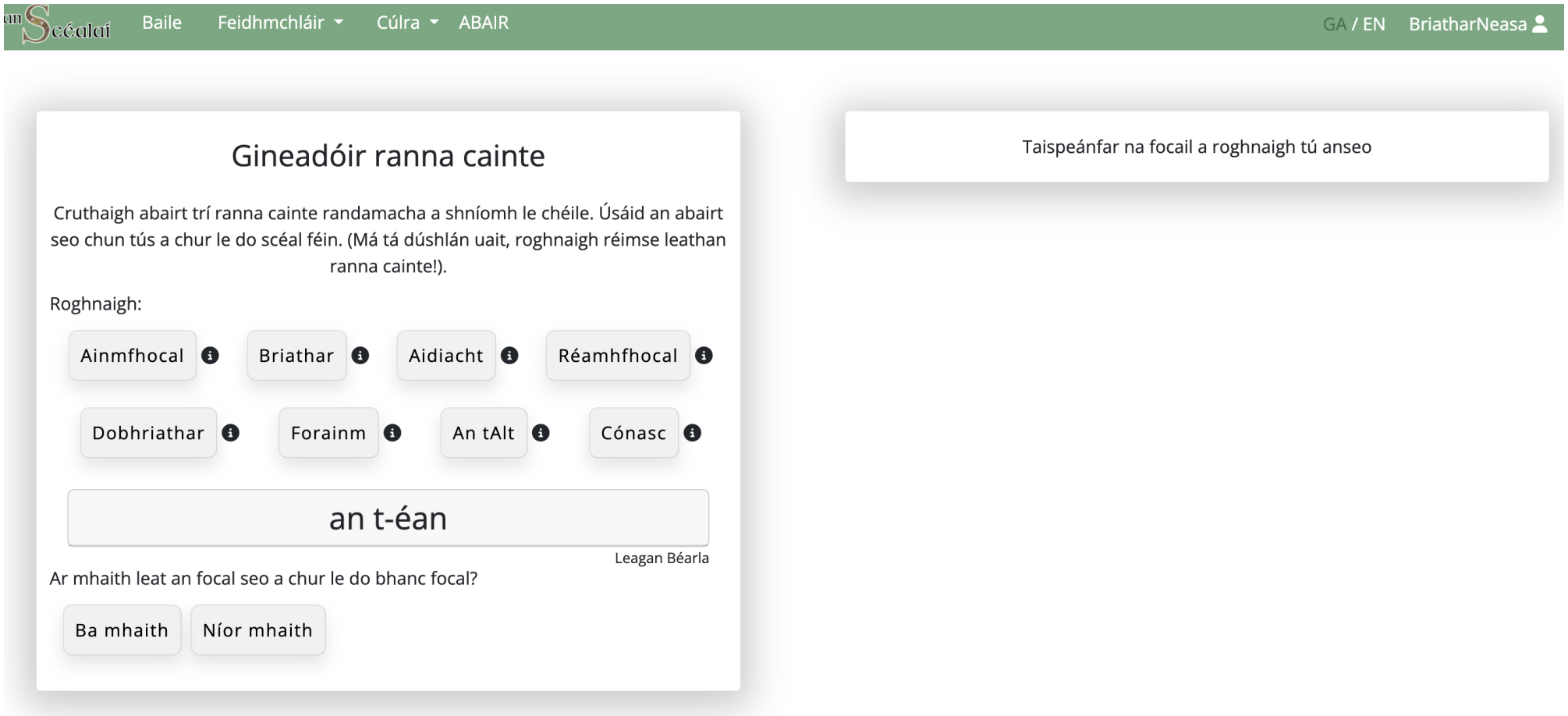
Compose story:

Type or Talk (ASR)

- **Features for Learners**
  - Access to previous stories
  - Dictionary lookup
  - Prooflisten (using TTS)
  - Grammar checking
  - Pronunciation practice (TTS + ASR)
  - Teacher feedback (via written/voice notes)
  - Access to statistics dashboard

