Project ILOCALAPP

Incidentally Learning Other Cultures and Languages through an App

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Methodological specifications

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1. Introduction

The result of the *ILOCALAPP* project – short for *Incidentally Learning Other Cultures And Languages through an APP* – will be a mobile application for language learning that genuinely fosters mobility. For this, the app will necessarily include a significant amount of culture-related material. The word "app" is the short form of "application"; the term refers to softwares than can be downloaded from the internet onto mobile devices (Scharber 2014:70). The present document unfolds the methodological framework and specifications for the app to be created, laying out its foundations. A great deal of time has been invested into exploring relevant research most suited to our objectives. Besides this, this report builds on the past experiences obtained from the *E-LOCAL* and E-*LOCAL for all* projects, whereby both the successful areas and those needing improvement have been considered.

Our target group – the people for whom the app will be created – constitutes mobility students who are residing abroad or are planning to embark on a mobility period at one of the European universities involved in the present project: University of Bologna (Bologna, Italy), Adam Mickiewicz University (Poznań, Poland), University of Coimbra and Centro de Estudos Sociais (Coimbra, Portugal) and University of Lapland (Rovaniemi, Finland). The app can eventually be useful to other travellers visiting those cities. Yet, being primarily target-oriented towards the specific and concrete needs of mobility students, it will be designed for this group. Similarly to the *E-LOCAL for all* project, the current project also maintains the "for all" spirit which aims at disseminating knowledge about languages and cultures to everyone. Mobile devices are extremely commonly used nowadays and are increasingly popular. In this sense, the ILOCALAPP project adopts a more open, outreach strategy, when compared to the previous Moodle based e-learning platform.

Language learning and cultures are two closely connected areas that will be addressed by mobile technology in the present project. Language as embedded in overall cognitive capacities of man means "the experiential and pragmatic background of language-in-use and the relationship between language and thought" (Geeraerts, 1995: 11–112). While language conveys information and provides knowledge with structure, culture is integrated in it (Kramsch 1993:1–8). Language both reflects and constructs cultural reality for its speakers (Kramsch 2003: 7). So language could not truly exist without the relevant cultural practices, being embedded in them. As evident in the name of the project, cultures and languages are placed side by side thus assigned with an equal status. The status of these elements as closely related concepts is depicted in figure 1 below.

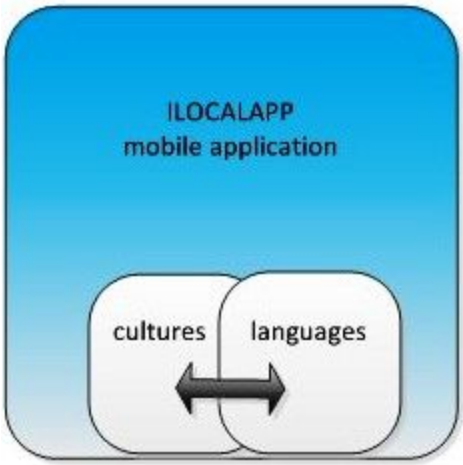

Figure 1. Cultures and languages are considered equal and mutually dependent in the mobile app.

It should be pointed out, however, that despite the existing terms "languaculture" (Agar 1994) and "linguaculture" (Friedrich 1986), both suggesting an integrative and holistic concept of culture, the thesis of language-culture inseparability is somewhat problematic (Risager 2006). The relation between language and culture is complex and multidimensional: they can be seen as both inseparable and separable as the lens focuses upon the linguistic practice, linguistic resources or the discursive construction of the 'linguistic system' as a unified, cohesive system; changing the perspective from language to languaculture, to discourse and to the rest of the culture. In short, language and culture are parts of the complex language-culture nexus which is historically and ideologically situated (ibidem 194–199).

In the recent decades, the cultural aspects of language learning have moved from the background to the forefront of the foreign language teaching (O'Dowd 2006:13). Kramsch identifies two ways in which the culture learning has been dealt with in language teaching. First, it focuses on the cultural production as a representation of a particular social group "through art, literature, social institutions or artefacts of everyday life" (Kramsch 1995:2). The second definition sees culture as "the attitudes and beliefs, ways of thinking, behaving and remembering shared by members of that community" (ibidem). The first one has dominated the scene until recently, so culture learning has been associated to learning of facts and figures, thus not making a real connection between the language and its culture. Social and political factors such as increased migration and the growth of transnational communication have lead to criticism of the communicative approach in language teaching. Intercultural communicative competence has been proposed as an alternative model (Byram and Fleming 1998). Intercultural perspectives underline the interactive process of culture learning and the interconnectedness between the culture and language learning.

The model of intercultural communicative competence includes two broad categories of cultural knowledge: knowledge of social groups and their products and practices in both cultures, as well as knowledge of processes of interaction at individual and societal levels (O'Dowd 2006: 40).

The central aims of intercultural learning are seen as becoming able to interact successfully and establish relationships with members of other cultures and to understand (inasmuch as this is possible) how members of other cultures see and interpret the world. Intercultural learning is therefore understood as an interactive process which involves the development of skills, attitudes, cultural awareness as well as knowledge. As a result of learning about another culture, learners are expected to take a more critical and distanced view on their own culture (critical cultural awareness). The key to developing the critical cultural awareness, according to O'Dowd (2006), may lie in combining cultural learning with ethnographic training for students, so that to enable them to see the new culture through the perspective of its speakers and to challenge stereotypical representations. Moreover, critical cultural awareness is enhanced when interaction with partners involves negotiation of meaning and explicit comparison rather than exchange of cultural information. As it builds on noting and critically evaluating practices and products in other cultures, critical intercultural awareness requires sense-making, i.e. the ability to interpret facts, events and to operate knowledge in real-time communication. It may make the learner aware of the multi-voiced nature of cultural realities and of the *Bildung* of the individual in society.

Guided by the principle of the equal status between cultures and languages, the project is coordinated by the University of Bologna. The coordinator and all partners – Adam Mickiewicz University in Poznań, Centro de Estudos Sociais at the University of Coimbra, and the University of Lapland in Rovaniemi – were also consortium members within the two previous projects, so the current project can build upon the previous know-how. Cultural components were firmly present in the earlier language learning products as well, yet the app to be created will require a stronger integration of culture in the materials. In fact, the aim of the consortium is to create a motivating app whereby linguistic and cultural components would be *intertwined* in an engaging way for the mobility student. By intertwining we mean that linguistic and cultural components are not separated but rather contextualised in real-life situations of the mobility student in the local culture.

Cultures and languages as intertwined elements are actually what makes our app unique. There is no other app currently available with a similar approach to language learning and cultural understanding, despite the fact that there is an abundance of language learning apps available such as Duolingo, Memrise, Babbel and Busuu – to name only a few. This, besides the fact that the app is tailored to mobility students, further strengthens the ILOCALAPP appeal: to arrive to one's destination while being assisted in linguistic and cultural challenges by a tailor-made app has certainly been unheard of before us. The app is truly tailor-made as its content will be oriented towards the specific students' needs.

