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FROM EUROPE TO BOLOGNA AND WAY BACK: LOCALISING LANGUAGE AND CULTURE LEARNING THROUGH TECHNOLOGIES

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Abstract

This doctoral thesis is aimed at investigating language and culture learning through technologies with special attention to the global and local dimensions that this process may acquire. Building upon three case studies experienced at the University of Bologna, the examination of the usage and the effectiveness of technological tools for language and culture learning will be conducted in relation with the phenomena of student mobility and internationalisation of higher education. The primary focus is upon Italian language and culture, but other languages and cultures will be also taken into account. Similarly, some specific technologies – i.e. the Moodle platform, the MOOCs (Massive Open Online Courses) and the context of mobile Apps – will be spotlighted while dealing with technology for learning purposes in more general terms.

The initial chapter is dedicated to providing a thorough methodological overview focusing on the latest theories and the specific technologies under investigation, raising the relevant critical issues which will be discussed in the following chapters. The approach adopted for this research is also specified and notions of instructional design for language and culture learning are provided, as this played a crucial role in the case studies analysed in the central chapters of this work.

The second chapter is devoted to the E-LOCAL (Electronically Learning Other Cultures And Languages) experience, which resulted in the creation of the E-LOCAL Moodle courses for six languages and cultures and their institutional systematisation. Focusing on the Italian version, all the steps from the conceptualisation of the courses to their final release will be retraced, including the methodological aspects and the practical implications pertaining to the usage of the courses. The third chapter analyses the transition from the E-LOCAL Moodle course to the E-LOCAL MOOC course of Italian language and culture; it highlights all the methodological issues related to its development as well as its role in the internationalisation perspective. The fourth chapter discusses the ILOCALAPP (Incidentally Learning Other Cultures And Languages through an APP) the experience and the usage of the UniOn! App for the incidental learning of languages and cultures, whose contents are geo-localised in the reference cities; in this chapter, the concept of experiential learning will be particularly utilised, again with a focus upon the Italian version and the city of Bologna in particular.

To conclude, the final chapter provides a systematic reflection upon the results collected in the central chapters. Such a reflection will be organised around the issues presented as critical in the first chapter and – in particular – it will deal with the multifaceted relation between technology and education. The evolution of both the technological tools and the educational approaches will be taken into account, as well as the criteria for both designing and assessing educational technologies. The local and global dynamics influencing learning will be also discussed in the attempt to identify a possible theoretical framework for learning languages and cultures through technologies. Finally, the conclusions of this work will summarise the current and future usages of the tools described, while also opening the path to new possible research perspectives.

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Preface

This doctoral thesis aims at investigating language and culture learning through technologies with a special attention to the global and local dimensions that this process may acquire. The focus is upon Italian language and culture – but other languages and cultures are also taken into consideration throughout the discussion – and upon some specific technologies, namely the Moodle platform, the MOOC's reality and the context of mobile Apps The investigation included in this thesis stemmed from three studies carried out at the University of Bologna along my doctoral years, which represented the starting point for a deeper reflection upon the usage and the effectiveness of technological tools for language and culture learning. Such an examination is conducted in relation with the phenomena of student mobility and internationalisation of higher education; these topics will be intertwined in the analysis of the case studies, and they will constitute the perspective from which many issues will be considered.

The thesis is organised as follows. The first chapter is dedicated to theoretical and methodological issues and has two main objectives: i) providing a thorough overview about the latest theories and the specific technologies under investigation in this thesis, and ii) raising the relevant critical issues which will be discussed in the following chapters. The first chapter also includes some specifications about the approach adopted and a section dedicated to instructional design for language and culture learning, which played a crucial role in the projects analysed. Chapters two, three and four illustrate the three case studies which were the core of my doctoral research. The second chapter is devoted to the E-LOCAL experience, which resulted into the creation of the E-LOCAL Moodle courses of six languages and cultures and their institutional systematisation. Focusing on the Italian version, all the steps from the conceptualisation of the courses to their final release will be retraced, with a special attention to the methodological aspects and the practical implications pertaining to their usage. The third chapter shows the transition from the E-LOCAL Moodle course to the E-LOCAL MOOC course of Italian language and culture; it highlights all the methodological issues related to its development as well as its role in the internationalisation perspective. The fourth chapter is instead committed to outline an experience of pure mobile learning, as it accounts for the ILOCALAPP experience and the usage of the UniOn! App for the incidental learning of languages and cultures, whose contents are geo-localised in the reference cities. In this chapter, the concept of experiential learning will be particularly exploited, again with a focus upon the Italian version and Bologna in particular. Bologna is, nevertheless, a relevant character in all the three experiences, even though at different degrees. In addition, in the examination of the three case studies also the gender perspective will be taken into consideration, both as far as the learning contents and the users' viewpoints are concerned; this goes into the direction of tackling any possible stereotypes related to the development and the usage of the educational tools analysed in this work. Moreover, in all the three chapters dedicated to the case studies, the design issues will be faced in relation to the pedagogical approach, the

impact of the tools upon the learning process will be investigated and the assessment of the results obtained will be analysed. In all cases, the local dimensions of learning will be taken into consideration and confronted with the global users of the tools, in the attempt to identify effective and exploitable practices. Finally, the fifth chapter offers a critical reflection upon the issues examined and the results collected in the previous chapters, and draws the conclusions about this research path while opening new possible research perspectives.

This doctoral research benefits from three important assets. Firstly, it builds upon a long research activity carried out by the Department of Modern Languages, Literatures and Cultures of the University of Bologna, which dates back to 2010 and was consolidated along the years. The temporal evolution is highly relevant as it allowed for observing how changes in technology may have affected the methodology and, conversely, how changes in the approach to learning may have influenced the development of dedicated technological tools. The second advantage is linked to the privileged observation point from which the analysis was carried out. For all the case studies under examination, I had the chance to consider both the internal (i.e. the research teams working on the tools) and the external (i.e. the actual users of the tools) viewpoints. This double perspective affected the final results as it enlarged the spectrum of analysis by including different nuances. Thirdly, the international and multidisciplinary composition of the research groups, along with the international and multidisciplinary background of the users, constituted a further added value, insofar as they enriched the discussion introducing new, unexpected but extremely interesting outlooks, as will be discussed in additional detail in the following chapters.

To conclude, a final note is necessary. This doctoral thesis combines the study of theoretical aspects with a practical approach, in line with the specificity of the scholarship which strongly supported the realisation of action-oriented research. As such, the conclusions drawn by this thesis may lead to future research developments, also embracing new contexts and different situations, and they are presented in such a possibility.

1. Methodologies and technologies

This initial chapter is dedicated to outlining the theoretical and methodological issues, which are relevant in discussing the case studies presented in the following chapters, and which will be also relevant for the critical analysis presented in the final chapter. Indeed, these introductory specifications pursue two main objectives. As a first point, they aim at providing a comprehensive overview about the methodologies under investigation in this thesis, with a special focus on the latest theories, and taking into consideration the specific technological contexts of the case studies which will be analysed. Secondly, this initial chapter also aims at raising the relevant critical questions which will be leading the analysis about the effectiveness of the learning solutions presented and the implications concerning language and culture learning through technologies. After an introduction about the approach adopted for this study and the definition of the area of investigation, and some preliminary considerations about language and culture learning through technologies, the first chapter moves on to present and discuss the theories and the tools. Concepts pertaining to the features of the CALL (*Computer-Assisted Language Learning*) and its most recent development – the MALL (*Mobile-Assisted Language Learning*) – will be examined. In addition, we will focus on specific technological tools and notions of instructional design for language and culture learning, which played an important role in the case studies which will be presented. Brief, preliminary conclusions about language and culture learning through technologies will end this initial chapter.

1.1 Introductive notes: looking for a methodology

Before entering into the details concerning language and culture learning through technologies, some preliminary remarks are necessary in order to define my area of investigation and the approach I decided to adopt to identify and answer my research questions.

My area of investigation pertains to language learning and acquisition in an intercultural perspective and through the use of technologies. As such, it includes various and interrelated aspects which will be deployed all along the following chapters. To begin with, in this research we will exploit the role of new technologies to foster language and culture learning and we will analyse the specificities of the learning environments. Some specific technological contexts will be taken into consideration (Moodle, MOOC, learning Apps) along with the latest methodologies applied for designing and using the tools. Language is always presented in relation to culture, and the intercultural aspects are included in the discussion. Even though the focus is on Italian as a second language for mobility students, phenomena like multilingualism and the role of English as a gate to other cultures will be also examined. Language and culture learning are discussed here in relation to student mobility, which is associated to the more general question concerning the internationalisation of education at

university level. Issues such as local vs. global citizenship and changing identities are also examined to provide a full understanding of the data.

In this perspective, the definition of Applied Linguistics offered by the Applied Linguistics Journal of the Oxford Academic fits into my doctoral research and offers a good insight onto my area of investigation. Applied Linguistics, in fact, can be viewed as "research into language with relevance to real-world problems"; as such it has to be considered "not only as the relation between theory and practice, but also as the study of language and language-related problems in specific situations in which people use and learn languages" (Gass, 2009: 9). In other words, by-passing all the difficulties related to providing an outstanding definition of Applied Linguistics, as outlined by Davies and Elder in their Introduction to the Handbook of Applied Linguistics (2004), such a discipline is characterised by the effort to combine practical experience and theoretical understanding of language development and language in use, through speculative and empirical investigations in real-world problems in which language is a central issue (Davies, Elder, 2004). Following this direction, my research was action-oriented since the very beginning and the approach I adopted was tailored accordingly. Since the initial phase of my investigation in fact, I was engaged in diverse and concrete examples of development and exploitation of technological tools for language and culture learning, which oriented my research towards the solutions of many practical aspects. Such concrete situations, however, proved to be relevant also in order to investigate the theoretical underpinnings, insofar as they could constitute the field for confirming (or refuting) the theory. My doctoral studies were therefore connoted as applied research, and they followed the LTA model depicted by Stringer for Action Research (2007, 2010, 2014), which is characterised by three main phases:

1. Phase 1 – Look (L), aimed at building a picture of the phenomena and gathering information;
2. Phase 2- Think (T), dedicated to interpreting and explaining;
3. Phase 3 – Act (A), devoted to resolving issues and problems.

The LTA model theorised by Stringer could be easily be applied to my doctoral investigation. I dedicated my first PhD year to the (L) phase, initially building a picture of the state of the art regarding technologies for language and culture learning; and then gathering detailed information about the specific technologies I decided to focus upon. This phase also concerned the methodological specifications and is summarised in this initial chapter of the thesis. I then moved to the (T) phase during my second PhD year, when I examined the three selected case studies and started to interpret and explain the results I was collecting. Chapters two, three and four of this work provide a detailed account of this phase. Finally, I reached the (A) phase in the third and final PhD year, when I started to draw the conclusions from previous investigations, which are discussed in the fifth chapter.

During these three phases, I followed both top-down and bottom-up processes, and I also moved from macro to micro concepts (from technology for language and culture learning to specific technologies for language and

culture learning) and vice versa, (using the results collected to question theoretical aspects). These oscillations will be reported in the discussion, and they are to be regarded not as forms of uncertainty but, on the contrary, as the attempt to provide a full picture of the phenomena under investigation. Similarly, both a descriptive and a critical perspective will emerge when describing and analysing the case studies, insofar as a description of the phenomena under investigation is preliminary to the global understanding and to the critical analysis of the issues involved.

1.1.1 Dealing with technology for learning purposes

From several viewpoints, dealing with technologies for learning can result in frustration and discomfort. If we adopt the teacher's perspective, the relation with technology is often characterised by a sort of anxiety caused by the fact that, as soon as a level of comfort is achieved (maybe developing and starting to use some materials related to that technology), new, faster, and allegedly 'better' technology arrives to replace it (Levy, 1997). Things do not improve if we adopt the researcher's perspective, for whom it is extremely hard to define a state of the art in a field where every in-depth analysis may turn out to be obsolete at the very moment in which it is completed. Also from the learner's perspective, the situation is quite complex, especially if the learning process happens in autonomy, with no tutor's guidance, as it may be difficult to decide the most appropriate solution to meet needs and expectations. But, as Levy pointed out already back in the 90's, taking into consideration only the latest technological breakthrough would be unfair and could lead to non-sense; we are – both as teachers and as researchers – forced to "try and make sense of what is going on" (Levy, 1997: 1) in order to provide the learners with mindful, attentive learning proposals. This is exactly the approach adopted in this research, where we will try to understand the extent of the phenomena first, and we will subsequently try to draw some applicable conclusions.

The concepts and the principles at the basis of a learning programme involving technology do not necessarily become obsolete when the technology itself is overcome by a newer one (Levy, 1997). On the contrary, the valuable knowledge and experience accumulated can be indeed absorbed and used to inform new projects. The three case studies examined in the central chapters of this thesis represent good examples of this attitude. They refer to a long experience with language and culture learning through technology, which was carried out at the University of Bologna between 2010 and 2018, and which led to the development of three main 'products' for language and culture learning: an e-learning course on a customised Moodle platform, a MOOC course and an App for mobile devices. These three products represent somehow the technological evolution of the last decade, and they also reflect the transition towards the mobile dimension of learning. The subsequent products were nevertheless able to exploit the positive results obtained with the first experience, and to maintain the underlying approach by adapting it to the newest tools. At the same time, the unavoidable

shortcomings identified by the users were analysed and overcome, in most cases. In other words, within the three experiences under examination, the authors tried to apply the latest theories and methodologies to concrete cases of design and development of technological tools for language and culture learning. As anticipated, in those years I have had the privilege to observe and work with the research teams who defined the methodologies, carried out the end users' analysis, created the learning materials and designed and assembled the learning platforms and applications. The observation and the results of this work are included in this doctoral thesis.

Several challenges are faced when wishing to develop a technological programme for language and culture learning; they were encountered in the case studies reported in this research and they will be discussed while highlighting the importance of collaboration among the different kinds of professional expertise involved in the process, which proved to be all valuable to reach the established learning goals. As the strengths and the limitations of the development environment can affect the process and the learning materials, the selection of hardware, software and development tools, along with the approaches adopted and the pedagogical viewpoints combine to play a key role in defining the final learning experience. We will provide an insight on how these challenges can be tackled, and samples of feasible solutions which can be adopted.

A final important aspect, which will be dealt with along my research, is the relationship between the local and the global dimension of learning, and its impact upon the search for identity. The technological tools under examination were in fact all originally created for a peculiar audience of learners: the mobility students, i.e. those students spending a part of their studies in a country other than that of their home institution. This typology of users can by definition be considered as 'global', as they live in different countries, they move, their learning path may start in one location and end up in another, etc. However, they are forced somehow to confront with the local aspects, especially when dealing with languages and cultures. The implications of these considerations will be discussed in the following chapters along with all the other issues mentioned above.

1.2 Preliminary considerations about language and culture learning through technologies

As a matter of fact, the fast evolution and the rapid spread of the information and communication technologies deeply changed our daily approach to information and communication, and this evolution also affected the ways learning can take place in several fields, among them language-culture learning (Troncarelli, 2016). If learning languages has already implied the use of technologies for many years so far, in recent years digital technologies have become central to language practice and they are becoming somehow 'normalised' (Bax 2003, 2011; Motteram, 2013), i.e. they are used as precious elements of the learning process without our "being consciously aware of its role as a technology" (Bax, 2011: 1).

The drastic innovation was brought in by the access to the web, which highly increased the selection of sources and resources available for both learners and instructors. As a consequence, language learning became more stimulating and engaging, and also more focused upon the needs and the features of the learner, insofar as the multimedia dimension which is included in the technological approach could be appealing for the diverse learning modalities (Troncarelli, 2016). Moreover, not only the web became a support for learning but it also became a learning environment itself, used either as a co-environment for other in-class activities or as the unique environment when learning happens entirely online.

If the effects of the so-called technological revolution became firstly evident in the classroom, where overhead projectors, interactive whiteboards, laptop computers and wireless connection have created a stronger connection to the outside world (Motteram, 2013), the biggest revolution is taking place nowadays outside the classroom, with a learning dimension which is more and more mobile and context-related. Learning through mobile devices in fact "gains credibility every day and the increasing popularity and rapidly diminishing cost of tablet devices reinforce this by providing a format that really is capable of delivering courseware" (Peacock, 2013: 2).

What Peacock affirms about English can be easily extended to other languages and cultures but it does not come without implications. The increased use of technologies brought new challenges and, if – on the one side – it is undeniable that technologies have influenced the approach to language and culture learning, both within and outside the classroom, some issues – on the other side – have raised concerning how to manage this impact in order to fully exploit it. Some critical considerations are even more urgent, insofar as the use of technologies for learning languages (and cultures) is more and more taken for granted, as long as this happens through tools that are part of our daily routine.

1.2.1 Four critical aspects

A first critical aspect to consider is the relationship between technology and education, and – more in general – between technology and society. Such a relationship is often presented in simplistic and antagonistic terms, providing a picture of technology either as so powerful of being capable to change virtually every aspect of our daily practice, or, on the contrary, as technology being entirely harmful and potentially destabilising and destroying (Bax, 2011; La Grassa, Troncarelli, 2016). In such a polarised scenario, it seems that there is no room for a middle, nuanced position, whereas – if we aim at properly understanding the role of technology in education and in society – we must accept a more subtle explanatory framework, which is multifaceted. The interaction between technology and education, and the interaction between technology and society, is undeniably complex and involves many intertwining factors, including most likely both advantages and disadvantages (Bax, 2011).

Secondly, we should try to better define what we mean by 'new technologies' (the plural is relevant), a label that we often misuse. Labelling a technology as new is indeed tricky as for the volatile impact of the technology itself, and may lead to a sort of impossibility to define a state of the art. Moreover, the general trend is to discard a technology when it is considered to be outmoded, no matter how effective it still proves to be (Levy, 1997). So, on the one side, the temporal aspect is a relevant factor to consider, as there is an unquestionable temporal evolution, which affects what we define as old and as new. On the other side however, some contextual factors need to be included in the analysis, which should take into consideration other dimensions of the learning experience in order to identify what kind of pedagogical principles may still remain as valid once a technology becomes obsolete. Hereafter, we will provide chronological review of the approaches and of the technologies used for language and culture learning including both the international landscape and also focusing on the specific Italian context, in the attempt to offer a contextualised analysis of the phenomenon.

A third relevant point is related to the concept of 'educational technologies'. Technology is said to be educational when it is used to facilitate the learning process. It may, or it may not, have been intentionally *created* for that purpose but it is *used* for that purpose. And once people decide to use a technological tool for language and culture learning, the approach adopted cannot be the same as if they were not. Similarly, if we use a technology which was not intentionally created to be educational, the approach cannot be the same (La Grassa, Troncarelli, 2016). That is to say that some specific criteria need to be considered both when designing and when assessing the tools, insofar as their usage can be functional only if certain conditions are met, as we will see.

Finally, a further interesting aspect concerns the possibility – and the relevance – to apply specific conclusions to more general situations in order to define theoretical frameworks. Studies about the usage of technology for language learning have been in fact abundant in recent years[1], and they try to offer exhaustive overviews of a complex and dynamic phenomenon. Researchers often complain that studies concerning CALL (*Computer-Assisted Language Learning*) and MALL (*Mobile-Assisted Language Learning*) lack a sound theoretical foundation, as the focus upon specific technological realities may result into a scarcity of general considerations applicable to language education as a discipline. We might wonder if the specific considerations pertaining to specific technologies, and the specific conclusions that can be drawn from a specific lesson, are relevant to those technologies and that lesson only. Or, on the contrary, if and to what extent they might be appropriate for other scenarios as well. Given the specificity of some technologies, and of their pedagogical

[1] In particular, see Levy, 1997; Warschauer, 1996, 2000, 2003; Bax, 2003, 2009, 2011; Yang, 2010; Martín-Monje, Bárcena, 2014; Miller, Doering, 2014; Traxler, Kukulska-Hulme, 2016; Kukulska-Hulme, 2018. For the Italian contributions, in particular see Balboni, Margiotta, 2008; Villarini, 2010; Caon, Serragiotto, 2012; Fratter, Jafrancesco, 2014; La Grassa, Troncarelli, 2016.

usage in particular, it might be necessary to accept the specificity of the approaches related to those technologies. In other terms, the specific conclusions derived from single experiences might be significant for other scenarios, but they are not automatically applicable to *all* scenarios. On the other hand, it is also true that defining theoretical frameworks – capable of going beyond the single specificities and aiming at providing general scaffolds to build upon – give solidity to the discipline (Bax, 2003, 2011; Burston, 2014, 2015).

1.2.2 Research questions

All these preliminary considerations can be reformulated into several research questions, which have been summarised around the following five main sets:

1. What are the specific features of the relationships between technology and education, in particular in the field of language and culture learning? How have they changed in recent years? And how are they linked to the specific context under examination?
2. How is the evolution of technology impacting the evolution of educational approaches? And vice versa, how is the progress in educational approaches influencing the development of technological educational tools? What kind of pedagogical principles can be maintained once a technology becomes obsolete?
3. What is the impact of technological tools on language and culture learning? How can we measure their effectiveness? How do the users assess it?
4. What factors are to be taken into consideration when developing a technological programme for language and culture learning? How is educational design changing in order to take into account those factors?
5. How are the local and the global dimensions impacting language and culture learning through technology? And how is this educational approach influenced by local and global dynamics?

All these issues will be addressed in the following chapters, and they will be examined from different perspectives in order to explore all possible answers and to reach a synthesis in the conclusive notes.

To begin with, in the following paragraphs, we will retrace the different approaches to the usage of technologies for language and culture learning which have alternated in recent years; after a short historical excursus, the focus will be on the theories which were considered mainstream from the mid-Nineties up to the present time, both in the international scenario and specifically in Italy. The decision to select this lifespan is linked to two main factors: i) the mid-Nineties represent a turning point in the evolution of CALL, as in those years the computer shifted from being a support tool to the learning environment to becoming a virtual learning environment itself thanks to the web development; ii) in the last ten years the mobile dimension of learning has become more and more relevant, insofar as we have moved from CALL to MALL. We decided,

therefore, to specifically cover the transition from one 'big revolution' to a second 'big revolution', so to say. This is also in line with the three case studies reported in chapters two, three and four, which follow the same direction, as they include examples of both CALL and MALL, whose details we will discuss in the following sections.

1.3 A brief history of CALL

As anticipated, CALL stands for *Computer-Assisted Language Learning*; its most commonly accepted definition was provided by Levy, who described CALL as "the search for and the study of applications of the computers in language learning and teaching" (Levy, 1997: 1).

Other acronyms have been used to refer to the same concept, for instance CALI (Computer-Aided Language Instruction), as a subset of the more general CAI (Computer-Assisted Instruction). Both CAI and CALI have American origins, whereas CALL has a British background. CALI was gradually abandoned from the early 1980s as it seemed to imply a teacher-centred approach (as shown by the use of the term 'instruction'), in favour of a label reflecting a more a student-centred approach, with a focus on 'learning' rather than 'instruction'. TELL (Technology-Enhanced Language Learning) was proposed as an alternative term by the TELL Consortium project of the University of Hull in the 1990s, but it did not encounter the acceptance met by CALL, which is nowadays largely accepted and used worldwide (Chapelle, 2001; Levy, Hubbard, 2005).

1.3.1 A first taxonomy of CALL

Even if CALL may be dated back to the Nineteen Sixties, it is only in the Nineteen Eighties that it reaches a wider audience along with the general distribution of personal computers. The evolution of CALL is usually divided into three main phases, linked to the evolution of the pedagogical approaches, and which were initially labelled by Warschauer as 'structural/behaviouristic', 'communicative' and 'integrative' (Warschauer, 1996; Warschauer and Healey, 1998; Warschauer, 2000; Bax, 2003). Nevertheless, this first structural taxonomy of CALL operated by Warschauer presents some 'inconsistencies', as Bax (2003) points out. The terminology and the dating concerning the three phases are in fact slightly changing in his works[2], and this shows that a systematisation was still in progress at the end of the 1990s. Nevertheless, we will start our account with the

[2] In particular, major differences can be found between Warschauer (1996) and Warschauer (2000): in the former work, *Structural CALL* was called *Behaviouristic* and it was said to have been conceived in the 1950s and implemented in the 1960s and 1970s, whereas in the latter work *Structural CALL* is dated as taking place in the 1970s and 1980s; the dates changed also for *Communicative CALL* (which slipped from 1970s-1980s to 1980s-1990s) and *Integrative CALL* (which slipped from 1990s to 21st century). See Bax (2003) for more details.

classification proposed by Warschauer (2000) as it can be regarded as a "substantive, systematic attempt to analyse and understand the history of CALL in anything more than 'factual' terms" (Bax, 2003: 14).
The classification – with reference to English teaching – is summarised in the table below, and it is commented thereafter.

Stage	1970s-1980s: *Structural CALL*	1980s-1990s: *Communicative CALL*	21st Century: *Integrative CALL*
Technology	Mainframe	PCs	Multimedia and Internet
English-teaching paradigm	Grammar-translation and Audio-lingual	Communicate Language teaching	Content-Based, ESP/EAP
View of language	Structural (a formal structural system)	Cognitive (a mentally-constructed system)	Socio-cognitive (developed in social interaction)
Principle use of computers	Drill and practice	Communicative exercises	Authentic discourse
Principle objectives	Accuracy	And fluency	And agency

Table 1. Warschauer's three stages of CALL (Warschauer, 2000).

The 1970s and the 1980s are characterised by the so-called *Structural CALL* (Warschauer, 2000), reflecting the view of language as a formal structural system. Mainframe is the technology in use for drill and practice exercises aiming at fostering accuracy. In the 1980s and 1990s the *Communicative CALL* emerged, in connection with a cognitive view which considers language as a mentally-constructed system. At this stage, PCs are used for communicative exercises enhancing fluency in addition to accuracy.
Even if Warschauer considers the *communicative CALL* ending in the 1990s, language teaching has continued to operate within a communicative framework also in the following years. In Warschauer's view, it is not clear, in fact, if the three stages are to be considered as neat historical phases (as the indicated dates may let suppose) or if they are paradigms that may also coexist in a defined historical phase (Bax, 2003). Moreover, Warschauer (1996) claimed that during the *Communicative CALL* phase, the computer was used for language learning on the basis of three main possible models: i) the computer as a *tutor*, offering skill practice in a non drill format, i.e. involving choice, control, and interaction on the part of the student in the process of finding the right answer; ii) the computer as a *stimulus*, offering activities aimed at stimulating students' discussion, writing, or critical thinking; and iii) the computer as a *tool*, empowering the learner to use or understand language.
Bax (2003) argued that those models did not reinforce the hypothesis of that period being a communicative phase of CALL, he claimed that the communicative role of CALL was very limited at that time, as limited was the actual interaction involved. On the contrary, he affirmed that the two key notions of Communicative Language Teaching, i.e. that learners learn in order to communicate and that they may learn to do this best through the

process of communication itself (Littlewood, 1981), are apparently absent from so-called *Communicative CALL*; subsequently, the definition of *communicative* seems to reveal more wishes and ambitions than the real usage of computers for language learning (Bax, 2003).

Finally, as for the *Integrative CALL*, it is said by Warschauer (2000) to be characterising the 21st century, reflecting a socio-cognitive view for which language is developed in social interaction, with multimedia and internet as reference technology for authentic discourse fostering agency in addition to accuracy and fluency. This is the most criticised category by Bax (2003), for whom the use of language in authentic social contexts – presented as the turning point – has always been part of the communicative language teaching, as it was for the value of integrating and integrative skills, which has been part of the communicative approaches since the 1980s. A further aspect is mentioned for claiming the existence of an *Integrative CALL* and it is linked to the fact that in the integrative approaches a variety of technological tools is used as an ongoing process of language learning (Warschauer, Healey, 1998). Such an argument is also questioned by Bax (2003) and it is regarded more as a new hope than as a defining criterion for a new historical phase.

1.3.2 Towards a new classification of CALL

Even though the classification of CALL in three phases proposed by Warschauer was enthusiastically welcomed and deserved credit for being a first, systematised attempt of conceptualisation and categorisation, it required some revision, both in its nomenclature and in its dating. Bax (2003) proposed a different analysis based on approaches rather than phases, which may coincide with historical phases insofar as they retrace the historical development of CALL with a more flexible attitude.

The first approach is named *Restricted CALL* and operated from the 1960s to about 1980 (Bax, 2003); with the label 'restricted' the author referred not only to "a supposed underlying theory of learning" (Bax, 2003: 20), but also to other key dimensions such as the activities and the feedback, the teachers' role, the position of the computer, which were all circumscribed, well defined to a limited area of action, i.e. restricted.

The second approach is defined *Open CALL* because it is "relatively open in all dimensions" (Bax, 2003: 20), even though not completely open yet. *Open CALL* emerged from the 1980s and lasted until the 21st century, even though some characteristics pertaining to *Restricted CALL* were still observable also in that period, for instance as far as grammar checking is concerned (Bax, 2003).

The third approach is labelled *Integrated CALL* (and not *integrative*, as in Warschauer's classification), it started to emerge at the beginning of the 21st century, but at the time it represented an aspiration and not a factual situation (Bax, 2003). As for the specific situation around 2000 in fact, Bax argues that CALL has had a more communicative role from the mid-Nineties onwards, but not for all the dimensions he identified; therefore the beginning of the century can be said to be characterised by an *Open* phase of CALL, with single institutions

showing also *Restricted* or *Integrated* features. The true integration of computer within language learning is still far away, in his opinion, at the time (Bax, 2003).

The table below summarises this new classification proposed by Bax (2003) and shows how the key dimensions identified by the author can help defining the different approaches.

Approach	*Restricted CALL*	*Open CALL*	*Integrated CALL*
Content	Language system	Language system and skills	Integrated language skills and system
Type of task	Closed rills Quizzes	Simulations Games Communication	Any, as appropriate to the immediate needs
Type of student activity	Text reconstruction Answering closed questions Minimal interaction with other students	Interaction with the computer Occasional interaction with other students	Frequent interaction with other students Some interaction with the computer
Type of feedback	Correct/incorrect	Focus on linguistic skills development Open, flexible	Interpreting, evaluating, commenting, stimulating thought
Teacher roles	Monitor	Monitor/facilitator	Facilitator Manager
Teacher attitudes	Exaggerated fear and/or awe	Exaggerated fear and/or awe	Normalised
Position in curriculum	Not integrated into syllabus - optional extra Technology precedes syllabus and learner needs	Not integrated into syllabus - optional extra Technology precedes syllabus and learner needs	Normalised tool for learning, integrated into syllabus, adapted to learner needs Analysis of needs and context precedes decisions about technology
Position in lesson	Whole CALL lesson	Whole CALL lesson	Smaller part of every lesson
Physical position of computer	Separate computer Lab	Separate Lab – perhaps devoted to languages	In every classroom, on every desk, in every bag

Table 2 The new outline proposed by Bax, adapted from Bax (2003).

Before moving on to the most recent evolutions, a short note about the Italian landscape is necessary in order to provide a full picture of CALL for the specific purposes of this research.

1.3.3 CALL in the Italian landscape

As for the specific Italian situation, in the mid-Nineties Porcelli (1994) identified five main approaches related to the usage of a computer for language learning, which represented the different roles that the computer could have in relation to the learning process (Porcelli, 1994; Troncarelli, 2016). These five approaches are reported and briefly discussed here below.

i. The computer regarded as a *teaching machine*, based on mechanistic procedures which were more easily programmable. This was the legacy of programmes developed back in the Sixties, when the psychology of education was dominated by neo-behaviourist principles. In the Nineties, the teaching machines could overcome the technical problems related to the old programmes, but their pedagogical effectiveness was not positively affected by the technological improvements.

ii. The computer considered as a *substitute for the teacher*, who could be replaced by intelligent programmes capable of leading the learning process, also monitoring and assessing its results.

iii. The computer seen as a *helper for the teacher*, providing support to carry out activities upon the language, and giving more opportunities for training and revision (drill, exercises, problem solving), also autonomously; in this perspective however, it is the teacher who guides the learner in the usage of the computer, and he/she is the ultimate responsible for the fruitful exploitation of this resource by the learner.

iv. The computer used as a *consultation tool*, as a big database, exploiting one of its main features, the information storage and retrieving. In language education this meant the possibility to access huge data about texts and dictionaries; such a possibility benefited advanced learners up of all, though.

v. The computer regarded as an *integrated learning aid*, i.e. as a tool capable of carrying out some specific activities included in the learning path and benefiting from its multimedia potentialities. With this approach, the peculiarities of the computers (that is to say, the individualisation of activities, the immediate feedback, the automatic control of time and points, and – eventually – also the unpredictability) are beginning to be exploited, after some the initial, hesitant experiences (Porcelli, 1994).

In the mid-Nineties the role of the computer was mainly related to the approaches iii), iv) and v), that is to say that the computer was considered as a *helper*, as a *consultation tool* and as an *integrated learning aid*. In this period, the negative feeling about computers – often due to a single experience with a single software for language learning – is counterbalanced by enthusiasm and eagerness to experiment. In other words, in these years the 'perception' starts to change, from a calculator the computer begins to be accepted as a tool provided with creativity, flexibility, attention (Porcelli, 1994).

Moreover, the learning activities proposed with the computer are expected to meet the so-called *validity requirement*, i.e. they have to be not only attractive, but also valid from a pedagogical viewpoint, that is to say that they have to offer an educational added-value. The validity of a software for language learning is related to its capacity of contributing to the attainment of the goals and the objectives of a language course (Porcelli, 1994). In such a direction, in order to be valid, a learning software should be: i) relevant, ii) acceptable, iii) complementary, and iv) economic.

i. The relevance of a software for language learning depends upon the appropriateness of contents and procedures, with regard to the topics faced and the learning strategies adopted.

ii. The acceptability of a software for language learning pertains to motivation and affective aspects of learning: it is not enough that a software is useful, it has to be considered useful by the potential user.

iii. A software for language learning is regarded as complementary when its activities are directly linked to the teaching unit.

iv. A software for language learning is economic when the relation between the advantages offered and the efforts required in terms of time, work and money is positive, i.e. the advantages are more than the efforts (adapted from Porcelli, 1994).

