

# 8 Virtual exchange facilitated by interactive, digital, cultural artefacts: communities, languages, and activities app (ENACT)

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## Abstract

This chapter is based on a workshop at IVEC 2020 which presented a model of Virtual Exchange (VE) facilitated by interactive, digital, and cultural artefacts created using a progressive web app developed by the EU-funded ENACT project team. The model offers an innovative approach to online intercultural exchange through the opportunity to create, share, appropriate, and re-create cultural artefacts. Drawing on Thorne's (2016) concept of cultural artefacts, the app is designed to enable artefacts as catalysts for intercultural exchange while “artifacts and humans together create particular morphologies of action” (p. 189). The ENACT project aims to develop Open Educational Resources (OER) that will foster intergenerational and intercultural understanding within and between communities; promote opportunities for intergenerational, intercultural interaction; and offer a real-world, immersive learning experience that brings culture to life. The web app is built on the well-established H5P.org interactive media engine tailored for the

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creation of, and engagement with interactive digital media for task-based exchange of cultural activities promoting linguistic, digital, and intercultural communication skills development. This chapter outlines how the ENACT app can be implemented in VE at higher education to facilitate deeper, immersive, virtual intercultural exchange experiences that go beyond talking about culture and that offer hands-on cultural experiences based on learning by doing to ensure equitable experiences to all students.

**Keywords:** open educational resources, ENACT app, cultural artefacts, immersive virtual exchange, virtual exchange for teacher education.

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### 1. Introduction

The ENACT project<sup>5</sup> aims to develop OER that will foster intergenerational and intercultural understanding within and between communities; promote opportunities for intergenerational, intercultural interaction; and offer a real-world, immersive learning experience that brings culture and language to life. The web app is built on the well-established H5P.org interactive media engine tailored for the creation of and engagement with interactive digital media for task-based exchange of cultural activities promoting linguistic, digital, and intercultural communication skills development. It is freely available to anyone in the world, which is expected to support equal digital access to the exploration and creation of cultural content around the globe.

The ENACT project has three main goals. First, we aim to promote two-way knowledge exchange (language, culture, digital skills) and understanding between either host/migrant communities in local languages (intercultural exchange) or youth/senior members of migrant communities in heritage languages (intergenerational exchange). Second, we support the inclusion of

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5. <https://enacteuropa.com/>

university students in the local community by allocating various roles to higher education students in the project activities. Finally, we offer an innovative task-based digital pedagogy for learning and VE between communities worldwide. Our workshop explored the final aim of the incorporation of the ENACT web app in VE projects in higher education.

This chapter introduces the ENACT project and examines how we presented it to transnational participants during the conference, and how we engaged them in interactive activities in order to experience the web app and understand its context.

## **2. Background and research aims**

In this workshop, we proposed that the ENACT web app can act as a tool to trigger social interaction and intercultural dialogue in VE as it enables learners to create, share, appropriate, re-create, and engage with digital interactive cultural artefacts from various cultures. Such cultural digital artefacts can involve introducing others how to dance a specific dance, such as English Morris dancing, how to create certain cultural arts and crafts, such as making a Japanese origami boat, or activities for a specific festival, such as making a Chinese lantern to celebrate the Chinese New Year.

Theoretically, ENACT draws on [Thorne's \(2016\)](#) concept of artefacts and sees the digital artefacts created and shared on the web app as catalysts for intercultural exchange while “artifacts and humans together create particular morphologies of action” ([Thorne, 2016](#), p. 189). On the one hand, we see the web app as a digital medium to facilitate the exchange of languages and cultures at two levels: engagement and creation. First, through engagement with the various features of the web app, people can learn about other languages and cultures presented via the content of the digital artefact. Second, the web app can mediate presentation and expression of one's own languages and cultures facilitated by the content creation steps of the app. On the other hand, we acknowledge that the web app itself has agency in creating and

producing certain “culturally organized systems of activity” (Thorne, 2016, p. 189) through the various affordances it embodies. Thus, technological objects are not perceived as passive tools, but as social actors (Latour, 1996). This perspective enables us to understand the synergies between our design of the app, its affordances, the intercultural exchanges it facilitates, and various representations (artefacts) of cultural activities produced by different communities using the web app.