One of the main challenges for the project team resides in the fact that the app will be launched in 2018. That means that considerable foresight is needed to produce an app that would still be appealing for students in 2018 and beyond. In order to capture the user interest, the app will have to be relevant to their social, cultural and historical realities. Undoubtedly, active and ongoing contact with mobility students, as well as their collaboration and participation throughout all the stages the app development, will be necessary to keep abreast of their current lifestyle and potential changes on the way. Ideally, the students would see the app as a positive, informal and incidental part of their everyday lives that provides a pleasant moment amidst their mundane and institutional activities. In addition to fostering mobility, the app supports other key competences provided in the Recommendation 2006/962/EC of the European Parliament and of the Council of

18 December 2006: communication in foreign languages, digital competence as well as cultural awareness and skills.

This document consists of six chapters. Chapter two contains definitions of key concepts. Chapter three defines the role of the learner and reflects on its relation to the learning environment. The fourth chapter focuses on the app especially from the viewpoint of its core values. The fifth chapter takes a step towards the map of content. The sixth chapter concludes the methodological specifications.

2. Types of learning

The planned mobile application is based on the assumption that any learning that takes place is **informal, incidental** and **mobile**. So a robust effort has been made to define these types of learning in subchapters 2.1. and 2.2.

As Macdonald & Creanor (2010:1) have put it, online and mobile technologies have opened up exciting new learning possibilities for higher education students. Indeed, learning through mobile technologies can make boundaries between educational settings, life and work more permeable. Learning languages becomes more mobile, accessible in various situations, and participatory. It provides opportunities for **authenticity** and **inclusion**. Burnett (2002) views that the ways in which we learn and interact with each other will be increasingly mediated by technologies and technological devices. Lankshear and Knobel (2006:65) have concluded that "the technologies, knowledges and skills are interrelated, dynamically connected to one another and mutually evolving in conjunction with people's changing ideas about purposes and tasks". To sum up, it is fair to point out an obvious yet easily neglected fact: technology and technological skills are also intertwined in the mobile application with languages and cultures. Although learning technological skills is not the upmost target of the app, it is inevitable and in fact essential for successful use of the app. The situation is depicted in figure 2 below.

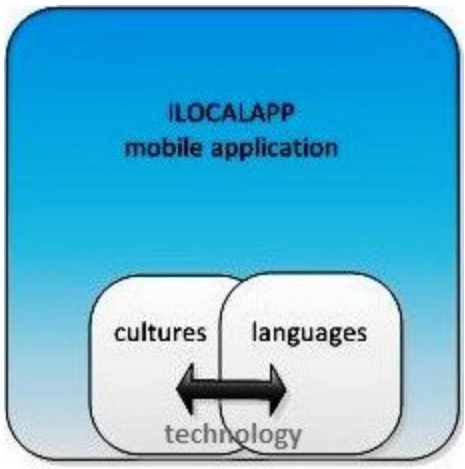

Figure 2. Using the mobile app inevitably leads to learning technological skills as well.

As figure 2 shows, the foci of the app are cultures and languages as equal and mutually dependent elements. It is crucial, however, that the project team acknowledge the fact that the students will also learn technological skills as they use the app. That is why 'technology' in figure 2 is foregrounded.

2.1. Informal and incidental learning

Having reviewed over 60 different bibliographical sources, Silva (2007) points out that **informal** and **incidental** learning are often used as interchangeable terms, both applied to the kind of

learning that does not take place in a formal environment or way. Despite their interchangeability in use, there is a difference between those terms, which has implications on both the process and the result of such learning.

Informal learning was identified as a widespread phenomenon as early as in the 1970s (Tough 1971, Livingstone 2001). Informal learning is more like "peer learning" or "practitioner learning", in contrast to learning from an expert (Laurillard 2007:xi). Recently, the rapid development of mobile technologies has generated new ways in which mobile devices might support informal learning (ibid.). In fact, Clough (2015:43) points out that "little is known about the impact that context-aware mobile technologies and widespread social networks have had on the ways people go about informal learning."

It is generally agreed that incidental learning is learning which is a byproduct of some other activity, hence seen as a subcategory of informal learning, more specifically, as informal learning which is neither planned nor intentional. As Marsick and Watkins (1990:12) have put it: "Incidental learning almost always takes place although people are not always conscious of it". Practically all language learning during early childhood is incidental. For adults, this kind of learning appears to be a form of socialisation (Cahoon 1995) based on their prior knowledge and mediated, among other factors, by the available means and tools, as well as by the learning styles preferred by the individual. That is why incidental learning is always **situated** in the broader socio-economic, political and cultural context.

Another significant characteristic of incidental learning is its **interactive** nature. Learners interact with knowledge, experience, other individuals and experts, the task at hand and with the immediate context where learning is taking place. They learn by doing; yet emphasis is often laid on bringing learners in contact with factual information rather than skills involved in the task. The pitfall of simply presenting the facts to be absorbed by the learner should be avoided in ILOCALAPP. Rather, the learner should be engaged by the information.

2.2. Mobile and context-aware learning

It can be clearly seen that mobile devices are becoming more popular in people's lives, and are likely to become increasingly prominent in the coming years. Though the mobile phone was introduced a long time ago, the notion of "mobile learning" may not have developed at the same pace. The concept of "mobile learning" – with its pure meaning – dates back to 2005 when the first touch-screen mobile phone was invented (Stoller-Schai 2015:956–957). This is the type of phone that is generally referred to as a smartphone nowadays. In the early days of mobile learning, Klopfer et al. (2002) were able to highlight features of mobile learning as follows: portability, social interactivity, context sensitivity, connectivity and individuality.

Initially, mobile learning was realised as electronic learning (e-learning) on mobile devices (Karadeniz 2009:360). As Quinn (2011:17) notes, due to the widespread adoption of mobile devices and especially smartphones, "mobile learning" (m-learning) is not anymore the application of e-learning on mobile devices but rather a separate type of learning. Compared to e-learning, learning through apps has torn itself away from the classroom logic and layout. Mobile learning is meant to "augment" the learning process as well as the efficiency. Specifically, it focuses on

learners' ability to cultivate and exploit connected networks of information for problem solving (Mundie and Hooper 2010:12). Gradually, mobile learning has become established as an independent topic of research. In fact, as many as 570 works were produced on mobile language learning over a period of nearly two decades from 1994 to 2012, looking at how mobile devices are viewed by teachers, students and institutions, as well as the way in which they are used" (Stockwell 2016 in Farr and Murray).

The context for mobile learning has changed from the legacy of learning with computers to the ubiquity of the social use of mobiles (Traxler & Kukulska-Hulme 2016:2). Moreover, many researchers believe it is particularly important to pay attention to the fact that the next generation of mobile learning is becoming 'context-aware' (ibidem). Context-aware mobile learning takes advantage of smartphones, and other mobile, connected and pervasive personal technologies, in the design of learning experiences that exploit the richness and uniqueness of the learner's indoor and outdoor environment.

These technologies detect a learner's presence in a particular place, their history in that place and perhaps their presence in relation to other people and objects nearby, and adapt the learning experiences accordingly. They also enable and encourage learners to capture aspects of the environment, approaching the environment as a learning resource, and to capture and share their reactions to it (Traxler & Kukulska-Hulme 2016:1). They can also motivate collaboration amongst learners to build shared knowledge (ibidem:6).

Vavoula and Sharples (2002:152) have put it concisely that this kind of learning "is mobile in terms of *space*, i.e. it happens at the workplace, at home, and at places of leisure; it is mobile between different areas of *life*, i.e. it may relate to work demands, self-improvement, or leisure; and it is mobile with respect to *time*, i.e. it happens at different times during the day, on working days or on weekends". Furthermore, Hanna Vuojärvi (2013:94) has pointed out that learning in a PMLE (personal and mobile learning environment) is not a process that is detached from other learning activities but takes place simultaneously and as a part of students' everyday activities. It is rather individual, historical, interactive and mobile in nature.

