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Digital applications and infrastructures

Communities, Languages, and Activities App (ENACT)

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CULTURA* SÄÄTIÖ



UAB
Universitat Autònoma
de Barcelona



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1. Introduction

This report is a summary of activities carried out as part of Output 2: Digital applications and infrastructures.

The outcomes of this output include:

- the ENACT web app which can be accessed on: <https://www.enacteuropa.com>
- a set of online video tutorials and printable user guides for using the tool, both for creation of new activities or for engaging with existing ones. These can be found at: <https://www.enacteuropa.com/?q=user-guides>
- a project website which provides project information and updates, and which is also the main access point to the developed web app. Project updates can be found under the News tab: <https://www.enacteuropa.com/?q=news>

2. Methodology for the ENACT web app design

We built on the well-established H5P.org interactive media engine and our partners' experience in Linguacuisine to develop a progressive web app tailored for the creation of, and engagement with interactive digital media (e.g. interactive videos and interactive virtual 360 videos) for task-based learning of languages and cultures. H5P is used as the underlying engine as it is an open-source community driven project that supports an impressive range of interactivity options over a range of media types including 360 videos and is used on more than 30,000 web sites including thousands of universities, enterprises, school districts, schools, and other organizations. Developing this as a responsive/progressive web app meant that deliverables can be used on the project website as well as accessed and used on computers, tablets, and mobile devices independently of their operating system. It also meant that people can use it without having to install yet another app on their devices and this will ensure access to a wider audience.

The ENACT web app provides a multilingual, user-friendly interface around the H5P.org engine that is tailored for creating and engaging with culture-based learning activities. The web app also provides tools to support the creation of an online community ranging from commenting and voting on content on the platform to sharing and promoting content using existing mainstream social networking tools by providing shareable links. The aim is to also support the sharing of generated

media on popular platforms (e.g. Youtube and Facebook) to increase awareness of the platform but with limited interactivity based on the constraints and limitations of such platforms.

The interactive, progressive web app has three components:

1. An engagement interface: to interact with interactive digital cultural artefacts
2. A creation interface: to author new cultural activities
3. An online community: to add likes, emoticons, comments, and feedback as well as to share and promote content.

The main innovative aspects of the web app are as follows:

- an innovative platform for virtual language learning and cultural exchanges that take place through interactive digital artefacts, beyond the use of passive media (e.g. videos in Linguacuisine) and beyond focus on one specific task (e.g. cooking as in the Linguacuisine model) to allow interactivity over multiple media types including 360 videos.
- impact through capitalising on existing online communities (such as Youtube, Facebook, Twitter, etc.). The videos of the digital artefacts (without interaction) can be hosted on existing streaming services such as Youtube with our system hosting the interactivity elements on top of that. Thus, a wider community of users is exposed to the raw material and can then be directed through such media to our web app for interactivity. Through the web app, it is also possible to share links to the digital artefacts on other social media. As storage of intensive media such as video can be hosted on existing streaming services, this reduces the cost of sustaining the platform beyond project funding (currently the video hosting is expensive on the Linguacuisine model).
- impact through a web-based design with a responsive and progressive web interface meaning that it is available to a wide range of users as it is cross-platform (i.e. iOS, Android, windows, mac) and work well on different types and sizes of hardware (i.e. phone, tablet, PC, etc.)

Impact and transferability:

The ENACT web app is fully transferable and scalable to be used to represent other languages and cultures worldwide, and to be used in other contexts; formal and informal education with a focus on either language learning or development of intercultural competence. The web app can also be used to promote cultures by cultural organisations. As explained in the innovation section, the design of the web app and its link to media streaming services increases both the range of users who can use

the tool and the range of people who can be made aware of it and the developed media. The source code can be made available as open source (using the extremely open and flexible MIT license).

The H5P engine which the projects builds upon also mainly uses MIT licence (see <https://h5p.org/licensing> for details).

Technically, the ENACT web app is built on the H5P engine with a streamlined and structured package composed of several H5P content types, such as interactive video, hotspots, and drag and drop (Dodds et al., 2021). The main challenge faced during app development was platform compatibility. H5P, PHP, and Drupal were used in the development of the app. Some H5P content types were not compatible with the ENACT web app infrastructure (branching scenarios and virtual tour). Still, the original design plans were largely implemented without loss of any desired functionality.

3. Pedagogy and co-design of the ENACT web app

The pedagogical design of the web app is underpinned by Task-Based Language Teaching (TBLT) criteria (Ellis, 2003) with pre-, during-, and post-task stages which enable learners to focus on linguistic form while engaging in meaningful interaction with the digital materials. The app can also be used for collaborative task completion as learners work together to enact, share, appropriate, and re-enact cultural artefacts and activities from various cultures. Theoretically, the digital artefacts act as catalysts for intercultural exchange and “artifacts and humans together create particular morphologies of action” (Thorne, 2016, p. 189).

More information about the technological, pedagogical, and co-design of the web app with target users can be found in the following publications:

- Dodds, C. B., Whelan, A., Kharrufa, A., & Satar, M. (2021). Virtual exchange facilitated by interactive, digital, cultural artefacts: communities, languages, and activities app (ENACT). In M. Satar (Ed.), *Virtual exchange: towards digital equity in internationalisation* (pp. 101-112). Research-publishing.net. <https://doi.org/10.14705/rpnet.2021.53.1293>
- Satar, M., Seedhouse, P., Kharrufa, A., Bone Dodds, C., Ganassin, S., Whelan, A. (2022). Cultural Tasks for Language Learning and Teaching: The ENACT App. *The FLTMAG, IALLT's free language technology magazine*. <https://fltmag.com/cultural-tasks-enact/>



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- The ENACT Web App The makers of a new app for language-learning on picking up a language through culture. *Babel: The Language Magazine*. Number 35, May 2021.
<https://babelzine.co.uk/babel-number-35-may-2021/>
- A research article is currently under review at the *International Journal of Computer Assisted Language Learning and Teaching* (IJCALLT) <https://www.igi-global.com/journal/international-journal-computer-assisted-language/41023>