

LanCook



Learning languages, cultures and cuisines in digital
interactive kitchens (LanCook)

Progress Report

Public Part

Project information

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Executive Summary

LanCook is a European-wide collaboration which engages with some of the major challenges concerning how to increase foreign language proficiency, motivation and the contribution of language skills in the EU. The project does this through an innovative combination of cooking, technology and language learning.

The collaboration involves a committed partnership of language teaching and learning experts and enthusiasts from Finland (University of Helsinki), Germany (University of Paderborn), Italy (The University of Modena and Reggio Emilia), Spain (Universitat Autònoma of Barcelona) and the UK (Newcastle University). Led by members in the UK, the project team carries out day to day project work in each of these partner centres.

Beginning in December 2011, LanCook involves the creation and use of multilingual task-based Language language learning materials for learners to cook dishes linked to 7 European cultures and countries: Catalan, English, Finnish, French, German, Italian and Spanish. LanCook's materials use digital sensor technology to promote a genuinely situated language learning experience of a real-world activity.

The materials (for use at CEFR levels A to C) are designed to be used with a 'portable kitchen' which uses sensor technology (similar to the Nintendo Wii™) to lead learners step by step through the cooking of a dish. Embedded digital sensors are inserted in or attached to all the equipment and ingredients allowing the kitchen to detect and evaluate activity as learners progress through their cooking tasks. As the kitchen is able to detect what users are doing, it can provide help along the way through a range of audio messages, pictures and video. There is also the option to gain more details about a certain cooking action. As an interactive activity, learners are also able to communicate with the kitchen! The pedagogical materials are stored as a software programme in the portable tablet PC and comprise of an integrated suite of materials for cooking preparation.



Figure 1: The touchscreen, interaction tools and some utensils with sensors which make up the portable kitchen

The overall aim to produce the materials involves a planned series of activities to develop the materials, trial them with a whole range of target learners, investigate the results of these trials and ultimately make these materials available to learners and teachers across Europe.

In each of the partner centres, members of the project team carry out the same activities with a specific emphasis on promoting the target language/s of their countries. This means that the project team form a close support network to ensure the shared activities are developing consistently and that quality is maintained across the materials and the trials.

As LanCook enters its second year, the project is now focussed on trialling in each of the partner centres and engaging with as many target learners as possible from adult, higher and vocational education learning contexts as well as immigrants and overseas students. Our planned dissemination activities such as events, presentations, workshops, hands-on sessions and demonstrations are also a focus of this interim period.

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1. Project Objectives

As a European-wide collaboration, LanCook engages with a diverse range of language learners at the level of instructed language learning and addresses a number of well-known problems, namely:

- that students in classrooms are rehearsing foreign languages, rather than actually using the language to carry out actions and
- that it is difficult to bring foreign culture to life in the classroom

LanCook directly addresses these issues in the production of technologically-enhanced language learning materials. The materials enable learners to practice and learn aspects of the target languages of the project in pairs (Catalan, English, Finnish, French, German, Italian and Spanish) whilst performing the meaningful real-world task of cooking a culturally-relevant dish.

Cooking is considered a fun and collaborative focus for LanCook as there is a huge interest throughout the EU in cuisine. This is seen in the number of cookbooks which are sold annually and the number and range of cooking-themed programmes on TV across Europe. In addition, many learners are motivated to learn European languages through their interest in cuisine and culture, and this project taps into this motivation.

LanCook involves the creation of digitally enhanced language learning materials from which teachers, language learners and academics can benefit. The project work takes an existing application of technology to language teaching and language learning, namely the use of embedded digital sensors (ambient intelligence) together with a Task Based Language Learning and Teaching (TBLT) approach (Ellis, 2003). TBLT is a well-established approach which is designed to promote language learning through the achievement of a goal or completion of a task. LanCook implements the advantages of TBLT using digital technology outside the classroom setting. Rather than simulating language use inside the classroom, learners using the kitchen are using language to physically carry out a useful and culturally relevant real-world task, thus realising the full potential of TBLT.

LanCook also engages with many EU agendas by promoting language learning, as well as linguistic and cultural diversity: supporting the development of innovative ICT for language learning, mobility across EU countries and the integration of migrant language learning. In Finnish and Catalan the project promotes the learning of less-used languages.

The partnership is developing and trialling materials with a range of users: CEFR levels A to C; adult, higher education and vocational students as well as migrants and overseas students. LanCook's activities in both running sessions and disseminating the aims and objectives of the project cover all of these groups of learners. Later on, this will provide the partnership with valuable feedback which will widen the range of groups for whom the materials will be relevant.