The development of context-aware mobile technology alongside Web 2.0 social spaces has facilitated location-based informal learning (Traxler & Kukulska-Hulme 2016:6). The mobile technologies support learning that is personal and contextualised, and controlled by the learner. The learning that occurs does so under very different conditions from the formal learning context of education. There is no curriculum, or teacher, or formal feedback, or goals, or assessment – but there are learner goals, feedback from their actions in the world and from the people they interact with, a curriculum formed by their own responsibilities, roles, interests and opportunities. Here the learner is in control, if anyone is, and constructs their own learning environment, selecting from and negotiating within their local context to define their own goals, forms of practise, feedback, adaptation, collaboration and reflection. This is the value of informal learning (Laurillard 2009:x).

Mobile learning also opens more options in terms of learning methods. Specifically, Castillo and Ayala (2012:2293) recognize that m-learning affords situated, personalized, collaborative, ubiquitous and lifelong learning. Consequently, m-learning provides opportunities for expanding traditional teaching methods, as well as informal and incidental learning.

Acknowledging these features of m-learning, the ILOCALAPP team decides to adapt suitable parts of the award-winning e-learning content onto the mobile platform to deliver a more efficient and easy-to-use tool for learning languages. In addition, the ILOCALAPP project has an advantage in m-learning because it allows students to situate learning into the same context in which it is applied. This, according to Zeng & Luyegu (2012:295) is crucial for the success of a mobile learning app. For example, a student standing at the airport can instantly use the app to look up words or find a model dialogue to apply in their current situation. It must be borne in mind that the applicability of the app is the element that engages students.

At the same time, disadvantages of m-learning in general and ILOCALAPP in particular should not be ignored. The learning process requires learners to concentrate and reflect on what they have learnt. Meanwhile, mobile users are more susceptible to distractions such as messages, notifications and other tasks as well as the environment that they are in (Ahonen et al. 2003:37). Voitovich (2015) contests this point saying that smartphone users are more focused, since there are no multiple windows to distract them like in laptops or even tablets. Once the app is open, the user's attention is concentrated on it. That is why our app needs to trigger learners' determination and cooperation in order to engage them. As stated in chapter 1, the app – at its best – will be addictive in a positive way to the students. Smartphone users read from screens of small size which makes compact texts preferable. However, since people take mobile phones everywhere with them – unlike other portable devices like laptops or tablets – they can always return to the content later on, especially if it has really managed to capture their interest. Throughout the day, there are large periods of time when the user can be focused on the content – on public transport, during lunch, waiting in queues, sitting in a doctor's waiting room, taking a sneak peek during TV viewing, and even before bedtime. In other words, the user can check the app whenever there is a longer pause along the day.

A major challenge in the traditional m-learning is that the same learning material can be studied at home, at school, on a bus or in a park, but the surrounding context is easily disregarded. In such learning situations, the learner's attention is likely to be focused on the mobile device's screen (Goth, Frohberg & Schwabe 2006). As a remedy for ignoring the contextual relevance in m-learning, context-aware learning integrates the contextual resources into the learning content. A mobile device delivers context-sensitive learning content to the learner and provides relevant feedback upon the learner's actions. Because of context-sensitiveness of the learning content, the learner is encouraged to interact with surrounding objects and phenomena (Laine & Nygren 2016:85.) Moreover, Auld et al. (2010:128) have also pointed out that the shortage of personal interaction poses a challenge in m-learning. The opportunity to interaction could pave way for context-sensitiveness as well.

This context-sensitiveness is an issue that the ILOCALAPP project has to take into account when designing the learning content for the app. Accordingly, students should be able to apply the knowledge gained through m-learning in their real life. For example, language exercises should be embedded in cultural contexts so that students are able to use the linguistic knowledge in the culturally relevant situation. Therefore, the information on apps shall be instantly applicable and easily retrievable. This highlights the importance of practical material and carefully thought-through methodology in m-learning.

Overall, the most recent findings in mobile language learning emerge from three main areas, namely SLA (Second Language Acquisition), cognitive psychology and affordances of technologies (Stockwell, 2016). These have to be considered by teachers and researchers who are engaged in the design of activities and tools for language learning through a mobile device. Most of them have been addressed earlier in the chapter: Issues of affordances have been evoked when highlighting how the use of mobile device enabled situated and meaningful learning, through the proposal of authentic context-aware inputs. As already mentioned, the fostering of a constructivist approach, as argued by SLA approaches, stress that the use of mobile learning enables students to collaborate and co-construct the process, resources and results of their learning outside formal and institutional contexts. Cognitive psychology, together with digital literacy approaches, urge to address issues such as cognitive load and its impact on working and long-term memory, as well as multimodal processing and learning (Paivio 2007; Stockwell 2016: 298–299).

3. App learner is also the user: towards collaborative learning practice

Incidental learners who are engaged with information technology environments end up developing new user identities, since "in addition to learning how to operate equipment and the software, becoming a user involves learning to see oneself in certain relationships to computers, other users, and organizational environments" (Cahoon 1995:48). The learner is growing accustomed to inhabiting the emerging space of digital media, the space of social relations that are open, continuous and fluid (Lankshear and Knobel 2006:38) while maintaining other type of relations pertaining to industrial and post-industrial space, which are more enclosed and purpose-specific. This change in the type of social relations has an impact on the type of practices people develop. As learners have access to both the conventional and computer-related, screen-based literacy realms, they develop the skills that enable them to navigate either of them. Slightly simplifying, we can say that at school they often operate in one literacy universe, and in non-school settings – in another (ibidem:30). For the ILOCALAPP team, the challenge consists of accounting for – and possibly capitalising upon – both available sets of practice.

In the recent years, technologies have brought about profound changes in the nature and direction of communication together with clear implications for the learner identities and environments. It represents "a shift from an era of mass communication to an era of individuated communication; from unidirectional communication from a centre to the mass, to multidirectional communication from many locations, from the 'passive' audience to the 'interactive' audience" (Snyder 2002:179). All these changes – **individuated, multidirectional** communication to an **interactive** audience – represent possibilities for future developments in learning and communication environments. The learner is capable of **multitasking**, keeping an eye on one task while going about other business, thus spreading oneself across multiple practices and discourses. A radical consequence of multitasking along with other changes in the learning environment is that the ILOCALAPP creators of mobile applications should never approach the app as a book with different chapters, but as a completely new kind of setting for learning.

Unlike textbooks, apps have multiple ways of entry and presuppose an active learner-application interaction. The linearity of textbook stories is replaced by the multiplicity, fragmentation and juxtaposition of texts and modes within the new mobile learning environment. The learner, who is also the user of the mobile device, can have several windows open, with different information being channelled through different modes (sound, writing, listening, image etc.). Depending on the technical possibilities of the user's smartphone or the app, s/he can select, move and resize documents, photographs and images. On the part of the user, this type of learning interaction requires careful attention management. The smartphone environment somewhat facilitates it, since once the app window is open, the users will have to focus their attention on whatever is on the screen. However, on the part of the designers (i.e. the ILOCALAPP project team), it will require planning several trajectories across learning materials and their distribution across different modes, apart from creating engaging and context-specific contents. In a way, the learner/user becomes a **co-author of learning materials**, and the very process of learning – an **increasingly collaborative practice.**

The awareness of the specific features of mobile learning resources as well as of the collaborative orientation of incidental learning led to the creation, by the ILOCALAPP team, of an **interdisciplinary methodological strategy** situated on the interface between the multimedia design, digital literacy and language teaching/learning. The adopted strategy aims to enable potential users of the planned app to fully contribute to the creation of the app contents, tapping both into their expectations and lived experiences of language/culture learning apps. The strategy represents a mixed-method approach as it combines quantitative and qualitative methods. More specifically, it is three-fold and includes consultation of the target group through 1) survey; 2) focus groups, and 3) experience prototyping.