As Smith and González-Lloret (2020) argue, a language learning software or app “conveys or is at least consistent with, a certain teaching approach, which actively shapes what the teacher and/or user can do with it” (p. 2). The pedagogical design of the ENACT web app is based on task-based language teaching principles. In language learning and teaching, tasks aim “to create a real purpose for language use and to provide a natural context for language study” (Willis, 1996, p. 1). Following task-based language teaching criteria proposed by Ellis (2003), the ENACT web app enables learners to complete cultural activities using the target language, engage in social interaction while exploring or creating these cultural activities, and focus on linguistic form while being engaged in meaningful interaction.

### 3. Operationalising the theory

Based on the above discussion, we established two design principles for the ENACT web app: first, its key role in creating ‘morphologies of action’ in the learning process (Thorne, 2016), and second that this role should be structured within task-based language teaching pedagogy (Smith & González-Lloret, 2020). In task-based language teaching, tasks comprise three stages: pre-task, main task, and post-task (language focus) (Willis, 1996). The pre-task introduces the topic and task, and highlights useful words and phrases. This prepares the learners and helps them understand the task instructions. The main part of the task cycle, or what we refer to as ‘main task’, is the part where learners do the task individually or in small groups. Finally, the language focus, or ‘post-task’ is when learners practise the new words

introduced in the activity, order the activity creation steps, answer questions on content, and reflect on task accomplishment and engage with other users through comments.

Before deciding on developing our own tool, we first explored the possibility of using existing tools that allow the creation of, and engagement with, interactive digital media. We are not aware of any tools that particularly scaffold user design of cultural activities within a simple task-based language learning framework, and especially ones that allow the creation of, in addition to engaging with, interactive content. *Linguacuisine* (Seedhouse, Heslop, & Kharrufa, 2020), while designed for task-based language learning, is dedicated to cooking, and the structure and level of interactivity provided is limited and lacks the flexibility required for this project. As such, we investigated H5P.org as it is a well-established, free, and open-source general interactive content engine. It offers a wide range of multimedia content types including games, quizzes, questionnaires, slide shows, and interactive videos among others. The downside is that H5P simply offers a way to create isolated interactive activities from a long list of interactive media types with no scaffolding for the choice of suitable media types.

We ran exploratory workshops with a total 42 participants (with home and migrant communities) in four countries (UK, Finland, Turkey, and Spain) following the same format in each (Dodds et al., 2020). The goal of these workshops was to carry out a preliminary appraisal of the support needed for the participants in terms of engaging with, structuring, and creating interactive tasks using the H5P.org platform directly. Among the key findings from these workshops were that H5P.org is not a suitable tool due to its lack of structure and scaffolding leaving participants struggling in terms of how to present their cultural activity. As such, what is needed is a system that provides a pedagogical structure to the content creation process to guide the content creators to produce more useful content for learners. The system should also only make available to content creators a subset of the large set of functionalities available in a tool such as H5P. The focus should be on what supports the creation of meaningful, learning focused task-based language learning activities.

## 4. Development of web app

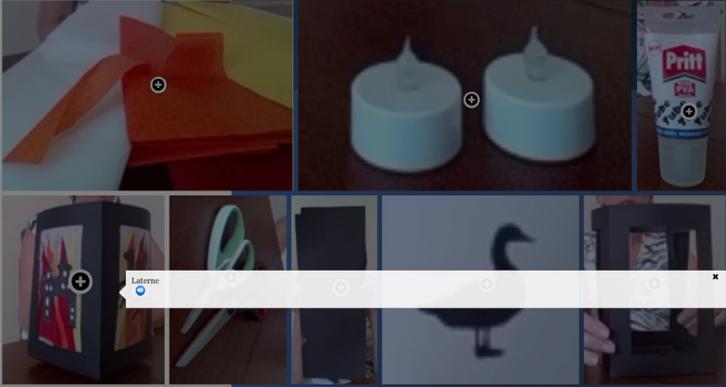
The H5P engine can function as a plugin that integrates into content management systems including WordPress, Drupal, and Moodle. We opted to work with Drupal 7 because it is well supported by the H5P community and because it supports content authoring without having to give full administrative privileges to all potential users as is the case with some other systems. We then followed standard programming practices to turn our Drupal 7 site into a progressive web application which makes it look and feel like an app on mobile or tablet devices.