These four characteristics of CALL are to be regarded as more general observations and strategies related to language education contexts (Porcelli, 1994). Nevertheless, they show many similarities with the approaches described in the previous sections, and they also present interesting references to the notion of normalisation which is discussed in the following paragraph.

1.4 Towards the normalisation of CALL

As anticipated, technology is said to be fully effective in language education when it has reached the stage of 'normalisation', i.e. when it has become somehow 'invisible' and it is used in daily practice as a valuable element of the learning process but without being consciously noticed as a technology (Bax, 2003). Before being normalised however, technology passes through various intermediate stages until it finds its proper role and converts to 'normal' value. Bax (2003) identified seven different steps which characterise the normalisation process of CALL, and which are summarised in the table below.

Stage		*Description*
1.	Early Adopters	At this stage, the technology is adopted out of curiosity only by a few teachers and schools.
2.	Ignorance/scepticism	Most people are sceptical, or ignorant of its existence.
3.	Try once	People try it out but the technology is rejected because of early problems. People can't see its value, as it doesn't appear to provide any relative advantage.
4.	Try again	Someone starts to tell that the technology really works. People try it again and they see that in fact it does have relative advantage.
5.	Fear/awe	More people start to use it, but still there is scepticism, alternating with exaggerated expectations.
6.	Normalising	The technology is gradually seen as something normal.
7.	Normalisation	The technology is so integrated into our lives that it becomes invisible,' normalised'

Table 3. The seven stages of the normalisation process of CALL (adapted from Bax, 2003:24-25).

According to Bax (2003), at the beginning of the 21st century CALL has not yet reached the normalised stage, "as evidenced by the use of the very acronym CALL – we do not speak of PALL (Pen Assisted Language Learning) or of BALL (Book Assisted Language Learning) because those two technologies are completely integrated into education" (Bax, 2003:23). In the author's opinion in fact, "one criterion of CALL's successful integration into language learning will be that it ceases to exist as a separate concept and field for discussion" (Bax, 2003: 23). In those years CALL is said to be at stages 5 and 6 of the normalisation process, with people in language education acknowledging its potential but still being to some extent uneasy about it, and alternating between fear and awe.

When computers are integrated into lesson plans in a supporting role for both teachers and students, CALL can be considered normalised (Bax, 2003). At such a stage, "computers are treated as always secondary to learning itself" because "the needs of learners will be carefully analysed first of all, and then the computer used to serve those needs" (Bax, 2003: 24).

In particular, two fallacies were identified as factors which prevented CALL from reaching the normalisation stage. On the one part, one documented issue is the users' perception of computers in education. They believe that computers should be able to do everything, and definitely more than what they can actually do; this is what Bax defined as the "Omnipotence Fallacy" (2003: 26). On the other, there is a common assumption that "the key or only factor in successful implementation of the technology is the technology itself" (Bax, 2003: 26), underestimating many other relevant factors for achieving successful implementation of CALL and reaching full integration; this is what Bax defined as the "Sole Agent Fallacy" (2003: 26). In order to reach the normalisation, changes were required in technology itself, but also in educators' and learners' attitudes and approaches and in practice as well. The individual environments were to be analysed to identify the relationships between the different factors involved and to overcome the barriers preventing integration. In short, then, the concept of normalisation lacked a substantial theoretical basis; nevertheless it was favourably accepted and recognised as potentially useful for educators (Bax, 2011).

1.4.1 A theoretical framework for reaching normalisation in CALL

In his following works, Bax (2009, 2011) tried to consider how normalisation could be reached by taking into account several interlocking factors, socio-cultural as well as technical. "Much of the recent research in online language learning has demonstrated that identifying the affordances of the tools used in tasks is insufficient to anticipate how the technology and the learning activity will be taken up by learners and teachers. As an alternative, a socio-cultural approach to online research encourages educators to look at technology, not as an independent force that shapes and determines how learners carry out a learning task, but rather as a part of a complex mesh of factors which go to making up any particular learning context" (O'Dowd, 2007: 32-33). For

such a purpose, Bax constructed a theoretical framework for understanding normalisation by adopting what Mercer and Fisher (1997) termed as a 'neo-Vygotskian perspective'. Such a label was used to refer to a theoretical approach to the study of learning drawing on the work of Vygostsky, but not exclusively based on his assumptions. While Vygostsky aimed in fact at determining the psychological principles responsible for cognitive development, focusing primarily on children, neo-Vygotskian perspectives intend to understand how adults, and not only children, learn new concepts and ways of operating (Bax, 2011). Bax adopted these approaches in the attempt to verify "how the normalisation of technology can occur in language education" and "how computers can operate effectively in the language classroom" (Bax, 2011: 6).

Following these neo-Vygotskian principles, Bax moved from the assumption that people can develop their forms of reasoning also through the engagement with a social group. It derives that people may deal with new ideas or new tools on the basis of some insights, initially analysed by Mercer and Fisher (1997) and summarised by Bax (2011) as follows:

1. Learning and development are culturally based, not just culturally influenced;
2. Learning and development are social rather than individualised processes;
3. Learning and development are developed 'communicatively';
4. Understandings are constructed in culturally formed settings;
5. Learning with assistance or instruction is a common and important feature of human mental development;
6. The limits of a person's learning or problem-solving ability can be expanded by providing the right kind of assistance or instruction (Mercer, Fisher, 1997: 13-16; Bax, 2011: 7).

These insights turned out to be useful also in understanding how a user adapts to new technology for learning purposes. In short, the actors of the learning process (i.e. the teacher and the student) deal with a new technology not in isolation, since their activity is (Bax, 2011: 7-8):

a) culturally based;
b) a social process;
c) developed through communication;
d) understood through culturally formed settings;
e) developed through assistance or instruction.

Bax continued further and found a connection between these insights and the normalisation process of technology in language education. As this process requires that the technology can contribute positively to the process of language learning, and not just that it is used normally (Bax, 2003), the potential value and usefulness of any new technology in language education should not be taken for granted; on the contrary, such a potential of technology should be previously and carefully analysed (Bax, 2011). Such an examination could

be carried out through what Bax defined as a 'Needs Audit', aimed at questioning firstly whether the technology is necessary and useful for the learning process (Bax, 2011: 8). When dealing with technology, the focus should be on learning and not on learners in order to avoid that – starting from a learner-centred education – we reach what he called the 'accommodation approach' to education, for which educators try to 'shape their practice to fit the learner' in every way, thus losing the primary goal of learning itself. If learners are characterised as *digital natives* whereas educators are characterised as *digital immigrants* (Prensky, 2001), the risk for educators wishing to 'accommodate their students' is to overestimate technology and consider it as the unique answer for any learning issue (Bax, 2011). On the contrary, the focus on learning implies challenging the learners' states and believes, and help them to "rise to more critical levels of thinking and analysis" (Bax, 2011: 9); such an element of challenge is crucial when considering the normalisation of technology in language education and it is also included in the very action of learning to use the technology, both from the educators' perspective and from the students' viewpoint.

1.4.2 The role of 'mediation' in the normalisation process

The effective educational practice could be benefited from some notions, which were grouped by Bax (2011. 10-11) in the following five sets of elements:

1. access to sources of prior knowledge, and interaction with them;
2. participation in a social and even emotional dimension, and interaction with other learners;
3. interaction with an expert, scaffolding the experience, through planning, feedback and advice, and constantly checking that learning is taking place;
4. modelling through the example of an expert, who exemplifies in his/her own behaviour:
   a) a set of approaches to knowledge and learning, including a criticality and rigour in dealing with sources of knowledge, and
   b) a methodical and cautious mode of expression in communicating ideas and information to others;
5. challenge and contradiction from an expert, and from other learners, to help the learner to rethink and review a position or idea.

All these five sets of elements are closely linked to the neo-Vygotskian insights previously presented, as they share the same approach to educational practice. Technology can be of great help in the provision of the first two sets of elements, namely information and peer interaction, but those two elements alone are not sufficient for effective learning to take place. The learning process, in fact, is enhanced by the additional intervention from an expert who knows better than the learner and/or has more experience in the target domain. The implication for the normalisation of technology is that it is not enough to simply give access to information and opportunities for interaction through technology (elements 1 and 2 above); on the contrary, it

is also essential to include the dimension of the expert intervention (elements 3, 4 and 5). To put it in a different way, none of these five elements of educational practice may be arguably indispensable to learning in itself, nevertheless they offer important contributions, especially in the domain of more formal education. In particular, they emphasise the significant role of 'mediation' in the learning process – which could be of various kinds, the mediating agents including experts, but also schooling itself, or else structured activities – and they avoid the simplistic assumptions that the technology itself can do everything (Bax, 2011).

To conclude, as it might be difficult to untangle all the variables impacting on the normalisation of a new technology, one relevant approach suggested by Bax (2011) is Action Research, for which – after a sound Needs Audit and a subsequent Learning Plan, taking into account the five elements benefitting educational practice – the main aspects impeding or promoting normalisation are elucidated.

The issues raised above, and in particular the role of Action Research starting with the analysis of needs and in relation to the importance of mediation in CALL, will be tackled in the case studies discussed in the following chapters, and they will be also re-considered in the final chapter in light of the findings collected.

1.5 The shift towards MALL

In very recent years, the development and proliferation of mobile technology has opened the path to a sub-set[3] of CALL, which is called MALL (*Mobile-Assisted Language Learning*). The acronym refers to a specific typology of language learning, mediated by mobile devices such as smartphones and tablets (Fratter, 2016). The second decade of 2000s is said to be the turning point in this matter, insofar as trends relating to the usage of technology emerged, which impacted upon its application to education.

1.5.1 The technological changes behind mobile learning

As a matter of fact, even though MALL has existed for about 20 years, the recent, strong improvements in the functionalities of mobile devices has led to some relevant changes (Burston, 2014). In particular, from 2013 onwards, the online audience using the computer has diminished all over the word – Italy included – in favour of the online audience using mobile devices, especially within the 18-34 age range. In parallel, the sales of smartphones and tablets are increasing whereas those of computers are decreasing (Fratter, 2016; Reinders, Pegrum, 2016). As outlined by Fratter (2016: 111), data regarding the trends in using technology indicate a change in the attitude towards the usage of resources, from a dedicated, stable modality (implying precise time

[3] According to some scholars (Burston, 2014; Kukulska-Hulme, 2018), MALL has nowadays become an independent field of research and it has not to be considered as being a sub-set of CALL. For the proposes of this work, however, we will follow its chronological development as a particular form of CALL, and we will conclude by outlining its specificities, which may indeed let consider MALL as a separate research area.

and location) to a mobile, flexible modality (anytime, anywhere). If we consider the educational dimension, mobile technology provides a myriad of opportunities to support learning and performance, both inside and outside the classroom (Martin, Ertzberger, 2013). With mobile technology, the learning environment can go with the student to the field site, to the laboratory and beyond; mobile technology opens the door for a new kind of learning, providing anytime and anywhere access to information, processes, and communication.

As we will outline below, "there are two main ways to engage in learning with a mobile device. The first involves using a general web browser to access websites, some of which may have been optimised for mobile access; the second involves downloading dedicated, single-purpose pieces of software called Apps, which are normally sourced from online app stores" (Reinders, Pegrum, 2016: 2). No matter which way is chosen, engaging with mobile learning offers a wide range of options for language use and second language acquisition, providing the learners with many concrete advantages, especially when it comes to out-of-class activities (Richards, 2015). The success of out-of class learning however "depends on the fulfilling of three conditions on the part of learners, namely motivation, learning resources and learning skills: if one element is lacking then the learning process is likely to be interrupted" (Bailly, 2011: 128).

1.5.2 Defining MALL, a situated, informal, incidental way of learning

Providing a definition of mobile learning implies a double perspective, focusing on the mobility of the learner, on the one side, and on the usage of portable devices, on the other (Burston, 2014). The first perspective embraces very broad definitions, insofar as if it is the learner to be considered mobile "any technology that allows flexible access qualifies as a support for mobile learning" (Burston, 2014: 345). If the focus is on the portability of devices, the notion of mobile learning is restricted to learning mediated and supported by handheld devices. MALL research has in fact generally focused upon the use of handheld devices, especially in out-of-class activities (Burston, 2014).

Nevertheless, Palalas (2011) proposed a definition of MALL which incorporates both aspects of mobility and claimed that MALL can be defined as "language learning enabled by the mobility of the learner and location, portability of handheld devices", but also "human interaction across multiple situations mediated by mobile technology within a networked community of practice, embedded in contexts which are relevant and pedagogically sound and informed by the real-life context in which the learning takes place" (Palalas, 2011: 76-77).

In other words, mobile learning is a form of learning which leverages the mobile device's portability and affordability in order to facilitate the communication of educational content (Yamaguchi, 2005); it is in fact enabled by integrating various hardware and software technologies into multimedia applications. This has been proving particularly relevant in the field of language learning and in the context of higher education, as the

increased ubiquity of mobile devices create new options for exploring new instructional strategies for higher education students. Mobile devices can provide learning opportunities for students to access content, to interact with tutors and other learners wherever they are located (Gikas, Grant, 2013), and as such they have the potential to be used in situations where learners are geographically dispersed, to promote collaborative learning, to engage learners with content; in short, they present a real opportunity to integrate the learning process with 'real life' activities (Taleb, Sohrabi, 2012).

In this perspective, the enhancement of context-aware technologies has enhanced the so-called situated learning, enabling students to learn in an environment that integrates learning resources from both the real world and the digital world. Situated learning requires knowledge to be presented in authentic contexts. This is based on the concept of situated cognition, which explains that knowledge cannot be known and fully understood independent of its context (David *et al*., 2007). Situated, mobile learning occurs when learners have access to information anytime and anywhere via mobile technologies to perform authentic activities in the context of their learning; it gives students the opportunity to be in the context of their learning and have access to information that is related to what they are seeing and experiencing at the moment (Martin, Ertzberger, 2013).

Following this direction, MALL particularly fits the category of informal learning. As is known, learning may range from formal to informal, passing through non-formal categories (Kukulska-Hulme *et al.*, 2012). Formal learning is typically delivered within an institution (e.g. a school or a university), in a systematic and intentional way and by trained staff (Vavoula, 2004). Non-formal learning instead refers to structured learning situations not exploiting typical elements of formal learning (e.g. accreditation or certification) but still being planned and organised (Trinder *et al.,* 2008; Werquin, 2010). On the contrary, informal learning is characterised for taking place naturally and spontaneously as part of other activities (Schugurensky, 2000). In the informal learning environment, an important role is played by mobile technology as it can be used for communication, collaboration, gathering and sharing information (Fratter, 2016).

In other terms, the possibilities to learn in a mobile and contextual way have radically changed due to the extensive diffusion of mobile and wearable devices, along with the availability of network connectivity (Jones, Issroff, 2007). This has multiplied tools, moments, chances to learn, and in particular to learn in an incidental way, within different contexts and with different interaction modalities (Kukulska-Hulme *et al*., 2012; Gikas, Grant, 2013). Incidental learning is defined as "unintentional or unplanned learning that results from other activities" (Kerka, 2000); as such, it may occur while pursuing other goals, or emerge while carrying out other tasks (Gaved *et al.*, 2013; Kerka, 2000). With mobile devices, learning can benefit from daily experiences as learning opportunities can unintentionally arise in various locations and situations (Scanlon *et al.*, 2014).

1.5.3 The challenges of MALL

Research in MALL has largely been mediated by technological development. Mobile technology has grown in sophistication, resulting in the release of a large amount of language-learning software. Despite the rapid growth of mobile applications, MALL research has been criticised for a lack of objective, quantifiable learning outcomes. Like CALL programs in the 1980s and related web-based adaptations in the 1990s, most of the applications described in published MALL research lack an explicit theoretical foundation (Burston, 2014). To date, situational, context-aware learning can be regarded more as a challenge than as an outcome, due to the fact that a pedagogical framework of reference is missing (Fratter, 2016). Available research is based on case studies accompanied by the users' perception; these MALL studies support the notion that mobile devices are efficacious learning tools – in particular for vocabulary instruction – and confirm the intuition that, shortcomings aside, mobile language learning applications have the potential to transform the way languages are learned (Heil *et al.*, 2016).

In addition, MALL has followed the path traced by CALL also as far as the pedagogical approach is concerned, which could be described as "one step forward for the technology, two steps back for the pedagogy" (Mioduser *et al.*, 1999: 233). Despite a pedagogical shift toward more communicative approaches to language learning, MALL seems to be more attached to behaviourist approaches (Heil *et al.*, 2016). In their recent study examining the fifty most popular commercially-available language learning applications for mobile phones, Heil *et al.* (2016) evaluated them according to a grounded set of criteria including the languages and the platforms supported, the monetisation, the user input to device, the areas of language abilities, the areas of instructional assessment, the modes of grammar instruction, the corrective feedback, the input and the output. Heil *et al.* found three interesting major trends: "first, Apps tend to teach vocabulary in isolated units rather than in relevant contexts; second, Apps minimally adapt to suit the skill sets of individual learners; and third, Apps rarely offer explanatory corrective feedback to learners" (Heil *et al.*, 2016: 39).

This study confirms the main critical aspects observed in MALL by Burston (2014), which result in the fact that – despite the relevant progress made over the past two decades, MALL still faces some challenges, namely:

- applications for mobile learning are still dominated by behaviourist, teacher-centred, transmission model programmes;
- the issues related to response feedback and learner monitoring have not been adequately addressed yet;
- the attempts to personalise the learning experience within a transmission model of instruction have remained prototype experiments (i.e. of short duration, involving limited numbers of students and little objective assessment of learning outcomes).

Furthermore, the application of behaviourist paradigms does not seem to be necessarily motivated by pedagogical reasons, but it rather stems from practical aspects: on the one side, vocabulary and grammar drills are easier to programme and to self-correct; on the other, short and simple exercises suit the fragmented, unfocused learning that characterises the mobile dimension. All this results in a preference for the "review and practice of what is already known. New content can be presented, but only to the extent that it can be packaged in small, self-contained units, that require minimal cognitive processing" (Burston, 2014: 347).

If, from a pedagogical viewpoint MALL has been mainly limited to behaviourist approaches, it has also been unable so far to fully "exploit the communicative potential of available technology" (Burston, 2014: 344). Mobile devices do have the potential to adapt learning to the physical environment of its users, their communicative functionalities can be used to enhance peer interaction, active participation, and task-based activities (Burston, 2014). Indeed, some studies demonstrate that MALL applications based on learner-centred approaches do exist and cover different areas of language learning, including "vocabulary acquisition, listening, speaking, reading and translation activities" (Burston, 2014: 352). The existence of such innovative projects also confirm that communicative-oriented programmes can be incorporated into the language learning process, "not only in out-of-class usage for collaborative communication and the creation of linguistically related artefacts, but also as part of in-class preparation for these tasks. Likewise, mobile devices can be used in class or out to further integrate MALL into the curriculum through related web-based computer-mediated communication activities like discussion forums, chats, blogs and wikis" (Burston, 2014: 352).

In other words, smartphones and tablet devices can support practically anything that can be done with a computer for educational purposes; moreover, mobile devices include the 'anytime, anywhere dimension' which allows for individualised language learning at a level that cannot be reached with stationary computers. Notwithstanding, MALL seems like it is not to enabled to fully realise its educational potential if access to mobile technology does not become ubiquitous. If, in fact, educators and learners are increasingly expected to be equipped with their own mobile devices – purchased for their private, general use –, problems of standardisation and compatibility have to be solved as well, in order to have any pedagogical materials able to run on these devices. Finally, for MALL to become central in language education, the "pioneering work of the early adopters" has to be continued and further developed "by classroom instructors with appropriate training in pedagogy no less than instructional technology" (Burston, 2014: 352).

To sum up, mobile devices have the intrinsic functionality of being powerful multimedia communication tools, capable of building and maintaining language learning communities. MALL is characterised by offering the possibility to exploit daily situations and let learning occur potentially anywhere and anytime; as such, it is particularly suitable for informal contexts but it also offers a 'natural connection' between different typologies of learning, namely formal, non-formal and informal, facilitating collaboration among learners. MALL can

exploit the affordance and the compliance of many applications in order to reach wide audiences of learners, even though the availability and the appropriate use of mobile devices cannot be taken for granted in certain areas and within certain contexts; moreover, as it has been for CALL, the simple introduction of new technology does not necessarily imply automatic improvements in the learning process (Fratter, 2016).

1.6 A focus on Moodle, MOOCs and educational Apps

In the previous sections several approaches to the usage of technology for language and culture learning have been mentioned, along with brief references to some technologies. Before moving on to deal with the case studies being analysed, we would like to provide a brief account of the specific technologies that will be analysed in the following chapters. This is not meant as a comprehensive overview of all the possible technologies available for language and culture learning, which is beyond the scope of this work, nor it is aimed at providing details about all possible usages related to those technologies, whose number is potentially unlimited. On the contrary, this section intends to offer an insight into specific technologies, namely the Moodle platform, the MOOCs' reality and the context of mobile Apps, as they are at the basis of the three experiences being the object of the following discussion.

1.6.1 The Moodle platform

Moodle is an acronym for *Modular Object-Oriented Dynamic Learning Environment*; it refers to a free, open-source Learning Management System (LMS) which allows for customisable contents and structures. For these reasons, it is one of the most commonly used platforms for online education, not only pertaining to language and culture, but indeed embracing a huge variety of subject matters (Stanford, 2009; Warth, 2011).

Moodle is a Virtual Education Environment (VLE), i.e. a protected learning space providing online education, and as such it combines multiple tools and activities for organising learning and for teaching (Stanford, 2009; Warth, 2011). With regard to the e-learning standards, Moodle is SCORM (Sharable Content Object Reference Model) compliant: following the SCORM standards and specifications, information (i.e. externally-authored content) is packaged in order to effectively integrate with the LMS (Ostyn, 2003). This means that the learning content is packaged into a Learning Object (LO), which – in the attempt to be pedagogically 'neutral' – proved to be quite stiff as far as the production of learning materials is concerned, especially in the context of language education (Fratter, 2010, 2016). The concept of LO implies an approach to online education oriented to the transmission of knowledge as it is based upon a uni-directional communication model; as such, it is an approach contrasting the features of creative and collaborative learning and it is gradually being abandoned (Fratter, 2010, 2016).

Nevertheless, virtual learning environments based upon the Moodle platform have existed and still exist because of a number of confirmed advantages. Literature about Moodle is more action-oriented and it is aimed at showing examples of how-to-use it, more than investigating the scientific dimensions of its usage; sometimes the explanatory function is accompanied by case studies supporting the clues provided (Stanford, 2009; Warth, 2011). Among the many, acknowledged advantages that teachers and students can have in using Moodle for online language education, we can find:

i. The ease of use of the system, which is user-friendly and no programming knowledge is needed to utilise its functionalities (this is important for learner but it is particularly relevant from the teacher's perspective, as it allows independent usage after short a short training; moreover, online tutorials are available for support).
ii. The combination of all communication tools in one single portal (which enables the use of only one user interface), differently from online providers offering a single tool (such as blogs, wikis, forums and chats); moreover, the online access to the resources fosters the autonomous usage from learners any time and from anywhere in the world.
iii. The interaction between learners and tutors, and the collaboration between learners: the claimed rigidity of the LOs through which learning contents are provided within the platform is somehow balanced by the additional resources offered by the platform itself (e.g. chat, forum, polls, etc.), which can facilitate communication.
iv. The enhancement of independent learning pathways thanks to the feedback on tasks, which can be easily provided, and to the learning tracking mechanisms that are available.
v. The possibility of choosing various 'degrees of access-protection', insofar as content can range from completely open (i.e. no registration and no key is required to enter; this feature is useful to show demos of the courses, for instance) to totally restricted (both registration and a specific key are required to access).
vi. The security of the environment, once the users (learners and teachers) are registered, their data are protected. From this viewpoint, a Moodle platform can be compared to a school with many classrooms and many classes: when you are registered you can enter the school (i.e. the Moodle platform) and especially access your classroom (i.e. your individual Moodle course); outsiders cannot access a protected course.
vii. The availability of different supporting features, such as the previously mentioned online tutorial guidance and the tools for learning control, but also course editing and course administration, the possibility of integrating other learning resources, a variety of communicative and collaborative learning activities, the automatic backup of the contents, and so on (Stanford, 2009; Warth, 2011).

In short, even though it is bounded to the LO philosophy, the Moodle platform can play an important role in fostering learners' autonomy, as it leverages three important aspects, namely: preparation, performance, and self-assessment (Dofs, Hobbs, 2016). Learners' autonomy can indeed be regarded as a main objective of online education, and it is particularly relevant in the field of language-culture education from a life-long learning perspective.

1.6.2 The MOOCs' reality

As for the MOOCs' reality, the acronym MOOCs stands for *Massive Open Online Courses*. MOOCs are characterised for being one of the latest attempts to use information technology in education, especially as far as university is concerned; they represent, in fact, one of the newest and more influential educational trends (Altabach, 2014). In addition, MOOCs are – along with the Apps, as we will show – one of the natural evolutions of Open Educational Resources (OERs), i.e. of learning materials and media which can be freely accessed and used for educational purposes (Bárcena, Martín-Monje, 2014; Fratter, 2016).

MOOCs can be defined as "dedicated web-based online courses with unrestricted access and potentially unlimited participation" (Bárcena, Martín-Monje, 2014: 1). These courses remove the usual limitations that standard courses have for access and attendance (in physical terms as they benefit from the web, but also as far as credentials, fees, previous certifications, and so on), but they preserve most of the defining features of standard academic courses (in terms of subject matters and learning goals, for instance, and sometimes also as far as tasks and final certificates are concerned) insofar as they are planned and delivered by universities. As such, MOOCs have a strong impact to the educational community they are addressing, and they particularly impact upon the internationalisation process of higher education (Bárcena, Martín-Monje, 2014; Boal, Stallivieri, 2015; Valva, 2018a). As they are generating interest and expectations, particularly in the fields of university education, lifelong learning and online training in general, the number of available MOOCs – and MOOCs specific for language learning – is growing, even though little research about them has been published so far (Bárcena, Martín-Monje, 2014)

Among these courses, the language MOOCs – sometimes also referred to as LMOOCs – are a particular sub-category, pertaining to the specificities of language learning. Although LMOOCs are in the very early stage of development, MOOCs for language learning have already shown their own specificities, insofar as they have to consider the peculiar aspects of language learning.

First of all, language learning is not only knowledge-based but it is also skill-based; i.e. in addition to simple assimilation of rules and vocabulary, it requires practice of "an intricate array of receptive, productive and interactive verbal (and non-verbal) functional capabilities" (Bárcena, Martín-Monje, 2014: 2). In this perspective, it is assumable that language learning implies considerable practice of language use and that it

involves a proactive attitude, engaging other skills in addition to memorisation and mechanical reproduction Such proactive attitude may include, for instance, skills pertaining to the actions of "relating, contrasting, criticising, inquiring, justifying, deducing, etc." (Bárcena, Martín-Monje, 2014: 3).

Furthermore, it is known that the innate language acquisition abilities are gradually lost after infancy, in favour of a more rule-based cognitive profile. For this reason, a learning model of explicit type may result more effective. The process is likely to include individual phases, for instance the improvement of certain areas such as pronunciation or punctuation, but it can also include collaborative phases, involving negotiation of meaning, construction and sharing of new knowledge, verbal communication, and so on (Bárcena, Martín-Monje, 2014).

All these aspects considered, the challenging MOOC scenario (with potentially huge numbers of heterogeneous students) could be transformed into "the opportunity to have many motivated and proactive students undertaking highly valuable peer-to-peer interaction" (Bárcena, Martín-Monje, 2014: 4). MOOCs, in fact, can be designed to successfully enhance the development of communicative skills "for potentially massive and highly heterogeneous groups, whose only common goal is their desire to learn a given language" (Bárcena, Martín-Monje, 2014: 3), and in line with the indications of the Common European Framework of Reference for Language, for which the "ultimate objective of language learning is generally accepted to be proficient engagement in intelligible, empathic, and effective verbal performance, in a varied set of contexts and situations, with different types of interlocutors" (Bárcena, Martín-Monje, 2014: 3).

Finally, MOOCs are notorious for their high rates of dropouts, which usually reach 90 percent (Webly, 2012; LeBar, 2014). They usually attract huge number of potentially interested people, but the actual number of users following an entire path and managing to reach the completion of the course, usually proved by a final certificate, is indeed low (Perifanou, Economides 2014). Therefore, one may ask if there is a difference between the impact that MOOCs can have and their effectiveness. On the other hand though, the completion of a course is not necessarily the right perspective from which this issue has to be tackled, as users can benefit from a course even without completing it. In other terms, MOOCs can be appreciated for the information that they offer, in combination with other courses/activities, or even for the pure enjoyment of learning; whatever the case, MOOCs provide their users with significant advantages even if they are not completed (LeBar, 2014).

1.6.3 The educational Apps

As for the third reality under examination, the widespread diffusion of mobile Apps, i.e. of dedicated applications for smartphones and tablets which can be directly downloaded by the users, often for free or at reasonable price, this represents a further challenge for education. Today, these Apps are pervasively a part of our daily life, and they are also penetrating the educational practice (Fratter, 2016). Moreover, the combination of Apps which are explicitly developed for educational purposes with Apps that were created for

other, generic purposes, but are used for learning, is creating a bridge among the different typologies of learning (formal, non-formal, informal). The integration of formal and informal learning is also facilitated by the so-called BYOD (Bring Your Own Device) approach, which refers to the current practice of requiring the users to be equipped with their own personal device also for learning/training purposes. With this approach, learning paths may be further personalised (Johnson *et al.*, 2014; Fratter, 2016).

Learning through mobile Apps is characterised by some constraints, notably the small screen size and awkward text input methods. These features can impact upon "the amount of data that can be displayed to users" (Burston, 2014. 347) and upon the expected learners' response. The text displayed is in fact usually limited and the learner text input is preferably restricted to "clicking options (true/false, multiple choice) or dragging objects" (Burston, 2014. 347). Such constraints could be bypassed through a more effective usage of the multimedia functions of the mobile devices, and in particular of images and audio, which are not exploited at the fullest of their potential (Burston, 2014). Other factors also impact upon the characteristics of learning mediated by mobile Apps and pertain to the external distractions and interruptions, often present while using the mobile devices, and which result into weak attention. These factors influence the design of the Apps themselves, as we will show below.

If mobile Apps are to be considered as effective tools for language learning is still a debated issue, with some scholars highlighting their potentials and other criticising their insufficient consideration of pedagogical research (Burston, 2014; Heil *et al.,* 2016; Miller, Doering, 2014; Pegrum, 2014; Reinders, Pegrum, 2016). On the one side, it is undeniable that mobile learning Apps can provide "a smoother, more streamlined experience, with most social media platforms and many educational services offering App versions, and with increasing numbers adopting an App-first or App-only approach" (Reinders, Pegrum, 2016: 2). However, it is also true that the users may be led to lose – partially or even totally – control over their overall learning experience as Apps often operate in isolation from each other and from the wider web; from this perspective, the wider web 2.0 allowed for more interexchange (Pegrum, 2014). This alleged isolation may go as far to lead to a "corporatized 'appification' of the web" characterised by "a learning landscape populated by individually purchased, independently used, standalone Apps training limited sets of knowledge or skills" (Reinders, Pegrum, 2016: 2).

In short, even though it is acknowledged that mobile learning Apps have a potential for creating new and transformative educational chances, it is not clear if such a potential is being properly exploited. Moreover, a discrepancy currently exists between the designers of the Apps, i.e. the people responsible for creating those tools, who often have little instructional experience, and the 'final consumers', i.e. the educators and the learners (Miller, Doering, 2014). In this regard, "there is a large body of research on many aspects of second language learning", but still "much of the relevant theory and empirical findings are overlooked by developers

of language learning technology support" (Kukulska-Hulme, Bull, 2009: 1). Therefore, it is crucial to match the contribution of pedagogical research with the assets of instructional design, in order to make the latter most effective.

1.7 Instructional design for language and culture learning

The notion of instructional design refers to the process of creating learning activities on the basis of the learners' needs, and starting with the definition of the final objectives of instruction, along with planning assessment tasks. As such, instructional design is aimed at developing learning experiences and environments, which can promote the acquisition of specific knowledge and skills by students in a more efficient, effective, and appealing way, thus impacting upon the overall quality of instruction (Merrill *et al*., 1996).

1.7.1 Specificities of CALL and MALL for instructional design

The recent evolution of CALL towards a mobile dimension has also impacted upon instructional design. If, on the one side, it is true that creating learning materials to be used through technological tools always implies a proper combination of pedagogical knowledge and technological expertise, while on the other, creating learning materials to be used with the computer highly differs from creating materials suitable for mobile learning (Fratter, 2016).

As shown, MALL is characterised to be potentially enabled anytime and anywhere; this apparently simple assertion involves the advantages mentioned previously, but it also represents a challenge precisely because of the fact that learning happens in various, often, unpredictable contexts. Mobile learning is location-based, as learning opportunities can arise in various location; this implies new tasks for designers and developers of mobile tools, who are challenged to find solutions for enabling and supporting learning activities (Scanlon *et al.*, 2014).

In addition, the physical features of mobile devices – smartphones and tablets have smaller displays in comparison to computer monitors – can influence the characteristics of the educational content presented. Finally, contents for mobile learning differ from e-learning contents not only as far as their format is concerned, but also as for the diverse contexts in which they might be used, which in many cases also imply the presence of some disturbing factors. In other words, when you work with your computer you are generally isolated and concentrate on the learning activity, whereas with your smartphone or tablet you may be engaged in different activities, and you are more likely to be disturbed by other situations while exploiting your learning contents (Fratter, 2016).

All this considered, learning contents for mobile device are based upon bite-sized learning, and they should be compliant with the three following characteristics:

i. being short, insofar as the time for learning is limited and the process is likely to be frequently interrupted;
ii. being attractive, because the users has to be intrigued by the information, stimulated by game-like elements and also motivated through challenges;
iii. being user-friendly, i.e. easily and effectively usable with mobile devices (Fratter, 2016).