3.1. Survey results

The survey carried out by the ILOCALAPP team gathered altogether 2350 respondents from around Europe and the world. We succeeded well in reaching our target group of young mobility students, since most respondents belong to the age groups 19–22 and 23–26 years of age. There is a separate analysis of the survey results, and this subchapter summarises its results from the viewpoint of the methodology and practical implementation of the app.

The survey respondents voted for art and literature, habits and lifestyle, and history and traditions as the most crucial areas of cultural interest. Throughout the survey, they also emphasised that their concrete, real-life situations should be taken into account. Certainly, keeping **the real-life aspect** constantly in mind will help in deciding what information is superfluous and, then again, what is necessary. This aspect also requires certain selflessness of the planning team: what might seem useful and interesting from our perspective may not be at all necessary from the student's perspective.

It is only fair to point out that most respondents provided their answers based on expectations, not experience, about language & culture apps: only 22.5 of them have experience in using a language & culture app. Those who had used language & culture apps earlier – and more likely base their views on experience – value mostly **simple, functional design features**, **short steps** and some **progress tracking**.

The same group – students who have experience in language & culture apps – criticise apps that do not have a complete set of material, making the student feel that something is missing. Too much monotonous repetitiveness and low learning levels were also disliked by this group. Let us avoid these pitfalls.

It is vital that the learning material team be focused on creating an app that gives students **a sense of completeness** with contents that are intriguingly and logically combined, with **a clear connection to real life** – this leads to **an inspiring learning experience**. The technical implementation team must ensure that **the design is simple to use and up-to-date**, preferably up-to-2018 and beyond, and that it gives a **comfortable user experience**. The experience aspect is most certainly crucial, as it plays a central role in the students' decision-making about whether to continue using the app and whether to recommend it to peers. The experience aspect will be discussed in more detail in subchapter 3.2.

3.2. Focus group results

The user experience was also explored by the ILOCALAPP team in all partner institutions by means of focus group meetings. This subchapter summarises the results of these focus group meetings.

The results of the focus group meetings indicate that the app must allow for some flexibility in terms of creating points of interest. Bologna, Coimbra, Poznań and Rovaniemi are all different destinations with different types of places worthy of visit. Rovaniemi, for example, is – understandably – more nature-focused than the other cities. Focus group participants also pointed out that event notifications would be handy. They highlighted that the possibility of creating your own events or itineraries would make the app even more useful for them. Overall, bookmarking or tailoring the content to suit your own needs was considered valuable in the form of personalised word lists, for example. As a useful idea, some focus groups suggested that we incorporate a "phrase of the day" feature in the app.

In some focus group meetings, the participants considered that the app is useful mainly during the stay. However, the majority of focus groups pointed out that it can be useful to familiarise yourself with the app and its content beforehand: you can learn about the language and the destination before going there. Some students mentioned that their tutors and the university's international office inform them so well that there would not be need for it, however. In fact, many groups stressed that the usage frequency would be at its peak at the beginning of the stay.

It became quite clear that students do not appreciate too many reminders. In short, the app should not force students to a certain level of activeness. Students should be able to modify the level of notifications themselves. Any reminders should contribute to positive reinforcement by means of supportive messages, such as: "*Hi, we've missed you! Care to explore?*" In the Rovaniemi focus group meeting, all participants viewed that they would use the app more often than once a week but more seldom than once a day. Similar results were obtained elsewhere: in Poznań, for example, students viewed that their maximum level of usage would be three hours weekly and that they were not fond of the idea of daily use. As was pointed out by the focus group participants in Coimbra, however, the app should allow for the students to contribute to the content: this would also prolong the individual usage span of the app as it is more engaging and captivating to the student.

In general, the focus group participants in different institutions viewed that the interface should not contain a considerable amount of text. It would be handy to be able to change the language of the icons and instructions from English to the local language. Some considered that a presentation video could be useful but it should be very short if there will be one. The focus group in Coimbra pointed out that it could be more useful to rely on the intuitive design or/and to have a supporting online area with a help and FAQ section. In any case, all the videos should be kept on the area or on YouTube rather than incorporated into the app to avoid the excessive data transfer.

Game-like elements such as badges, ranking and other forms of positive reinforcement were considered a positive feature in the app. Yet, scores as such were not appreciated by all focus groups.

The focus group meeting also sparked some concrete ideas for the cultural content of the app. Cultural dos and don'ts, local recipes, and recognising local food products in supermarkets were mentioned, for instance, along with belvederes and trekking paths.

Surprisingly, some focus groups did not consider interaction with native speakers as a necessity provided through the app. They pointed out the existence of other channels of communication already offered by the university's international office and other connections. Then again, some focus groups perceived the value of communication from another perspective. Perhaps it would be a good solution to exploit already existing channels of communication and encourage app users to benefit from them. The focus group meetings in Coimbra generated the idea of inviting mobility students to collaborate with the app creation, rather than merely "trying to fit into the app a travel guide and a phrasebook with automatic translation", and rather than thinking of mobility students as "language tourists".

3.3. Insights from experience prototyping

Experience prototyping represents one of those techniques that were imported, so to speak, from areas beyond the language learning/teaching and social sciences -- hence they are less familiar to most project team members. This method has been mostly used in marketing and multimedia design research. However, with the development of the knowledge-based economy and communication technologies across Europe, methods from social science and psychology have gradually come to be used by design and marketing research and vice versa. As a method that observes the user in action and interaction, as the user is immersed in the experience built around artifacts, the experience prototyping can be associated with other qualitative methods in social sciences (like participant observation or ethnography). Prototypes are "representations of a design made before final artifacts exist. They are created to inform both design process and design decisions" (Buchenau & Suri 2000: 424). Within the ILOCALAPP project, the experience prototyping was planned to gain insights into the process of interaction between the user and the app interface. "Think-aloud" technique, by encouraging verbalizations of this process (Boren & Ramey 2000), aimed to help reveal the user expectations about the contents and functionalities of the app. Mockups of the interface had been designed to aid the user in exploring each of the cities. As the user goes about doing one of the proposed tasks (visiting a museum, buying a bus ticket or eating a dish of the traditional cuisine), s/he is being prompted, observed and filmed by research team members.

This section describes the experience prototyping sessions conducted in May 2016 in Bologna, Coimbra and Poznań and it reports the obtained results, with the aim of identifying concrete hints for progressing in the definition and design of ILOCALAPP functionalities and services.

3.3.1. Definition

Experience Prototyping is a method that focuses on how a task or a situation is experienced with the main purpose of gaining understanding of users and their experiences in a real world context and to evaluate and communicate design ideas. The designers investigate users' needs as actors role-playing users in a real user environment. The aim is to find solutions for a new application, a new interface, a new device or a new service. This technique helps the designers to understand the users' point of view when designing future devices or applications.