The aims of the project can be further broken down into a series of objectives. At each stage in the process of achieving these, the project team work together to share ideas, practices and insights, drawing on each other's strengths and expertise in European language teaching and learning: A summary of the project objectives is as follows:

1. The creation of language learning materials using a task-based approach integrating pre-task (preparation for cooking), during-task (cooking activity) and post-task activities (reflection on learning and experience of using the materials) based on the target languages of LanCook.
2. The creation of language learning materials using a task-based approach based on the target language cultures of LanCook.
3. The creation of language learning materials based on lesser-used languages such as Finnish and Catalan.
4. The creation of language learning materials which integrate the next generation of innovative approaches to ICT in language learning, namely the use of digital sensor technology using a task-based approach to meaningful activities.
5. The creation of language learning materials which can be linked to the Common European Framework of Reference for Languages divisions A, B and C (relating to the amount of support available to learners and the level of language employed).
6. The trialling of these materials with their direct beneficiaries from a diverse range of backgrounds.
7. The analysis and evaluation of materials based on collaborative work by the project team to provide improved design with regard to the above objectives

2. Project Approach

LanCook follows a collaborative approach where there is mutual responsibility for the shared activities in terms of creation of materials in the target languages between the project partners. The project adopts a specific methodology for the creation, trialling and dissemination of the materials. There is also a shared focus on supporting LanCook's aim to promote European Language Learning and mobility and collaboration through cooking and technology.

The partnership's shared activities are divided into a number of work packages which run across and at specific points of the lifetime of the project (3 years). In Year 1 of the project, partners worked towards developing the materials with a specific emphasis in mind that the technological and pedagogical design of the materials should be grounded in principles of language learning and suitable for target learners (for example, CEFR levels A – C and from a range of backgrounds). In June 2012, project members had the opportunity to meet face to face in Newcastle, UK. Over a series of collaborative workshops, the team examined how European cultural, culinary and linguistic diversity may be embodied in the materials.

Once the design was in place, this implementation stage also involved making the materials. Of utmost importance here was that there was consistency between the materials. This meant that the partners had to work closely together.

The third phase of implementation, which is currently underway in each partner centre as part of Year 2, is the trialling of the materials where target learners take part in cooking sessions. LanCook will run at least 125 of these sessions involving a minimum of 250 learners across the partner centres. Learners are invited from adult, higher and vocational education learning contexts as well as immigrants and overseas students.

The cooking sessions not only provide opportunities for the project team to engage with the target language but also gather data about the suitability of the materials and the extent to which the design leads to tangible learning outcomes as well as increased motivation and confidence in the target languages. The project approach in Year 3 will allow the project team to evaluate the results of trials (audio-video recordings, vocabulary test data, learners' perspectives on the technology). This will lead to findings that will be incorporated into a modified design ready for dissemination and exploitation.



Trialling Scones recipe in the UK with some Iraqi English Language Learners



Trialling Scones recipe in the UK with some Spanish English Language Learners



Trialling Fish Soup recipe in Finland in Finnish



Making audio-visual materials in Italy for the Italian materials

LanCook has a dissemination strategy which is designed to allow as many people as possible to engage with the project work as direct and indirect beneficiaries and contribute to the sustainability of the project results. The partnership aims to achieve this by:

- Raising awareness of the project and its rationale, aims and objectives
- Informing stakeholders about activities
- Engaging in dialogues with stakeholders
- Promoting the different outputs of the project to stakeholders

There are a range of stakeholders linked to the project overall and to the activities in each of the partner countries. Stakeholders include:

- Members of the partner institutions (colleagues, management and students, student teachers)
- Research and academic communities
- Local and regional education communities (language teachers, language learners and decision-makers)
- National education communities (national organisations related to language teaching and learning and the promotion of languages in general)
- European organisations and networks in lifelong learning and language learning
- Policy-makers
- Worldwide organisations and networks
- Public at large

On-going and planned activities include locally-led (taking place in the partner centres) and collaboratively-led activities:

Locally-led Dissemination Activities:

(a) Online dissemination:

- Main multilingual website and local partner websites
- Social Networking

(b) Trialling the materials

(c) Demonstrations

(d) Production of promotional materials

(e) Press releases and hosting visits by the Media

(f) Local dissemination events

Collaboratively-led dissemination Activities:

(g) Conference presentations at European conferences: Eurocall, WORLDCALL

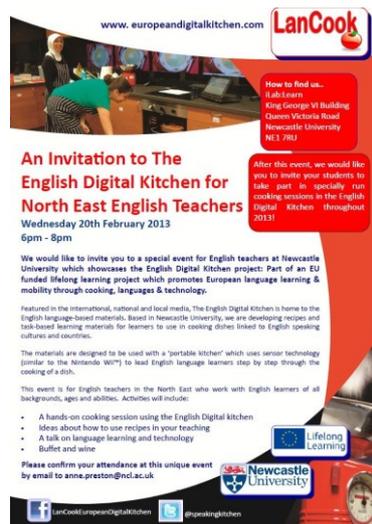
(h) An email shot summarising the research with website links sent to lists for language learning

(i) Journal articles

(j) International dissemination event



A cooking session with talented young linguists from the UK (April 2013)



An event for local language teachers in the UK (February 2013)



A local dissemination event in Italy (April 2013)



Piloting the materials with teachers in Finland (April 2013)

3. Project Outcomes & Results

LanCook envisages a number of tangible and non-tangible outputs from the project work. As a product-oriented project committed to the production of digitally-enhanced language learning materials, LanCook anticipates the following outputs which will benefit those directly addressed by the project:

1. After re-design, the creation of 7 sets of language learning materials (in English, French, German, Italian, Spanish, Finnish and Catalan) and 7 'portable digital kitchens'.

Impact: So far in the reporting period, the project has run cooking sessions with a number of target learners using the materials the partnership created in the first half of the project lifetime. Partners have worked with language teachers to identify target users in adult, higher and vocational education learning contexts. Partners have also been working with organisations and charities providing language learning services to migrant groups and more general lifelong learning opportunities, to encourage those in the broader community to use the digital kitchens.

In terms of demonstrations, LanCook has run and has forthcoming plans to run a number of events (30) in the partner centres. During these events, the digital kitchens have been presented and stakeholders have been able to have hands-on experience. The groups targeted here have included local and regional education networks, language teachers in schools, groups of language learners from community groups and schools as well as research and academic communities.

2. An easily accessible authoring tool for the task-based designed materials to enable direct users to create further materials.

Impact: LanCook's materials are designed to be sustainable and cost-effective. In order to make the materials, the team have designed and use a specially designed 'authoring tool' to allow the materials for the kitchens (recipes, audio-visual materials) to be integrated easily into the software programme for playback. The introduction of this tool has not only facilitated work within the project at present but provides a long-term opportunity for making materials for further languages and cuisines as well as increasing the possibilities for exploitation, mainstreaming and sustainability. For example, teachers and other language professionals can use this authoring tool to make their own materials too as we have developed guidance on how to use the tool and in addition, advise on how to make the recipes, audio-visual materials.

3. An easily accessible authoring tool for the task-based designed materials to enable the development of materials with further languages and cuisines.

Impact: The completed project would also be very easy to extend to further European language and cuisines, so that eventually many more EU language and cuisines were covered. Then, each installation in an EU-wide network would be capable of teaching all EU language and cuisines. Also, the project could be extended to include language learning in primary and secondary schools.

4. The creation of a transferable, interdisciplinary model of task-based, situated learning which can be applied to many different technological settings and many different skill and knowledge sets, not just to language learning

Impact: The project work has led to the drafting of a transferable, interdisciplinary model of task-based language learning. There are currently a number of well-known models that exist however so far, a model which seeks to integrate Task-Based Language Learning with technology within the context of motivating real-world activities has not been developed. After the trialling of the digital kitchens with our target end-users and data analysis, we hope to produce a final version of this model relevant to European language learning with technology in a real-world context. This model can be used by language teachers and materials developers to understand language learning processes and create further materials.

More information concerning the project and results can be found by consulting our multilingual webpages: www.europeandigitalkitchen.com

Contact details for each of the partners can also be accessed from the webpages. The project is co-ordinated overall by Professor Paul Seedhouse (paul.seedhouse@newcastle.ac.uk)

Our Facebook pages contain updates on developments *as they happen on a day to day basis*. Search: Lancook: European Digital Kitchen

4. Partnerships

The collaboration involves a partnership made up of members from:

Finland (University of Helsinki)

Germany (University of Paderborn)

Italy (The University of Modena and Reggio Emilia)

Spain (Universitat Autònoma of Barcelona)

UK (Newcastle University).

Led by members in the UK, the project team carries out day to day project work in each of these partner centres. In each of the partner centres, a lead manages the project work locally in the planning, organising, administering and monitoring of the project outputs, outcomes and objectives. A group of junior team members carry out day to day project work and a full time member of the team (across the 3 years), based in the UK, ensures the smooth running of the project on a daily basis through planning, organising and liaising with the partners.