In short, if CALL is characterised by Learning Objects, MALL better suits bite-sized activities, sometimes also referred to as MLO (Mobile Learning Objects) and defined as "an information entity, digital, interactive, adaptable and reusable in different contexts, designed to support an educational objective through a mobile device" (Castillo, Ayala, 2012a: 240).

Another feature pertaining to instructional design for CALL and MALL – and particularly relevant for the mobile dimension – is that of gamification, i.e. the use of game elements and mechanisms (e.g. points, badges, leader boards, etc.) in non-game contexts in order to enhance the users' engagement (Shuler *et al*., 2012; Sandusky, 2014; Fratter, 2016). Including gamification mechanisms in educational contents implies the design of learning paths based upon the rewards obtained after accomplishing certain tasks or reaching a given milestone. As highlighted by Fratter (2016), gamification can involve both individual elements (for instance by taking into consideration the time taken to carry out an activity or the badges collected) and social activities (for example: cooperative but also competitive tasks). Such an approach is regarded as positively impacting upon motivation, especially as far as intrinsic motivation is concerned (Sandusky, 2014), but it needs to be further explored as for the effective pedagogical impact (Fratter, 2016).

1.7.2 The role of the users in instructional design

A further aspect needs to be taken into consideration when dealing with instructional design for CALL and MALL, that is the role of users in the creation processes. In fact, "the role of the user is becoming more active, being the main character in several steps of the most commonly used approaches for the development and release of applications and tools" (Mirri *et al*., 2018: 1). Instructional design is becoming more inclusive and it is increasingly based on the involvement of the users, who are directly engaged in the design and in the development processes (Bano, Zowghi, 2013; Mirri *et al*., 2018).

Methodologies implying the users' co-creation of tools range from user-centred to participatory design (Mirri *et al*., 2018). The user-centred design consists in "designing and developing applications or products where a team of designers focuses on users' needs in an iterative way" (Mirri *et al*., 2018: 2). Following this approach, the designers plan and develop a tool, with a focus on the design processes and trying to meet the user's needs. In this perspective, the user is at the centre of the process, but it does not necessarily have an active role (Mirri *et al*., 2018). Nevertheless, the needs of the users are generally surveyed before and their

participation simulated. Conversely, participatory design consists in "letting the users actively contribute to the design and to the content development process" (Mirri *et al*., 2018: 2). With this methodology, the users are involved as co-designers and their role becomes an outstanding component of the process as they can raise design issues and they can suggest functionalities, thus making the final products more receptive to their needs.

Even if they show obvious differences, these two approaches also present some similarities and interesting intersections as well, with one of the most interesting interpretation being that participatory design is user-centred, as far as the fulfilment of the users' needs is met along with their interest (Mirri *et al*., 2018). Nevertheless, the participatory design approach is based on a stronger engagement of the end users in the design phases, and it seems that a deeper involvement of the users in the design phases may correspond to a higher level of users' satisfaction when using the final product. In other words, the end users' satisfaction is proportional to the effective users' engagement in the design process, and the tools developed following a participatory design approach seem to be more likely to meet the users' expectations (Mirri *et al*., 2018).

The issues pertaining to the instructional design of tools for language and culture learning will play a crucial role in the three case studies discussed in the following chapters. These three case studies, in addition to covering the technological and pedagogical evolution of CALL and MALL, also represent relevant examples of end-user involvement in the design process.

1.7.3 A framework for assessing MALL educational resources

In recent years, a growing emphasis is laid on the evaluation of the learning design of educational resources, with educators being required to adopt the role of designers, especially in MALL contexts (Miller, Doering, 2014; Reinders, Pegrum, 2016), because "with the potential for linking formal in-class learning with informal out-of-class learning, emphasising situated learning, and enhancing learner autonomy – to name only some of the possible benefits – teachers may need to adjust to new ways of teaching and supporting learning" (Reinders, Pegrum, 2016: 9).

A framework for such an evaluation was proposed by Reinders and Pegrum (2016), for whom the learning design of MALL resources can be evaluated by taking into consideration five categories, including: i) the exploitation of potential educational affordances; ii) the correspondence to general pedagogical approaches; iii) the correspondence to L2 specific pedagogical approaches; iv) the correspondence to SLA principles; and v) the consideration of affective factors.

These five categories are better outlined here below.

- Category 1: Educational affordances. All technologies have their own set of affordances; i.e. the key uses for which they seem to be allocated. As far as learning is concerned, Pegrum (2014) suggested

that mobile device have three main sets of affordances, linking: i) the local and the global; ii) the episodic and the extended; iii) the personal and the social.

The first set refers to the fact that "we interact in and with our local environments while simultaneously remaining connected to global networks of resources and people, from whom we can learn about our local contexts and with whom we can share learning generated in our local contexts" (Reinders, Pegrum, 2016: 4). The second aspect is related to the fact that we can engage in bite-size learning anytime and anywhere but we may need to find a way to connect those bite-sized chunks into extended learning. Finally, the third element pertains to the fact that tailoring our learning experiences to our needs and preferences does not exclude participating in learning communities; on the contrary, the two dimensions can be intertwined (Reinders, Pegrum, 2016).

These three sets of affordances recall many relevant aspects of language learning, which is autonomous but also networked, distributed, and situated. Moreover, also the mobility of the devices needs to be taken into consideration. The mobility may range from a minimal level (for which only the device are mobile whereas the learners and the learning experience are not) to a maximum level (in which all the key factors – the devices, the learners, and the learning experience – are mobile): "the greater the overall level of mobility, the more fully the affordances of mobile technologies for learning are likely to be exploited, and the more closely their use is likely to align with contemporary pedagogical approaches" (Reinders, Pegrum, 2016: 5).

- Category 2: General pedagogical approaches. Even if learning pedagogy has moved from traditional, behaviourist approaches based on the transmission of information towards progressive approaches such as social constructivism, most MALL resources are still bound to a conventional model (Burston, 2014). Behaviourist learning still has a place in education, remarkably for initial content at lower levels, but it cannot be the only available approach, insofar as active, collaborative learning is acknowledged to be effective; moreover, there is also room for the emerging socio-cultural approaches to learning (Pegrum, 2014).
- Category 3: L2 specific pedagogical approaches. In relation to the specific field of language learning, there are some recent pedagogical approaches which are regarded as particularly effective, which can be also easily combined together as they can be combined with social constructivism and other progressive approaches. They include the communicative approach, pushing for authentic, situated interaction; the task-based approach, focusing on situated meaning and the achievement of real-life goals; and the intercultural competence approach, overcoming the simple learning about other culture in favour of situated intercultural interactions (Reinders, Pegrum, 2016).

- Category 4: SLA principles. Research on Second Language Acquisition has identified core requirements for language learning, which include "the need for comprehensible input, comprehensible output, negotiation of meaning in interaction, and noticing of new language, the last of which can be promoted through effective feedback" (Reinders, Pegrum, 2016: 6); without these components, it is hard for learners to gain communicative competence in the target language.
- Category 5: Affective factors. It is largely acknowledged that affective factors also impact upon language learning; among them we cite engagement and motivation, which can be enhanced by interesting and relevant learning resources, also capable of lowering the affective filter (Reinders, Pegrum, 2016).

In the framework of Reinders and Pegrum, the five categories are subdivided into criteria which may be rated, "resulting in a total score for each criterion, each category, and the mobile resources as a whole" (Reinders, Pegrum, 2016: 6).

With the limitations due to the facts that scores are subject to individual judgments, such a framework can be applied before, during and after the use of the resources, so as to include a more systematic evaluation covering all the usage's phases. In fact, if the pre-, during- and post-implementation phases are all covered with a "consistent, wide-ranging approach to evaluation" (Reinders, Pegrum, 2016: 12), the examination of the support offered by the MALL resources to the language learning process is likely to be enhanced. Moreover, these principles could also be effectively used as a guide in the development of mobile materials and mobile activities. Nevertheless, this framework does not include any measurement of learning outcomes, insofar as it does not influence initial design and initial use, but it could have an impact on re-design or reuse (Reinders, Pegrum, 2016). The assessment of the outcomes represents indeed a relevant challenge in a post-implementation phase, especially for MALL, as we will see in chapter four below.

1.8 Preliminary conclusions about language and culture learning through technologies

The attempts to evaluate the efficacy of technology use in language and culture learning are still endangered by some unsolved issues, which were summarised by Golonka *et al.* (2014: 71) in the following list of categories: "poor description of the research design; poor choice of variables to be investigated; lack of relevant data about participants; studies based on untrained users of the technology; a nearly exclusive focus on Western European languages, especially English; and an overall lack of systematicity in investigating key factors that may enhance the effectiveness of foreign language learning and teaching".

Research on CALL and its mobile subset MALL has not resulted yet into a unified research agenda and robust, validated findings (Golonka *et al.*, 2014). Moreover, when enquiring about CALL and MALL a distinction

between impact and effectiveness is essential, insofar as those two aspects are not always combined and interdependent.

CALL and MALL differ not only for the diverse technological devices that they involve, but they also require varied attitudes and the approaches to learning. In addition, the possibilities of delivery learning activities – notably, in-presence, blended or distance – are also to be reconsidered when dealing with CALL and MALL. Shortly, both stationary computers and mobile devices can be useful for in-presence activities, whereas the blended delivery requires integrations among the in-presence and the distance activities in terms of contents and tools, which are to be carefully planned. The blended modality has been largely used for e-learning mediated by platforms such as Moodle; with the empowerment of mobile learning, it is the hybrid approach, which is becoming more and more popular, alternating in-class moment to out-of-class activities (Fratter, 2016).

MALL demonstrates once more that deciding to use technology for language and culture learning is not a neutral choice. Educational technologies are not exchangeable tools with no methodological underpinnings; on the contrary, using technology for language and culture learning implies a continuous adaptation of approaches and methodologies in relation to the technological tool used (La Grassa, Troncarelli, 2016).

As we have seen, from the mid-Nineties onwards, major changes have characterised the educational landscape of languages involving a technological dimension. The web has become a huge container and dispenser of resources, and not only the language input is exponentially increased and increasable, but also the learning tools and activities may be autonomously used by both students and teachers. If it is true that the web has an enabling function as far as the learning process is concerned, it is also important to remark that such enabling function does not automatically include an added value to the process: the capacity of the web to address a wide and dislocated audience does not produce *per se* obvious positive effects upon the elaboration of learning paths, as the MOOCs and the Apps in particular are showing (Troncarelli, 2016).

In other words, what Porcelli stated about softwares already back in the 90s is still true for newer technologies: these have not only to be *adopted*, but they have to be *adapted* in order to be effective (Porcelli, 1994; Burston, 2014; Heil *et al.*, 2016). The adaptation has to follow the learning needs of the students, and it can be carried out only if the relation between the learning goals and the technological tools is clearly understood; in this perspective, the computer works as an *aid* and not as a *substitute* for the educator, contributing to the attainment of the learning goals (Porcelli, 1994).

Exploiting this further, a new, interesting concept has emerged, which is called adaptive learning, and which can lead to computers becoming personalised teaching devices. The notion of adaptive learning refers to the "ability for software to automatically update its functionality based on input received or data processed" and "while growing in popularity, it is still a largely unexplored arena in mobile language learning applications" (Heil

et al., 2016: 41). Theoretically, such a notion could predict a "move away from traditional textbooks towards interactive adaptive learning platforms, with both an incorporation of more gamified elements and the use of big data and analytics to store content about users" (Heil *et al.*, 2016: 33). Practically, such features are still far from being evident and widespread, even though it is acknowledged that "the incorporation of more adaptive learning features would provide a more personalised experience, both in terms of content delivered during instruction as well as feedback" (Heil *et al.*, 2016: 42).

In addition, one further aspect, which is often underestimated when dealing with technology for learning, is the sound coordination that is required by its multimedia dimension. From the learner viewpoint, the multimedia dimension of technology implies the rational management of all verbal (written and oral) and non-verbal messages finalised for learning. It is worth underlining that the simple co-presence of those elements is not sufficient, as it could result into an overabundance of information, generating confusion more than fostering communication.

Similarly, the summative vision for which you just add 'some technology' to other in-class activities, which is maybe the easiest to adopt, does not include any pedagogical change (or adaptation) and it is not *per se* intrinsically positive (Porcelli, 1994; Bax, 2003, 2010; Troncarelli, 2016). "At their best, technological innovations can increase learner interest and motivation; provide students with increased access to target language (TL) input, interaction opportunities, and feedback; and provide instructors with an efficient means for organizing course content and interacting with multiple students. At their worst, the use of new technologies can result in inappropriate input, shallow interaction, and inaccurate feedback; student frustration with software and hardware; distraction from the learning task; and a general over-emphasis on delivery modality over learning objectives" (Golonka *et al.,* 2014: 70-71). As we have seen, the function of educational technology cannot be regarded as automatically innovative: the union of old – and often ineffective – learning methodologies with new, modern tools can create 'strange results', incapable of reaching the expected learning goals, and therefore not successful from a pedagogical viewpoint (Troncarelli, 2016).

In the following chapters we will move on to discuss three specific case studies, showing how educational technology can be utilised. All of them pertain to language and culture learning through technology, but they take into account the usage of three different technologies, namely a Moodle platform for this first case, followed by a MOOC course in the second case and concluding with a learning App in the third case study. In addition, even though at least for two case studies the languages and cultures involved are various, the focus will be mainly on the versions concerning learning Italian language and culture, with special attention to the role played by the city of Bologna within those tools.

As anticipated, the three case studies are based upon an interesting action-research experience carried out at the Faculty of Foreign Languages and Literatures – since 2012, School of Languages and Literatures,

Interpreting and Translation – of the University of Bologna for almost a decade. Beginning in 2010, the Faculty, then School, was involved in several projects aimed at the development and the implementation of technological tools for language and culture learning. The chance was ideal in order to analyse and test the methodologies and the approaches, and to identify any shortcomings and possible ways for further progress. The three experiences will be discussed in chronological order, which will also allow for an overview of the technological and pedagogical evolutions along the years. Moreover, the three case studies will be the starting point for a more general reflection about the specificities of CALL and MALL, which will be summarised in the final chapter.

2. The E-LOCAL experience

In this second chapter we will proceed to the examination of the first of the three case studies under investigation in this thesis. We will begin with an overview on the E-LOCAL project; then, we will discuss the analysis of the users' needs and the methodological specifications elaborated by the project teams. The features of the learning platform and of the courses will be presented before introducing the first pilot phase and the revision of the courses. The follow-up to the project, namely E-LOCAL *for all*, will be the object of dedicated paragraphs along with the challenges it faced in terms of new modalities of delivery of the courses and enlargement of the users' base. An assessment of the courses will lead to some preliminary conclusions, which will end this chapter.

2.1 An overview on the E-LOCAL projects(s)

E-LOCAL stands for *Electronically Learning Other Cultures and Languages*. The acronym lets emerge the main features of the project, which was aimed at creating online courses for 'other' languages and cultures, i.e. languages and cultures which were not in the mainstream of online courses at the time in which they were developed. E-LOCAL was a two-year multilateral project, funded by the European Commission under the Key Activity 2 for Languages of the Lifelong Learning Programme[4], an action line that specifically supported language learning and linguistic diversity.

In line with the priorities established by the European Commission, the E-LOCAL project aimed at promoting multilingualism[5] and student mobility through the development of online multimedia materials for six languages and cultures – namely Dutch, Finnish, Hungarian, Italian, Polish and Portuguese – expressly designed to help mobility students with language and culture learning. Between 2010 and 2012[6], the project teams developed the six E-LOCAL courses, one for each language-culture involved, which were hosted on a dedicated Moodle platform, and presented language contents at A1 level of the Common European Framework of Reference along with cultural aspects.

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[4] The Lifelong Learning Programme (LLP) was the action programme for education and training of the European Union in the period 2007-2013; thereafter it was replaced by the Erasmus+ programme, running from 2014 to 2020 and supporting education, training, youth and sport. More information is available on the archived web pages of the Lifelong Learning Programme and on the website of the Erasmus+ programme.

[5] The Council of Europe makes a distinction between "plurilingualism as a speaker's competence (ability to use more than one language) and multilingualism as the presence of various languages in a given geographical area" (Extra & Yagmur 2012: 14); however, the European Commission and the other bodies of the European Union often use the term multilingualism to refer to both situations (Luise, 2013). In this study, as we are discussing the priorities outlined by the European Commission, we will adopt the same approach and we will use the term multilingualism.

[6] The E-LOCAL project lasted from December 2010 to November 2012, but its research ideas were developed all along 2010 and its results were exploited beyond the formal end of the project, as we will discuss in this work.

Since their initial release, the E-LOCAL courses have been used within the institutions belonging to the E-LOCAL Consortium, and beyond the Consortium itself, as we will better outline below. The E-LOCAL project was coordinated by the University of Bologna and it was carried out in collaboration with a European partnership involving other four universities, three secondary schools and a research centre[7] (Magni, 2011; Magni, Valva, 2012; Ceccherelli, Valva, 2016).

In 2013-2014, the European Commission funded a follow-up of the E-LOCAL project, under the same Key Action 2 of the Lifelong Learning Programme. The new project was called E-LOCAL *for all*, and it had two main aims:

i) pursuing dissemination actions of the results of the previous project, thanks to which the E-LOCAL courses became accessible to all the users having the credentials of an institution belonging to the eduGAIN network (see below for details); and

ii) testing 'new ways' of using the E-LOCAL courses, specifically with the involvement of dedicated forms of tutorship (Ceccherelli, Valva, 2016).

In addition, in 2014 the E-LOCAL course of Italian language and culture was adapted and integrated within the learning offer of the Language Centre of the University of Bologna, as the supporting tool for the self-guided A1-level course. However, this course was terminated in 2016/2017, when the MOOC based upon this same course was launched, as we will explain in chapter 3 below (Valva, 2018a).

To sum up, on the one side, the E-LOCAL courses have been available on the dedicated Moodle platform of the University of Bologna[8] since their initial release happened during the E-LOCAL project; on the other side however, the E-LOCAL Italian course in particular has been the object of several reconsiderations along the years, which we will discuss in the following sections. Before doing that, it is necessary to provide an outline of the context in which the E-LOCAL courses were planned and designed. This contextual information is crucial to understanding the reasons behind the pedagogical choices which led to the actual features of the courses (Valva, 2018a).

2.1.1 The promotion of linguistic and cultural diversity

As stated, the E-LOCAL project was funded under the Key Activity 2 for Languages of the Lifelong Learning Programme. The aim of such an Activity was in particular to raise language awareness and to enlarge the access to language resources. From this perspective, the focus was upon the importance of preserving linguistic

[7] The E-LOCAL Consortium was composed by five universities (the University of Bologna, the University of Lapland, the University of Debrecen, the Adam Mickiewicz University, the Katholieke Universiteit Leuven), three secondary schools (the ICTS Rosa Luxemburg of Bologna, the Charles de Gaulle Secondary School of Poznań and the Tóth Árpád Gimnázium of Debrecen) and the Centre for Social Studies of the University of Coimbra.

[8] The E-LOCAL Moodle platform of the University of Bologna is available at: https://e-localcourses.unibo.it/

and cultural diversity. In addition, and in line with the European policy of multilingualism, Key Activity 2 paid special attention to the promotion of the so-called LWULT (*Less Widely Used and Less Taught*) languages, by encouraging the development of projects pursuing this goal. The E-LOCAL project was conceived in fact with the 'mission' to support the LWULT languages, and its final aim was the development of uniform and innovative learning tools and materials for six cultures and languages at A1 level: Dutch, Finnish, Hungarian, Italian, Polish and Portuguese (Magni, Valva, 2012).

The concept of LWULT languages was particularly used in the European Union framework, and especially in the 1990s; the languages it referred to might vary according to the context, but it was generally used in opposition to the three languages that were mainly utilised within the institutions of the European Union for administrative, working reasons, i.e. English, French and German (Gazzola, 2006), and also in opposition to the languages mainly studied in schools and universities (Baïdak *et al*., 2017). As for the European Union, a dichotomy is evident between the policies envisaged by the institutions on the one side, and the state of the art, both at institutional and at individual levels, on the other. In between, some actions are carried out to bridge the gap. The EU language policies encourage the promotion of less widely used European languages and invite the Member States to widen the selection of languages taught at different levels of education. However, the education systems of the Member States, eventually, offer the opportunity to learn them as foreign languages only at tertiary level, as including LWULT languages in the curricula of secondary schools does not seem to be feasible because of many constraints (Magni, 2011). When the E-LOCAL project was planned, English was – and it still is – the most studied foreign language at the European level, and languages other than English, French, German were rarely studied; nowadays – even though Spanish has become more popular as a foreign language – the situation is unchanged (European Commission *et al.*, 2012, 2017).

In this context, the conceptual idea of the E-LOCAL project was to bypass somehow the standard forms of learning, and hinge upon the technological tools to develop alternative educational paths available for both secondary and tertiary levels of education. As the E-LOCAL Consortium consisted of both schools and universities, and all the institutions involved in the project could benefit from the results, the promotion of linguistic and cultural diversity could meet a wide audience. The E-LOCAL project involved in fact six higher education institutions and three secondary schools of six different European countries (Belgium, Finland, Hungary, Italy, Poland and Portugal) and addressed both pupils in their final years of high school and university students, i.e. that part of the student population that is likely to experience mobility (Magni, 2011).

2.1.2 The approach to student mobility

The approach to student mobility is a second key issue related to the E-LOCAL initiative. As said, the E-LOCAL courses were designed taking into account the specific needs of mobility students, i.e. of those students going

to experience a study or training mobility period in one of the countries where one of the six languages of the project is spoken. Even though tackling linguistic skills at breakthrough level, the E-LOCAL courses include the concomitant acquisition of cultural competence, "conveying the message that integration, even in a temporary mobility experience, always entails learning local language and culture" (Ceccherelli, Valva, 2012: 26).

From this perspective, student mobility – and the Erasmus experience in particular – is regarded as a concrete action to build up the future European citizens, and single individuals are enabled to live in new linguistic surroundings, as well as to understand the values and behaviours of other groups (Magni, Valva, 2012). In other words, the E-LOCAL courses represent an effort to combine the promotion of linguistic and cultural diversity with the aspiration to internationalisation of (higher) education.

If on the one hand in fact, the presence of foreign students – either spending a temporary mobility experience or enrolled in international courses – is a qualifying factor for the universities from the internationalisation viewpoint, on the other hand, a learning catalogue only offering English-taught courses is not enough to attract and retain the international students. On the contrary, the low competence in local language-culture can have negative repercussions both on the academic environment and on the job market. In fact, the low competence in local language may force graduate students to use their locally acquired competence elsewhere, as they cannot integrate into the regional network of business (Pizzoli, 2018).

In this regard, the English-taught courses may even represent a discouragement for international graduate students to remain in the country where they study, thus reducing the potential positive effects of internationalisation onto the labour market (Gazzola, 2009, 2017). Differently said, when it comes to the internationalisation of the university, having only-English competence is not sufficient. As the European Commission itself has stated several times (2013: 7), "in order to fulfil their potential to successfully integrate in their host country, mobile students, researchers and teaching staff need specific support for language learning, including the opportunity to learn the local language(s), whether or not this is the language of the study course or research group".

The European policies consider multilingualism and mobility as two intertwined elements. On the one hand, the opportunities created to reinforce linguistic support aim at making mobility more effective and efficient; on the other, the reinforcement of mobility is intended "for the purpose of language learning, in order to help learners to overcome initial linguistic barriers and motivate them to acquire competence in at least two foreign languages" (Council of the European Union, 2011: 7).

In short, the support of language-culture learning is meant in order to help students live mobility experiences more efficiently and effectively. Conversely, the support of mobility itself is meant to help students overcome the barriers and motivate them to learn languages. In this perspective, multilingualism and mobility are part of

the same plan, whose final goal is to foster interaction, and, with that, the integration within a given place (Magni, Valva, 2012).

2.1.3 The cultural dimension

Learning mobility is defined by the Council of the European Union (2011: 4) as a "transnational mobility for the purpose of acquiring new knowledge, skills and competences" and, as such, it is "one of the important ways in which citizens can strengthen their employability, enhance their intercultural awareness, creativity and personal development, as well as participate actively in society". The promotion of intercultural awareness is associated to learning mobility along with other important factors pertaining to the accomplishment of individual fulfilment.

Following this perspective, from the E-LOCAL viewpoint, the knowledge of local languages and cultures has to be encouraged in order to enable the European citizens to take advantage of the freedom to work or study abroad, and also because it is crucial to help better understand each other's cultures (Magni, Valva, 2012; Ceccherelli, Valva, 2016). The acquisition of linguistic skills, in fact, cannot be isolated from "the development of an awareness of the cultural complexity of the environment, particularly evident in and among European countries. This awareness can also be associated with changes in cultural competence and identification" (Council of Europe 2007: 34).

In line with these principles, the E-LOCAL courses were built as a tool to be used for linguistic and cultural preparation before any mobility experience, but they also constitute an accompanying guide to be used as a reference during the mobility period. Moreover, the intercultural dimension of language learning is reinforced by the use of the local language in combination with English as a vehicular language to introduce the cultural contents. This combination of languages was conceived in order to make the cultural contents fully accessible for beginners, and at the same time to foster the acquisition of language skills in the local language (Ceccherelli, Valva 2016).

Indeed, in the E-LOCAL courses the role of English is very specific, as it acts as a vehicular and global language that opens the path to the appreciation of local realities. The possibility of practising diversity as an educational resource, and the relationship between cultures and languages impact upon the internationalisation of universities, going beyond the mere use of a global language (Preisler, 2011). In this perspective, the knowledge of the local language – and, more generally, of the local reality – can let the students fully exploit the benefits of their mobility period: the E-LOCAL courses are therefore conceived as virtual experiences of linguistic and cultural discovery that can help the users to face the challenges of real-life mobility (Magni, 2011).

2.2 The E-LOCAL analysis of the users' needs

The E-LOCAL courses were planned as comprehensive yet flexible learning pathways, trying to cope with the specific users' needs. In line with this standpoint, the first step for the project Consortium was the elaboration of an analysis of the students' needs and of their expectations, in relation to language-culture learning within an online environment. Such an analysis aimed at revealing central information, necessary for the definition of a shared learning methodology and of a general framework of contents. For this purpose, in the initial phases of the project, the E-LOCAL Consortium launched an online questionnaire among the students of the partner institutions, which is reported in Appendix A.

In this regard, it is also worth mentioning that such an approach to planning the development of learning tools presents interesting connections with the Needs Audit envisaged by Bax (2011) in order to enquiry whether the technology is necessary and useful for the learning process, and then adapt the learning path accordingly.

The following sub-paragraphs are elaborated starting from the Analysis on the survey for end users (E-LOCAL Consortium, 2011a), which was carried out by the project Consortium and published on the E-LOCAL project website.

2.2.1 The questionnaire and the attitude towards learning languages and cultures

The questionnaire elaborated by the E-LOCAL Consortium to investigate the users' needs was online for one month, from 22nd February to 21st March 2011. During this time span, the questionnaire was answered by a total of 1124 students, belonging to the nine institutions of the E-LOCAL Consortium (i.e. people from six different countries at least). The questionnaire consisted of a total of ten questions, four of them were open questions and the other six were multiple choice selections. Two of the selections included an open field for further elaboration, as we will show. All in all, the questions focused on students' attitudes towards learning languages and cultures, and on the motivations for learning them, as well as on topics and technological solutions in language learning.

The first question was about the institutional belonging of the respondents. In this regard, it is worth mentioning that the questionnaire was not submitted to a scientific sample; on the contrary, it was distributed to a selection of students of the partner institutions on the basis of internal criteria. For instance, the selection of students could be linked to the *grades* (e.g. the questionnaire was given out only to the final years of the secondary schools involved, or to the students enrolled in their first year at the university for some universities) or to the *status* (e.g. in some universities the questionnaire was given out to future outgoing students, in others only to students enrolled in the humanities). Moreover, the number of respondents varied considerably between institutions, ranging from 369 questionnaires returned from the Katholieke Universiteit Leuven in Belgium to 32 questionnaires returned from the University of Lapland in Finland. As a general principle

therefore, the results of the survey could not be generalised to all partner institutions and for the project purposes the answers were analysed at institutional level as well; correspondingly, the institutional viewpoints were checked when making decisions about the methodology and the framework of contents. However, the differences among the institutional answers are not relevant for the purposes of our investigation, insofar as the final features of the E-LOCAL course of Italian which is the main object of this chapter – and of all the other courses in the end – were decided taking largely into account the global results of the survey. In addition, and despite the strong variation in institutional answers, the survey results proved to be sufficient for indicating a trend and for drawing preliminary conclusions about the needs and expectations of students concerning learning languages and cultures within an online environment.

A specific question about the language(s) already known by the students was also included at the beginning of the questionnaire, and most answers indicated more than one language. The three most often mentioned languages were English (1093 respondents), French (668) and German (602), and this answer was indeed in line with the EU statistics about languages studied at the European level (European Commission *et al.*, 2012). Among the ten most often mentioned languages we can also report – in this order – Dutch, Italian, Spanish, Polish, Latin, Russian and Portuguese. The composition of the Consortium only partially influenced these answers, being the top-three answers not directly connected with any of the partner institutions. However, the question was partially biased as it did not specify whether to include or not the mother tongue among the possible answers; this was a choice of the respondents and we can presumably assume that some did include their mother tongue and some others did not. Among the submitted answers, there was a rather comprehensive understanding of different language groups within the Indo-European language family, and, as it might be supposed, only Finno-Ugric languages of the Uralic languages were less known to the majority of respondents. Nevertheless, this was a relevant aspect to be taken into consideration from the viewpoint of the E-LOCAL Consortium, insofar as the methodology and the common framework to be developed for the courses had to applicable to all the project languages, no matter what language family the belonged to.

The first two questions were the only ones pertaining somehow to the personal domain, no other background question was included in this questionnaire, concerning for instance gender, age, field of study and so on, even though some pieces of information could be deducted from the sample selections made at the institutional level. Yet, this kind of background information was not taken into consideration with this initial questionnaire, contrary to what will happen with future analysis, as we will outline below.

The questionnaire continued inquiring about the willingness to study more languages and cultures, and if a student indicated interest in studying more languages and cultures, there was an open field for specifying which ones. In total, 941 students answered that they were interested in learning more languages and cultures. The top ten submitted specifications listed Spanish (including cultural aspects from Central and South America,

e.g. Cuba), Italian, French, Russian, Portuguese (including cultural aspects from South America, e.g. Brazil), Japanese, Chinese, German, Swedish and Finnish. It is also worth mentioning that English – along with its cultural varieties – were mentioned altogether only 26 times. These answers were interpreted as an indicator of a general interest also towards 'less common' languages and their cultures, indeed towards less taught languages. The questionnaire did not specify the relation between the E-LOCAL project and the LWULT languages, however the project website was online by the time the questionnaire was launched and information about the project could be potentially checked by respondents; moreover, the audience of respondents included undeniably also students sensitive to this topic, so the answers cannot be regarded as completely unbiased in this regard. Nonetheless, these results let emerge an appealing inclination.

2.2.2 The motivations for studying other languages and cultures

The possible motivations for studying one of the E-LOCAL languages were the focus of question 4. The respondents indicated that the main reason was the very pragmatic "to find a job" option (70.5%), followed by "just to travel" (63.5%), and "to study abroad" (61.4%). In comparison, "for networking" was considered less significant (28.9%). The option "other" was answered by 116 students (10.5%) and the ten most often mentioned themes reported were: "personal development, enhancing cultural and linguistic understanding", "meeting people and getting friends abroad", "interest, fun of learning languages". The themes indicated by the students in their answers were taken into account in order to elaborate the general framework of contents for the courses, as they provided concrete and motivating situations for learning languages and cultures. Figure 1 below shows an overview on the motivations indicated by respondents to questions 4.

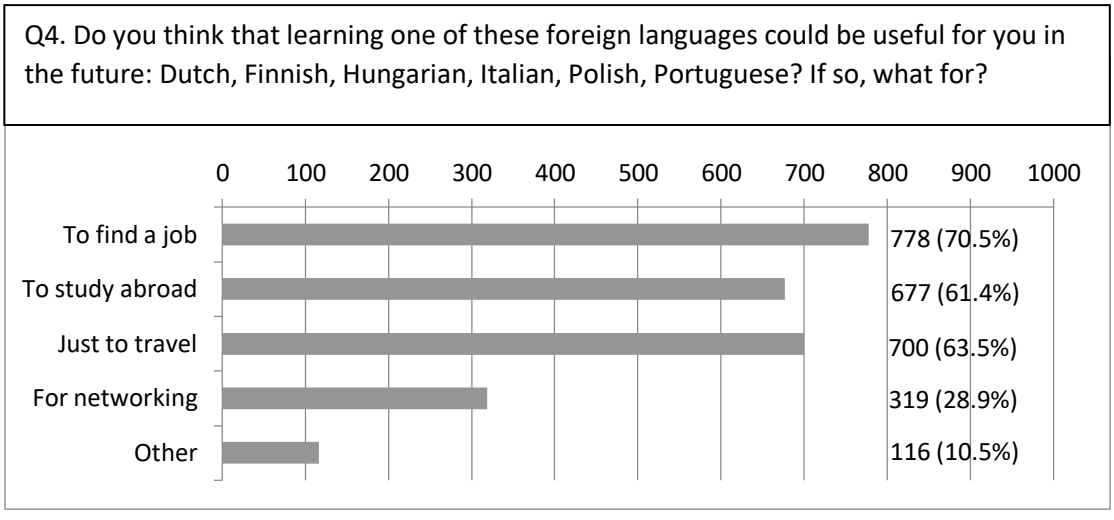

Figure 1. Motivations for studying one of the E-LOCAL languages.

Question 5 probed the importance of learning about cultures. The majority of respondents (84.7%) answered that learning about languages and learning about cultures are equally important, thus showing awareness of the fundamental role of culture in languages. In some institutional responses the percentage was even higher, reaching 90-95%. This datum confirmed the approach already adopted by the project Consortium and supported the idea of letting cultures have a pivotal role in the E-LOCAL learning materials.