The experience prototyping consists in a realistic simulation and it is considered one of the best ways for visualising human behaviour and for sharing even its least describable qualities with the specific recipients. The prototypes could be a physical model of a specific touchpoint, a sketch or a sign. It could also be a role-play, which focuses on the service's interactions. The prototype should focus on the service's most important or unusual touchpoints, according to the designers' needs.

In the context of the ILOCALAPP project, experience prototyping help better define and design the functionalities and the services our app will provide.

3.3.2. Preparation

In particular, the goals of our experience prototyping sessions were:

- understanding users and their experiences with the app prototype in a real world context,
- understanding users' needs and users' point of view in a real user environment

To reach these goals, we have identified 3 tasks the participants had to complete during the experience prototyping session. The tasks were the same for all the ILOCALAPP partners:

- Buy a bus ticket.
- Visit a monument/museum/library.
- Eat a plate of typical food.

Starting from some "common" mockups, we have customized them with specific multimedia content (pictures and texts) for each partner, as prototypes models. Then, each partner has printed on paper the mockups and has managed to create a suitable model for the participants.

Figure 3. Prototype model preparation in Bologna.

Figure 4. Prototype model preparation in Poznań.

3.3.3. Sessions

In May 2016 experience prototyping sessions were held in Bologna, Coimbra and Poznań, with the aim of getting feedback and comments from participants on the functionalities, the interactions, and the flow of the application that we are developing, by means of a realistic simulation in a real world context.

Some data about the participants are available in the following table.

Institution	Date	Participants
Unibo	17th and 24th May 2016	3 (2 Italian Students, 1 from Bachelor degree in Foreign Languages, 1 from Master degree in Computer Science; 1 graduated), 1F +2M.
AMU	30th and 31st May 2016	5 (international students, students of mobility programmes), 2F + 3M
CES	May 2016	2 Erasmus/mobility students.

The sessions were conducted in an informal way, letting the participants feel comfortable and free to provide comments and suggestions. Pictures and videos were taken, together with researcher notes.

Figure 5. Experience prototyping session in Bologna.

Figure 6. Experience prototyping sessions in Coimbra.

3.3.4. Results

We have analyzed the notes and the reports provided by all the partners involved in such an experience, and we have identified the main common remarks about the following items.

Navigation among the contents and the services

Navigation among the contents and the services plays a strategic role. Navigation tools should be adequately provided to come back to the previous content/menu/interface, to come back to the index page of the application, and to move across different services/content/functionalities related to the same content (i.e. language tips, tips to talk, cultural and historical information, practical information, games, external links, etc.).

Interface, layout and their configuration/personalization

The participants have shown opposite views on background/ foreground colors and font size. This means that some sort of customizations will be needed. The application should offer a set of configurations to let the users choose their preferred combinations of typographical aspects. Moreover, the interface should let the users scroll long textual content and enlarge images. Finally, the interface should help users identify the content typology: whether it is cultural information, language tips, exercises or games.

Vehicular language vs target language

This is a very complex issue, which should be further discuss before taking any decision.

According to user preferences, the interface and the content should be provided in both languages. The app should let the user choose between the languages or use both of them. Icons and visual cues should be exploited as much as possible in the app interface.

3.3.5. External links and social network connections

External links and connections with social networks were considered very important by the most of the participants. In particular, they expressed interest in having:

- additional external/official information related to the topic;
- a way to share information/pictures/comments;
- a way to be connected with the other users;
- exploiting already existing functionalities, locally provided information and social networks.

Practical and cultural content

A good balance between historical/cultural content and practical information should be found. We have to pay attention to provide not only practical information or not only historical/cultural information. This would also help us in applying the incidental learning paradigm. The content will be connected with students' real-life contexts that will bring forth both aspects, but they can each find their own suitable balance between practical and historical/cultural information by creating personal learning trajectories in the app.

Audio Content

Audios are needed, in particular for the language tips, in order to effectively support users in their daily activities and in language learning

Online vs Offline App

Most of the participants showed interest in having some contents available also offline. Obviously, not all the services can be available offline (i.e. notifications related to the user position). But, at least, some sort of "static" content should be also available offline. An idea could be to make available offline all the content that does not need any online functionalities or services (i.e. geo-localization).

3.3.6. Final remarks

The experience prototyping sessions have been useful and fruitful in all the three institutions. The discussion has confirmed some issues that had already emerged during the focus groups and allowed us to improve the conceptualisation of the final app design, as well as to specify the direction of the steps to be taken. A further prototyping session is planned in Rovaniemi for September 2016 during which an improved mockup will be tested. In general, this method may be exploited also during other stages of development in the future in order to gain further insights on the app.

4. Core values

Lankshear and Knobel (2006:196–199) lay out the following set of principles for learning with digital technologies. They can be useful for us as a source of inspiration for the core values for the outcome of our project.

- **efficacious** learning

What somebody learns *now* should be connected in a meaningful and motivating way to related social practices (authentic rather than pretend versions of practices) composed of particular ways of using language, acting and interacting, gesturing, using tools and other artefacts within certain contexts such that one enacts or recognizes a particular social identity or way of doing and being in the world (Cazden et al. 1996). This involves thinking of education and learning not in terms of schools and young adults (place-related and age-specific) but, instead, in terms of human lives as *trajectories* through diverse social practices and institutions (ibid.) To learn something is to progress toward a fuller understanding and fluency with doing and being in ways that are recognized as 'being in the world', to 'get it right'.

- **integrated** learning

Learning *inside* a cultural practice rather than at a distance; i.e. learning in situ rather than about the practice. Various bits of cultural practice are learned in their natural relationship to one another (i.e. intertwined elements – languages & cultures, modes, technology). Learning is integrated in a sense that *it does not clash with who learners are and what they do* in the other dimensions of their lives.

- **productive** appropriation and extension in learning

Learning should build on what learners already know and have experienced – collaborative and participatory learning.

- **critical** learning

Learning should create spaces for developing and negotiating differing points of view on social practices, identities, institutions and the like. This means creating spaces for experiencing different and competing sets of practices and deciding how to handle their divergence.

At this point, it is worth reminding that we are not supposed to build a system in which a student should assimilate the language or the culture. Our mutually selected core values simply support improving the quality of mobility through language proficiency, intercultural understanding, interaction and social integration of the student. Our core values also reflect the learning concepts we are focusing on in this project: mobile, informal and incidental learning.

Careful consideration has been carried out based on information gained in relevant research, practical teaching and surveys and consultation with students, language-learning professionals and technology experts. The core values of the ILOCALAPP methodology – and inevitably the app – are depicted in figure 7 below.