LanCook partners: Face to face meeting week, June 2012

Collaboration between the partners is facilitated and maintained through shared decision-making processes, specific communication systems, internal reporting and internal evaluation. The partnership takes part in regular meetings over Skype (every 6 months) and has a planned series of face to face visits. These meetings provide space for shared discussion and decision-making. Online services such as discussion forums and a devoted space where partners can store outputs relating to the project activities allows for peer-review. There is also a system for internal evaluation of specific areas such as Project Co-ordination, Communication, Financial

processes and efficiency, Progress towards project goals/sub-goals and Dissemination activities.

The project's strategic approach to producing the materials contributes to the European added value of the project. Developing the materials in a partnership at a European level means that LanCook's materials have face validity, having been created and trialled in and across the partner centres. Furthermore, the partnership's working practices promote the cross-fertilisation of ideas concerning the relationships between European language, cuisines and cultures.

Outside of the direct project, members of the partnership in each of the centres strive to establish collaborations with stakeholders who represent the range of learners targeted in the project work. In doing so, LanCook hopes to increase the sustainability of the project results and expand the network of people committed to promoting European Language Learning and mobility and collaboration through cooking and technology.

Partners have been working with language teachers to identify target learners in adult, higher and vocational education learning contexts. Members have been working with organisations and charities providing language learning services to migrant groups and more general lifelong learning opportunities, to encourage those in the broader community to use the digital kitchens. In the UK, for example, events have been held to encourage those in migrant groups to take part in the cooking sessions as well as visiting these organisations (Workers Educational Association, Action Foundation, and Newcastle University Women's International Group) in situ to talk to target learners.

In other partner centres, the digital kitchens have been presented and stakeholders such as language teachers and vocational teachers have been able to have hands-on experience. The future collaborators targeted here have included local and regional education networks, language teachers in schools, groups of language learners from community groups and schools as well as research and academic communities.

5. Plans for the Future

Plans for the future for LanCook involve specific activities to achieve the project aims and objectives:

Products and Outputs

The partnership will complete two sets of digitised materials for the digital kitchen in English, German, Finnish, Italian, Spanish, Catalan (audio instructions, photos and videos) by July 2013. Two sets of French materials (audio instructions, photos and videos) will also be complete by the May 2014.

In each of the partner centres, members are on course for completing the trials (250) so that data will be available for analysis which will lead to improved language learning materials. This involves a number of sub-activities, namely:

- Recruiting target learners from a range of backgrounds to cook in the digital kitchens
- Running cooking sessions (in total 125 cooking sessions across the partner centres) which are audio and video-recorded
- Collecting information about the participants in terms of linguistic, cooking and technological background
- Collecting data which can show evidence of learning vocabulary using the digital kitchens (pre, post and delayed post-tests)
- Collecting data on how users interact in the target language or other in the kitchen in pairs
- Collecting user-experience data concerning these technological enhanced learning environments and LanCook materials

In terms of dissemination activities, as well as a number of end of project events scheduled between June 2014 and November 2014, which will showcase LanCook's modified version of the digital kitchens and provide a forum for LanCook's message to promote European Language Learning, culture and collaborative through cooking and technology, we will continue to hold a number of events tailored to our different target groups. These will take place in each of the partner centres.

In addition, as well as the initial marketing materials we have already produced (leaflet, banner, aprons, USBs), we plan to create a range of promotional materials. We plan to be innovative with these and initial proposals are:

- wooden spoons with LanCook logos
- e-cards sent to our contacts list with news and recipes from the project

As well as collaboratively produced materials which can be translated into the key languages of the project, partners will be free to choose whatever different forms of materials they wish according to what they think is most suitable to their own contexts.

Processes and outcomes:

Analysing data from the cooking sessions in each of the 5 partner centres during the trials will involve:

- Transcribing audio and video data to identify episodes of learning and interactions with the materials to evaluate the technology
- Transcribing audio and video data to identify user interactions with the materials to evaluate the technology
- Analysing pre-post and delayed post-tests to investigate targeted vocabulary learning
- Analysing biographical data
- Analysing qualitative data concerning what the targeted users think and feel about the materials
- Analysing the overall design of the materials in terms of their relationship to the CEFR.

Based on the findings from the above analysis, the partnership will identify key design implications to improve the materials design for the modified version planned for exploitation from May 2014. This will involve making a specific exploitation plan, building up an online community of practice, identifying new projects and commercial exploitation.