The following question examined which aspects of a foreign culture the respondents were more interested in. For each of the suggested themes the students could choose whether they were "not so interested", "interested", or "very interested". The most popular themes for the respondents were "habits and lifestyle" (52.4% selected the "very interested" option), "history and traditions" (47.1% of very interested respondents), "music" (45.5% of very interested), and "art and literature" (43.6% of very interested). In addition, 48% of respondents declared to be interested in "cuisine" and 46.8% in "movies". In contrast, 54.2% of respondents affirmed instead that they were not so interested in "sports".

As shown by Figure 2 below, the answers to this question carried along important information for building up the contents of the E-LOCAL courses, as they provided an outline of the students' views on several themes, which could be implemented in the learning materials. "Habits and lifestyle" was the most popular theme, which definitely supported the cultural approach that had been planned for the framework of contents; moreover, the general interest obtained by almost all the available options could endorse the incorporation of cultural aspects within all the learning materials.

Q6. Which aspects of a foreign culture are you interested in?

	1 Not so interested	2 Interested	3 Very interested
History and traditions	9.9% [111]	43% [484]	**47.1% [530]**
Art and literature	16.6% [186]	39.8% [445]	**43.6% [488]**
Movies	15.9% [177]	**46.8% [521]**	37.3% [416]
Music	11.2% [125]	43.3% [482]	**45.5% [507]**
Cuisine	19.3% [214]	**48% [533]**	32.8% [364]
Habits and lifestyle	5.6% [63]	42% [470]	**52.4% [586]**
Sport	**54.2% [600]**	31.5% [349]	14.4% [159]

Figure 2. Aspects of a foreign culture the respondents were more interested in.

Question 7 was conceived to refine the topics to be included in the common framework, as it concerned other possible aspects that could be considered relevant in a foreign culture. Following the responses given to many of the previous questions, these answers confirmed and strengthened the cultural approach of the E-LOCAL project. The answers to this open question varied greatly, though.

Question 7 was answered by 420 students in total, and "mentality and lifestyle" was the most popular theme, with 83 respondents mentioning it. This answer was lined with the most popular answer in question 6, "habits and lifestyle", and confirmed that such a theme was highly very interesting. "Politics" raised interest in 48 respondents, sometimes with an emphasis on the current political situation of different countries. "Religion and attitudes towards religion" got 42 respondents, whereas 31 respondents declared to be interested in learning about the rules of interpersonal communication in different cultures, especially when meeting people. The same number of respondents mentioned "sights, including natural sights and landscapes" as a theme of interest. Finally, among the 10 most popular themes that were mentioned we can also find "fashion", "architecture and monuments" (28 respondents each), "nature, wildlife, fauna and flora" (23 respondents), "education system" (14 respondents) and "links between history and language, view of the world and language" (12 respondents).

2.2.3 The technological solutions for language and culture learning

With question 8 the focus moved towards the technical and technological aspects, as this question examined what could make an online environment motivating. Respondents were provided with a list of features and they had to state whether they were considered "not so motivating", "motivating" or "very motivating". Interestingly, the only feature that was considered very motivating by the majority of respondents (49.7%) was efficiency. All the other features were considered motivating by the majority of respondents: visually attractive (54.7%), technically well-made (52.2%), simple enough to use (51.8%), fun (50.8%), and interactive (50.5%). It is also worth pointing out that no feature was considered as not so motivating by the majority of respondents. Figure 3 below summarises the results of question 8.

Q8. What makes an online learning environment motivating? Please choose from the following:			
	1 Not so motivating	**2 Motivating**	**3 Very motivating**
Simple enough to use	7.7% [85]	**51.8%** **[573]**	40.6% [449]
Fun	13% [144]	**50.8%** **[561]**	36.2% [400]
Technically well-made	9.9% [109]	**52.2%** **[576]**	37.9% [418]
Efficient	6.4%	43.9%	**49.7%**

	[71]	[483]	**[547]**
Visually attractive	13.5%	**54.7%**	31.8%
	[149]	**[603]**	[350]
Interactive	7.9%	**50.5%**	41.6%
	[87]	**[558]**	[460]

Figure 3. Features making an online environment motivating.

The information collected with this question was were relevant for the internal discussion about the learning environment. In order to make the E-LOCAL learning environment "efficient", the first aspect taken into consideration was to have it programmed to run well on the computers used by the target learners, and then to have it compatible with various web browser-versions. From the Consortium's viewpoint, a "visually attractive" learning environment could be created involving graphic designers capable of combining this feature with the learning goals, whereas a "technically well-made" learning environment could refer to the expectation of having a programme that worked well, with quality graphics and clear functions. "Simple enough to use" also entailed the idea of clear instructions and directions, whereas "fun" was used to identify an entertaining learning environment, eventually also offering praise for the learning progress. The "interactiveness" feature could represent a challenge, but – if met – this feature could result in a great advantage for language and culture courses.

Question 9 was an open question aimed at identifying the other aspects that could make a learning environment motivating; the answers to this question – and to question 8 as well – were meant to facilitate the technical process of creating the E-LOCAL learning environment. In total, 365 people replied with answers to this question, which were grouped into the following eight main categories: "flexibility and convenience" (136 respondents), "extensiveness and authenticity" (43 respondents), "interactiveness" (38 respondents), "low or no price" (20 respondents), "saving time" (19 respondents), "testing or keeping track of progress" (16 respondents), "good technical solutions" (13 respondents), "design" (8 respondents).

"Flexibility and convenience" were reported as the most motivating factors for online learning. The answers included within this group highlighted the relevant features of e-learning, insofar as aspects like "learning can take place anytime and anywhere", "it helps avoiding classroom pressure", and "quick access" were mentioned.

The answers labelled as "extensiveness and authenticity" provided details about what to include in the materials and mentioned "audiovisual support about everyday life, links to news sites, and learning practical

language on a variety of themes". Also mentioned, there were themes such as seasonal holidays and fun facts about countries or languages. Other important aspects mentioned the following notions:

i) the materials included in the courses had to be up-to-date;

ii) the language had to be authentic (a particular emphasis was put upon native speakers, who were considered by the respondents important for the quality of the audio materials);

iii) the materials had to refer to authentic articles or news broadcasts;

iv) the materials had to be relevant in getting to know the culture.

The answers grouped within the "interactiveness" label included:

i) the possibility to communicate with other learners through forums or social media;

ii) the possibility to get feedback, to communicate while doing the exercises (the possibility for support via e-mail was also mentioned in this context);

iii) the possibility to get recognition and/or praise for achievements;

iv) the possibility to take part in contests with other learners.

All these factors labelled as pertaining to the "interactiveness" domain were discussed in this initial project phase, and they will play a crucial role in the future developments of the courses. Moreover, "interactiveness" was the only factor that was mentioned also in the previous question, as it was a possible selection. Indeed this aspect assumed a specific importance in the design of the E-LOCAL courses. In this regard, it is also worth mentioning that 11 students claimed not to be motivated to learn online because of the missing human contact.

As anticipated, the other answers – which were numerically less relevant – were grouped into the categories of "low price or no price at all", "saving time", "testing or keeping track of progress", "good technical solutions" and "design". There were also some uncategorised answers that mentioned the following aspects: gamification, a good reputation of the online courses, the actual learning outcomes achievable, a recommended learning schedule and clear aims for learning, the possibility of taking the course with friends, the availability of technical support, a wide variety of languages offered by the learning platform, the possibility to use the online courses before going on an international student exchange. Finally, the questionnaire ended with a question asking for contact information to those students who were possibly interested in testing the first version of the E-LOCAL courses. Altogether 699 students gave their e-mail addresses, 62% of the 1124 respondents.

To sum up, the results collected through the online questionnaire proved to be an initial, valuable resource for defining a learning methodology as well as a common framework of contents for the E-LOCAL courses, insofar as they provided an extensive idea about needs and expectations of the students. All in all, the number of survey respondents was high and a clearly positive attitude towards encountering other cultures and languages

emerged; also the relation between language and cultural competence was outlined in the submitted answers. Culture was meant in a very broad acceptation, as pertaining to arts, history, literature, and also habits, traditions, and lifestyle. Moreover, the students recognised the connection between languages and mobility, they underlined the necessity for high-quality learning materials and confirmed the importance of having efficient and functional learning environments, possibly also interactive (Magni, Valva 2012).

2.3 The E-LOCAL methodological specifications

As shown, the questionnaire launched in February 2011 within the E-LOCAL Consortium focused upon the interest in languages and cultures and upon the motivations for studying online. The results of this survey opened a discussion within the project Consortium, which led to the elaboration of a methodological document outlining the pedagogical criteria to be taken into consideration for the development of the courses, along with the approaches to learning and the technological implementation of the materials. It was a learner-centred, bottom-up approach, which – starting with the student experience and moving to a reflection upon the related scientific literature – allowed for the definition of a specific methodology. The remaining of this section is based upon an analysis of the E-LOCAL Methodology specifications (E-LOCAL Consortium, 2011b).

2.3.1 The four key values of the E-LOCAL Methodology

To begin with, the E-LOCAL methodology was grounded on four key values, which we will summarise here below.

1. The first key value identified for the E-LOCAL online learning environment was authenticity, which was supposed to be pursued in the materials to be created. On the one hand, linguistic and cultural authenticity was supposed to be reached by using native speakers in audio materials; on the other hand, situational authenticity was linked to the presence of realistic contexts and situations in which students travelling to a foreign country could be involved in. In short, the E-LOCAL courses were said to stem from authentic contexts and circumstances and offer authentic linguistic, communicative and cultural situations.
2. The second key value was motivational learning. Following the indications that emerged from the analysis of the end-users survey, the motivation relied upon high-quality learning materials, efficient and functional learning environments, and clear guidelines. In this regard, technology was considered a support for creating incentives for the students; in addition, the thematic pattern of motivation was taken into account in the learning materials. In other words, motivational learning was pursued through a stimulating learning environment and through relevant and well-structured learning materials.

3. The third key value identified by the E-LOCAL Methodology was communicativeness. Several questionnaire respondents stated that interactiveness was a relevant aspect to be considered, and that the missing human contact could be partially replaced by making good use of social media. As the E-LOCAL courses were conceived for distance learning, they had to rely upon their organisational structure in order to guarantee some forms of interaction, and they had to exploit additional external resources to fulfil this requirement.
4. The fourth key value was identified in the replicability, which is linked to the fact that the E-LOCAL courses are replicable for a number of users which is potentially endless, and the E-LOCAL model could be potentially applied to other languages and cultures and/or to other language levels. These aspects were taken into account when creating the contents of the courses, and during their technical implementation as well.

These four key values were supported through several methods. First of all, the E-LOCAL courses were built in order to be independent online courses that could be taken without any teacher support[9]; their user is a self-guided individual, who discovers the target language and culture step by step. The theoretical framework which was adopted behind this approach was that of distributed learning, defined as a typology of learning which is carried out online either completely or partly together with some face-to face learning (Bates, Poole, 2003). For the E-LOCAL purposes, the definition of distributed learning encompassed a learning process going to be based fully online.

The methodology, the learning environment and the materials were planned in a proactive way They followed a student-centred approach, which could be identified with the seven qualities of meaningful learning proposed by Jonassen (1995), namely:

1. active,
2. constructive,
3. collaborative,
4. intentional,
5. contextualised,
6. conversational, and
7. reflective.

In the E-LOCAL courses, these seven qualities of meaningful learning were considered when creating the contents, the materials and the exercises; moreover, systematic and proactive consideration of each study unit

[9] This aspect will turn out to be critical, and it will be reconsidered in a following phase (see in particular 2.6, 2.7 and 2.8 below).

from the viewpoint of these seven attributes of meaningful learning confirmed the quality of the learning material in a rather extensive way. When developing the E-LOCAL learning materials, these seven qualities were taken into account and applied either as interrelated or as independent qualities, depending on what best suited each material.

2.3.2 The approach to learning

As for the learning approach, the E-LOCAL courses represent an attempt to merge different theories, models, and methods, and adopt them in suitable, reasonable contexts. As a first point, the learning aims of the E-LOCAL courses had to be made clear to the user. It is only after comprehending the learning goals, that the independent and self-guiding student can relate to the learning material in a proper way, keeping those learning goals in mind. In this perspective, the E-LOCAL learning materials were planned to be intentional, i.e. supporting the learning goals and outcomes, and situational, i.e. focusing on real life contexts, such as problem solving that motivates to study languages and cultures (Ruokamo, Pohjolainen, 1999).

The E-LOCAL learning approach embeds behaviourist, cognitivist and constructivist perspectives. The behaviourist approach to learning was favoured for learning facts, such as vocabulary, for which logical sections of information and immediate feedback to the student represented an applicable pattern. Instead, the cognitivist approach was used for explaining grammar topics, using the vehicular language. This approach allowed to explain the principles and processes of the languages, which might turn out to be very complex for beginners engaged in autonomous learning. Moreover, according to cognitivism, the processes in the learner's mind and what the learner does play a significant role in the process of learning, and this is in line with the active student envisioned. In contrast, from constructivism E-LOCAL derived the fact that learning is also linked to situations and cultural aspects. To obtain this link to situations and cultural aspects, the E-LOCAL platform entailed a sense of concreteness in the study units, with an authentic-looking environment and everyday life situations. In addition, the shift from the virtual world to the real world and the use of language were facilitated by providing cultural information potentially sufficient for understanding special characteristics in everyday behaviour. According to constructivism in fact, information is constructed in the student's mind on the basis of presumptions that the student already has about the information itself. To go further, pedagogical principles about online learning have utilised the social constructivist approach to learning, for which information is built by both the individual and the social community and the individual learning and development is seen as a part of a larger cultural context. This was implemented in the E-LOCAL courses by creating an opportunity for students to communicate with each other in a dedicated Facebook group, which had – at least during the project lifetime – semi-structured models for discussing the contents of the course.

These semi-structured models aimed at facilitating individual, creative communication and preventing students from feeling overwhelmed and thus refrain from communication.

Finally, as far as feedback is concerned, this was meant following both the behaviourist and the constructivist approach, i.e. there was enough feedback given to the student to allow opportunities for self-evaluation, and the feedback was given both externally (i.e. by the learning environment itself, thanks to technological solutions allowing for feedback after the exercises) and internally (i.e. by the student, pondering on whether the learning aims have been achieved and what kinds of studying strategies would be feasible).

2.3.3 The language-culture bond and the intercultural competence

As anticipated, in the E-LOCAL learning materials, cultural and linguistic contents were conceived as intertwined. Language does convey information, but culture is integrated in it (Kramsch, 1993), and when cultures are acknowledged as essential parts of languages, the student's understanding of studying languages becomes wider in scope. In line with these considerations, the E-LOCAL virtual learning environment was developed so to allow for both aspects to be included in a harmonious and motivational way. The cultural part was conveyed mainly in English, since A1 level in the target language would not enable introducing complex cultural concepts. However, cultural contents were also included in the target language whenever possible, for instance by specifying the local name of the main cultural concepts introduced.

In their methodological document, the E-LOCAL partners tried to provide a definition of culture, which proved to be very difficult. In the end, they adopted the definition proposed by Bartlett and Davidsson (2003), for which culture is something people are usually unconsciously part of, and individuals learn how to think and behave in that particular culture. According to Bartlett and Davidsson (2003), culture exists on three levels: i) everyday objects, art and artefacts; ii) norms and values; iii) basic assumptions.

As we will outline below, the E-LOCAL material mostly pertain to the most explicit level of culture, namely everyday objects, art and artefacts. In this category however, not only high culture alone is included, rather also practical, daily life. Likewise, the E-LOCAL methodological specifications also present the approaches for building intercultural competence, regarded as the ability to develop and use targeted knowledge, skills and attitudes to be used for effective and appropriate intercultural interactions (Deardorff, 2006). Starting from the studies on intercultural communication, the project teams considered the three main approaches to the development of such a competence, namely the culture-specific, the context-specific and the culture-general approaches (Bennett 1998; Samovar, Porter 2004).

As for the culture-specific approach, it includes materials dealing with one specific, national culture. The underlying assumption is that every single culture has its own specific features, which are reflected in the behaviour and the communication of the individuals. From this perspective, "learning about cultural values,

habits, behavioural patterns, and communicative strategies of the target culture would allow individuals to become culturally competent in relation to the target culture" (E-LOCAL Consortium, 2011b: 9). With the context-specific approach this assumption is pushed further and tailored to "a more detailed level of contexts, or even individual situations" (E-LOCAL Consortium, 2011b: 9).

Finally, the culture-general approach concentrates upon "skills and knowledge that can be relevant in many situations within various (national) cultures" (E-LOCAL Consortium, 2011b: 9). Here, the underlying assumptions are two: as a first point, cultures are supposed to share some similar features; secondly, the understanding of general principles in communication enhances the adaptation to different situations. From this perspective, learners are called to deal with the general mechanisms of intercultural communication rather than learning specific cultural patterns (Bennett 1998; Samovar, Porter 2004).

The E-LOCAL learning materials were created concentrating on each culture separately, as each course represented a close, defined entity. In this regard, they followed mostly the culture-specific approach, cultural patterns were presented alongside with linguistic components, and language and culture were considered as inseparable entities. Moreover, since the E-LOCAL project was dealing specifically with less widely used and less taught languages and their cultures, special attention was paid to how to tackle the user's previous knowledge, if any. As a matter of fact, the students' expectations about the courses could be partially based on stereotypes rather than actual knowledge, and stereotypes can negatively affect the learning process as they reduce motivation and endanger intercultural communication (Gudykunst, Kim 2003; Samovar *et al*., 2010). Provided that the cultural components of the E-LOCAL learning materials were designed to reflect specific national cultures, the authors and the designers had to avoid negative stereotypes, as well as to defuse some general stereotypes linked to each of the national cultures represented.

2.3.4 The development of the learning resources

In short, the E-LOCAL pedagogical strategy encompassed the concomitant learning of language and culture, and the learning resources were developed in order to foster this bond, for which language on one side reflects and on the other constructs the cultural reality of the speakers (Kramsch, 2003). The language-culture bond envisaged for the E-LOCAL courses was the founding element of a learning path in which the (inter)cultural competence and the knowledge of the local language are risen as key factors for the appropriation of an enlarged action-space (Magni, Valva 2012).

If the cultural and linguistic contents in the E-LOCAL learning materials were intertwined, the complex cultural information, however, was conveyed in English, whereas the target language was used for the cultural scenarios, also in coherence with linguistic materials. This parallel acquisition was thus enabled by the use of English as a vehicular language, a global language that – in this case – opened the path to the discovery of local

realities (Ceccherelli, Valva 2016). As a result, the E-LOCAL courses could claim to promote multilingualism and multiculturalism in various countries, and also to promote mobility from country to country, integration in different societies, and respect for diversity (Ceccherelli, Valva 2016).

During the development of the six courses, specific Task Forces of language and culture experts were created with the aim of drafting the contents, as we will show in detail below; the first challenge they had to face was related to the adoption of such an approach for languages that are taught with no previous knowledge and within an online platform. The authors decided to build materials based on simple, daily language, and on stimulating cultural *realia* (Magni, 2011).

In addition, the E-LOCAL Consortium decided to promote the awareness of the importance of language and culture diversity within Europe through the exploitation of digital technologies. The development of educational tools based upon *Information and Communication Technology* (ICT) was in line with the support to innovative, interactive and motivating services, methodologies and practices related to lifelong learning; from this perspective, the technological tools are not to be intended as a methodological approach itself but as tools to integrate in the educational methodology (Blake, 2013). In the E-LOCAL approach though, technology and the learning environment are more than a supporting element for teaching. The E-LOCAL learning environment in fact was supposed to also motivate and engage students, as motivation was considered indeed as a key factor, preventing students from withdrawing. Each E-LOCAL language and culture course was conceived as a virtual experience of discovery for the student, consisting of several study units (as we will specify below), which are relatively small and concise, coherent units. The idea was that the E-LOCAL traveller, i.e. the end user, is going to take a virtual tour in an online environment, in order to explore the culture and acquire an understanding about it, but also in order to learn the language through motivating study units and exercises, which were created to suit different learning styles. In line with these principles, the technological implementation was seen as the opportunity going to support this objective with a clear and intuitive learning environment.

2.4 The E-LOCAL learning environment

In creating an attractive and effective learning environment a crucial role is played by the cooperation of both technological and pedagogical subject matter experts. In fact, if the complexity of the technical implementation may impact upon the types of learning materials which can be created, a preliminary definition of learning materials needed from a pedagogical viewpoint can avoid a jeopardising disconnect. In other words, the authors of the learning contents need to know what is possible to do with the specific technology they are working with, but, in the same way, the technologists need to know what the envisaged learning goals are. For

the specific purposes of the E-LOCAL learning environment, some features were agreed by all the staeholders involved in the development process, which will be outlined in the following sub-sections.

2.4.1 The customised learning platform

The E-LOCAL learning processes was conceived to take place in an asynchronous way. In order to provide the e-learning units with a well-suited online environment, the Consortium decided to use a Moodle instance (http://moodle.org). As presented in 1.6.1 above, Moodle is an open source Learning Content Management System (LCMS), which is compliant with the most commonly-used e-learning standards, such as the SCORM standard. Since its release, the E-LOCAL Moodle instance has been hosted at the University of Bologna[10], in the local web servers unit, and it was customised in terms of layout, navigation system and users' permits (https://e-localcourses.unibo.it). Currently, the E-LOCAL Moodle Platform of the University of Bologna hosts the Italian course along with the other five courses created during the E-LOCAL project. A login associated to institutional credentials is required to enter the platform, as for the institutional access policy. Nevertheless, the login is also useful for identifying the users, tracking and storing data about their activities and improvements, and also for enabling any eventual follow-up of their learning performance in the long run (E-LOCAL Consortium, 2011b).

In the E-LOCAL Platform, each learning unit corresponds to a Learning Object (LO), thus to a SCORM package. The units were supposed to be short and attractive, as required by e-learning, but also efficient, i.e. conveying real competence (E-LOCAL Consortium, 2011b). However, some constraints and some main common characteristics were defined at Consortium level, in order to give the same dimension and the same structure to all learning units of all the six E-LOCAL courses. As we will better show below, these constraints and common features concerned, among other, the following aspects:

- overall structure of each learning unit;
- typology and quantity of the exercises,
- format and quantity of the multimedia items;
- relationship among content, multimedia elements and exercises.

As for the actual instructional design process, a Task Force composed by experts of language and experts of culture created the learning materials for each E-LOCAL course. These learning materials were then implemented through a dedicated Authoring Tool, transformed into Learning Objects and finally uploaded onto

[10] In 2012, at the end of the E-LOCAL project, similar Moodle instances were created also to be hosted in the servers of the partner institutions. For the purposes of this work, however, we will use only the platform of the University of Bologna as a reference tool.

the learning Platform. In this regard, it is worth underlining that this was a quite long and laborious process, which required several kinds of expertise, and made any eventual revision relatively demanding. Nevertheless, the process was planned in such a way to control each single step and to proceed with gradual releases of single LOs, so as to better monitor each phase; in the end, it turned out to be to be a functional strategy.

2.4.2 The toolkit for developing the courses

The details concerning the structure of the E-LOCAL courses are reported in the so-called 'Common Framework of Language and Culture Courses' (E-LOCAL Consortium, 2011c), a specific document containing the common scaffold to be applied to all learning materials of the different courses of language-culture and which was elaborated in the initial phases of the project, after the analysis of the users' needs reported in 2.2 and in parallel with the methodological specifications presented in 2.3.

Moreover, as all the above-mentioned issues could strongly affect both the process of content production by the authors and the implementation of the e-learning platform, such constraints and characteristics were summarised in a set of Author's Guidelines, which were made available to all people in charge of creating the learning materials. These Guidelines proved to be extremely useful in creating uniform learning units, and in meeting the requirements of the e-learning platform. In addition, also a Storyboard was elaborated, which contained the plot for developing the learning sequences and the situational dialogues. The Storyboard reports suggestions for developing each of the seven sequences, of which the e-story section of each unit is composed (see below). As such, it is a narrative, short summary of the whole course. In the end, the Storyboard was annexed to Common Framework.

These tools – the Common Framework, the Storyboard, the Author's Guidelines – can represent indeed a relevant toolkit for potentially developing similar courses (e.g. for different languages and cultures or for different language levels), and as such they worked in order to make feasible the fourth key value identified in the project methodological specifications, i.e. the replicability of the courses (see 2.3.1 above).

To enter into the details, for each unit of each course the Common Framework of Language and Culture Courses contains indications about:

- titles of the units,
- communicative functions,
- main lexical items,
- cultural and everyday life topics.

The Common Framework is also composed of sections for linguistic material and grammar in each unit, and it has enough flexibility for including the specific grammar contents and communicative functions of each

language in the suitable units. The learning sequences are in fact regarded as specific for each language, and they were inserted in the common pattern to create uniform but original courses. The various sections of the Common Framework were created with reference to the A1 level of the CEFR, and after analysing the available online materials for the six languages (not so many for some of them), as well as A1 level textbooks. The Common Framework then depicts an outline of the elements to be included in each unit-section, in terms of templates to be used for their creation and multimedia items to involve (images, audio, pop-up windows, links to external resources), but also as far as their variation in quantity is concerned, providing a range of minimum and maximum number for each element. Finally, the Common Framework of Contents also includes estimates about the approximate time that each section of the units requires from the student, and the estimated total duration of the units (E-LOCAL Consortium, 2011c).

2.4.3 The structure of the courses

The E-LOCAL platform opens up with a short description of the adventures in which the characters – as we will specify below – will be involved along the learning units, and an interactive map of Europe allows to select the country (and thus the course) the user wants to take (Magni, Valva 2012).

As shown by Figure 4 below, the interactive map provides a visual idea of the courses available on the platform, and could eventually be exploited for further developments, by adding clickable countries (i.e. by adding new courses for new languages and cultures). As a matter of fact, the map has been the same since the platform initial release, but it signals however once more that key value number 4 – replicability – had been planned and hoped for.

Figure 4. The home page of the E-LOCAL platform.

The entry page of each of the six courses presents the list of the units along with a short description of their contents, and it also includes another interactive map enabling the access to the single units and showing the path to follow in order to move through the units.

In total, each E-LOCAL course is composed by ten units: eight main units, plus an introductory unit (unit 0) with the aim of stimulating the users' curiosity by testing their preliminary knowledge, and a final unit (unit 9), meant as a self-assessment of the learning process. The users are however enabled to conduct self-evaluation all along the units (for instance, by checking the correctness of answers in the exercises), and to keep track on the learning development (Magni, Valva, 2012; Ceccherelli, Valva, 2016).

Figure 5 below represents an overview of the entry page of the Italian course and shows the list of units.

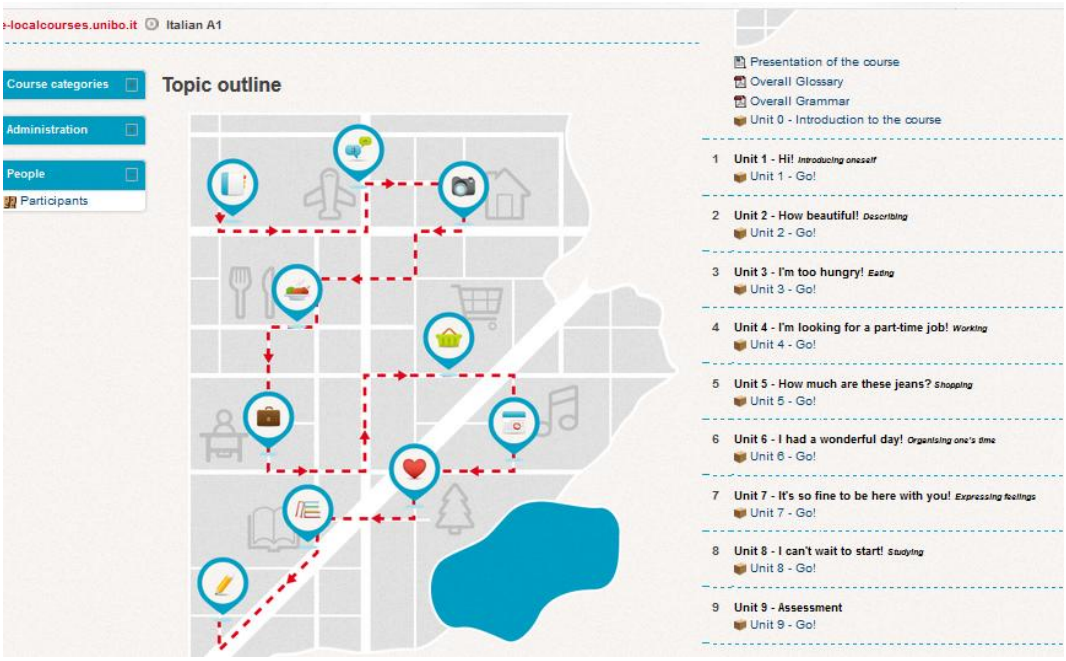

Figure 5. The entry page of the Italian course.

The eight main units have all the same structure: they are organised in five main sections and built around a main theme connected to plausible real-life situations, in order to foster the accomplishment of key value number 1, authenticity. Figure 6 below shows an example of the structure of the eight main units of the courses; the five main sections (i.e. e-story, e-grammar, e-culture, e-life and e-language exercises) are visible in the left column.

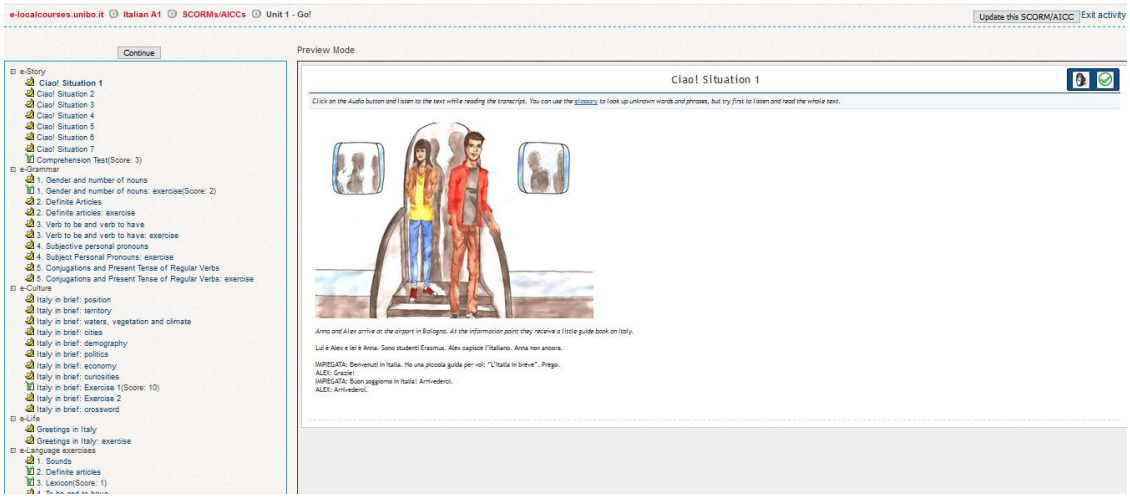

Figure 6. An overview of Unit 1 of the Italian course.

The E-LOCAL courses are centred on the adventures of Anna and Alex, two Erasmus students arriving to one of the E-LOCAL cities (to Bologna, as far as the Italian course is concerned). E-story is the first of the five main sections composing each unit. It consists of 'stories', i.e. of situations that Anna and Alex live, and which could be potentially experienced by the mobility students addressed by the E-LOCAL courses. As specified in the Storyboard and in the Common Framework, in each unit the e-story section is composed by seven situations, which are followed by a short quiz aimed at checking the users' comprehensions of the main events. In addition, each situation is illustrated by an image, and contains the audio of the dialogues as well as a pop-up dictionary with the new vocabulary presented in that specific situation. The seven situations are narrated directly in the target language, mainly through dialogues, and only at a later time an explanation is provided. With such an approach, with the e-story the user is plunged immediately into the target language and culture, and this might cause some disorientation as reported by some users (see 2.5 below). On the other side however, this approach attained the key value of authenticity envisaged by the project methodological specifications.

The second main section is e-grammar. It consists of grammar notes (from two to six for each unit), and each note is followed by a related grammar exercise. As anticipated, the grammar notes are specific for each language, and each Task Force decided autonomously the subject matters to include. The notes are mainly textual, even though images and tables could be incorporated if relevant; on the contrary, the grammar exercises could exploit the 12 templates available in the dedicated Auhtoring Tool for the exercises in general, and they could include images, audio, links if necessary.

The third section is named e-culture and contains from four to eight short texts describing some cultural aspects of the country as specified in the Common Framework. To catch and stimulate the users, each page of the e-culture sections contains an image and a pull-down question: the text with the information opens up only when the users give the right answer to the question. In addition, the e-culture section also contains from one to two simple exercises meant to recap/fix the main facts.

E-life is the fourth section in each unit, and collects curiosities and practical information related to daily life. It is a shorter section as it may only contain from one to two texts and from one to two related recap exercises. It was the special interest for mentality and everyday life emerged in the questionnaire launched at the beginning of the project that induced the partners to dedicate a specific section of each course unit to these aspects, instead of embedding them in the e-culture section (Ceccherelli, Valva, 2016). In both e-culture and e-life, images, audio and links to external resources may be available if deemed necessary by the authors.

The fifth and final main section of each unit is named e-language exercises. It offers a series of exercises aimed at reinforcing and deepening the grammatical, lexical and communicative aspects presented in the previous sections. As for the Common Framework, this final section could contain from five to fifteen exercises, which could be created choosing among 12 different templates available in the dedicated Authoring Tool, and could include life images, audio and links to external resources (Ceccherelli, Valva 2016).

2.4.4 The contents of the courses

As anticipated, the Common Framework indicated which communicative functions and the lexicon to be included in each unit, as well as the main subject matters for the e-culture and the e-life sections. We report all these items here below, as they provide a good insight onto the courses.

The topics of the eight main units concern the following fields: 1) introducing oneself, 2) describing, 3) food and drink, 4) working, 5) shopping, 6) timetables, 7) feelings, 8) studying.