An area we were keen to improve concerned the H5P content authoring workflow. In a typical H5P use case, no overall task structure is provided and the content author needs to select a content type from the long list of all available H5P content types. Authors create their content, taking advantage of the customisation facilities to adapt the look and feel of their content. Such workflow offers great flexibility and is well suited to teachers who are prepared to invest some time and effort in acquainting themselves with the H5P system and who want to apply their own pedagogies. However, we desired a workflow that channelled users towards producing content aligned with task-based language teaching pedagogy, and removed any unnecessary complexity to support non-expert users (whether from technology or pedagogy perspectives).

Our solution was to create a new H5P content type which wrapped together selected existing content types in a three-stage structure. Within this new content type, we present text instructions to guide content authors for each stage. For example, the pre-task stage starts with the introduction instruction: *Select a media type from the menu below and use it to create an introduction giving a sense of the activity's context* and a drop-down box where the user can select one of only two relevant H5P content types (for this step): interactive video or virtual tour (360 degrees). Modifications were made to some of the H5P content types we integrated into our application to better suit our language learning aims. For example, image hotspots were deemed useful for vocabulary training at the pre-task stage as an image could have 'hotspots' placed over depicted vocabulary items, and clicking a hotspot would pop-up a box revealing the associated word in textual form.

Figure 1. Affordances of the ENACT web app to focus on form

Now we'll teach you some of the key vocabulary relating to this activity.



Drag the words to match them with the corresponding images

Transparentpapier	Schere	Kleber		
schwarzer Karton				

Sankt Martins Laterne

?  
schwarzer Karton?  
Teelicht?

MORE VIDEOS

We extended this to support audio recordings for each hotspot to allow end users to hear the associated pronunciation. Similarly, an image matching content type was modified to create a game where images are paired with their textual and auditory representations to be used to practise vocabulary at the post-task stage. In addition to instructions at the content creation phase, scaffolding text was added to the presentation side of our H5P content type (i.e. the learning phase) to contextualise the wrapped content. For example, the line *Now we'll teach you some of the key vocabulary relating to this activity* is used to introduce the vocabulary training content. During the main task stage, the interactive video option enables content creators to include pop-up multiple choice questions, which facilitate focus-on-form during the meaning-focused activity (Figure 1).

## 5. ENACT Workshop at IVEC 2020

The IVEC workshop had three parts. The first part consisted of a brief overview of the ENACT project, describing its aims and outputs, and highlighting its relevance to VE. There was a focus on the ways in which the project outputs can be adopted to facilitate VE in higher education.

In the second part of the workshop, the engagement interface of the web app (ENACT Interactive Player) was demonstrated, and the participants were given an opportunity to carry out one of the existing cultural activities available in Turkish, Chinese, and English. The web app also includes an online community interface (ENACT Community), on which the participants can post a multimodal response to the activity they have carried out.

Next, the creation interface (ENACT Author) was discussed, and participants were able to produce a short interactive activity on the web app, and explore potentials to create immersive virtual cultural experiences by using 360 degree cameras and Google Cardboard virtual reality headsets. This part of the workshop involved a group discussion which facilitated reflection on potential applications of the ENACT web app in participants' own contexts. One of the

participants later reflected how the opportunity to create an activity had made him consider how he could incorporate the app into his course in Austria. His feedback described how he envisaged using the ENACT web app to facilitate his students, based in the USA, to experience living in Vienna in a meaningful way. Other participants commented how quick and simple it was to create an activity that provided an interactive, engaging language learning experience.