Dissemination activities are on-going throughout the lifetime of the project. In terms of processes, partners will continue to work on online dissemination which involves:

- Regularly updating facebook pages for each of the partners
- Regularly updating the twitter feed for the LanCook
- Regularly updating the project website (LanCook's main webpages in English and the partner specific multilingual webpages)
- Disseminating LanCook across a range of the other online sources, such as target websites.

A planned series of partnership meetings will take place, whereby members meet over Skype to discuss a mutually set agenda concerning the progress of the project, co-ordination of the project budget and discuss difficulties encountered. In June 2013, partners will plan the date and aims of subsequent partner face to face visits. Peer reviews will continue to take place by consulting the products, outcomes and processes of the project work.

Finally, we intend to establish a spin-off company called 'Linguacuisine' which will make the portable kitchens commercially available to educational institutions. This is intended to increase the sustainability of the project work in the long term.

6. Contribution to EU policies

Contribution to EU policies is embedded in LanCook's overall aim to promote European Language Learning through cooking and technology. Within these thematic areas, EU policy initiatives are supported across the partnership countries and through dissemination work which reaches other EU countries.

EU policy relating more generally to the area of multilingualism and more particularly to initiatives linked to the EU's '*Strategic framework for European cooperation in education and training ("ET 2020")*', *Inclusive Growth priority of Europe 2020*, *Agenda for New Skills and Jobs* and *Youth on the Move* is promoted and supported through LanCook's focus on *linguistic and cultural diversity*:

The promotion of employability, mobility and growth can be seen more specifically in the cross-fertilisation of our materials which are created and shared between the partnership countries, reaching a wide range of target learners from adult, higher and vocational education learning contexts as well as immigrants and overseas students. The growing community of practice which promotes the 'usability' of European languages for real-world purposes as well as our social networking serves to bring together diverse groups of language users under the project work.

Multilingualism is supported through the scope and range of LanCook's of presentations, demonstrations and dissemination. This plays a large awareness-raising role in promoting EU language learning and cooperation. Again, as the LanCook's networks grow, more and more EU citizens are exposed to the values of the project and EU initiatives and policy.

Raising *language competence and skills* are also a part of LanCook's agenda. The final products of the project will be pedagogically and technologically trialled and tested materials for situated language learning. The model for language learning which will form part of LanCook's outputs can inform other areas of practice in promoting language competence and skills.

LanCook's inclusion of lesser-known languages such as Finnish and Catalan shows a direct engagement with *languages of minorities in the EU*. LanCook plays an awareness raising role in regards to these languages as well as promoting and increasing access to these across the across the partnership countries and through dissemination work which reaches other EU countries.

Beyond the main area of multilingualism, LanCook's focus on targeting lifelong learners and adult learners demonstrates how the project links to the EU's renewed *European Agenda for Adult Learning* (2011). The 5 priorities for adult learning for 2012-14, the focus on which matches the lifetime of the project, fit which LanCook's values and more specific project activities. The project provides access to lifelong learning opportunities through its recruitment work for the cooking sessions. The partners are active in disseminating to a wide range of adult communities of learners which stretch beyond the confines of the Universities where the partners are based. LanCook not only performs an educational but also an awareness raising role here. The innovative learning environment of a digital kitchen provides opportunities for

adult learners to be creative and independent. The cooking sessions can have a long-term influence on learning by building motivation and confidence. Furthermore, adult cooks leave the cooking sessions with information about local learning opportunities (for language learning, cooking or more general adult learning courses).

The role of the technology plays an important role in the learning and motivational opportunities provided through the cooking sessions. At the end of the cooking sessions, adult learners become 'experts' in using the next generation of digital technology which is embedded or hidden in the kitchen environment. They are even asked to provide feedback on how it could be improved!

Cooking provides a familiar activity for adults which can engage the senses. By creating high quality language learning material, supported by the affordances of sensor technology, LanCook reaches out to a far greater variety of learners. Together with LanCook's dissemination activities to target lifelong learners such as migrants, ethnic minorities and seniors, the project engages with those at higher risk of *social exclusion*. Members continue to build skills and competences in establishing working relationships with these groups.

Finally, linked to the use of technology, LanCook supports the development of *digital literacy* by EU citizens. By using the affordances of the next generation of digital technology and making the study of how target learners interact with the technology, the project team can identify ways to support citizens in learning how to use new technological tools and importantly, in training stakeholders in how to use ICT independently (by working closely with language teachers and trainers).

LanCook demonstrates how Europe can lead in the production of high quality innovative and accessible information and communication technologies. As a partnership, the project will continue to follow the EU motto to be 'United in diversity' through its investment in collaboration, culture and languages.