The communicative functions presented in the eight main units are the following:

1) Saying hallo and goodbye. Introducing oneself. Asking and expressing states of mind.
2) Describing people and things. Expressing qualities.
3) Ordering in cafés and restaurants. Expressing quantity. Expressing the state of one's health.
4) Describing one's interests, likes and dislikes. Writing a CV.
5) Asking for price. Expressing quality, size, fit. Expressing percentage. Asking for direction.
6) Planning one's day. Expressing time. Expressing frequency. Making a date.
7) Expressing feelings and emotions. Giving advice. Writing an e-mail.
8) Orienteering in university environment. Filling in a Learning Agreement. Filling in a form.

The lexicon of the eight main units is about:

1) Expressions used when meeting and when leaving someone. Numbers (1-10).
2) Countries and nationalities. Qualities. Colours. Shapes. Family tree.
3) Food. Flavours. Kitchen stuff. Rooms and furniture. Numbers (10-100). Health and illness.
4) Jobs. Hobbies. Pets. Sports.
5) Clothes. Shops. Money. Numbers (over 100). Cardinal numbers. Means of transportation.
6) Clock time. Parts of the day. Days of week. Months. Year. Amusements.
7) Animals. Natural areas. Weather.
8) Vocabulary concerning education (e.g. learning environments, subjects, positions).

The topics covered by the e-culture section of the eight units are the following:

1) Country in brief.
2) Who's who in History, Arts and Literature.
3) Cuisine (main typical dishes).
4) History of language (and map of dialects).
5) Some curious and very specific traditions.
6) Movies and music (both pop and classic music).
7) Nature and environment.
8) Education system (from nursery school through different secondary schools up to university).

The e-life section of the eight main units include the following themes:

1) Greetings. (Handshake or bow? Simple instructions to establish and preserve human relations: how to greet and say goodbye - handshake, kiss, bow etc.; formal and informal ways of addressing someone).
2) Something about the society (for example family: its structure and role in the society, marriage etc.; or/and other social issues).
3) Meals (what time, what is usually eaten and drunk, etc.).
4) Old wisdom and new trends in the language (traditional idioms and proverbs showing mentality; influence of English and new technologies, e.g. the language of sms).
5) Holidays (when national and religious holidays are, what and how is celebrated, gifts bought on each occasion and their meaning).
6) How do people spend their free time? (nightlife, weekend etc.).
7) Sing a song! (texts of some famous songs with links to music).
8) Student life (social life, students' clubs, habits such as graduation parties, etc.).

As for unit 0, it represents an introduction to the course and includes preliminary information about the language. For the Italian course, after a short quiz for testing what the users already know, information about the general characteristics of the Italian language is provided, along with the alphabet and the sounds, and

basic grammar notions. The short quiz was not meant as a preliminary assessment of the level, as the course is conceived for absolute beginners; on the contrary, it is more a game-like test to let the users check if they know preliminary, general notions.

Finally, as for unit 9, it was meant to help the users self-assess if they achieved the expected level of proficiency in the Italian language. Similarly to the other units, for the Italian course unit 9 it is based on the adventures of two Erasmus students (Tom and Patricia in this case), and the users are invited to follow them and to complete the proposed exercises (organised in 13 different situations) in order to check what they remember about the things learnt in the previous units. A short, final, narrative feedback is provided, not on the exercises themselves abut aimed at recapping the learning path.

All the above mentioned aspects show how comprehensive the courses are, aiming at providing the users with all necessary coordinates to navigate the local reality. As said, the language is placed side by side to the cultural issues, and each unit presents a coherent and self-sufficient pattern built around a thematic subject. To conclude, it also worth mentioning that such a framework was applied to six languages belonging to different groups of the Indo-European family (Germanic: Dutch; Romanic: Italian and Portuguese; Slavic: Polish) and also to the Uralic family (Finno-Ugric group: Finnish and Hungarian); this confirms the author's perspective of creating a framework potentially replicable also for other languages.

2.5 The first piloting and the revision of the courses

Once the production of the learning materials and their technological implementation were terminated, the courses were tested by more than 100 pilot users selected within the nine institutions involved in the E-LOCAL project. Among them, 20 pilot users tested the Italian course of language and culture. The group of pilot users was composed mainly of students, but it also included some members of the staff of the partner institutions. Between February and June 2012, the pilot users were called to test the courses and tell their opinion about technological and methodological aspects, as well as to comment about the contents of the course, thus providing the E-LOCAL Consortium with very useful suggestions derived from their experience, as we will outline below.

2.5.1 The selection of pilot users for the Italian course

The pilots were selected in the period between October 2011 and January 2012, and at the beginning of February 2012 all institutions arranged an introductory seminar to instruct their pilot users about the project, the activities they were expected to carry out and the importance of their feedback for the future improvement of the E-LOCAL courses. In this regard, it is worth mentioning that the participants in the introductory seminars were invited to submit a feedback questionnaire, in which they were asked – along with

other pieces of information – about their expectations and their suggestions concerning the pilot phase: the majority of respondents mentioned the necessity to include some sort of 'contact' with native speakers and to interact with other users, even virtually.

The courses were released onto the E-LOCAL learning platform on 27th February 2012, and from that date up to the beginning of June 2012 the pilot runs took place in all partner institutions. During this phase, several workshops with the pilot users were organised in each institution, in order to monitor their advancement and solve any possible problem reported, but also to discuss the piloting experience. The initial workshops also aimed at getting the pilot users introduced to the learning platform. In the end, the workshops turned out to be very useful not only to check the pilot users' work, but also to gather narrative feedback about the platform and the learning materials. In other words, the workshops also acted as face-to-face reviews, and the suggestions collected in those occasions were shared and discussed by the partners, also impacting upon the final decisions about changes to operate.

The pilot users were required to submit an online evaluation questionnaire after completing each unit of the course, and a final evaluation questionnaire after completing the whole course. The amount of feedback collected at Consortium level is impressive (690 questionnaires were submitted to assess the single units, and 66 forms to evaluate the courses). We will refer hereafter only to the feedback concerning the Italian course.

The pilot users of the E-LOCAL course of Italian language and culture were selected among seven institutions of five different countries: Adam Mickiewicz University and ZSO2 Charles de Gaulle Secondary School in Poland; University of Debrecen and Tóth Árpád Gimnázium in Hungary; University of Lapland in Finland; University of Coimbra in Portugal; Katholieke Universiteit Leuven in Belgium. Their testing of the course lasted about three months (from February to May 2012) and concerned the totality of the course; for each unit an evaluation questionnaire was submitted (except for unit 0, for which no written feedback was required) and they also submitted a final evaluation questionnaire at the end of the whole course. The feedback provided by the pilot users was analysed by the Task Force in charge of the Italian course and represented the starting point for the revision.

2.5.2 The feedback submitted by the pilot users of the Italian course

The feedback submitted by the pilot users was very detailed. For each section of each unit, the pilot users had to give indications about the strong points and the shortcomings, and they had to specify the time taken to complete the section, which offered a useful insight to outline the average time to prospect to future users to compete the course. It must be said that, quite obviously, the time taken to complete the sections varied considerably among the students, and it was linked to the degree of in-depth learning, which was autonomously decided by each student. On average however, the pilot students took about 4.5 hours to finish

each unit, but some units resulted longer than others (unit 3 and 4 were particularly long for the pilots, with 5.5 and 5 hours respectively as average time reported to complete all the materials).

The first units were more problematic, also from a technical viewpoint. For instance, for unit 1 the pilots reported some technical problems with the learning environment (the main technical shortcomings mentioned being: small working area, difficult scrollbar system, grade system not always working), even though they were satisfied with the learning contents and globally considered the materials as well-made. The technical problems however started to be solved already after unit 2, and in parallel a feeling of 'quick improvement' emerged among the pilot users. In general, they found the units well built, attractive, efficient, useful and interesting. The different topics introduced in the various units were appreciated, along with the overall information provided and the external references that were linked in some texts. The opinions about the level of difficulty varied greatly among the users and were specifically linked to the single sections of the units.

In this regard, the e-story section was generally considered as a useful introduction to get into to the language of the unit. Even though generally defined as interesting, this section was said to be quite difficult for beginners as the students were sometimes overawed by the amount of new words introduced, which made it difficult. In particular, in the first units the situation-glossary of the e-story was appreciated but considered as incomplete (this is maybe because they had not understood yet that it is complementary to the overall glossary); in the final units instead, the pilots noticed that a lot of new words were introduced through the e-story and considered this mechanism as positive, this is maybe because students began to get used to the course structure and found out the effectiveness of the learning process. On average, students took more than 50 minutes to finish the e-story section of each unit.

As for the e-grammar section, this was generally considered the hardest section as the users were again somehow overwhelmed by the quantity of information. Again, this sensation was stronger for the first units and diminished thereafter. Even claiming the difficulty of the topics, the pilot users however considered the explanations contained in the grammar notes as good and easy to understand, and the exercises related to the notes were appreciated. The pilot users also gave useful suggestions about the desired order of grammar topics (which was actually reconsidered during the revision phase) and asked for more tables/examples/schematised information in order to facilitate learning. The average time taken to complete this section was 80 minutes.

The section of e-culture of the eight units was globally considered very interesting, useful and well made by the pilot users. In some cases, the cultural texts were considered too long and full of information, and the related games/exercises too difficult or detailed. The time taken to complete the e-culture section of each unit was approximately 35 minutes.

The e-life section was considered generally interesting and useful, and also nice and easy. This was indeed the shortest section, as the average time taken to complete it was only 20 minutes. The pilot users particularly appreciated the practical information provided by this section even though they claimed that the texts could be even shorter and better structured.

The final section of e-language exercises was generally appreciated by pilot-users, who considered such a section useful for summarising and fixing all the points of the unit. Indeed, the students liked this section because it combined all the elements presented in the other sections. The exercises were considered nice, enjoyable, and also useful and effective. Some pilot users, however, said that the exercises were sometimes quite hard and that they had the feeling of 'not knowing enough' to be able to do them. In addition, the pilot users expressed specific remarks on some exercises which could be improved, and generally, asked for more glossaries to be associated to the exercises. In addition, they also indicated the typology of exercises that they considered more effective (out of the several typologies proposed) and asked to have more of them. Approximately, the pilot users took 75 minutes to complete the e-language exercises section.

2.5.3 The strong points and the weaknesses of the Italian course

To sum up, the feedback provided by the pilot users of the E-LOCAL course of Italian language and culture at the end of the pilot phase was globally positive: the pilots appreciated the course, they found it interesting and effective. The combination of materials pertaining to both language and culture, which are presented during the course, was particularly appreciated and it was considered as the key to enter the new local dimension, thus confirming the initial assumption of the project about the importance of building intercultural knowledge and competence as crucial aspects for student mobility (Ceccherelli, Valva 2016).

The pilot users also individuated some weaknesses and shortcomings within the course, in particular from a technical viewpoint, but they expressed some concrete suggestions for improvement.

Entering into the details, as we have anticipated, the sections of e-story and e-grammar were often considered quite difficult. This was probably linked to the fact that the students – absolute beginners learning in an online environment – are plunged directly into the language with the seven situations of the e-story section, which are narrated in Italian, and then they are presented grammar notes and explanations, which may prove to be also quite complex, especially in the initial units. Such a situation may result in an initial feeling of disorientation and discouragement (Ceccherelli, Valva 2016). On the other hand, however, the e-culture and e-life sections were perceived as enjoyable and soft moments of the learning process. Besides, the e-language exercises concluding each unit were generally considered useful to fix the information. In this regard, it is worth specifying that the order of the five sections of each unit was not meant to be necessarily linear and sequential; on the contrary, the learning environment allows for multiple and diversified starting points and for

personalised learning paths: the users can freely navigate the sections and decide to take them in the order they consider more suitable for their needs. This aspect however was not clearly presented to the users during the pilot phase, whereas in the finalised version of the platform it was specified that the learning order within each unit can be decided by the users (even though the section of e-language exercises may naturally be considered as the final one). Nevertheless, the contents of the eight units are conceived as sequential and, even though there is no formal hindrance in the learning platform, it is hard for the students to be able to take the contents of a unit if they have not completed the previous one (Ceccherelli, Valva 2016).

In addition, the pilot users pointed out the necessity to include more and more structured glossaries, and to have clearer instructions for the exercises. They also suggested to improve the visual side and the efficiency of the learning platform, in terms of navigability and visualisation. Finally, the pilots highlighted the importance of receiving precise feedback for the activities carried out and some of them asked to have more exercises and/or some sort of mid-term tests (Ceccherelli, Valva, 2016)

2.5.4 The revision of the Italian course

As it is easy to infer, such a kind of feedback represented a crucial source of information for the Italian Task Force of the E-LOCAL project, as it provided very concrete remarks which became the starting point for the revision of the course. During the revision phase in fact, very important changes were discussed and implemented. In addition to eliminating typos and shortcomings, as well as errors and technical bugs, the revision concentrated on two main actions: i) improving the architecture of the course and ii) improving the interaction with the contents of the course.

Those parts of the course requiring to be simplified were actually smoothed and the navigation among the various sections composing the courses was made more straightforward. Moreover, cross-referencing was added in order to guarantee a better cohesion among the sections of each unit and also among the various units. The feedback provided to the users after the exercises was another aspect carefully considered during the revision of the course. Such an aspect in fact was considered crucial to foster the learners' autonomy and therefore it was enhanced. In addition, suggestions to the users aimed at self-monitoring their learning path were introduced along with invitations and tools to foster self-evaluation.

The instructions of the exercises were also improved during the revision phase, along with the explanations and all indications to the users. Moreover, short introductory messages were added at the beginning of each unit with the aim of clarifying its contents and objectives. The additional tools already included in the platform during the pilot phase (i.e. the overall glossary with all the vocabulary of the course and the pop-up glossaries available for many texts and exercises, the file collecting all the grammar notes of the courses, the links to external resources) were perfected and made more identifiable by the users (Ceccherelli, Valva 2016).

The revision phase lasted from June to October 2012, and at the end of this process the E-LOCAL course of Italian language and culture presented all the features that it still has today. In particular, the course is characterised by:

- an initial presentation of the whole course and an explanation at the beginning of each unit aimed at highlighting contents, durations and objectives;
- a unit 0, aimed at introducing the course and the Italian language, by verifying possible preliminary knowledge and stimulating the user's curiosity about some topics which will be presented in the following units;
- 8 main units, each of them organised in 5 sections, containing language items along with cultural and communicative information, as specified in the Common Framework of Contents and in the Storyboard;
- an Overall Glossary collecting all the vocabulary presented in the course and pop-up glossaries available for many texts and exercises;
- an Overall Grammar collecting all the grammar notes presented in the units of the course;
- cross-references within each unit and among the units, with indications about related subjects and in-depth sections;
- feedback for the users for each activity carried out and models for self-correction;
- a guided reflection after unit 4 and a guided reflection after unit 8 (i.e. halfway and at the end of the learning path) aimed at self-monitoring the learning process;
- a unit 9 with a final test to self-evaluate the whole learning experience.

When the E-LOCAL project ended, in November 2012, the finalised version of the Italian course of language and culture was available on the E-LOCAL learning platform and it was ready to be used by all people having the institutional credentials of the University of Bologna. This was a crucial aspect still to be faced. During the pilot phase in fact, all the pilot-users selected to participate were provided with temporary credentials to enter the learning platform; at the end of this phase, only the users with institutional credentials could use access the course (Valva, 2018a). It must be specified, however, that such a restriction was linked to the institutional policy and not to the leaning platform itself, which allows indeed for different forms of access (with and without registration). In addition, the E-LOCAL course was ready to be used by autonomous users, as no form of assistance was planned after the pilot phase (during which the users had some reference persons to contact in case of need, even though they were not tutors *stricto sensu*). This represented an additional challenge for the sustainability of the course in the long run.

2.6 E-LOCAL for all and its two objectives

A common remark in the feedback provided by the pilot-users who tested the E-LOCAL courses was related to the desirable presence of a tutor, who could have been very useful in smoothing a learning process involving a huge amount of complex learning materials. In this regard, it is worth mentioning that such a remark was not expressed by the pilot users of the Italian course only; on the contrary, it was generalised among all the pilot users of all the E-LOCAL courses. That is to say that all the users showed the necessity to receive some sort of assistance, be it technical, motivational or content-related (Valva, 2018a).

This remark was taken into great consideration within the E-LOCAL Consortium when thinking of a possible follow-up for the project. Actually, this was one of the main critical aspects of the E-LOCAL courses along with the restrictions for accessing the learning platform.

Following these reflections, the E-LOCAL Consortium applied for a new project built around two main objectives, a quantitative and a qualitative one:

i) the quantitative objective was linked to the usage of the courses by a larger audience, and beyond the partnership who created them;

ii) the qualitative objective was linked to the usage of the courses with new and diversified modalities for supporting the users (Valva, 2018a).

The new project was termed elocALL, acronym for E-LOCAL for all, and its outcomes will be the object of the following sections.

2.6.1 elocALL and the enlargement of the user-base

E-LOCAL for all lasted from November 2013 to October 2014. As it was for E-LOCAL, elocALL was funded under the Key Activity 2 for Languages of the Lifelong Learning Programme and, again as it was for E-LOCAL, the new project focused on less commonly used languages, which are rarely taught at higher education level and even more rarely, or not at all, at secondary school level (Ceccherelli, Valva, 2016). The partnership of the new project was almost the same, 8 out the 9 partners confirmed their participation. Therefore, the elocALL Consortium included also two secondary schools among its partners (one of the three schools participating in the first project withdrew), and the E-LOCAL courses of languages and cultures could be offered to pupils as well. Once more, the project was in line with the EU policies for languages and mobility, as far as the 'promotion' of local languages was concerned but also in terms of target groups (Ceccherelli, Valva, 2016).

As anticipated, elocALL was a project combining continuity and innovation around two main objectives; the first objective was linked to the exploitation of the E-LOCAL courses beyond the Consortium that developed them, and the second objective was the introduction of tutor-based activities for supporting the users of the courses. If, in fact, at the end of the revision process the Italian course (and all the other courses as well) could

be defined as finalised and well working, some actions were however needed in order to identify the best ways for the users to take them and the modalities to reach a wider public of users, beyond the institutional borders (Valva, 2018a). In this perspective, with the elocALL project a new phase started, during which the E-LOCAL courses opened up for new typologies of users and new forms of utilisation.

As far as the quantitative objective of the elocaALL project is concerned, i.e. the enlargement of the audience of the E-LOCAL courses, two main actions were carried out. Firstly, each institution of the elocALL project created and maintained its own version of the E-LOCAL platform with all the E-LOCAL courses. This solution allowed the Platform of the University of Bologna to avoid managing all the Consortium users, and at the same time it multiplied the chances to propagate the courses as each institution was free to decide its own access policy.

As for the second action, this was related to the Bologna Platform itself. In order to overcome the access restrictions, the E-LOCAL Platform of the University of Bologna was included in the eduGAIN network, for which all the users owing the credentials of an institution belonging to the network can access the shared resources. In this regard, it is worth mentioning that the E-LOCAL Platform was the first online resource that the University of Bologna decided to share with the eduGAIN network. On 25th March 2014 the University of Bologna shared the E-LOCAL Platform with IDEM (the Italian Federation of Universities and Research Institutes for Authentication and Authorisation), a network to which it had belonged since 2013. Students and staff of the universities joining the IDEM network could now enter the E-LOCAL courses with their institutional credentials. In turn, IDEM is part of eduGAIN, an international service of inter-federation allowing for interconnection among the different national federations, i.e. allowing for sharing resources among international partners. In this way, since March 2014, all the users having the institutional credentials of an institutions belonging to the eduGAIN network have had the possibility enter the Unibo E-LOCAL Platform.

This action represented indeed a great turning point for the E-LOCAL courses, as eduGAIN is an international and rapidly growing reality collecting many institutions in Italy, in Europe and all over the world. The affiliation to the eduGAIN network allowed the University of Bologna to positively answer the innumerable requests for using the E-LOCAL courses that it was receiving, and which had to be declined because of access restrictions (Valva, 2018a). This was particularly true for the Italian course, which was warmly welcomed during its public presentations and met the interest of many institutions trying to cope with the needs of their international students in terms of language and culture education.

2.6.2 elocALL and the tutoring of the courses

As far as the qualitative objective of the elocALL project is concerned, i.e. the new modalities for supporting the fruition of the E-LOCAL courses, this involved a tutor-based process that allowed for the interaction of the

users with a tutor during the learning process, and also let the users interact among themselves. This interaction could have several different forms, but in any case the users were somehow helped in solving their problems or completing their tasks.

As for the interaction between the user and the tutor, during elocALL the three well-known typologies were tested, namely:

i) the in-presence tutoring, with in-class meetings between students and tutors;

ii) the tutoring in blended-learning contexts, i.e. a mixed modality with both distance and in-class tutoring); and

iii) the distance tutoring, where all forms of communication are mediated by the computer (Macdonald, 2008).

Each partner of the project decided the typology (or the typologies, as more options were available) of tutoring to use for their learning platform; the university of Bologna decided to try the three of them, as we will better outline below. However, no matter what typology of tutoring was adopted, all tutors had the possibility to take advantage of the tools embedded in the Learning Content Management System (i.e. in the learning platform hosting the courses). Such tools of the LCMS ranged from e-mails to forum, chat, and instant messaging; and logically, also tools outside the learning platform could be exploited (Ceccherelli, Valva, 2016).

When it comes specifically to the third category of tutoring, the so-called e-tutoring, the elocALL project involved the three main categories of e-tutors, corresponding to the different roles they can have in the supporting process, that is to say:

i) the e-teachers, i.e. experts of the subject-matters;

ii) the e-moderators, i.e. experts of social relationships (monitoring the activities carried out by the learners within the learning platform and, in case of need, invoking the e-teacher and/or the platform tutor);

iii) the platform tutors, i.e. experts of technical issues related to the learning platform (Salmon, 2003; Goold *et al.*, 2010).

Even though the e-tutoring could be further divided into more categories, for instance referring also to the different domains as reported by Goold *et al.* (2010), or including more roles among their activities (Denis et *al.*, 2004; Fernández Jiménez *et al.*, 2017), for the purposes of the elocALL project the three identified categories were enough to cover the span of action required. Moreover, the roles and the functions of these three categories of e-tutors may easily overlap for certain questions, and/or one e-tutor may cover more than one function. What is relevant, however, is the kind of support provided by the e-tutors, who are called to help the students to learn effectively, thus adding value to their online experience. During their learning process, the users may be able to interact with the tutor(s) in the modality considered as most suitable for them, and

they may be enabled to receive help to carry out their tasks and to solve their problems (Goold, Coldwell, & Craig, 2010; Valva, 2018a).

2.6.3 The E-LOCAL Facebook group

As for the interaction among the users of the courses, this relied upon the activities suggested by the tutors, both in class and within the platform, and also upon a dedicated Facebook group. We will draw a detailed outline about the activities carried out within the tutored courses in the following paragraph, whereas some information about the Facebook interaction is provided hereafter.

The E-LOCAL Facebook group was created on 23 January 2012, at the beginning of the first pilot runs, with the aim of providing a learning support to the students through peer review. It was, and it still is, a closed group, counting about 150 members at the end of the E-LOCAL project and about 350 members at the end of the elocALL project (nowadays – May 2019 – it has about 500 members). In its initial stage, the group included the pilot users, and then more in general the users of the courses, but also experts of the E-LOCAL languages and cultures; after the end of the elocALL project, the group also admitted people otherwise interested in languages, cultures and e-learning.

During the E-LOCAL pilot phase, the users pointed out that the Facebook group somehow compensated for the absence of a tutor. In this phase in fact, the highest participation in the group was reached in February and March 2012, the first months of the pilot runs, and the group turned out to be extremely useful also to have immediate feedback about problems impeding the regular taking of the courses. Since its creation, there have been peaks in the number of participants, in concomitance with relevant phases of the projects. If both the first and the second pilot runs represented crucial moments for the group to increase the number of its member, a final relevant moment was the end of elocALL, and the launch of stable, finalised versions of the courses. Since then, the number of participants has continued to grow (as new people have continued to take the courses), but the number of activities within the group is very low, and the level of interaction is therefore limited.

During the elocALL project however, the group was actively used to promote the courses and to foster interaction among the participants. In order to guarantee a better distribution of the group, a shortcut link was created in spring 2014: www.facebook.com/groups/elocalforall/; the group was also given two essential keywords: languages and e-learning. In addition, a brief yet comprehensive description was created to explain the aims of the E-LOCAL Facebook group:

> *This group is for E-LOCAL students of the following languages and cultures: Dutch, Finnish, Hungarian, Italian, Polish, and Portuguese. Please feel free to ask for peer support and tell about your learning experience! Language- and culture-related postings, pictures, and videos are also more than welcome.*

Naturally, the group welcomes also new members who are not E-LOCAL students but people interested in languages, cultures, or e-learning, for example.

Moreover, a moderator belonging to the elocALL Consortium took care of the E-LOCAL Facebook group for the duration of the project, and especially during the second pilot phase (see below). The moderator was in charge of supervising the activities, activating the group by posting relevant pictures, videos, and links, answering members' questions or forwarding them, and allowing new members to join. In this phase, the typical activities carried out in the E-LOCAL group were problem-solving (e.g. access to learning platform) and motivation-raising (through videos, pictures, articles, but also asking direct questions involving the users); tandem-study requests and offers to help with finding accommodation were also quite popular among the members of the group. All in all, it can be said that the moderation activity carried out during the elocALL project systematised the group activities (elocALL Consortium, 2014a).

Finally, the E-LOCAL Facebook group represented also a chance for the Consortium to analyse the 'educational potential of social media'. The role of social media in education can be classified into three main different areas, according to the main functions they are performing: sharing of information, discussion and construction of information (Bauters *et al.*, 2012; McCarroll, Curran, 2015). The E-LOCAL group has mainly focused on public sharing of information, whereas discussion and construction have been more limited. From the educational perspective, the potential of the group has not been fully exploited, as public sharing of information is relevant, but discussion and construction of information are indeed crucial for learning purposes (elocALL Consortium, 2014a).

2.7 elocALL and the tutored courses

On the basis of the agreed objectives and methodologies, each institution of the elocALL consortium decided what of kind of tutoring to adopt, within a range from a maximum and a minimum option. The maximum option was to have for each learning platform one platform-tutor, one e-moderator and six e-teachers. The minimum option was to have for each learning platform one platform-tutor and one e-moderator/e-teacher (elocALL Consortium, 2014b). The chosen option varied between the two extremes according to the specific context and needs of each institution. In other words, each single institution participating in the elocALL project was called to autonomously decide how many E-LOCAL courses to activate in the tutored modality, what kind of tutoring to propose, and also how many pilots users to let participate in each tutored course activated. The following subparagraphs are based upon the Report on tutoring written by the elocALL Consortium (2014b), and they will provide firstly an overview on how the pilots were selected – as it offers an interesting insight onto motivational aspects for learning languages – and then a focus on the Italian tutored course.

2.7.1 The selection of pilot users for the tutored courses

The main tool for selecting the pilot users for the tutored courses was a questionnaire expressly created for that purpose, which is annexed in Appendix B. In each partner institution, the questionnaire was used both as a medium to inform students about the possibility of taking the E-LOCAL courses, and also in order to survey the motivations of potential pilot users for the tutored courses. In some cases, the results of the questionnaire were combined with oral interviews, again with the main aim of surveying the motivation of the potential pilots.

Also other modalities were used within the Consortium for selecting the pilot users for the tutored courses, for instance dedicated registration lists were created and the courses were activated when a minimum number of registered students was reached (or, more often, the tutored courses were offered to the maximum number of students established in order to guarantee efficient tutored classes). Other options for selection concerned the consideration of the average of grades (and priority was given to students with the highest grades) or the consideration of the competence in English (and priority was given to students with a higher proficiency, due to the fact that English was the intermediary language of the courses). In all cases however, motivation played a pivotal role in the selection process (elocALL Consortium, 2014b).

The three main topics investigated through the questionnaire, and through the interviews, were: i) the knowledge of foreign languages, and specifically English proficiency; ii) the attitude towards e-learning; 3) the factors contributing to enhance motivation in taking the online courses. The questionnaire was returned by 517 students from the entire elocALL Consortium.

As for their knowledge of foreign languages, all respondents declared to know at least one foreign language. The majority of respondents also declared to be confident enough with English and that they considered it 'quite natural' to have English as the language of instruction. A minority, however, admitted having some difficulties with English and claimed that they would prefer a different language of instruction. When it comes to the attitude towards e-learning, the majority of respondents affirmed that they had never taken any online course before. The main expected advantages of online learning were however identified in flexibility and independence, whereas the perceived shortcomings were the lack of human interaction and the difficulty of monitoring leaning progresses. The presence of a tutor was identified as an added-value in this regard. Finally, the motivation factors were mainly linked to the interaction with local people, which would improve after taking the course, and more in general the chance of learning a new language and a new culture was considered quite valuable *per se*; nonetheless, a minority of respondents valued more instrumental motivation factors such as the possibility of receiving credits and certificates (elocALL Consortium, 2014b).

When it comes to the specific results of the questionnaire returned by the students of the University of Bologna, they are generally in line with the global results obtained within the Consortium. However, as they

offer a clearer outline of the institutional situation, we provide here below a focus on the results of the Bologna questionnaire.

Outgoing Erasmus students for AY 2014/2015 were invited to submit the questionnaire, which was returned by 51 people. As far as the knowledge of foreign languages was concerned, 21 respondents (41.18%) declared to know one foreign language, 23 respondents (43.14%) declared to know two foreign languages and 8 respondents (1569%) declared to know more than two foreign languages. Almost all respondents (49 out of 51) declared to have competence in English as a foreign language. Out of 21 students who declared to know just one foreign language, 20 knew English and 1 French. If students knew 2 foreign languages, it was always English + 1. If they knew more than 2 foreign languages, the combination was English + 2 or more. Moreover, the majority of respondents (30, i.e. 59%) claimed to be confident enough to use English as the language of instruction to take the courses. Some students (19, i.e. 37%) admitted that they could have some troubles in using English as the language of instruction, but they were enough motivated to do it. Only two respondents said they would prefer a different language of instruction, without specifying which one, though (elocALL Consortium, 2014b).

As for the attitude towards e-learning, almost all respondents declared that they had never taken an online course before (only 5 out of 51 students had had a previous experience with online learning) and only two students had had a previous experience with an online language course. When asked to estimate the advantages of online learning, the main benefit pointed out by the respondents was the flexibility in terms of time and place of learning, which was stressed in almost all the comments provided. Such a flexibility also referred to the fact that the online environment could offer to the students the possibility to decide their own learning path, fostering autonomy and self-evaluation. Yet, this flexibility in organisation was seen sometimes as a potential shortcoming, for instance if students are not determined enough to respect their own schedule. Among the other estimated advantages, the respondents included the possibility to revise the activities previously carried out and the fact that online learning is cheap. Online learning was also somehow associated to rapidity, to the idea that learning can become quicker and that the online environment makes things faster (elocALL Consortium, 2014b).

As for the shortcomings of online learning, respondents identified them in the lack of interaction, guidance and feedback from 'someone'. In particular, the lack of class interaction – both in terms of teacher's contribution and in terms of peers' exchange – was perceived as a big disadvantage. In addition, a further disadvantage was related to the oral aspects of the language, which were considered difficult to be learnt online. On the other hand, the advantages of having a tutor during the online experience, were associated to competence and assistance. In this regard, it is relevant that the verbs most frequently used to describe the tutor's actions: *answer, clarify, help, motivate, correct, support*. The majority of respondents affirmed nevertheless that they

would *maybe* be able to successfully take an online course without a tutor, but a significant 40% of students affirmed that they would be able to successfully take an online course *only* with a tutor (elocALL Consortium, 2014b).

Finally, as far as motivation was concerned, receiving ETCS credits for the taken course was not considered so important by the respondents of the University of Bologna. More important was the fact of receiving a certificate of participation, and fundamental was to have the opportunity to learn the language and the culture of the country where they were going to spend their mobility period because this would allow them to interact more effectively with local people (elocALL Consortium, 2014b).

As anticipated, during the elocALL project, the University of Bologna activated a tutored course for each E-LOCAL language and culture. The launch of the above-mentioned questionnaire was also a chance to inform prospective Erasmus outgoing students of all departments about the possibility to take the courses of Dutch, Finnish, Hungarian, Polish and Portuguese, as well as about the possibility of becoming pilots for the tutored courses. In total, 110 people asked to take the tutored courses, i.e. about a half of the students selected for Erasmus mobility to the E-LOCAL countries. The tutored courses of Dutch, Finnish, Hungarian, Polish and Portuguese lasted from April to June 2014; for all courses, students were provided with online assistance and with at least ten hours of in-presence meetings (elocALL Consortium, 2014b).

At the same time, the non-tutored courses were available on the E-LOCAL learning platform for all the languages and cultures, and they were taken by more than 700 students. At the end, both independent and guided users were asked to submit an evaluation questionnaire, aimed at assessing their learning experience with the E-LOCAL course taken. We will report in the following paragraph the results obtained within the two typologies of users, whereas we will firstly conclude this paragraph with a focus on the tutored course of Italian language and culture.

2.7.2 The Italian course with tutor

Within the framework of the elocALL project a tutored E-LOCAL course of Italian language and culture was organised for the international students of the University of Bologna, i.e. for those students who were going to be enrolled in one of the international degrees – entirely taught in English – for the academic year 2014-2015. Right after their enrolment, these students were informed about the possibility of taking the E-LOCAL course of Italian language and culture, either autonomously or with a tutor by becoming pilots of the tutored course. A selection followed, to assess their motivation through a questionnaire and 76 students asked to be admitted to the tutored course. As said, these students attended courses where the language of instruction was English: such a high interest shown for the E-LOCAL course of Italian confirmed that the need for integration in the new

reality was pursued also through the knowledge of the local language and culture, and that such a need is strongly felt by student spending a period abroad (Ceccherelli, Valva, 2016).

The E-LOCAL tutored course of Italian lasted from July to October 2014. 76 students registered to take it, and they were invited to begin the course before leaving for Italy, as the tutor was already available to assist them in case of need. After their arrival in Bologna the tutored course continued with in-class activities as well as with further online assistance and activities. The model adopted for this tutored course was blended, and in total the students were offered 30 hours of assistance by the tutor (20 hours for distance assistance and 10 hours for in-presence meetings). The tutor was the reference person for every request concerning the learning materials, and she also suggested additional activities aimed at reinforcing the main aspects (elocALL Consortium, 2014b).