By the end of the workshop, participants had learned how to use the app, and developed an understanding of how innovative technologies can facilitate deeper, immersive virtual intercultural exchange experiences that go beyond talking about culture and that offer hands-on cultural experiences based on learning by doing. There were positive comments from participants about both the enjoyment and engagement aspect of the app, such as one transnational participant who commented: “I participated in your workshop on the ENACT app. My colleague and I would like to thank you again for a great session, where we both learned a lot and enjoyed having the opportunity to use your new app!”. There was also feedback on how the app could be used in an academic context to facilitate cultural immersion within an international programme: “one of our main goals for the course is to help students experience our city in a meaningful way, virtually. We think the ENACT app would be a great way to facilitate this”.

Comments were added to the activities on the web app after the workshop, which demonstrated the participants’ engagement, with feedback including, “it was really interesting to learn new vocabulary and sentences while engaging in a fun activity. I am sure that I will now remember the words better than if I would have only read a text or listened to an audio file”. This gave us an idea of which aspects of the app were proving successful and how participants viewed their experience. However, some participants experienced challenges in the creation of the cultural activity in terms of technical development and ease of use. These are especially important aspects when implementing the web app as a tool for VE ensuring learners can support each other technically since not all learners have equal levels of digital skills, which is essential in providing equitable learning experiences for all.

## 6. Using the ENACT web app for VE

University instructors interested in introducing interculturality in their teaching and learning can use the ENACT web app as part of their VE to support internationalisation at higher education. For example, pilot implementations were planned for the fall semester of the 2020-2021 academic year at two project partner institutions: Newcastle University and Universitat Autònoma de Barcelona.

At Newcastle University, the ENACT web app was implemented within an existing three-week VE with pre-service language teachers in the UK and Turkey. The purpose of the exchange was to offer experiential practice in VE to teacher trainees of Teaching of English to Speaker of Other Languages (TESOL). The cultural activities on the ENACT app were used as a springboard to prompt intercultural dialogue to further participants' understanding of culture(s), cultural objects, and cultural activities. In intercultural groups, the participants then used the ENACT web app to choose and digitally co-create a cultural activity that they choose while communicating synchronously via videoconferencing. We asked teacher trainees to complete individual e-portfolio entries at the end of each task to explore deeper understandings of culture and language learning gains, but also to identify challenges in using the ENACT web app for online intercultural exchange. Some learner comments from their e-portfolios were as follows:

“when we talked about our culture, I learned some words and activities from Saudi Arabia and Czech Republic. For example, fishing is a cultural activity in Saudi Arabia and fish means ‘smak’ in Arabic. Also, I learned the word ‘kroj’ which means ‘costume’ so; I learned both a word and a national costume of Czech Republic”.

“I liked when we talked about the sense of belonging and whether each one of us feels that we have it or now and to what level we can relate to other cultures or to our own”.

“when uploading materials, [name of another participant] was waiting for my email while I thought she had received it and at that time we were all waiting for the materials to be upload [sic]. We had waited nearly half an hour before realising we got each other wrong. This funny misunderstanding shows that it’s the same in both of our cultures not to urge others, because that might suggest you have no confidence or patience in him/her, and thus make you feel impolite”.

“my Turkish partners told us that in some parts of Turkey, people used various methods to make the bride cry at the wedding, and then they danced together. I've never heard of such cultural activity before, and I thought it was very special and interesting. I am very happy to have this opportunity to learn about the cultural activities in Turkey, which is very meaningful”.

## **7. Conclusion**

In this chapter we described a workshop which provided a model of VE facilitated by interactive, digital, cultural artefacts. These artefacts were created, shared, and engaged with through the ENACT web app and will persist as OER. As the ENACT project progresses, so too will the opportunities to foster intergenerational and intercultural understanding within and between communities, to promote opportunities for intergenerational, intercultural interaction, to and offer a real-world, immersive learning experience that brings culture to life.

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