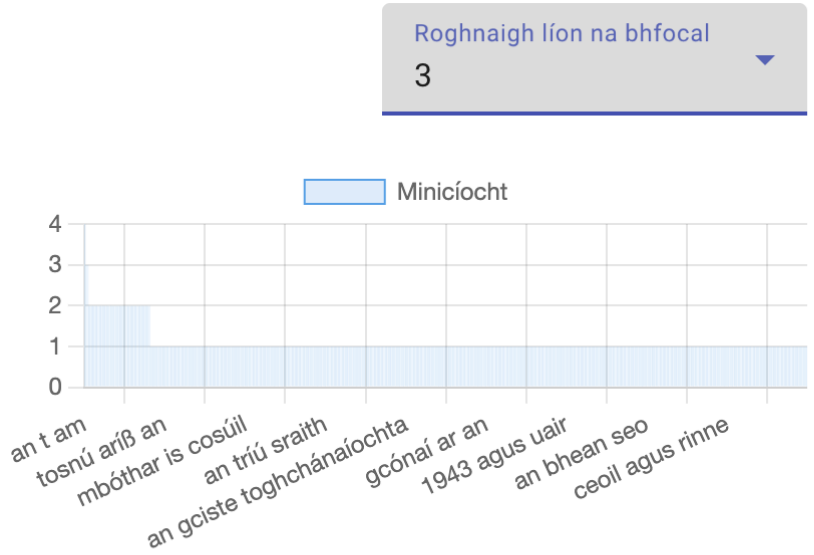


Gineadóir spreagthaí

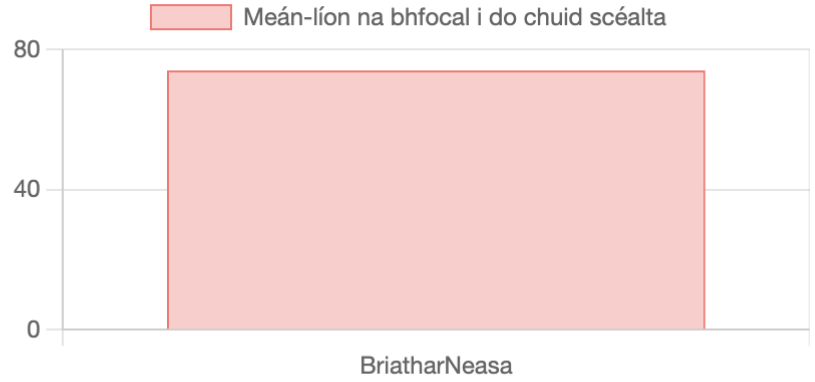


a Staitisticí

Dáileadh na bhfocal/na bhfrásaí



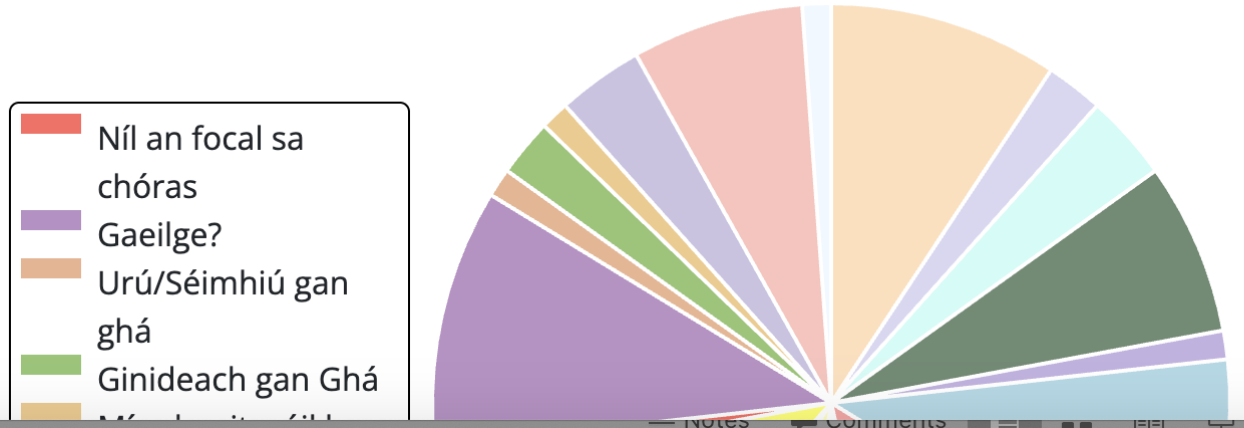
Meán-líon na bhfocal i do chuid scéalta



Focail a cuardaíodh

restaurant	21/2/24
dog	29/1/24
dog	24/11/23

Earráidí Gramadaí



LARA – Learning and Reading Assistant

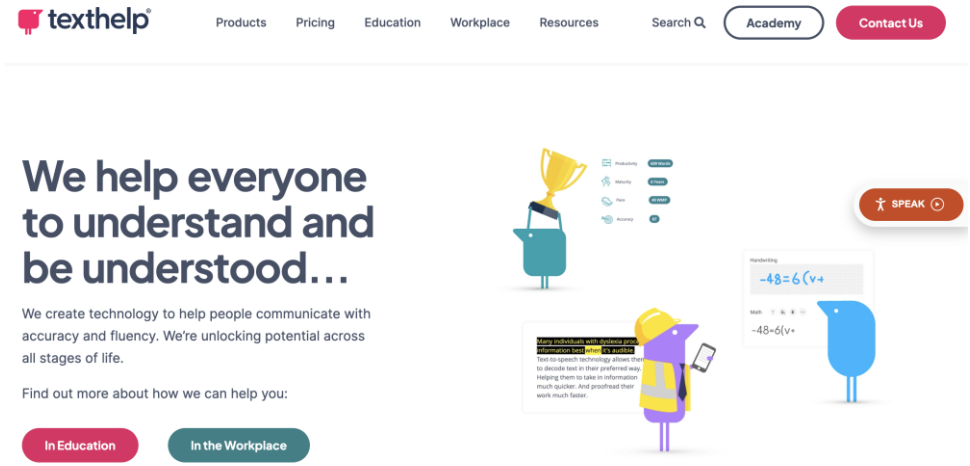
https://lara.abair.ie/Na_Tri_Mhuicin_snc_nemovocabpages/_hyperlinked_text_.html

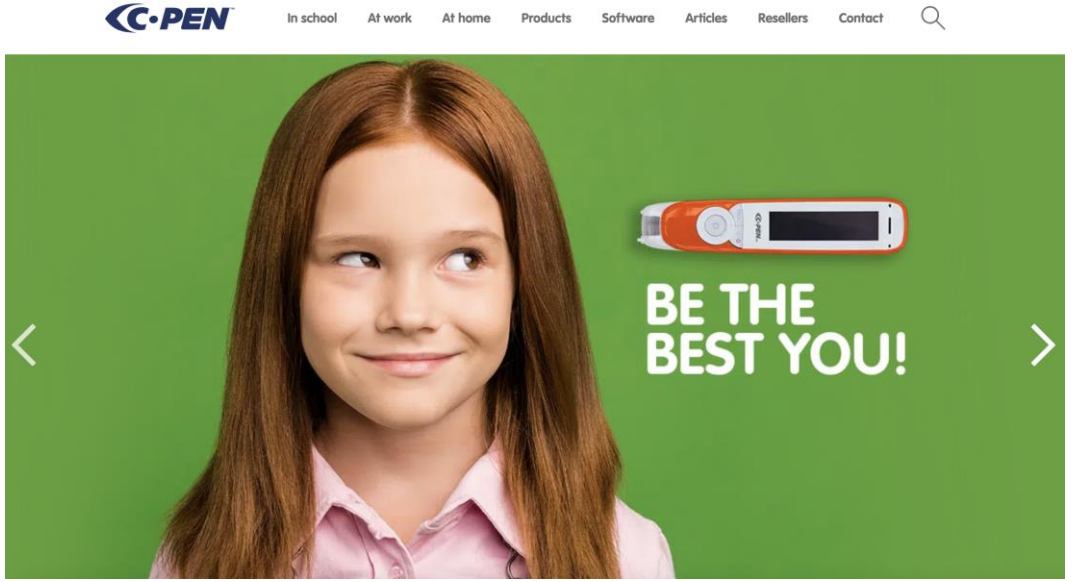
I gcomhar le:

UNIVERSITY OF LIMERICK
OLLSCOIL LUIMNIGH

PRINTTS

***PR**omoting **IN**clusive Mainstream Practice through the provision of Gaeilge and Irish-English **TTS** resources*





Le maoiniú ón: HEA | HIGHER EDUCATION AUTHORITY
AN tÚDARÁS um ARD-OIDEACHAS

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Sin é mo scéalsa...

Go raibh míle maith agaibh!

neasa.nichiarain@tcd.ie

abair.ie (& scealai.abair.ie)

abair.ie

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An Chomhairle um Oideachas Gaeltachta & Gaelscolaíochta

S20 PLEAN GNÍOMHAÍOCHTA 2018-2022
Ár dTeanga, Ár bPobal

S20 STRAITÉIS 20 BLIAIN DON GHAEILGE 2010-2030
Ár dTeanga, Ár bPobal

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