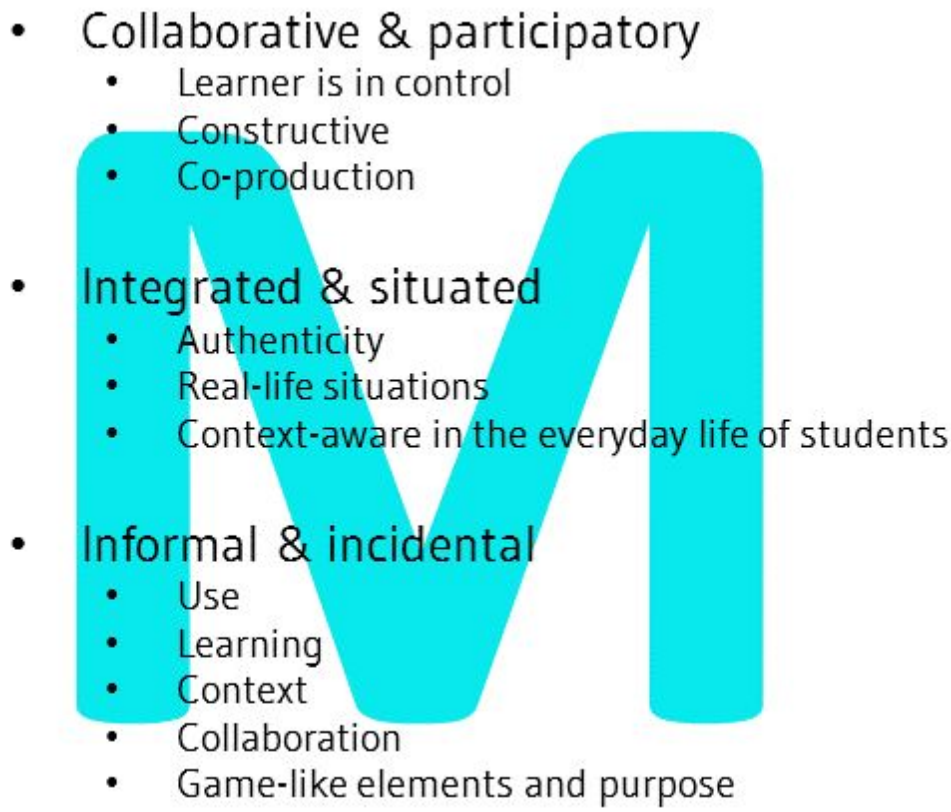

Figure 7. The core values of the methodology and the app.

The core values were finalised by the ILOCALAPP partners in a project meeting at the University of Lapland, Rovaniemi, Finland on 9 June 2016. The set of our methodological core values is organised along three thematic clusters: collaborative and participatory (learner participation); integrated and situated (cultural immersion); and informal and incidental (type of learning and activity). As the app will be **collaborative and participatory**, it means that the learner is in control; learning and use of the app is constructive and there is a possibility of co-construction of learning materials. The app will also be **integrated and situated**, meaning that there is authenticity, real-life situations, and learning is context-aware, where the context is the daily student life. As the third thematic cluster suggests, the app will also be characteristically **informal and incidental**: its use, the format of learning that takes place, the contexts and collaboration, as well as the game-like elements and purpose are all situated outside the classroom, linked with everyday activities and represent a by-product of those activities. Finally, as illustrated in Figure 7 by the large turquoise letter M, the concepts of **student mobility**, **mobile devices**, and **mobile learning** sustain all the above-mentioned values. In other words, the attributes explained above are the most essential characteristics of the app that will be launched in 2018.

5. From the methodology to the map of content

As described in the previous chapters, the specific design of the map of content has been strongly inspired by various principles and theories in the field of learning theories and literacy research (incidental and informal learning, situated learning, multimodality and digital literacies), cognitive sciences (distributed cognition theory) and the affordances of technology (m-learning, geolocalization).

Our main aim consists of enhancing the fruition of authentic inputs through the language in use in context-aware interactional frames and specific places. We also aim at putting forward cultural values about specific places and habits in an authentic and relevant way. To face this challenge, the linguistic contents for the four languages will rely on the most probable oral exchanges in a context (university, museum, botanical garden, etc.) while capitalising at the same time on the most interesting cultural informations.

Within this general frame, contents will be accessible through three different main entries:
'in the place', 'activities', 'culture'. The entry 'In the place' is composed of nine categories corresponding to the lived experiences of an Erasmus student in the hosting town (Bologna, Coimbra, Poznań, Rovaniemi):

1. *[U] = Uni Life*
2. *[G] = Getting around*
3. *[F] = Food & Drink*
4. *[S] = Sights*
5. *[E] = Entertainment*
6. *[L] = Lifestyle*
7. *[Se] = Services*
8. *[Sh] = Shopping*
9. *[ME] = Me in...*

Each category includes three (3) to six (6) sub-categories. For example, the sub-categories for **[S] = Sights** could be 'squares', 'monuments', 'parks', etc. whereas the sub-categories for **[Se] = Services** concern a variety of different practicalities, such as 'housing', 'health and wellbeing services', 'banks', 'post-office', etc.

Sub-categories can vary according to the specificities of each country and town. We can, for example, foresee that points of interests in Bologna will be different from those in Rovaniemi (historical buildings vs. nature sights and outdoor activities). The ninth category (**ME in** Poznań, Rovaniemi, Bologna, Coimbra) is the most customizable for the app users because it is supposed to gather all the students' preferences. Preferences are tracked and gathered according to the most used and interesting contents of the ILOCALAPP or as external online extra resources (websites, social media, etc.) too. '**ME in'** seems to be the most appropriate category for overall items concerning e.g. public holidays in each country, safety

issues and the dos & don'ts. An idea of a diary function is also being considered, whereby the user would be able to upload photos, videos, and text to compose a diary of the mobility period. In such a way, the idea of co-constructing materials, which we stand for in this methodological framework, would be implemented in practice.

Let us observe a concrete example of 'ME in [...]': I am visiting a university library in Bologna and I need to borrow a book but I do not know what to say, or how to do that politely or maybe I am very unsure about phonetics and pronunciation. I have two options: to start from the home page and click on 'UniLife' -> Libraries -> and then looking for a specific library, such as the SALA BORSA. Or search directly the *SALA BORSA* from the 'free search area'. Geolocalization will also facilitate the content exploration thanks to active notifications about places. Then I can access two other sections: TIPS for TALK – that consist of a series of suggestions of words and expressions coherent with the communication situation and lexis in the place – and the section TALK where ready-made sentences will be available in a written and audio form.

In order to facilitate the reception and comprehension in a dialogue (or generally of a second turn within a bidirectional exchange), the ready-made sentence will be followed by some models of the most frequent answers.

In the section 'Culture', students will be able to access longer texts about the historical and cultural aspects of the place but also to learn and get in touch with the pragmatic and sociolinguistic habits used in that place. The scheme below in figures 8, 9 and 10 will further clarify the map of content.

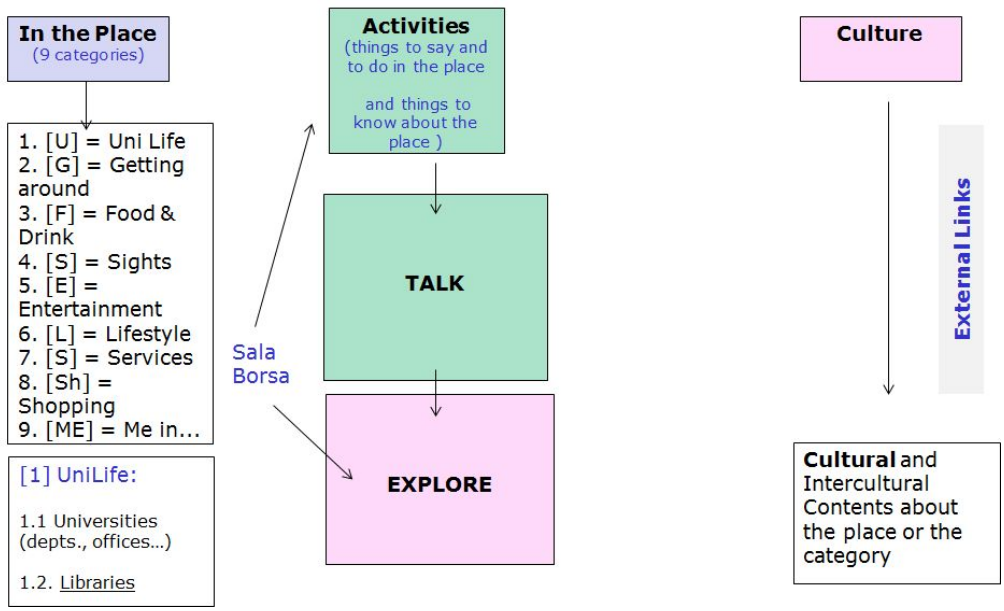

Figure 8. General structure of the contents.