Only 14 students out of the 76 who registered for the tutored course completed it, i.e. they finished the activities which were indicated as necessary in order to receive a certificate of completion. Those activities included: completion of at least four out of the eight main units, attendance of at least three out of the five in-presence meetings, completion of the activities suggested within the forum, participation in the online activities. It is worth specifying that these criteria were inserted for the project purposes, which required the tutored course to have clear start and end dates, as well as clear measures to determine whether a participant had completed the course or not.

Time was the main critical aspect pointed out by the pilot users in their final assessment. At the end of the activities in fact, the pilot users of the tutored courses were asked to evaluate their experience and identify the difficulties encountered. Their evaluation was globally positive, but three issues were noticed as particularly complex and they are summarised here below.

i) The pilot users of the tutored course reported some difficulties in meeting the deadlines set for the online activities, as their timing was not in line with everyone's agenda. The course was in fact organised during the summer period, with the students leaving for Italy, each and every of them according to their own plans and this made it complex to find a suitable timetable.

ii) Once in Bologna, the in-presence meetings overlapped with other classes that the pilot users were supposed to attend. The students were in fact enrolled to different international degrees, and it was impossible to arrange a calendar with no overlapping as the classes involved were too many.

iii) The duration of the tutored course was too short in the pilots' opinion and in general the time to carry out the activities was perceived as not enough. This final aspect was partially related to the project timetable, but it was also linked to the specific characteristics of the course itself which is long and articulated (elocALL Consortium, 2014b).

The remarks reported above concerned mainly organisational matters; a further aspect is however relevant: the pilot users of the Italian course complained that the E-LOCAL course was not linked to ECTS, whereas in their opinion – and contrarily to what emerged in the responses to the questionnaire launched among the outgoing students – receiving credits for taking such a course would be a relevant motivational aspect (Valva, 2018a).

In this regard however, it is worth mentioning that, during the elocALL project, the E-LOCAL course of Italian language and culture was 'analysed' by the Language Centre of the University of Bologna, and eventually chosen as the reference tool for their A1 course, which was delivered as a self-guided course with the support of a tutor.

The experts of the Language Centre operated some changes in order to adapt the E-LOCAL course to the necessities of a learning path based on autonomous study, even though with assistance, but with a final test realising credits if passed. From AY 2014/2015, the adapted version of E-LOCAL course was included in the learning offer of the Language Centre of the University of Bologna and it was delivered once per semester, with the availability of an online tutor, also offering some in-presence meetings. The attendance of the in-presence meetings and the submission of a fixed number of online tasks were the requirements to sit the final test, which counted as 5 ECTS if passed.

This solution met the requests of the pilot users of the Italian tutored course of the elocALL project, and worked for some years, until AY 2016/2017 when this course of the Language Centre was ended and the MOOC was launched (see chapter 3 below). Unfortunately, during those years, the users of the E-LOCAL-Language Centre course were not invited to submit written feedback, but they took part in oral reviews, though. Their opinions confirmed the general trend already emerged: the course was appreciated, it was considered interesting and relevant, but it was long and complex, and the support provided by the tutor not enough to meet their needs. In particular, the users of the E-LOCAL-Language Centre course would have liked more in-presence activities and more time to spend on each single unit. Again, timing was a critical factor.

2.8 Tutored and non-tutored courses under assessment

If the two declared aims of the elocALL project were to expand the user base of the E-LOCAL courses and to experiment new forms of usage, an indirect objective pursued by the project teams was the comparison between the results obtained by the assisted users and those obtained by the autonomous users.

In fact, both the users participating in the pilot runs of the tutored courses and those who were taking the courses autonomously were invited to submit a feedback questionnaire to assess their learning experience. In addition, since the tutoring was arranged in different modalities and according to different methodologies within the institutions of the Consortium, data concerning different tutoring experiences were used – along

with data concerning the autonomous category of users – as valuable information to evaluate the efficiency of e-learning in different educational contexts (Ceccherelli, Valva, 2016). The following sub-paragraphs are based upon the Exploitation Report written by the elocALL Consortium (2014c).

2.8.1 The features of the tutored courses

In total, 389 students were selected as pilots for the tutor-based courses in the whole project Consortium. 19 tutored courses were organised in the elocALL institutions, with an average of 20 students per course. Five tutored courses of Italian were organised within the Consortium (two in Italy, by the University of Bologna as described above and also by the secondary school ICTS Rosa Luxemburg; two in Poland, by the Adam Mickiewicz University and by the Charles de Gaulle Secondary School; one in Belgium by the Katholieke Universiteit Leuven) and offered to both students of Italian as a second language and of Italian as a foreign language.

The majority of the tutored courses decided to select a blended learning option, with the presence of both e-teachers and e-moderators to accompany the online path of the students, who were offered also in-presence meetings. For some courses, however, it was opted for the full-distance solution, and their users only had the support of e-teachers and e-moderators, with no in-presence activities. Four out of the five Italian tutored courses were organised in blended modality, whereas one only exploited the e-tutoring (elocALL Consortium, 2014c).

In total, 137 people out of the 389 pilot users of the tutored courses completed the learning path according to the schedule (with a completion rate of 35.22%); however, the completion rate was twice higher in the blended learning modality than in the full-distance tutoring. Entering into details, the courses with a blended tutoring were attended by 243 pilot users and 105 of them completed their course (i.e. 43.20%); on the other hand, 146 people took courses which offered full-distance tutoring and only 32 of them completed their course (i.e. 21.92%). The table below provides an overview on the above-mentioned completion rates of the tutored courses.

Overall selected pilot users	389	Pilot users attending tutored courses in blended modality	243	Pilot users attending courses with full-distance tutoring	146
Overall pilot users completing their course	137	Pilot users completing their blended course	105	Pilot users completing their full-distance tutored course	32
Overall completion rate	35.22%	Completion rate for blended courses	43.20%	Completion rate for full-distance tutored courses	21.92%

Table 4. An overview on the completion rate of the E-LOCAL tutored courses.

When it comes to the specificities of the Italian course, 132 students took part in the tutored versions organised within the Consortium (the majority – 76 – at the University of Bologna, as we indicated above; the rest – 56 – in the other institutions) and 46 completed the learning path (with a completion rate of 34.84%). The general trend of the Italian course confirmed the considerations about the other courses: the general completion rate was very similar (35.22% on average for all the courses, and 34.84% on average for the Italian one), and, also in the case of the only full-distance tutored course of Italian, the completion rate was lower than the general average (22,58% in this case).

However, some remarks are necessary when it comes to the four courses with a blended modality. In fact, for three of them the completion rate is very high (almost close to 90%), whereas for the course offered by the University of Bologna the completion rate is much lower than the average (only 18.42%). This remarkable difference in the results might be linked to the fact that the courses with the highest completion rate were held at two secondary schools in two cases, and with small groups of students in all cases, which allowed for personalised learning paths. In the case of the University of Bologna, on the contrary, the tutored course was attended by a higher number of people (76 in total, even though they were divided into two groups) and the students were enrolled in different degree programmes so that their different schedules made it hard to organise tutored activities suitable for everybody, as we have explained above.

It is evident that the problems reported by the pilot users of the Italian tutored course pertained mainly to logistics and organisational aspects, nevertheless they negatively impacted upon the completion rate. In fact, for the students who had registered for the Italian tutored course, the impossibility to attend the in-class meetings due to the overlapping with regular classes of the degree programme turned out to be discouraging; moreover the limited number of traditional classes (five meetings, of two hours each) was disappointing for many, and in some cases even compromising the entire learning process (elocALL Consortium, 2014c).

In any case, the general results obtained within the elocALL project may confirm that the availability of tutors in the classrooms, even though reduced by the blended modality if compared to traditional in-class courses, positively affects the learning process, and content-based assistance is much more efficient than a support which is merely motivational and organisational (Ceccherelli, Valva, 2016).

2.8.2 The assessment of the tutored courses

When it comes to the specific assessment of the tutored courses carried out by the pilot users, the global judgment was very positive. In the final evaluation questionnaire that the students were asked to submit at the end of the tutored courses (Appendix C) – and which was returned by 134 people out of 389 pilot users, about 34% – the pilots highly valued the combination of online activities and tutors' assistance, and the support

offered by the tutors was considered relevant in order to have an efficient and effective learning experience. On the whole, 30% of respondents had taken the Italian course; the results reported below are therefore relevant for all the six E-LOCAL courses and specifically for the Italian course, as explicit remarks indicate when this latter differs from the other cases.

The final evaluation questionnaire focused on both general and specific impressions about taking a tutored online course (i.e. the expectations about the tutored course itself but also the usefulness, availability and clearness of the tutor), and then it concentrated on the E-LOCAL platform with questions aimed at assessing specific issues of the learning environment (i.e. the interface, the coherence, the autonomy fostered, the interactiveness, the pedagogical and intercultural assets, etc.); the final part of the questionnaire invited the users to identify the shortcomings and to propose suggestions for improvement.

The expectations reported by the respondents were generally linked to 'get acquainted with a general knowledge of the country and discover its culture' and also 'to learn the basics of the language in order to be able to communicate in daily situations'; in short, the expectations could be summarised in 'find the relevant information and acquire the necessary skills to get ready for the mobility experience'. Some respondents also mentioned other typologies of expectations, such as 'have the possibility to learn without stress, having fun', or they relied their expectations upon the possibility to have a personalised learning path and interacting with both tutor and other learners. In the majority of cases, the initial expectations were met or even exceeded. In some cases, however, the respondents reported that their expectations were only partially met because of the difficulties related to the specific activities, or because of the time-pressure to carry out a huge workload. In all cases though, the learning mode which offered activities on the online platform with the support of content-experts was appreciated (elocALL Consortium, 2014c).

When it comes to the specifying assessment of the tutoring, 70% of respondents considered useful the presence of a tutor, 19% partially agreed on such a statement, and 11% of respondents disagreed on that point. It is worth noticing though, that the comments by the 11% disagreeing about the usefulness of the tutor were not aimed at criticising the tutors themselves, but at specifying that the tutor's help was redundant. These comments implied that the learning materials were considered efficient and motivating as such (Ceccherelli, Valva, 2016), and represented only an upstream minority, but they deserve to be mentioned nevertheless.

The availability of the tutor in supporting the users' path was considered sufficient by 78% of respondents, whereas 17% partially agreed on that statement and 5% found it insufficient. When it comes to the guidelines provided by the tutor to the pilot users, they were considered clear and helpful by 81% of respondents; 15% partially agreed on that and 4% disagreed (elocALL Consortium, 2014c).

Figure 7 below reports the assessment of tutoring provided by respondents.

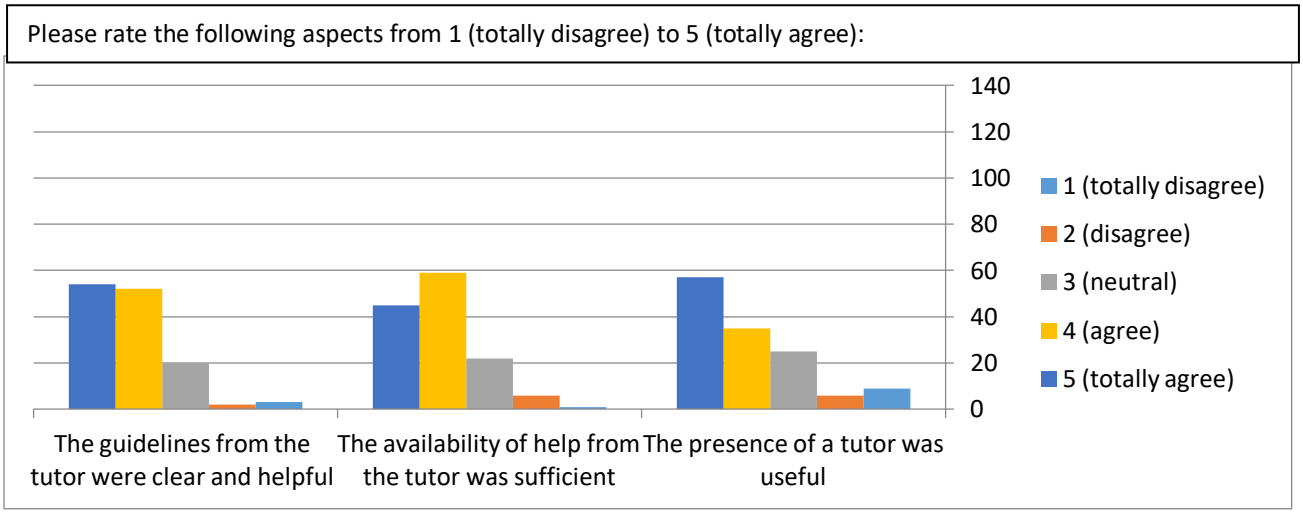

Figure 7. The assessment of tutoring during the elocALL project.

As for the specific evaluation of the E-LOCAL learning environment, this was the object of the second part of the evaluation questionnaire submitted by the pilot users of the tutored courses. 76% of respondents thought that the E-LOCAL learning environment offers a motivating interface for studying languages and cultures; 75% also considered it coherently put together and 74% affirmed that it fosters learners' autonomy. The percentages were similar also for the other criteria under assessment: 73% of respondents stated that the learning environment offers relevant moments from a pedagogical viewpoint for experiencing the new linguistic and (inter)cultural settings; 72% of respondents considered the learning environment as user-friendly and 71% as interactive. Finally, for 69% of respondents the E-LOCAL learning environment allows for students to challenge some cultural misconceptions and prejudices (elocALL Consortium, 2014c).

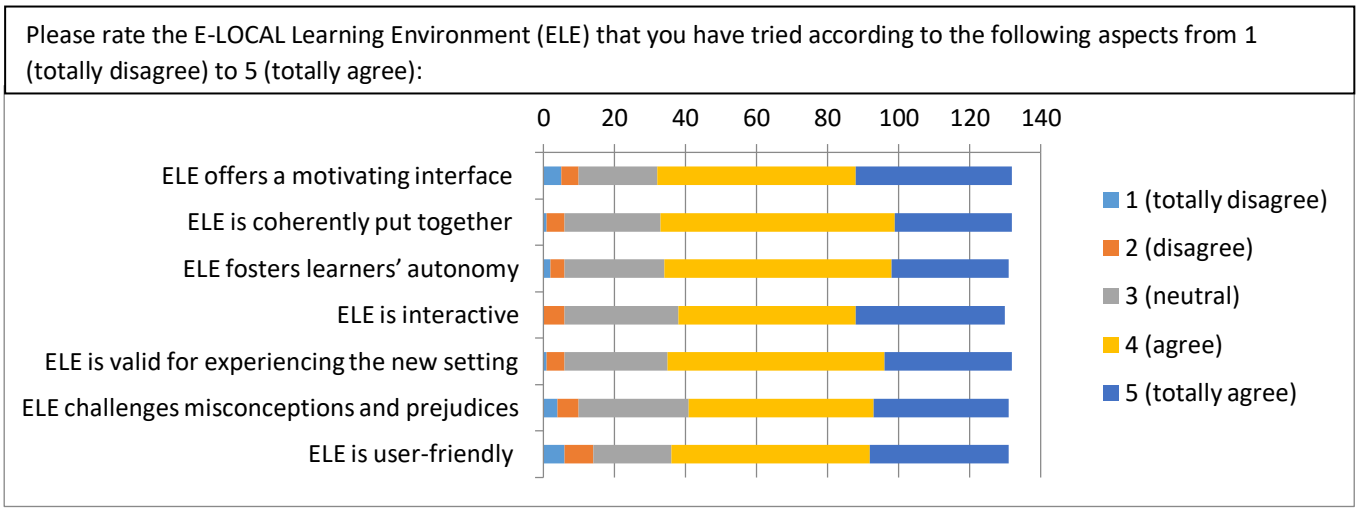

Figure 8. The assessment of the E-LOCAL learning environment by the users of the tutored courses.

The final section of the evaluation questionnaire was about any shortcomings identified, possible suggestions for improvement and general remarks.

As for the shortcomings, it is worth underlining that the majority of respondents didn't report any. Some students suggested to improve listening/speaking tasks and online communication; pronunciation was pointed out as a difficult aspect (this was particularly relevant for certain languages but did not pertain to Italian specifically). The oral aspects of the language and the practice of oral skills were generally perceived by the respondents as requiring some refinement, which is quite usual for an online environment.

A second issue identified by the respondents concerned the interaction with other people (with tutors, with other users, with native speakers), which could be intensified along with in-presence meetings: many respondents stressed the importance to have 'human assistance'.

Thirdly, the respondents also pointed out that the amount of information presented in the courses was huge in terms of topics, grammar aspects, historical/cultural facts; on the other hand, however, many of them often required more exercises and more tables.

Surprisingly, another difficulty pointed was the intermediary language of the platform, even if before taking the course the students had declared to be confident enough with English. Other shortcomings concerned the organisational aspects (as already anticipated) and some specific points of the learning platform, notably the navigation and the grading system, which were considered not properly working by some of the pilots. In particular, the grading system was not self-evident and needed some clarification about the percentages reported (elocALL Consortium, 2014c).

All in all, the general remarks about the tutored courses were very positive: students declared to be very happy with the courses and fully satisfied with the tutoring. The feedback collected also informally (through face-to-face meetings) confirmed what emerged in the formal evaluation questionnaires, that is to say that the tutoring actions played an effective role in supporting the users in their learning progress, in particular as far as the understanding of topics was concerned.

The tutoring of the course also impacted upon motivation: if the multimodal learning environment was considered engaging *per se*, other factors proved to be relevant to keep the level of users' commitment high; among them, the human interaction with peers and tutors was a crucial aspect, according to the pilot users of the E-LOCAL tutored courses. The experience they were engaged in was repeatedly defined as a 'good opportunity', to recommend to friends and in general to people interested in learning languages. The pilot users of the E-LOCAL tutored courses went even further and also affirmed that having more languages and cultures taught with the E-LOCAL methodology would be ideal, as the E-LOCAL courses are well organised and offer a complete set of information (elocALL Consortium, 2014c).

2.8.3 The assessment of non-tutored courses

As said, during the elocALL project the E-LOCAL courses were continued to be used also by independent users as it was originally planned when the courses were created. The user base enlarged a lot though, as the partners institutions installed the courses onto their learning platforms and thanks to the participation in eduGAIN of the learning platform managed by the University of Bologna. During elocALL, the Italian course available on the platform of the University of Bologna had about 400 registered users, and other 600 users were registered for the other five courses available. If we consider also the other learning platforms which hosted the same courses, during elocALL there were more than 3500 registered users for the E-LOCAL courses[11]. In chapter 5 we will provide some reflections about the current situation of the E-LOCAL courses, which are still in use, whereas we will conclude this chapter with an overview of the comments received by the independent users during elocALL, and with a comparison of the two set of data.

As far as independent users are concerned, at Consortium level 154 people returned the evaluation questionnaires to assess the non-tutored E-LOCAL courses (Appendix D). The overall number of responses is quite in line with those received for the tutored courses, but in this case the respondents represent only a minor percentage of the registered users (about 5%), which on the other hand highlights a considerably high percentage of dropout for the autonomous users. 17% of the submitted responses concerned specifically the Italian course (elocALL Consortium, 2014c).

The evaluation questionnaire focused on the same issues presented in the evaluation questionnaire for the users of the guided courses and, on the whole, the feedback from independent users was positive, too. The expectations of the self-guided users in taking the E-LOCAL course were linked to their willingness to learn a new language in order to communicate (for travelling, meeting new people, during an exchange programme or a mobility period). A second cluster of expectations was related to the opportunity to get to know the culture, the history and the daily life of a given country; a third one to the possibility to learn a new language in a different, funny way. As it was for the tutored users, the initial expectations were met or even exceeded in some cases. In their opinion, the E-LOCAL courses are well structured, rich in grammar and vocabulary, as well as in cultural and everyday life content. The users also appreciated the fact that the courses were free of charge, user-friendly and that they could learn at their own place; the flexibility was highly emphasised as well (elocALL Consortium, 2014c).

[11] These figures are to be intended only as approximate as some partners' institutions experienced some problems with tracking the actual numbers of registrations.

As for the specific features under assessment, they are summarised in Figure 9 below. The interface of the learning environment was considered motivating by 82% of respondents (summing up those who agreed and those who totally agreed with the proposed statement). Similarly, 84% stated that the learning environment was coherent, and the same percentage was obtained as far as the fostering of autonomy was concerned.

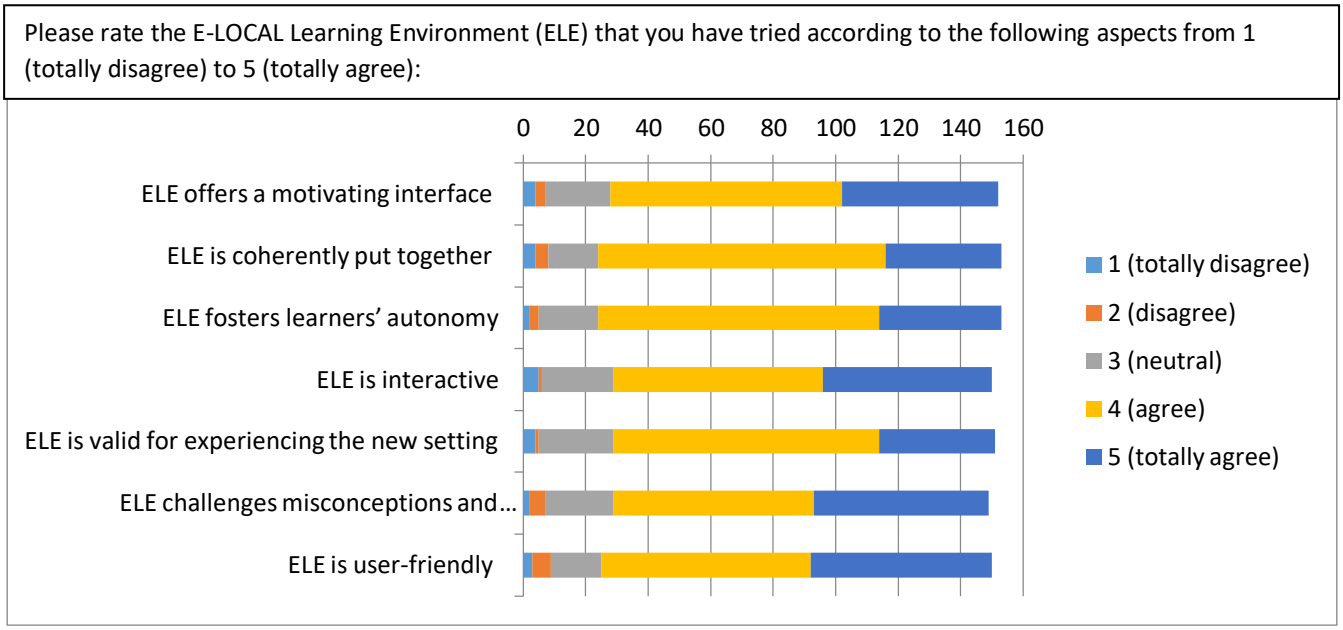

Figure 9. The assessment of the E-LOCAL learning environment by the users of non-tutored courses.

In addition, 81% argued that the learning environment was interactive, 81% believed that the learning environment offered pedagogically valid moments for experiencing the new linguistic and intercultural setting, and again 81% agreed that the course enabled the users to challenge cultural misconceptions and prejudices. In short, the learning environment was assessed positively in all its aspects by more than 80% of respondents (Ceccherelli, Valva, 2016).

When it comes to the shortcomings, also the autonomous users reported some problems with the navigation system and some complaints about the audio; some users experienced difficulties with English as the vehicular language and they expressed the need for some assistance from a tutor. As for the technical problems reported – by autonomous but also by guided pilot users –, it is worth mentioning that before the end of the elocALL project a major revision was carried out and they were all fixed.

To conclude, the feedback of the autonomous users did not differ significantly from the feedback given by the users of the tutor-based courses; in general, in fact, both typologies of users evaluated in a positive manner all the aspects under judgment. The E-LOCAL learning environment was appreciated for having a motivating

interface, for being coherently put together, for fostering the learners' autonomy, for being interactive, pedagogically valid, user-friendly and for efficiently challenging the stereotypes. Conversely, it is worth noticing that the autonomous users provided an assessment of the learning environment which is higher than the assessment presented by the users of the tutored courses: in fact, the percentage of positive opinions given by the self-guided students ranged between 81% and 84%, whereas the percentage of positive opinions expressed by the guided students ranged 69% and 76% (elocALL Consortium, 2014c). The difference of ten points on average between the two typologies of users could be explained from several viewpoints. Firstly, it can be assumed that the few independent users (5% of the total of registered independent users) who decided to fill in the evaluation questionnaire were the most motivated, and also the ones who really considered the E-LOCAL courses as a suitable tool for their goals. A second possible reason could be linked to the innovation represented by online courses of languages and cultures out of the mainstream, since at the time of their creation no online courses existed for many of the E-LOCAL languages: this aspect could have led the self-guided users to positively assess the effort made in creating such a learning platform. Another motivation for this difference could rely upon the fact that the guided users concentrated mostly on the tutoring experience itself, when assessing their learning experience.

2.9 Concluding remarks about the E-LOCAL courses

Some preliminary conclusions can be drawn from the E-LOCAL experience, based on the feedback received by the users who tested the courses both in the non-tutored and tutored modalities. Globally, the learning materials and the learning platform were assessed positively by the majority of users of both typologies, their strong points being the consistency, the wide variety of themes, and the high-quality exercises. The connection between language and culture, which was one of the innovations of the courses in the authors' mind, was considered relevant, and the cultural parts of the E-LOCAL courses were judged particularly interesting, especially when commented with the tutors. Some technical problems were reported and were solved after the pilot phases, whereas the organisational issues concerned specifically the tutoring and could be possibly included in a protocol for replicating such an experience.

Entering into the details, non-tutored courses seemed to suit more likely independent, self-regulated and strongly motivated learners, who might enjoy studying at their own pace and constructing information autonomously. Nonetheless, the completion of a whole E-LOCAL course by independent students requires significant motivation and commitment from their part, which may reveal to be difficult to accomplish and result into relevant dropout rates. On the other side, tutored courses seemed to suit mostly social learners, who might enjoy constructing information socially and might be more motivated by externally set deadlines. For this typology of users, learning is considerably facilitated by the assistance of a tutor, and they also rely

positively upon peer-support (elocALL Consortium, 2014c). In this regard, the E-LOCAL Facebook group proved to be a relevant experience, at least during the elocALL project. As anticipated, in fact, the users of the courses could benefit from the group in order to communicate with each other, with the teachers, and with native speakers. In this perspective, the E-LOCAL Facebook group played an important role for learning purposes as well, insofar as it was participated not only for networking, sharing experiences and opinions, and problem-solving, but it was also used for asking for peer suggestions, and for submitting texts for correction. A final relevant function of the group was related to motivation, as the group was also used for posting motivational and even jokey videos, pictures, articles; other frequent uses were tandem-study requests and offers to help with finding accommodation. All in all, the members of the group could benefit from the presence of mates and of native speakers in the community in order to increase their lexical and cultural competence (Ceccherelli, Valva, 2016).

On the basis of the independent learners' experiences, the E-LOCAL courses proved and confirmed to be efficient as a stand-alone product as they were originally planned, ready to be taken by self-guided users. Yet, due to the considerable amount and complex characteristics of the learning materials, the assistance of a tutor turned out to be important, for motivating and helping the users to tackle the challenge of studying a new language and the related culture. From the e-learners' viewpoint, in fact, there are many benefits in having a tutor available. The pilot users of the tutored courses claimed to be more comfortable with a support and with more communication opportunities (elocALL Consortium, 2014c).

Also the tutors' viewpoint deserves some considerations. During elocALL, the project Consortium tried several typologies of tutoring, both in blended learning and in full-distance modalities. Provided that both modalities require technical assistance if technical problems with the learning platform occur, tutoring entails some specific pedagogical challenges as it requires sensitivity, creativity and innovativeness on the part of the tutor. In e-learning, it can be demanding for the tutor to find out the motivations to push the users, and also their actual needs are not necessarily evident, therefore it could be tricky to elaborate the right strategies to support them. It can be also difficult to set suitable deadlines, as the learning pace of each student may vary considerably, and pressure and anxiety can be as de-motivating as slow rhythm. The learning platform can help in this regard, as the users can follow their own path, but the activities proposed by the tutor may result not in line with such a path. In addition, it can be very demanding for the tutor to obtain the users' active participation as they might refrain from accepting and carrying out the activities proposed through the online tools (notably within the forum and the chat, but also via e-mail, for instance). The tutors of the elocALL pilot phase reported some difficulties in identifying the 'right questions' to ask to be attuned to their students. In this regard, the blended context proved to be more efficient as the face-to-face meetings helped smoothing the critical sides, by offering chances to discuss thoughts and feelings and to negotiate solutions and

compromises. In elocALL, the human contact also proved crucial for giving and understanding feedback on the activities, with a positive impact upon motivation and commitment (elocALL Consortium, 2014c).

To conclude, after the end of the elocALL project, the E-LOCAL Moodle Platform of the University of Bologna provided courses according to the following pattern:

- the course of Italian language and culture was available for self-guided international and mobility students;
- the course of Italian language and culture was also offered by the Language Centre with the support of a tutor for a selection of international and mobility students (upon request, on the basis of available seats);
- the courses of all the other languages and cultures (Dutch, Finnish, Hungarian, Polish and Portuguese) were available for self-guided students of the University of Bologna and of the institutions belonging to the eduGAIN network;
- the courses of all the other languages and cultures (Dutch, Finnish, Hungarian, Polish and Portuguese) were used by the students of the Department of Languages, with the support of their teacher and as integrative tools to their regular classes.

While the E-LOCAL courses have remained on their dedicated Moodle Platform, and they have kept being used (even though with some critical aspects, as we will discuss in chapter 5), the action-research group who created them started to plan new, different tools: a MOOC based upon the E-LOCAL course of Italian language and culture, and an App for the incidental learning of languages and cultures. Those two experiences will be the object of the two following chapters.

3. Case study 2: the E-LOCAL MOOC of Italian language and culture

During AY 2016/2017 the University of Bologna and the METID Lab - Politecnico Milan developed a MOOC course entitled 'Benvenuti in Italia! Orientarsi con l'italiano. Italian as a second language with e-LOCAL (Electronically Learning Other Cultures and Languages)', which – as indicated in the title itself – was based upon the E-LOCAL course of Italian language and culture. The development of this MOOC along with the piloting editions, the revision phase and its finalisation, represent the object of the second case study under investigation in this research. In the following sections we will in fact recall the steps which led to the creation of the Italian MOOC, starting from the very reasons that led to this decision, and moving to the actions taken to plan and design it. We will then outline the features of the first editions of the courses, including the feedback provided by the pilot users, and discuss the steps of a steady revision that gave to the Italian MOOC its current features. The new editions of the course will be also presented, again with the feedback provided by the users, also from a gender perspective. Finally, in the conclusive paragraph of this chapter, we will introduce some considerations related to the use of a MOOC in order to enhance the learning process of local language and culture, along with its impact upon the educational community and the internationalisation of higher education.

3.1 The reasons behind the E-LOCAL MOOC

In September 2016 the University of Bologna took into consideration the option of delivering a MOOC of Italian language and culture, in addition to the E-LOCAL course already available on the dedicated Moodle platform developed during the E-LOCAL project (see chapter 2 above).

As discussed in chapter 1, MOOCs (*Massive Open Online Courses*) represent one of the most recent and influent educational trends, when it comes to the educational usage of technology. As said, MOOCs could potentially have an unlimited number of participants, maintaining at the same time the characteristics of academic courses, and as such they can highly impact upon educational communities and upon the internationalisation processes, in particular as far as higher education is concerned (Altbach 2014; Bárcena, Martín-Monje 2014; Boal, Stalllivieri 2015).

These specificities of the MOOCs were evident when contemplating the option of developing a MOOC based on the Italian E-LOCAL course, along with several other contextual factors, which were also under examination. One may ask in fact, why having (also) a MOOC if a 'similar course' is already available within the same institution? Firstly, the E-LOCAL tutored course available at the Language Centre of the University of Bologna (see 2.7.2 above) was dismissed that same year, as the Language Centre decided to focus upon higher levels of language. The self-guided course remained available nevertheless, but it started to suffer from 'technical problems', insofar as it is based upon an old version of the Moodle platform, which is no longer supported. In

other words, in 2016 – four years after its first release, and two years after its major revision carried out at the end of the elocALL project (see chapter 2 above) the E-LOCAL Moodle course of Italian language and culture started to look out-of-date; its contents remained more than actual and valid, but its support began to be obsolete.

Contextually, the University of Bologna launched BOOK (UniBO Open Knowledge), the platform designed to develop and deliver MOOCs. BOOK is a customised Open edX platform, providing the authors with an internal Authoring system – Open edX Studio – that allows to develop the contents of the courses.

As reported in the home page, BOOK has three challenging objectives:

i) to shape the future of education, insofar as digital technology is used to improve learning processes and experiences;

ii) to support the development of soft skills by providing students with a set of knowledge and abilities supporting the development of behavioural competences;

iii) to impact on society through learning, by reaching a large number of learners, responding to the increasing need for knowledge and developing competences for the benefit of a worldwide audience (information retrieved from the BOOK Platform in April 2019).

The three objectives are indeed ambitious, but they are somehow tuned with the pedagogical evolution of educational technology. The mission of BOOK is also in line with the internationalisation strategy of the University of Bologna, as the platform could combine the wish for attracting new, international people with the willingness to confirm high-quality learning. In this perspective, a MOOC of Italian language and culture represented a further 'investment' to meet both objectives.