Figure 8 shows the general structure of the map of contents where on the top line we have the macro-entries ‘In the Place’, ‘Activities’ and ‘Culture’. If students click on ‘In the Place’, nine (9) categories will be available. By clicking on ‘Activities’, students will access, in a more immediate way, suggestions for contextualized conversation and exchanges in the place and some information (historical, artistic, practical, etc.) about a specific place. The section ‘Explore’ is strictly connected with the entry ‘Culture’.

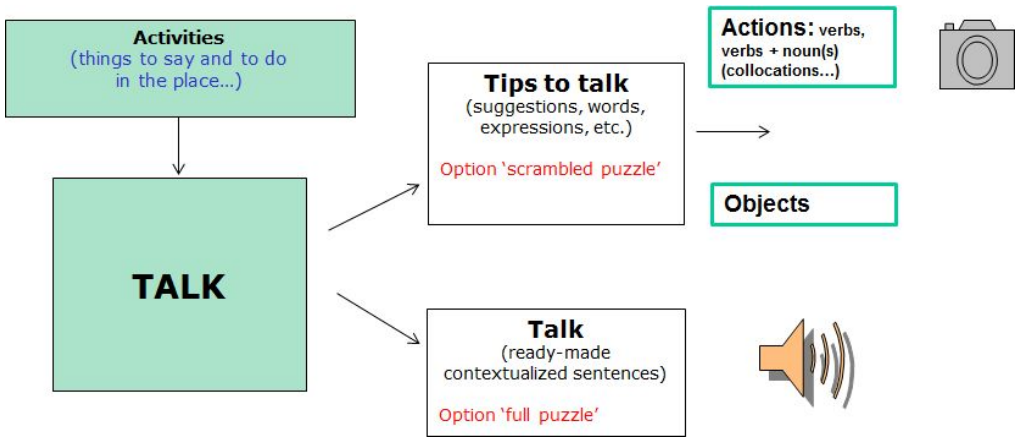

Figure 9. Focus on ‘Activities’.

In figure 9 we represent how to offer ‘things to say and to do in the place’ to the app users. They will be able to choose from the two modes: the first, metaphorically called ‘scrambled puzzle’, consists of suggesting tips for talking, for example, key verbs referring to actions in the place, or verbs + nouns, for example, in the case of collocations or other similar phenomena. The app is addressed to users with different levels of proficiency. For this reason, we need to facilitate their understanding as well as include a possibility to actively recycle the contents (words, expressions, etc.) by facilitating the comprehension through the association with pictures (for example in the Italian and Portuguese versions) and through the possible association with the translation in a bridge/vehicular language like English.

In the ‘full-puzzle mode’, so to speak, sentences are ready-made so that users just need to look for them in the proper category, to read and listen to them, before using them during the interaction in the place with other people.

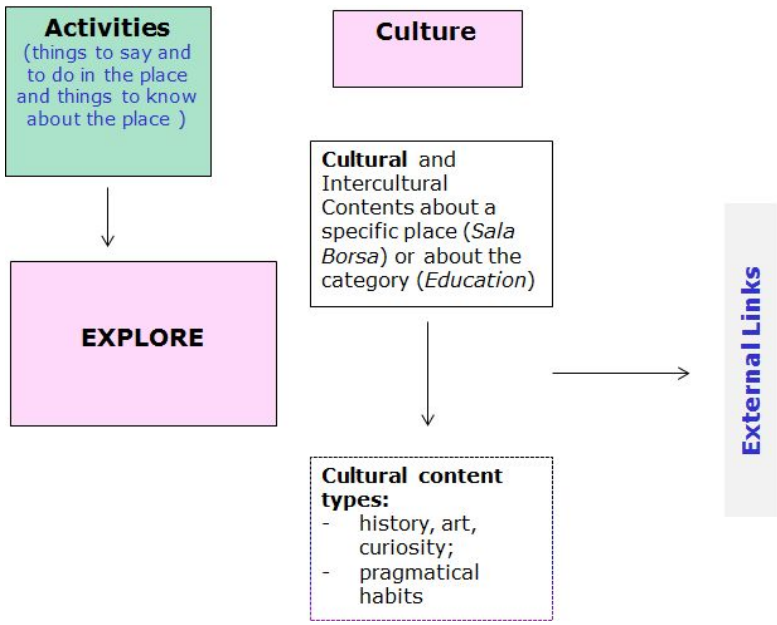

Figure 10. Focus on 'Culture'.

Finally, figure 10 proposes to illustrate how we approach cultural contents. They can be about a specific place (i.e. about the history of the Sala Borsa building) or about a field (i.e. higher education in Poland). Cultural contents should try to spark up the interest of our mobility students by touching topics that would cover both the factual historical information and would include curious pragmatical aspects about the place and habits in the place.

As far as external links are concerned, they will be exploited mainly to suggest relevant links within social media and social networks, to reliable monolingual and bilingual dictionaries, as well as official websites and portals about places or events freely available online (http://www.unibo.it ; http://salaborsa.it).

Social media and social networks will be helpful for two reasons: i) to foster the creation of a community of practice and/or a community of interest composed by the mobility students using ILOCALAPP but also by native speakers, and ii) to encourage the use of productive written and oral abilities by sharing ideas, words, emotions about a place or an event in a place. In such a way, the collaborative nature of the app will be effectively put into practice.

In line with the methodology of incidental and informal language learning, ILOCALAPP will not propose traditional exercises about lexis and grammar but will exploit games specifically designed for linguistic aims. One possible example is offered by the digital game Magic word, available into two different versions, one more lexis-oriented: (http://www.lilec-linguistica.it/magicword/page.html) and the other more morphology-oriented. We are also considering the use of DCT (Discourse Completion Task) for a 'Guess the word' type of digital game, as well as Tetris: (http://www.ccdmd.qc.ca/fr/jeux_pedagogiques/?id=1088&action=animer).

6. Concluding remarks

As stated in the introduction, the end product of the project will be an app that aims at incidental language learning permeated situated within the relevant cultural content. It is worth emphasising the mutual interdependence of both types of contents, as we would prefer that linguistic and cultural content be **intertwined** in the final app, with technology as a sustaining mechanism. The situation is depicted in Figure 11.

Figure 11. Linguistic and cultural contents, along with technology, are strongly and dynamically intertwined in the app.

The ILOCALAPP team should aim for intertwining as strong as shown at the far right of Figure 11 to enable all crucial elements blend into a natural part of the content. The scenario depicted at the far left of figure 11 is only light intertwining, much like the one carried out in the E-LOCAL online courses where cultural and linguistic elements were mostly presented in separate sections. The scenario in the middle is a mid-way solution which, perhaps, would be sufficient but not the scenario the ILOCALAPP should strive for.

As technology plays, after all, such a significant role in the app, it is vitally important that the app is easy and attractive to use. It has a significant effect on the modes that can be implemented in the final app as well. A close interaction between the technological and linguistic experts is crucial for ensuring that the technological design and implementation of the app is easy to use and functional. Furthermore, annex 1 is an example of the enthusiasm for reciprocal and cross-disciplinary learning amongst the project team. It contains ideas from a consultation with electronic media designers creating apps in the award-winning enterprise in Coimbra.

The app will foster learning four languages along with the respective cultural practices: Finnish, Italian, Polish and Portuguese. In the European and global context, the app will improve the quality of mobility by means of promoting:

- language proficiency
- cultural and intercultural understanding
- interaction and
- social integration of the student.

This context sets the framework for the core values that were chosen for the methodology.

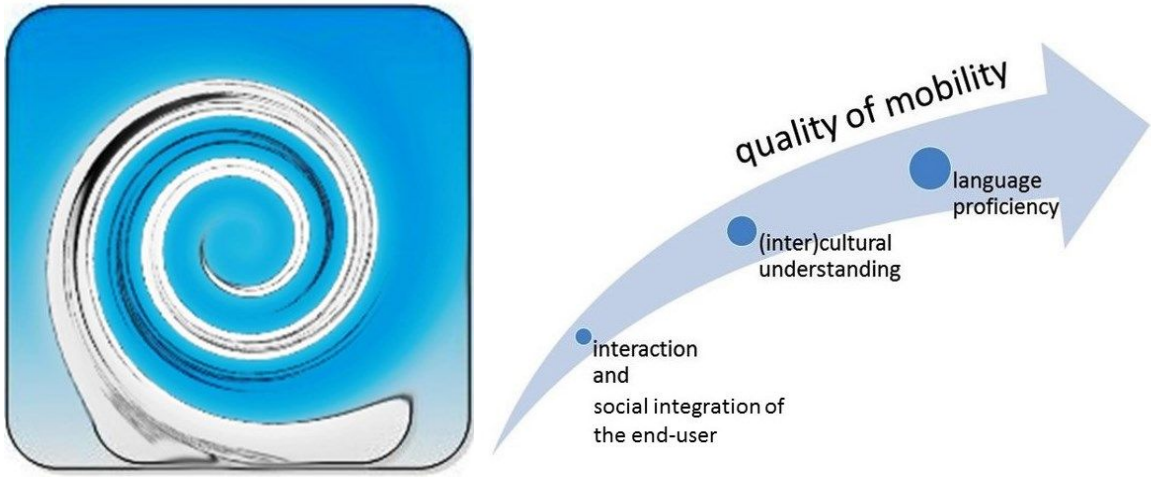

Figure 12. Cultures and languages are intertwined in the technologically advanced mobile app, contributing to key mobility values in the European – and global – context. This context sets the framework for the core values.

Figure 12 shows visually how the app should match the objectives of improving the quality of mobility through language proficiency, (inter)cultural understanding, interaction and social integration of the student. It is important to bear these objectives in mind throughout the methodological specifications and, eventually, the whole project.

Early on in the report it was discussed that the app will be **appealing** and that it will **transcend conventional ideas of language and culture learning**; these factors would most likely support our aim of improving the quality of mobility and, therefore, they could be considered as key values. As the project team will need to foresee what would be attractive to students in 2018 and beyond, the app – for it to be successful – will have to make sense to the user/learner in the 21st century in terms of technology and learning content. Therefore, the project team will need to make a continuous effort to wilfully think within the 21st century scope and maintain a close working contact with students to be able to trace a social change/trends that may have implications for the app development. **Foresight** and **contact with the students** are needed.

The app will be contextualised in the university city where the students arrive, i.e. the Finnish course will be situated in Rovaniemi, the Italian course in Bologna, the Polish course in Poznań, and the Portuguese course in Coimbra. The idea is to make the learning content correspond to the students' **everyday contexts and lived experiences**. Within these contexts, the app would be used **incidentally** in a **game-like** manner, and hence it will form a **pleasant moment** amidst the students' daily activities; it can even become an easily accessible, enjoyable **way of quality time**.

If the app becomes as successful as we humbly hope and work for obtaining success, the app could be expanded to other European university cities and their linguistic and cultural settings. In fact, such an expansion would improve the mobility experience of students at large and it would support fostering mobility more widely at European level. Besides this, the app could be extended to target other categories of mobile population, like transnational corporate professionals, migrants, asylum seekers and refugees.

Annex 1. Practical implications for the app contents design

Using mobile phones for reading and learning (Voitovich 2015)

Mobile phone users read from screens of small size, so it is often believed that shorter texts are preferable. However, since people take mobile phones everywhere with them (unlike other portable devices like laptops or tablets), they can always return to the content later on, especially if it has really managed to capture their interest.

Contrary to the common idea, the attention of mobile phone user is more focused (unlike with desktop or laptop), since there are no multiple windows to distract the user from the content. Once the app is opened, the user's attention is concentrated on it. Throughout the day, there are large periods of time when the user can be focused on the content -- on public transport, during lunch, waiting in queues (lines), sitting in a doctor's waiting room, taking a sneak peek during TV viewing, and even before bedtime. In other words, the user can check the app whenever there is a longer pause along the day.

Content design for mobile end users: practical implications (Smyth 2016)

Layout

The newly released user heatmaps suggest that the centre of the screen (rather than its top) is the spot receiving most attention among mobile phone users. So the most significant element (information, image, task) should appear in the screen centre.

Size and language

Texts can occupy several screens - provided they really capture the user's interest. Yet it is important that the size of the whole text is announced (e.g. 5 min- read; 50 words etc.) or made otherwise known straight from the beginning, so that to enable users to plan their interactions with the app. Each new sentence should contribute to developing the idea in the prior phrase. There is no space, time nor patience for vague wordings and long sentences. Strong need to articulate thoughts clearly.
The opening lead should be written in such a way so that to enable users to check their expectations about the whole content (spoiler-like paragraph of 3-4 lines).

Content value

The information should be either super-innovative, mega-interesting, extremely helpful or entertaining, otherwise the user will stop using the app. Each element and component of the content (sound, image, font size and colour, layout, word or phrase) should bear some function or meaning, nothing is there simply to adorn or distract.

Format/design

- Write an opening lead of 3 lines (spoiler-like).

- Write short paragraphs of 3-5 lines, separated by a space from the following paragraph to create a rhythm within the screen space. For the same reason, use bullet points and other lists.
- Write short headlines of 1-2 words -- do not take up the screen space. Announce the time or word estimate for the task right after the headline.
- Do not use very large fonts

Use of visual elements

Eye-tracking movements in text and image on the mobile phone differ:

- with an image, eyes become transfixed on it;
- with a text -- eyes scan the screen from the top down.

So if a video/image is to be inserted into a text, it would distract the user's attention away from the text. That is why it is advisable to avoid unnecessary video and images (to 'adorn' the text) since they take up much space on the screen . Opt for either text or image or video to occupy each screen at the time, not together.

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