Moreover, from the E-LOCAL team viewpoint, a MOOC also represented the concrete possibility of a further enlargement of the user base of the Italian course, due to technological characteristics of the MOOCs. If the participation in the eduGAIN network had, in fact, overcome many barriers as far as the access to the courses was concerned (as depicted in chapter 2 above), some limitations remained nevertheless, as potential students belonging to institutions which are not in the eduGAIN network could not enter the courses, and the same applied to potential students not belonging to any institution at all. With the MOOCs the access restriction is solved, as students may access either using their institutional credentials or directly registering to the platform.

In addition, the MOOC solution also allowed for an easier access in terms of devices, as the platform is also compliant with mobile devices, which registered a pervasive diffusion in the years following the launch of the E-LOCAL Moodle courses, as we discussed in chapter 1 above. The E-LOCAL Moodle platform was not suitable for mobile devices when it was developed, and an eventual reconfiguration – even though technically possible – was not deemed feasible.

Finally, the development of a MOOC based on the E-LOCAL course also represented a chance for refreshing and updating the learning materials. In fact, the development of the MOOC was the chance to reassess the learning materials created during the E-LOCAL experience, in order to make them more attractive and efficient for a growing, heterogeneous and changing audience of international students.

3.2 The development of the E-LOCAL MOOC

All these contextual factors considered, in October 2016 the University of Bologna started to plan the MOOC of Italian language and culture based on the E-LOCAL course; like many contents of the BOOK platform, this MOOC was developed in cooperation with METID - Politecnico Milan. In particular, in this initial phase, the METID staff brought in expertise about the technological tool and the multimedia items, whereas Bologna offered language and cultural competence along with a general supervision. As it was for the E-LOCAL Moodle courses in fact, also for the Italian MOOC several competences were necessary for building a path for language and culture learning through a technological support. This confirmed once more the collaborative approach adopted during the E-LOCAL project, for which the different kinds of expertise – both pedagogical and technological, but obviously also notional – involved in the development process are all necessary to reach the established learning goal. The development process was facilitated by the internal Authoring system of the Open edX platform – Open edX Studio – that allowed for a smooth implementation of the learning contents.
In the remaining of this paragraph we will report the development process of the Italian MOOC, highlighting both the features of the Moodle course that were confirmed also for the MOOC and the changes that were necessary for this new technology.

3.2.1 The analysis of the Moodle course and the confirmed features

The development of the Italian MOOC began with a 'phase zero', i.e. with a close examination of the E-LOCAL learning materials. The first step was in fact a careful analysis of the existing Moodle course, aimed at rereading the contents and checking the functionalities, with a special consideration for the new global target users and also the potential number of participants which was no more restricted (Valva, 2018a). The analysis was carried out in parallel in Bologna and Milan, using dedicated grids which were created for that purpose. In this regard, it is worth mentioning that such a procedure could be replicable for other situations, for instance it could be applied to the other E-LOCAL courses in case a decision of creating related MOOCs was taken, but also to other Moodle courses in general. The procedural pattern ideated during the development of the Italian MOOC represented an added value of this experience.
The general structure of the E-LOCAL Moodle course of Italian language and culture proved to be still appropriate and it was confirmed. 'Benvenuti in Italia! Orientarsi con l'italiano' is a course entailing both

language and culture learning, it is organised in five macro-sections (the same as the E-LOCAL Moodle course, namely: *e-story*, *e-grammar*, *e-culture*, *e-life*, *e-language exercises*), all the macro-sections contain the same sub-sections of the previous course, and the additional materials (i.e. the overall glossary and the overall grammar) were also confirmed, even though slightly refined. An introductory unit deals with preliminary knowledge and a final unit is aimed at assessing the learning path. As for the topics, the communicative functions, the lexicon and the cultural themes included in the Italian MOOC, they were globally the same as in the Moodle course (see 2.4.4 for details), but some specific items were integrated where necessary.

Finally, the platform also includes a Progress page to monitor the advancement of the learning path, and a Discussion page where a platform tutor has been available since the first editions.

Figure 10. The info page of the Italian E-LOCAL MOOC.

Furthermore, English was confirmed as the vehicular language of the course, and cultural information, grammar notes and all instructions are provided in English; on the contrary, the dialogues, the examples and the terms referring to cultural-specific items are in the target language, as it was before. The language level expected to be reached at the end of the Italian MOOC is still A1 of CEFR, even though the contents also included some A2 items. This aspect however will be the object of a further re-consideration in the revision that will be carried out after the first editions, as we will better outline in the following sections.

3.2.2 The changes to the course and the finalised features

The transition from the E-LOCAL Moodle course to the E-LOCAL MOOC inevitably required some changes. To begin with, the navigation of the course was strongly improved, with more efficient connections among the

single sections and more evident cross-references among contents dealing with related subjects (Valva, 2018a). The navigation was indeed a tricky aspect of the E-LOCAL Moodle, and it was reported many times as problematic by the pilot users. After the second pilot phase, the one carried out within the elocALL project – as shown in 2.7 and 2.8 above –, the navigation was improved but it still presented some problems. With the development of the Italian MOOC, the aspects related to the navigation were carefully considered and new solutions were adopted.

Entering into detail, the overview of the units is still a vertical menu, but it immediately shows also the single macro-sections so that the users can directly reach the specific part required. On the contrary, the navigation within the sub-sections of the macro-sections relies upon a horizontal bar, highlighting the sub-section in use and showing the title when the cursor is on it. At the end of each sub-section and of each macro-section the user can easily move forward using the 'next' button, and same applies to move back with the 'previous' button. The navigation breadcrumbs are always visible to the users who can be aware of their location within the course. Textual cross-references among the single parts were maintained and a bookmark system was added.

The interface and the layout of the course were modified as well, in order to be smoother and more straightforward. Other aspects which were improved concerned the graphical issues and the multimedia items. In particular, the images included in the seven situations of the e-story section of each unit were substituted by animated designed which resulted into short videos; the transcript of the dialogues is available next to the video and the sentences are highlighted when they are pronounced by the characters in the videos. All the audio items (i.e. not only the e-story dialogues but also the audio files available for the grammar notes, for the exercises, etc.) were re-recorded by professional actors, and also many images and pictures included along the different parts of the course were modified/substituted with the aim of harmonising the entire graphical look.

As far as the contents in a stricter sense, i.e. the texts of the various parts composing the sections of the course, the majority of them did not require any substantial change but only slight adjustments. The dialogues of the e-story were all confirmed with some minor corrections as far as extra-textual references were concerned (for instance, a tablet replaced the computer of the old dialogues, or the name of a President was modified); the same approach was applied to the texts of the e-culture and the e-life sections, in which also the links to external references were checked and updated. In addition, the e-grammar notes were enriched with tables and examples.

Moreover, specific attention was paid to gender issues when adapting/re-writing the grammar and lexicon contents. In this regard, those grammar notes referring to genres of nouns were adapted taking into account the latest evolution concerning the names of jobs and institutional roles (Robustelli, 2012). In addition,

attention was also paid to avoid all kinds of stereotypes, misconceptions and prejudices, which might have involuntarily been included in the cultural contents.

The exercises were the items which required more action, insofar as some of them were not considered suitable for the new platform and others were not completely accessible. The accessibility, though, was an aspect which was taken into great consideration during the development of the Italian course for the Moodle platform, and all the activities were produced in such a way to be accessible by all users. Nevertheless, the accessibility issue needed to be reconsidered while developing the MOOC and the exercises which did not enhance accessibility were completely reformulated. Also the graphical layout of the activities composing the e-language exercises section was improved in order to be more functional to the activities themselves.

Finally, in this transition from the E-LOCAL Moodle to the E-LOCAL MOOC, a special attention was paid to the self-assessment and the self-evaluation of the learning process. Already in the initial development phases in fact, the learning platform was enabled with all necessary tools to let the users monitor their progress and self-assess their advancement; the feedback provided to the users was reconsidered in this perspective and improved to be more evident (Valva, 2018a). These issues will be further reconsidered after the first editions of the courses, as we will outline below, when relevant changes will be implemented in order to further improve the users' experience.

3.3 The 'first editions' of the MOOC

With the label 'first editions' we actually identify three editions of the Italian MOOC which lasted about four months each, so in total they cover a time-span of one year, and during which the course was somehow tested and re-analysed by its developers and authors.

3.3.1 Edition 1, the launch of the MOOC

The MOOC course 'Benvenuti in Italia! Orientarsi con l'italiano. Italian as a second language with e-LOCAL (Electronically Learning Other Cultures and Languages)' was launched in May 2017 on the BOOK Platform[12], the first edition was online from 15 May to 11 September 2017 and counted 427 registered users. Out of them, 25 students (i.e. about 6% of registered users) obtained the final certificate of accomplishment. In the initial editions, the certificate of accomplishment was released to the users who responded correctly to at least 60% of the questions of the Final Assessment. This criterion, however, will be reconsidered in the following revision phase, as we will explain below.

[12] The same course was also launched on POK, the MOOC Platform of Politecnico Milan. However, the editions available on POK follow different dates and they were not taken into consideration in this analysis. This study only refers to the Platform of the University of Bologna.

At the end of the first edition of the Italian E-LOCAL MOOC, the users were invited to submit a questionnaire aimed at investigating their expectations and their satisfaction with the course. In total, 15 users submitted 'readable' questionnaires, i.e. questionnaires which could be considered as analysable (not null nor empty). The questionnaire asked for some background information (mother tongue, previous experiences with Italian courses), investigated the expectations related to the MOOC and then required to rate some specific issues concerning both the contents and the learning environment; finally, the respondents were also invited to identify any shortcomings and suggest possible improvements.

To begin with, the mother tongues reported by the respondents are various: Spanish in three cases, and then Danish, Greek, Hungarian, Portuguese, Russian, Serbian, Telugu. Two respondents declared Italian as their mother tongue, three did not specify. For nine out of the 15 respondents, the E-LOCAL MOOC was the first Italian course ever, as only six of them had taken an Italian course before. Consequently, expectations were mainly linked to learn the basics of Italian and they were met as the course was judged to be interesting, useful and relevant, providing 'much more than only grammar'.

The questionnaire then invited the respondents to rate a set of statements from 1 (totally disagree) to 5 (totally agree); as said, the statements concerned both the contents and the learning environment, focusing upon some specific aspects, and the results are summarised in Figure 11 below.

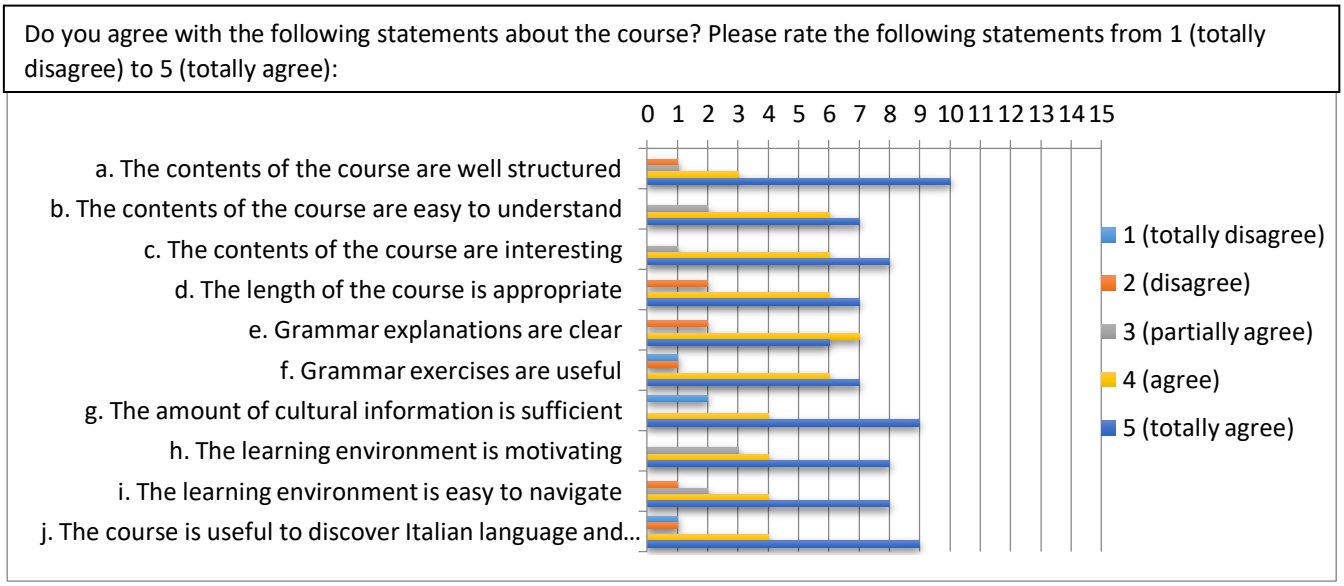

Figure 11. Graph summing up the rating for the evaluation statements at the end of edition 1.

As for the contents, the majority of respondents considered them as well structured and easy to understand (13 out of 15 respondents agreed or totally agreed with both statements), and also interesting (14 positive

answers, one respondent partially agreed). The length of the course was judged as appropriate by almost all respondents even though two of them disagreed; the grammar explanations were regarded as clear and the grammar exercises useful by the vast majority (13 positive answers, two people disagreed), and the amount of cultural information was considered sufficient by almost all respondents (nine people totally agreed, four agreed and two totally disagreed). When it comes to the learning environment, all respondents reported it as motivating (12 agreed or totally agreed with that statement, three partially agreed) and easy to navigate (12 agreed or totally agreed with that statement, two partially agreed and one respondent disagreed). In general, the course was judged as useful to discover Italian language and culture (13 positive answers and two negative ones) and defined as 'enjoyable' in the open comments.

Finally, when explicitly invited to report the shortcomings of the course, many respondents did not identify any but some of them pointed out that the course was 'too long/complex for the level achieved', and that some errors were noticed (for instance wrong answers indicated as correct or vice versa). More audio/listening activities were indicated as a suggestion for improvement, along with a reduction of the themes (again considered as too many for the A1 level).

We don't know if the final evaluation questionnaire was returned (only) by those who managed to get the certificate of accomplishment, even though we can easily presume that among the respondents there were at least some students who achieved the course and obtained the certificate. Therefore, we can assume that the respondents were motivated people and all in all quite satisfied with the course. Unfortunately, we don't have many indications about the reasons of withdrawal. Nevertheless, the results of this questionnaire submitted after the first edition of the MOOC let already emerge some critical aspects to be considered, namely the length of the course and the amount of information contained therein. As for the low accomplishment rate (5.9%) and for the answers provided in the questionnaire, we can conclude that the Italian MOOC was a long course to be completed in four months, and it was also demanding in terms of motivation and perseverance (you needed to reach the end of the path in order to be able to try to take the final assessment – which tested contents distributed along all the units of the course – and get the reward, i.e. obtain the final certificate).

3.3.2 Edition 2 and Edition 3

The second edition of the E-LOCAL MOOC of Italian language and culture was online from 26 September 2017 to 23 January 2018, 140 students registered to take the course and 14 of them (10%) received the certificate of accomplishment. The third edition of the MOOC was online from 8 February to 31 May 2018 and counted 108 registered users, out of whom only four obtained the final certificate of accomplishment (less than 4%).

Also at the end of these editions the users were invited to submit an evaluation questionnaire, which was actually modified in order to investigate more in details the background of the users, their expectations about

the course and their satisfaction with it, but also the 'perceived learning'. This label refers to the personal feeling of the users about how much they believed to have learnt, how much and in which way their language and cultural competences have improved after taking the course (Valva, 2018a). As we will see, all along the editions the concept of 'perceived learning' will become more and more relevant in exploring the impact of the MOOC and, used in combination with the results of the Final Assessment unit, it will result useful to provide an overview of the effectiveness of the course. In addition, such a concept has proved even more relevant when assessing tools conceived for informal and incidental learning, for which the traditional forms of evaluation are not suitable or not always possible. We will discuss all the details about this issue in chapter 4, when we will outline its potentialities and its limitations. As for the Italian MOOC however, from the second edition of the course onwards, the questionnaire used to evaluate the course remained the same and included the users' perception of learning as an assessment criterion. The finalised evaluation questionnaire for the Italian MOOC is reported in Appendix E.

In the end, the revised evaluation questionnaire included more background questions (age, gender, origin, position, languages, expectations), questions about expectations, some issues about contents and learning environment to be rated, issues about the perception of learning to be rated as well, and two open questions about the shortcomings, on the one side, and any remarks or suggestions, on the other.

In total, the second and the third editions of the E-LOCAL MOOC received only seven evaluation questionnaires. Some preliminary considerations are however possible also with this short number of answers. There were no respondents belonging to the age groups less than 19 and 23-26, whereas two respondents belonged to the age group 19-22, one respondent to the 27-30 group and, surprisingly, the three remaining respondents were more than 30 years old. The age groups of the respondents are maybe explained by their position: the respondents included in fact students enrolled in an international course (three out of seven), one Erasmus exchange student, one PhD student, and also two professionals. The gender was well balanced: four respondents were male and three female. The countries of origin included Russia, Turkey, India, Greece but also Italy (one respondent specified Bolzano as her provenience). All respondents declared to speak English and some of them included English + one or more languages. Five out of seven respondents declared to have taken another Italian course before this one, but they did not specify what kind of course.

The expectations about taking this MOOC course were linked to learning the basics of the language and discovering some aspects of the culture, and they were mostly met as the course was judged as 'extensive and effective'. One respondent specified that the course was useful to learn both Italian and English, which was unexpected but appreciated by the student.

After background information and expectations, the new questionnaire enquired about the same set of statements proposed in the first version of the questionnaire, and concerning both the contents and the

learning environment. Here again, the respondents were invited to rate the statements from 1 (totally disagree) to 5 (totally agree). The contents were judged well-structured and interesting (100% of positive answers), and also easy to understand (six positive answers, one neutral). The length of the course was considered as appropriate by the majority of respondents, even though one of them disagreed and one was neutral with the statement; the grammar explanations were regarded as clear and the grammar exercises as useful by the majority (for both statements there were no negative answers (only some neutral, and the rest were positive), and the amount of cultural information was considered sufficient by all respondents but one who disagreed.

As for the learning environment, all respondents considered it as motivating and easy to navigate (100% of positive answers for both statements). Overall, the course was judged as useful to discover Italian language and culture (here again 100% of positive answers, with five out of seven respondents totally agreeing with the statement). Figure 12 below reports the rating of the evaluation statements.

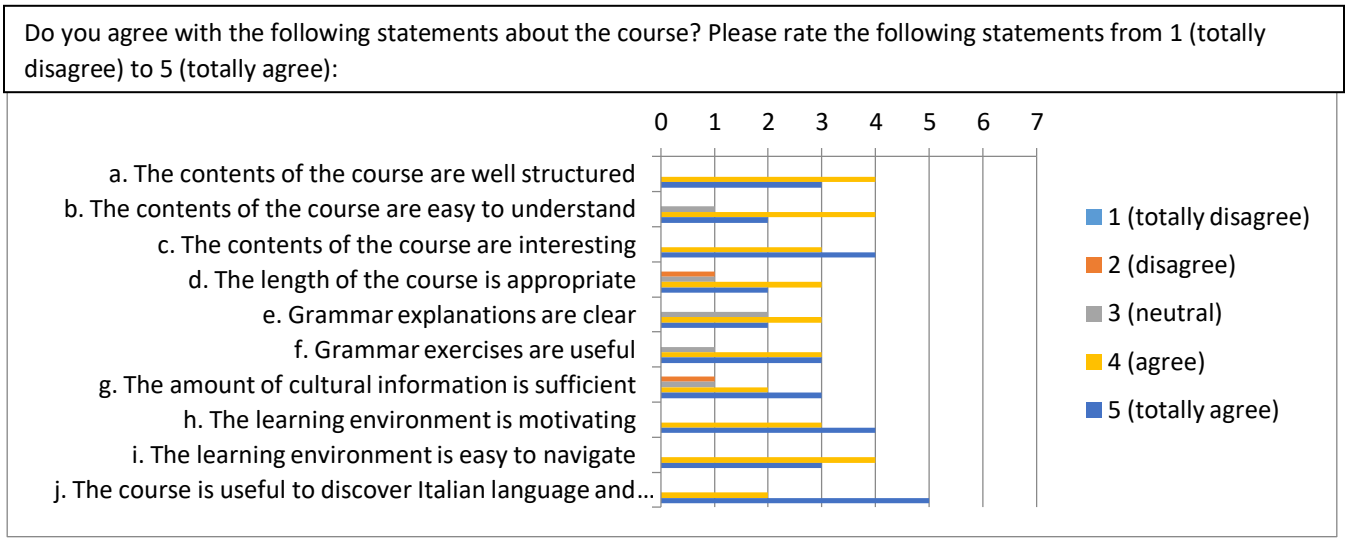

Figure 12. Graph summing up the rating for the evaluation statements at the end of editions 2 and 3.

The evaluation questionnaire then moved on to investigate the perception of learning. This investigation consisted in proposing a set of statements about how language and culture competences may have changed after taking the course; the statements had to be rated according to a 1-5 scale (1=totally disagree and 5=totally agree). For these two editions of the MOOC, all respondents declared to be more familiar with basic Italian grammar after taking the course and also more familiar with Italian culture (100% of positive answers for both statements). Also the understanding of the local environment was judged as improved after taking the course, here again with 100% of positive answers). The questionnaire then enquired about the four language

skills (reading, listening, writing and speaking). As for the receptive abilities, the respondents declared to feel more confident when reading Italian texts and when listening to people speaking in Italian (almost all positive answers for both statements, one neutral each). When it comes to the productive skills, all respondents declared to feel more confident when speaking Italian (surprisingly, 100% of positive answers) and almost all respondents (only one neutral) agreed on the fact that they felt more confident when writing in Italian. Figure 13 below summarises the results about the perception of learning for the second and the third editions of the Italian MOOC.

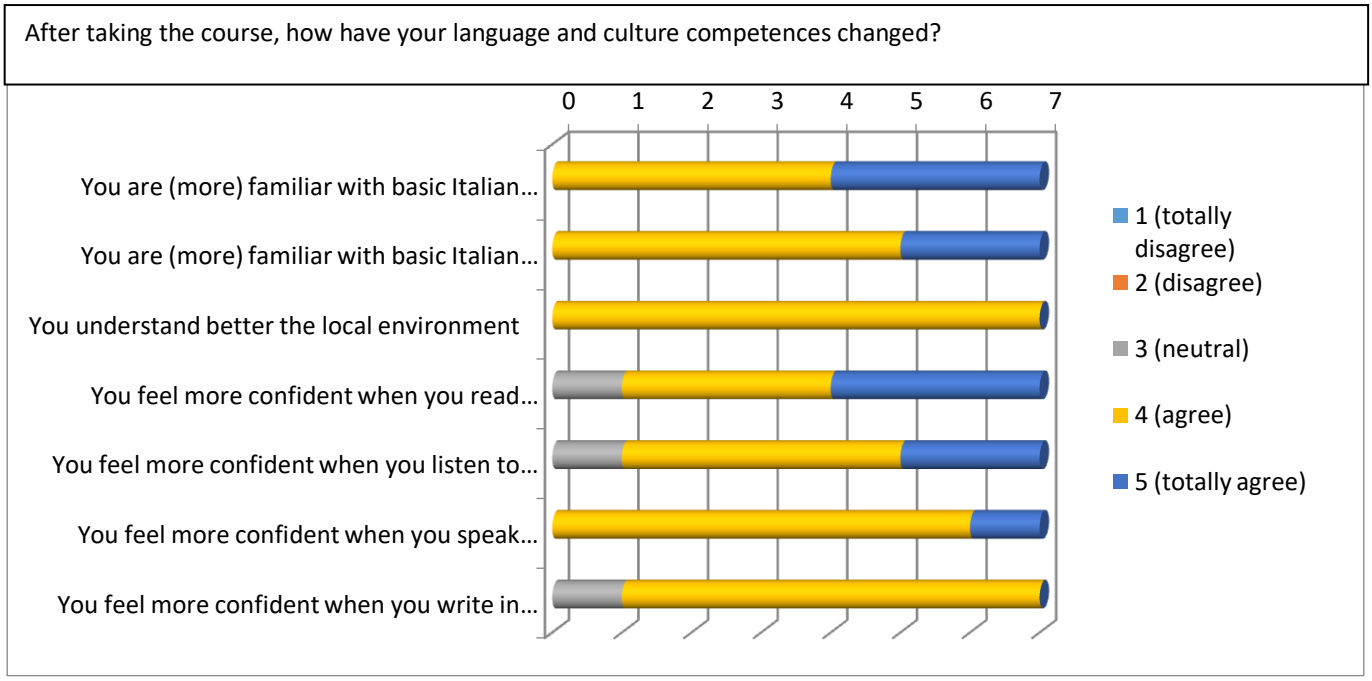

Figure 13. The perception of learning in editions 2 and 3.

The questionnaire ended with the request for identifying any shortcoming and eventually providing suggestions for improvement. The majority of respondents did not identify any shortcoming, nor they provided any suggestions. Nevertheless, two interesting remarks were pointed out. Firstly, one student noticed that the course was too long to be taken as a whole and at once and proposed the option to create two 'sub-courses' to be taken in different moments. This remark was indeed relevant, as it confirmed an intuition which was already being considered by the authors (see below). Secondly, another student highlighted that the amount of information contained in the course was overwhelming for a new learner, especially as far as the grammar aspects are concerned (literally, the student stated that he "could hardly remember only half of the grammar of the course", whereas "the story and culture parts, on the other side, are very interesting and memorable").

This second remark somehow reinforced the first observation and the authors' intent to reconsider the whole structure. Finally, these two remarks were also in line with what emerged after the first edition of the course and confirmed once more that some revision action was needed.

3.3.3 Comments on the three first editions

All in all, the results of the evaluation questionnaire submitted at the end of the first three editions of the Italian MOOC are extremely positive, but they must be considered carefully, though. On the one hand in fact, they only refer to a limited sample of students; on the other, they were presumably submitted – in most cases – by those who managed to reach the end of the course and obtained the certificate of accomplishment, i.e. by those students who were satisfied with the learning experience. Unfortunately, at that stage there was no feedback from those who dropped out, even though some preliminary conclusions could be drawn after the first year of Italian MOOC, which take into account the results obtained by the students, the evaluation questionnaires returned by the limited sample of students and also a further analysis of the course carried by the authors.

The table below summarises the data about the first three editions of the Italian MOOC as for the registered users and the certificates of accomplishment released at the end of the editions.

Opening dates of the edition	Registered users	Certificates of accomplishment released	% of certificates out of registered users
From 15/05/2017 to 11/09/2017	427	25	5.9
From 26/09/2017 to 23/01/2018	140	14	10
From 08/02/2018 to 31/05/2018	108	4	3.7
Total first editions	675	43	6.4

Table 5. An overview on the Italian MOOC first three editions.

The table shows that, on average, the number of students who managed to accomplish the first editions of the Italian MOOC was quite in line with the general trend outlined for all the MOOCs, not only those specifically pertaining to language learning, all of them being characterised by high rates of dropouts as we have discussed in chapter 1 (Perifanou, Economides 2014; Valva 2018a). For all the three so-called 'first editions' in fact, the percentage of students obtaining their final certificate is less or equal to 10%, which is considered to be the threshold for 'successful' MOOCs, the 'standard' dropout rate for the MOOC being calculated at around 90% (Webly, 2012; LeBar, 2014). The question is debated, as we have seen, since the completion may not necessary be the right indicator to take into consideration, and students can benefit from a course even without completing it (LeBar, 2014). In other words, the effectiveness of a MOOC cannot be determined by judging only

its completion rate, and, similarly, the impact of a MOOC has to be analysed in the multifaceted context in which it operates.

When it comes to the registered users of the first editions of the Italian MOOC, the high number of students enrolled in edition 1 (more than 400 people) can be linked to the 'novelty factor', as this was one of the first MOOCs launched by the University of Bologna, and the first ever of Italian language and culture. Other contextual factors may have impacted, as the A1 course delivered by the Language Centre of the University was dismissed the same academic year in which the MOOC was launched, and there was somehow a strong request for a similar learning offer. Also the timing was relevant because the first edition was online from May up to the whole summertime, which is a large temporal window to embrace all those students preparing for a mobility period in the following academic year. All this said, from the second edition the registered users of the Italian MOOC have diminished, and they are around 100-150 people per edition; this trend will be confirmed also in the following editions, as we will show. Anyhow, if we consider the three first editions of the MOOC as an *ensemble*, in its first year the Italian MOOC counted about 700 registered users, out of whom about 6% managed to obtain the final certificate of accomplishment.

In addition, in this specific case of the E-LOCAL MOOC of Italian language and culture, the high rate of dropout can also be linked to the length and complexity of the course, as it was pointed out in the responses to the evaluation questionnaire, and as it was also evident from the authors' viewpoint. This was the legacy of the Moodle course from which the MOOC stemmed out, and for which many students are not able to reach the final units, or they are not able to keep pace with the learning path (Valva, 2018a). The initial stage of the MOOC experience confirmed that the online environment requires shorter learning moments in comparison to those offered by the E-LOCAL course, and with more frequent milestones to articulate the learning process.

To sum up, after noticing all these elements, a reflection was initiated with the aim of having an E-LOCAL MOOC of Italian more functional and exploitable in its entirety. Such an analysis led to a deep revision of the course, which will be the object of the following paragraph.

3.4 The revision of the MOOC

After the first editions of the MOOC, it was decided to carry out a relevant revision of the course in order to eliminate the shortcomings and the weak aspects identified during its first year. Concomitantly, it was also decided to reconsider the overall timetable established for the pilot year, which consisted of three editions, each of them lasting about four months. As we will see, after the revision, the new editions will be shorter (as the courses will be shorter) and there will be no interruption between an edition and the following one.

The revision consisted of three important steps, which are summarised here below, and which will be described in detail in the following sections:

i. the improvement of the evaluation system of all the activities and exercises of the course, for the purposes of the attribution of the points and the release of the certificate of completion;
ii. the redistribution and the addition of some contents in order to reach the A2 level of language; in this respect, the course is divided into two different parts covering the two levels;
iii. the introduction of a monitoring and encouragement mechanism, aimed at supporting the users in their advancement.

3.4.1 Step 1 and Edition 4: the improvement of the evaluation system

As for the first step of the revision, it consisted in the addition of an evaluation test at the end of each of the eight main units and in the redistribution of the score necessary to obtain the final certificate. As such, only some typologies of exercises are evaluated for the release of the final certificate.

In fact, the course continues to include several typologies of exercises (the comprehension test at the end of the e-story, the quizzes related to the cultural aspects, the grammar and language exercises, etc.), and each question included in the exercises counts as one point. The points assigned for each exercise are indicated after the title of the exercise itself, while the number of the maximum attempts is indicated under each quiz. This kind of questions, however, are not evaluated for the purposes of the completion of the course as they are meant for the users' self-assessment; in this perspective they provide the students with a feedback about their correctness and the correct answer is shown once the student has used all the attempts available.

The points obtained with this kind of questions are in any case reported in the Progress Page of the course, where they are labelled as 'practice scores'. The Progress Page shows the points and the percentage of success for each sub-section of the unit, and also the breakdown points of each exercise, so that at any time the students can have an overview on their practice score.

On the contrary, the quizzes at the end of each unit (i.e. the evaluation tests which are added during the revision phase) are evaluated and, as a whole, they weigh 20% of the final score. The Final Assessment unit, for its part, weighs 80% of the final score. The certificate of accomplishment is in fact released to those students who have answered correctly to at least 60% of the evaluated questions (i.e. the questions included in the quizzes at the end of the units and in the final assessment unit).

With such a balance, the students have a concrete advantage in doing the final evaluation tests at the end of each unit for the purposes of the final certificate, and this also allows to directly take the final assessment and eventually pass the course for those students who prefer such an option (Valva, 2018a). Also the points assigned for each evaluated exercise are indicated after the title of the exercise itself, and similarly the number of the maximum attempts is indicated under each quiz. The system records the result of the final attempt, though, and not of the best attempt. The score obtained for the evaluated questions is obviously also reported

in the Progress Page of the course, and the points gained are labelled as 'problem score'. The Progress Page also shows a graph with the points necessary to complete the course, so that the goal to reach and the effort required are visually evident. Figure 14 below provides some examples of how the progress is shown to students.

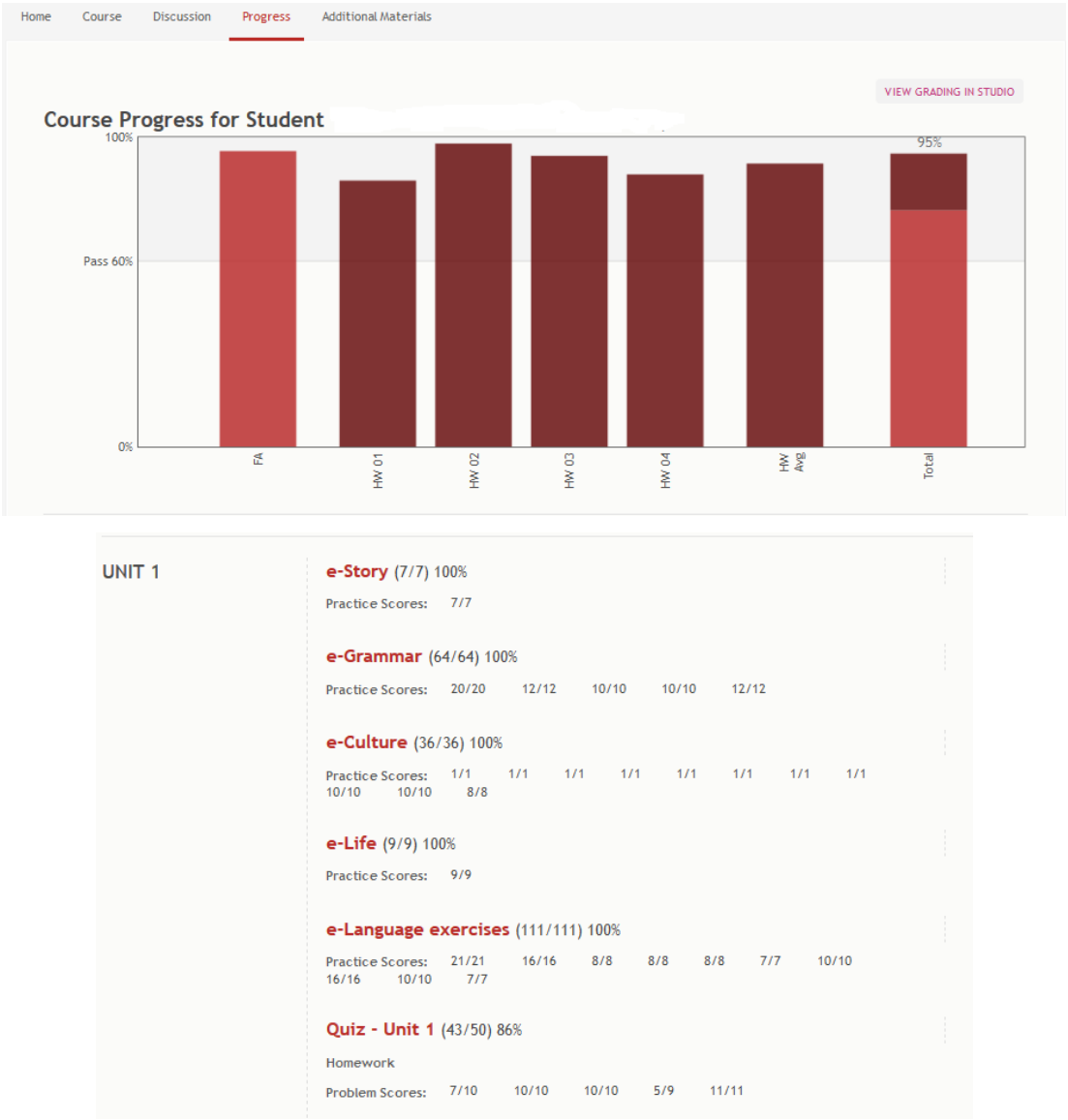

Figure 14. Examples of Progress Page.

When it comes to the details of the evaluation tests at the end of the units, which were added in the revision phase, they are structured in five exercises each, with a total of 50 points, which are not equally distributed among the exercises (i.e. one exercise may count for 14 points, for instance, while another only for six; the

total of the points for each unit-quiz is 50, though). The evaluated quizzes cover the major grammatical and lexical items presented in the single units, whereas the final assessment covers the entire content of the course.

This first change was implemented while the third edition of the MOOC was still ongoing, therefore it was already available when the fourth edition started. The fourth edition of the MOOC could be actually considered as a 'transition' edition, with a part of the revision already carried out but still belonging to the 'old system', i.e. an entire long course lasting about four months with no support for the users. The fourth edition was in fact online from 12 June to 02 October 2018, it counted 126 registered users, 26 of them obtaining the final certificate of accomplishment (a bit more than 6%, in line with the overall percentage of the first editions), which was however released following the new rules established during the revision.

3.4.2 Step 2: towards A2 level, the course is divided in 2 parts

The second step of the revision was particularly articulated. It consisted in the re-organisation of the course into two different ones, one covering the A1 level of language of the CEFR and the other covering the A2 level. As a first action, an analysis was carried out with the aim of identifying the items which were missing for the A2 level, in terms of grammar notes but also as for the lexical aspects and the communicative functions. Indeed, the course was already an 'advanced' A1 level, with many contents already approaching the following level. Then, the actual contents were redistributed, and the missing contents were created. This was also the chance for an overall revision and debug, for clearing up all typos, errors and mistakes.

Once the re-organisation was completed, the BOOK Platform of the University of Bologna actually included two MOOC courses of Italian language and culture: 'Benvenuti in Italia! Orientarsi con l'italiano - Part 1' and 'Benvenuti in Italia! Orientarsi con l'italiano - Part 2'.

Part 1 consists of four main units, plus an introductory unit with preliminary grammar information and a final assessment unit. As it was for the course of the first editions, the four main units include a story with seven situations and a comprehension quiz at the end, grammar explanations with related exercises, cultural pills with short tests and everyday information, and language exercises to fix grammar, lexicon and communicative aspects.

Similarly, Part 2 is also organised in four main units, plus an introductory unit and a final assessment unit. The introductory unit is the same as in Part 1, and the repetition is aimed at revising some preliminary information. Also the structure of the units 5-8 (the numeration continues after Part 1) is the same, and they include the same sections. Moreover, both Part 1 and Part 2 include the Overall Grammar (i.e. the collection of all the grammar explanations of the course) and the Overall Glossary (i.e. the collection of all the vocabulary of the course), as additional materials.

The story narrated to guide the learners in the discovery of Italian language and culture is the same as before, the main characters remaining Anna and Alex, two Erasmus students who arrive in Bologna and are helped by their Italian friends in their learning process while getting settled in the town. On the contrary, the grammar, lexical and communicative information of each of the two parts is more focused and more specific for the CEFR level covered.

Also the Final Assessment Unit was re-organised to suit the specific necessity of the two Parts. First of all, for each of the 2 Parts of the course, the Final Assessment unit consists of 12 exercises, built around two main characters (Tom and Patricia, again two Erasmus students) and aimed at testing the skills developed during the course. As it was for the E-LOCAL Moodle course, the final assessment has a task-based approach while testing also lexico-grammar and communicative competence, though. This is particularly the case for Part 2, whereas in Part 1 the exercises are more grammar-oriented.

Having taken Part 1 of the course is not a compulsory pre-requisite to take Part 2, even though it is strongly recommended as many notions imply the knowledge of the previous contents. It is however possible that some students already having a preliminary knowledge of Italian may start directly from Part 2, without taking Part 1.

Each Part is expected to last about ten weeks; this shorter, more defined duration, along with shorter and more defined contents, has positively impacted upon the success of the course, as we will better outline below.

3.4.3 Step 3: the introduction of supporting actions

The third intervention of the revision phase concerned the introduction of a supporting system in order to guide the users in their learning path. First of all, regular messages to the users were introduced to highlight the milestones of the learning process.

During an edition of the course, seven messages are sent to the learners. An initial welcome message is sent the day in which the edition opens, and it contains a presentation of the course, its structure and contents, along with the invitation to take the introductory unit to check previous knowledge and find out preliminary information. Since this first message, the users are encouraged to interact with the other participants in the Discussion Area, in order to benefit from peer learning. Then, a message for each of the four main units is sent every two weeks, with the aim of helping the students to follow a regular path and not to forget to progress in their learning. These messages briefly present the content of the unit they are referring to and they keep encouraging the interaction among participants in the Discussion area. Another message is sent one week before the scheduled end of the edition, to remind the users to finish all their activities and take the final assessment if they wish to receive the certificate of accomplishment; the requirements to get the certificate are also reminded with that message. Finally, a concluding message is sent the day after the end of the course

to thank the participants, explain how to download the certificate if they have completed the course, and also invite them to submit the feedback survey. An example of such messages is available in Appendix F.

A second aspect of this third revision step concerned the availability in the Discussion Area of a content-tutor, which was added to the presence of the platform tutor. In fact, the role of the platform tutor – available since the first editions of the course – was more related to technical problems and organisational matters, being a figure recalling the scheduled dates, the requirements to get the certificate, and solving any eventual operational problems. On the contrary, with the content-tutor the users can discuss about issues concerning the information presented in the units of the course.

As it was for the tutored E-LOCAL courses, the users can benefit from the presence of an expert within the platform. Even if the MOOC is indeed conceived to be taken autonomously, some questions may arise during the learning path for which a relevant answer may turn into a motivational input, in addition to solving the specific issue. The typical interactions with the tutor in the Discussion page concerned clarifications about specific topics that were not clear, up of all grammar aspects, as in the example reported in figure 15 here below. This discussion is taken from Part 2 of the course, and the student asks for a clarification about the usage of two adverbs of time. The tutor provides some examples to clarify the issue. Similar discussions are present throughout the two parts of the course and they usually concern requests of explanation about specific topics and/or about specific exercises.

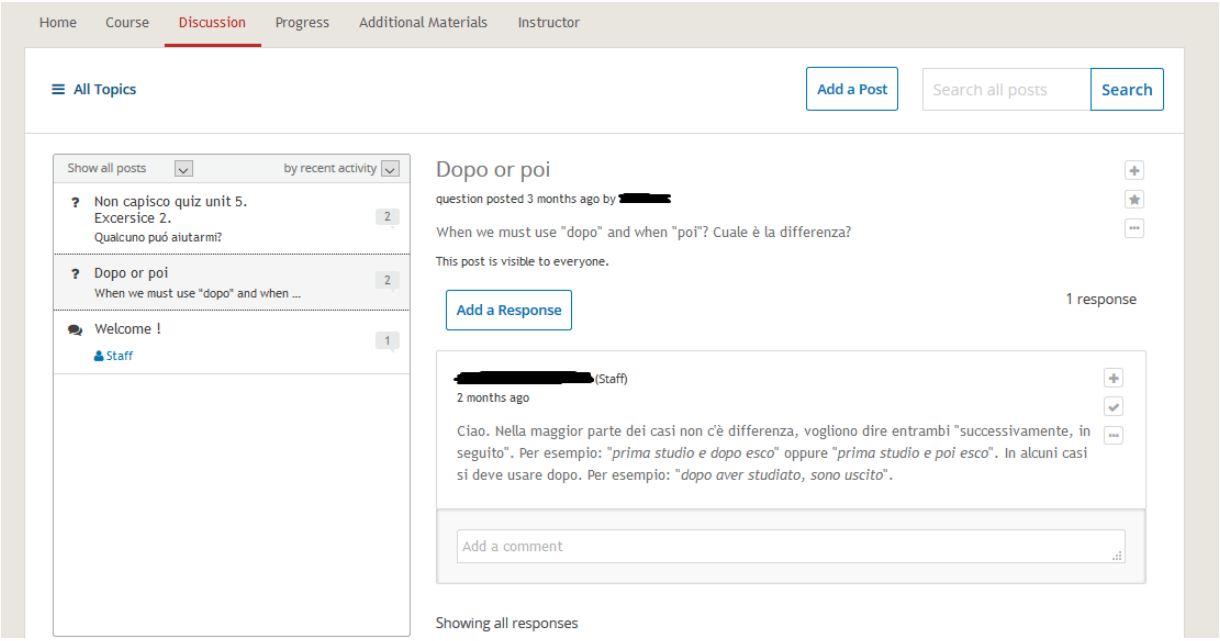

Figure 15. An example of grammar clarification in the MOOC Discussion Area.

Furthermore, some students also tried to use the Discussion Area provided within the course as a chance to re-use what they had learnt throughout the unit and to get to know the other learners. This specific function of the Discussion area was promoted also in the regular messages sent to the users to remind them about the advancement of the course. The second example reported here below shows a post in which a learner introduces himself and invites the other learners to do the same. The tutor reacts and introduces herself, whereas only a few other learners take the chance to continue this discussion.

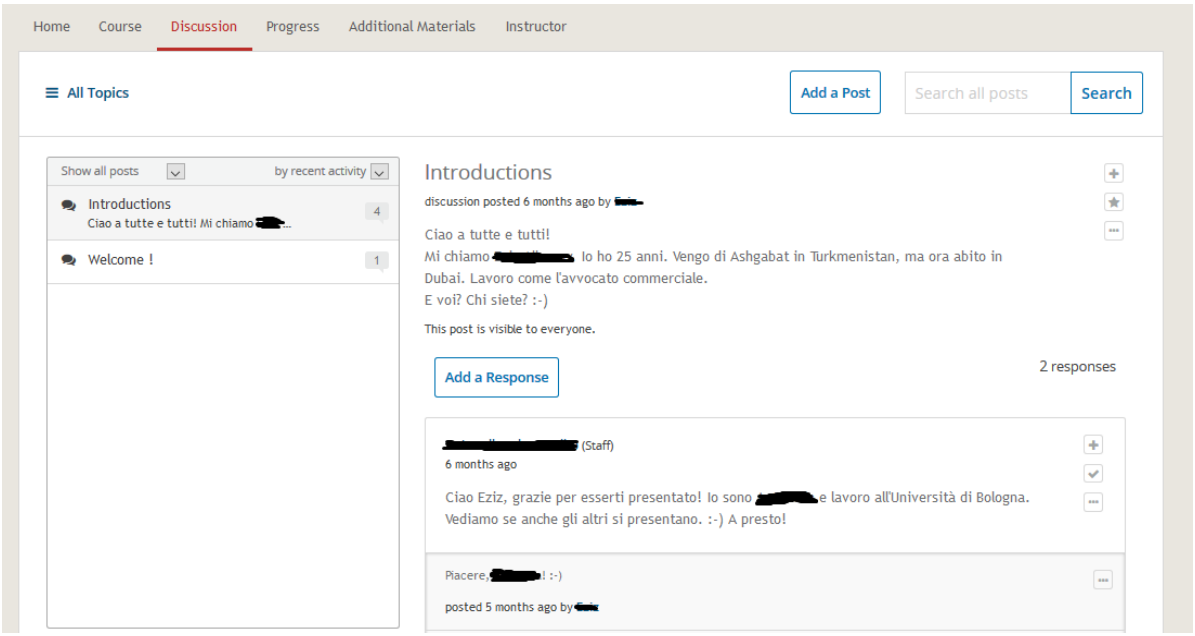

Figure 16. An example of users' interaction in the MOOC Discussion Area.

It must be said, in fact, that the possibility to interact with the tutor and/or with the other users in the Discussion Area was not exploited at the maximum of its potentiality; it was appreciated as an additional functionality of the course, though, as the users reported in their feedback form. The reasons for this limited activity may be several; the main one in our view is linked to the typology of students, generally engaged in many other activities and taking the Italian MOOC as an additional, optional course not too demanding in terms of social engagement.

3.5 The 'new editions' of the MOOC

With the label 'new editions' of the MOOC we identify the editions of the course divided into two parts, as it was re-organised during the revision phase, and incorporating all the features that we have presented in

paragraph 3.4 (that is to say: Part 1 and Part 2 of the course, corresponding to two different language levels, A1 and A2; an improved evaluation system applying to both parts; and the presence of supporting actions to guide the learners).

3.5.1 An overview on the new editions

The first edition of the new MOOC 'Benvenuti in Italia! Orientarsi con l'italiano - Part 1' was online on 02 October 2018 and lasted until 10 December 2018, it counted 125 registered users and 23 of them obtained their certificate of accomplishment (18.4% of completion rate). After that, other editions followed: 11 December 2018 - 19 February 2019 (110 registered users, 11 certificates, 10% of completion rate); 20 February - 02 May 2019 (151 registered users, 24 certificates, 15.9% of completion rate); 03 May - 12 July 2019 (148 registered users, 27 certificates, 18.2% of completion rate).

The first edition of 'Benvenuti in Italia! Orientarsi con l'italiano - Part 2' was instead online from 11 December 2018 to 19 February 2019, as it was developed while the first edition of Part 1 was online. It counted 59 registered users and released 12 certificates of accomplishment, with a completion rate of more than 20%. Since then, the other editions followed in parallel with the editions of Part 1: 20 February - 02 May 2019 (56 registered users, 12 certificates, 21.4% of completion rate); 03 May - 12 July 2019 (49 registered users, 13 certificates, 26.5% of completion rate).

The table here below represents an overview on the new editions of the MOOC of Italian language and culture and allows for some considerations about the new arrangement of the course.

Opening dates of the edition	Registered users	Certificates of accomplishment released	% of certificates out of registered users
Part 1			
From 02/10/2018 to 10/12/2018	125	23	18.4%
From 11/12/2018 to 19/02/2019	110	11	10%
From 20/02/2019 to 02/05/2019	151	24	15.9%
From 03/05/2019 to 12/07/2019	148	27	18.2%
Total Part 1	534	85	15.9%
Part 2			
From 11/12/2018 to 19/02/2019	59	12	20.3%
From 20/02/2019 to 02/05/2019	56	12	21.4%
From 03/05/2019 to 12/07/2019	49	13	26.5%
Total Part 2	164	37	22.6%

Table 6. An overview on the 'new editions' of the Italian MOOC.

First of all, the number of registered users has benn quite stable along the different editions. It is about 100-150 people for each edition of Part 1, and about 50-60 people for each edition of Part 2. Since each edition is online for about ten weeks (even though the effective work required is counted in five weeks, the longer opening however takes into account the academic timetable, holidays, and so on), there are five editions every year for each part. If this registration trend is confirmed also for the future editions, potentially about 700 students are taking Part 1 of the E-LOCAL MOOC every year and about 300 students are taking Part 2, with a total of around 1000 people registering yearly in the Italian course.

Secondly, the accomplishment rate increased relevantly after the revision took place. With the new editions, the percentage of certificates of accomplishment released is never under 10% for Part 1 and never under 20% for Part 2; on average it is 16% for Part 1 and 22% for Part 2. These figures confirm that the changes operated were relevant in this regard, as many more students manage to take the entire course and meet the requirements for the final certificate.

In addition, since the two Parts are available, the completion rate has always been higher for Part 2; the reasons why the students taking Part 2 of the course obtain better scores than those taking Part 1 are not self-evident, though. We can only infer that the second part of the course might result relatively easier, especially to those who have taken also the first part, but we do not have concrete evidence supporting this assertion.

To continue, a note is necessary about those students who did not obtain the certificate of accomplishment and who still represent the majority of registered users. This large group actually includes two categories of users, very different from each other.

There are, in fact, some people who just register and enter the course in order to 'have a look', i.e. to check what it contains and how it works, but who do not seriously commit in the course itself. In other words, this category of people has an inattentive approach; they just go through the contents, read what they find mostly interesting, but they do not necessarily follow a learning path. This typology of users actually represents the majority of those who do not get the final certificate.

Then there are also some students who accurately follow the entire learning path, they take all the parts and submit the exercises, but they do not manage to pass the course. The number of people included in this category decreased after the revision of the MOOC, confirming that the actions put in place met the necessities of the audience and went in the direction of having a MOOC more responsive to the users' needs. Some of them remained, nevertheless, and it would be interesting to further investigate the reasons behind their failure.

Finally, it is also very interesting to analyse the feedback received by the users of the new editions of the MOOC, as it provides further insights about the features of the course. This feedback will be the object of the following section.

3.5.2 Feedback from the users

The users' feedback is regularly collected through the final evaluation questionnaire, updated and finalised as it was explained in 3.3.2 above. In this section we refer to the feedback submitted by the users of the new editions of the MOOC as it provides an interesting outline of the users themselves and their reaction to the learning path provided.

Up to present, the evaluation questionnaire has been returned by 49 students of the new editions. As for the age groups, the most represented is the oldest one with 18 respondents being more than 30 years old. The age group 23-26 counted 12 respondents, ten respondents belonged to the 27-30 group and six respondents to the age group 19-22. Finally, three respondents were less than 19 years old. The age composition is already an interesting indicator, and it is in line with the previous editions: the feedback is usually submitted by the older students, which does not necessarily mean that the MOOC is taken up of all by older people.

The vast majority of respondents for these new editions were female (40), nine respondents were male. The majority of respondents had Russian as the mother tongue (11 out of 49, with nine of them coming from Russia, one from Azerbaijan and one from Turkmenistan), followed by Portuguese (eight in total, seven of them coming from Brazil, the others from Portugal), Spanish (seven in total, three of them coming from Colombia, two from Argentina, one from Venezuela and one from Spain), English (six in total, four of them coming from the USA and the other two from Australia) and German (four in total, two from Austria and two from Germany). Two respondents indicated Turkish and two indicated Bengali as their mother tongues, whereas the following mother tongues were reported by one respondent: Albanian, Croatian, French, Georgian, Malayalam (from India), Persian (from Iran), Ukrainian, Vietnamese, Wolof (from Senegal). When it is not specified in brackets, the mother tongue is in line with the country of origin (e.g. the respondent who declared Albanian as the mother tongue was from Albania and so on). As for the languages spoken, all respondents declared English, alone (in six cases) or more frequently in combination with one or more languages.

As for their position, two respondents were visiting researchers, three respondents were high school students, six were Erasmus students, 15 were students enrolled in an international course (i.e. in a course of the University of Bologna entirely taught in English), and 23 chose the option 'other'. When invited to specify, many declared to be prospective students and/or to be planning to move to Italy. The category however included also a person asking for the Italian citizenship, three PhD students, and many professionals (lawyers, translators, journalists, officers, advisors, artists, consultants). The majority of respondents (31 out of 49)

stated not to have taken any Italian course before that one, only 18 people had had a previous experience (in many cases it was an in-presence course in their country of origin, but some respondents taking Part 2 referred to Part 1 as a previous experience).

The expectations about taking this MOOC were linked to learning the basics of the language (some respondents specified what particular areas of the language they wanted to improve, many stressing the importance of being able to communicate, to participate in conversational routines) and to discovering some aspects of the culture (someone highlighting the necessity to integrate their new daily context), but also to upgrading, refreshing previous knowledge (especially for those who had taken a course before). Some respondents declared to have no expectations at all, being their first MOOC experience; others mentioned the necessity to have a self-paced learning path or linked the expectations to the final certificate. The participants' expectations were met, or even exceeded, the course was judged supportive, very well built and well balanced in terms of theoretical and practical parts, but also gorgeous, very lively, thought-provoking and intelligent.

After background information and expectations, the questionnaire moved on to enquire about the contents and the learning environment and the respondents were invited to rate the evaluation statements from 1 (totally disagree) to 5 (totally agree).

Figure 17 below summarises the results of the evaluation statements for the new editions of the MOOC.

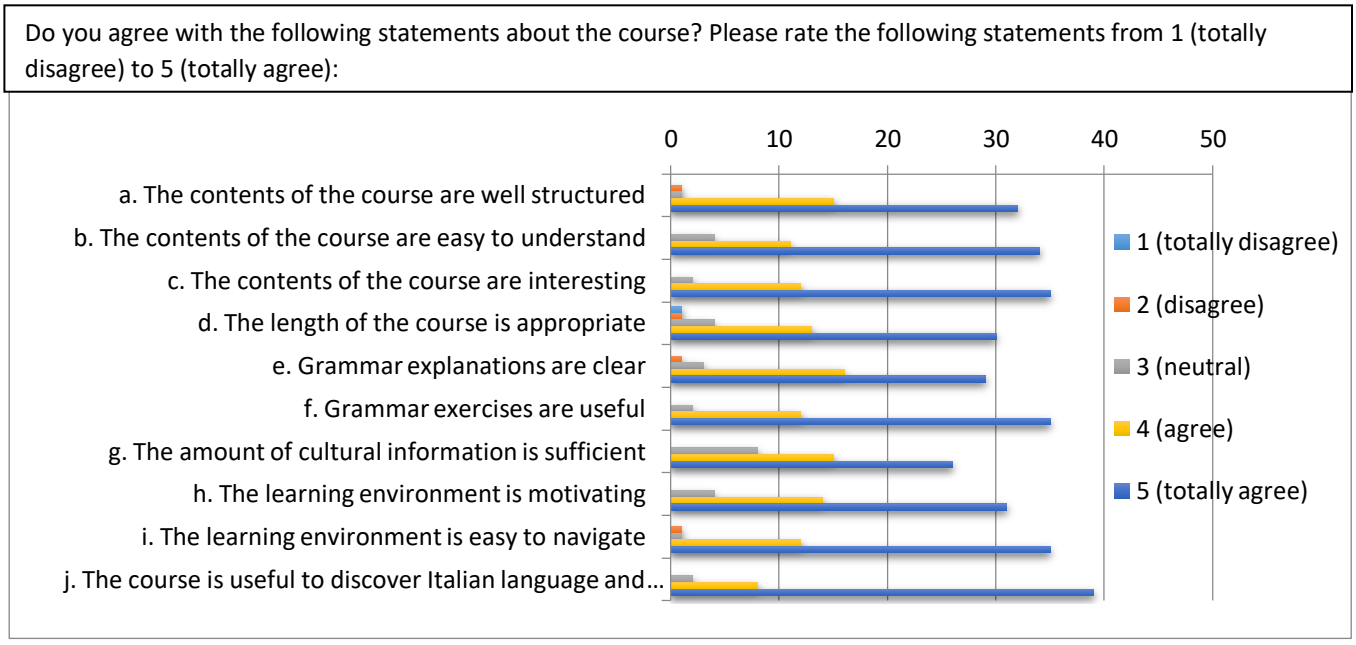

Figure 17. Graph summing up the rating of the evaluation statements in the new editions of the MOOC.

The contents were judged well structured (47 positive answers out of 49, with 32 totally agree and 15 agree; one neutral and one disagree), easy to understand (45 positive answers, with 34 totally agree and 11 agree; four neutral) and interesting (47 positive answers, with 35 totally agree and 12 agree; two neutral). The length of the course was considered as appropriate by the majority respondents (30 totally agree and three agree), even though four were neutral, one respondent disagreed, and one totally disagreed with the statement. The grammar explanations were regarded as clear (29 respondents totally agreed with the statement, 16 agreed, three were neutral and one disagreed) and the grammar exercises as useful (35 respondents totally agreed and 12 agreed, two were neutral and there were no negative answers). Also the amount of cultural information was considered sufficient by all respondents, there were no negative answers, eight were neutral, 15 agreed with the statement and 36 totally agreed.

As for the learning environment, all respondents reported it as motivating (31 respondents totally agreed with the statement, 14 agreed and four were neutral; there were no negative answers). The learning environment was also considered easy to navigate by the majority (35 respondents totally agreed with the statement, 12 agreed, one was neutral and one disagreed). Overall, the course was considered as useful to discover Italian language and culture (with 39 out of 49 respondents totally agreeing with the statement, eight agreeing and two neutral).

The evaluation questionnaire then focused upon the perception of learning from the users' viewpoint. As said, this investigation consisted in proposing a set of statements about how language and culture competences may have changed after taking the course, and the statements had to be rated according to a 1-5 scale (1=totally disagree and 5=totally agree).

All respondents declared to be more confident with basic Italian grammar after taking the course (with 21 respondents out of 49 totally agreeing with the statement, 26 agreeing and two neutral) and also to be more familiar with Italian culture (with 19 respondents totally agreeing with the statement, 24 agreeing and six neutral) after taking the course. The understanding of the local environment was perceived as improved after taking the course as well, with 22 respondents totally agreeing, 23 agreeing and four neutral.

As far as the four language skills are concerned (reading, listening, writing and speaking), the receptive abilities improved more than the productive abilities, in the respondents' perception. In particular, after taking the course, the users declared to feel more confident when reading Italian texts (23 respondents out of 49 totally agreeing with the statement, 20 agreeing and six neutral; no respondent disagreed) and also when listening to people speaking in Italian (with lower rates, though: 20 respondents totally agreeing with the statement, 18 agreeing, and 10 neutral; one respondent disagreed).

When it comes to the productive skills, the positive rates decreased but they still remained the majority. In particular, 12 respondents totally agreed with being more confident when speaking Italian, 12 agreed and 17

were neutral about this statement; eight people disagreed. Finally, as for writing, 15 respondents totally agreed with being more confident when writing in Italian, 19 agreed with this statement and 11 were neutral; four people disagreed. Figure 18 below summarises the perception of learning reported by the users of the new editions of the MOOC.

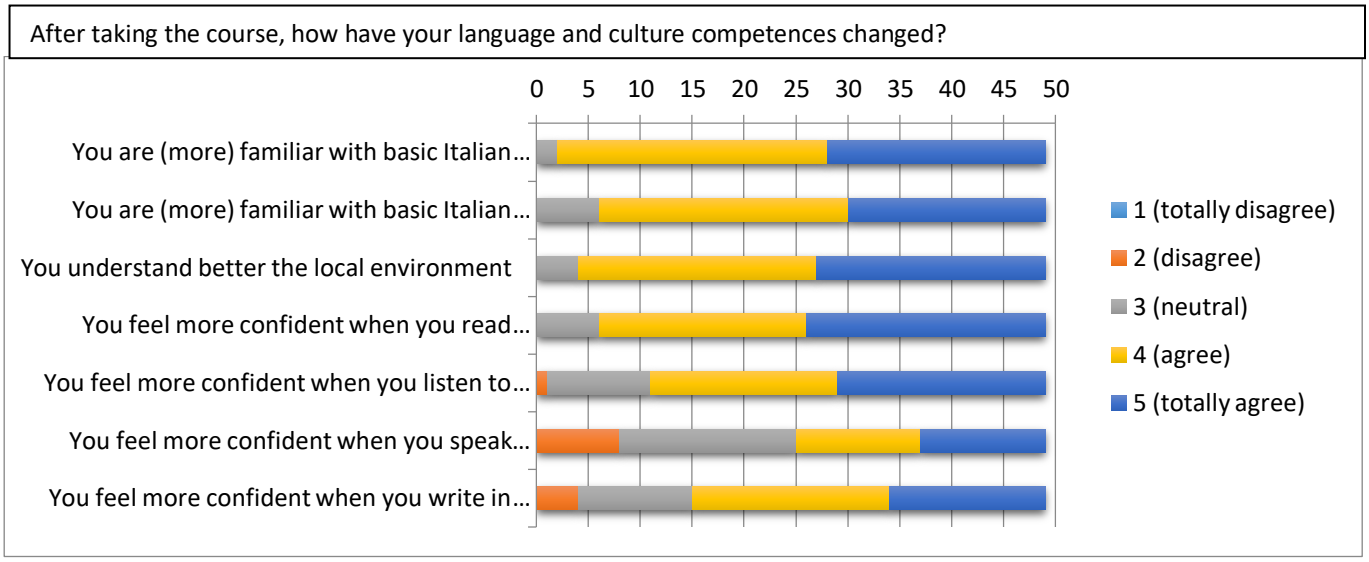

Figure 18. The perception of learning in the new editions of the MOOC.

The questionnaire ended with the request for identifying any shortcoming and eventually providing suggestions. Among the few shortcomings reported, there were some difficulties with special characters and apostrophes for some devices, some typos were still there and the vocabulary was sometimes perceived as immense. Among the suggestions, there was the request of having more listening and more writing exercises, and also to improve the speaking part with the addition of specific feedback. Someone pointed out some difficulties with the Italian grammar and asked for more explanations and more examples. The use of English was somehow controversial, some respondents declared that they would like to have more English (i.e. more translations), others who would like less English (i.e. explanations in the target language). Many respondents expressed the desire to continue with the higher levels and asked for a continuation. Finally, and interestingly, someone asked to include in the MOOC some references to possible books to use to continue studying.

All in all, in the comments from the respondents, the Italian MOOC was judged a very good introduction to the language and the culture, logical, interactive and easy to navigate. The structure was particularly appreciated, and it was reported as helpful the possibility to see one's own progress and to go back to the missed assignments. The material was also very relevant and the respondents also reported having a lot of fun while

learning interesting new facts about Italy. In general terms, the time allowed for the course was adequate, and a 'sense of accomplishment' was brought by completing each task and each quiz successfully.

3.6 Gender differences in the feedback about the MOOC

The new editions of the Italian MOOC were characterised for the specific attention paid to preventing contents and usage from being affected by stereotypes and prejudices. As stated, when adapting and re-writing the course contents, a thorough work was made to detect and change any possible misconception which might involuntarily included in the previous versions of the contents.

Similarly, the feedback collected for the new editions of the Italian MOOC was analysed also taking into account the indications provided by the United Nations for gender statistics, according to which gender issues impact upon all areas of life, including education (United Nations, 2016). Even though, gender statistics entail much more than simply disaggregating data by sex – as they should adequately reflect differences and inequalities, and therefore they should adopt specific methods for data collection (United Nations, 2016), for the specific purposes of this work the disaggregation of data, and the discussion of the results obtained, was considered as sufficient to included the different perspectives of analysis.

As anticipated, the evaluation questionnaire was returned mainly by female respondents, 40 out of 49 (i.e. 81.6%); nine respondents were male (18.4%) and no respondent selected the 'I do not wish to specify' option. Male respondents were in most cases (six out of nine) students enrolled in international courses, whereas female respondents showed a larger variety of positions. Only two male respondents (22.2%) had has a previous experience with a course of Italian, while 17 female (34.7%) respondents declared to have tried other courses before taking this MOOC. Expectations were linked to learn the basics about Italian language and culture for both gender groups, but male respondents did not add any information to specify what they meant by 'basics' and, in most cases, they claimed not to know what to expect exactly because this was their first experience with an Italian course. On the contrary, female respondents provided a lot of specifications about what kind of skills they particularly expected to learn and/or improve, and they also put a lot of emphasis on communication.

As for the assessment of the contents and of the learning environment, there were no relevant differences between the two groups in the rating of the specific statements proposed by the evaluation questionnaire. All in all, their feedback was positive both as far as the contents and the environment were concerned. Similarly, there weren't huge differences also as for the perception of learning among the respondents. For both gender groups, receptive skills scored better results in comparison to productive skills; in particular, speaking skills were thus resulting a bit more problematic for both male and female, while female respondents also showed less positive perception as far as writing skills were concerned.

Finally, the same typologies of general comments were reported by both male and female respondents, even though it is interesting to note a different emphasis put on to the final certificate between the two groups. In fact, getting a final certificate was included among the expectations of female respondents and no further comments about that aspect were included in the open comments; in contrast, male respondents did not mention the certificate among their expectations but some of them specified in the open comments that the final certificate was not as they had excepted. Nevertheless, the vast majority of comments indeed concerned the aspects that the users had found as more complex, with male respondents being slightly more detailed in identifying the difficult aspects of the course but also more enthusiastic in showing their appreciation.

3.7 Concluding remarks about the E-LOCAL MOOC

For the months to go, regular editions of Part 1 and Part 2 of the E-LOCAL MOOC of Italian language and culture are already planned to be activated one after the end of the other, with no interruptions and with no relevant change under examination at the moment. We can therefore presume that the structure obtained after the revision phase is proving to be efficient and effective for the purposes of providing international students (and not only) with a relevant course for discovering Italian language and culture. The feedback so far collected also seems to confirm this assertion.

Once an edition is over, the students enrolled in that edition can still view its contents, but they cannot do the exercises anymore, nor can they get the certificate if they did not meet the necessary requirements before the end date. They can, nevertheless, enrol in a new edition if they wish. In such a way, the E-LOCAL MOOC of Italian language and culture stands as a reference tool onto the BOOK platform for all those looking for a comprehensive and flexible approach to learning both Italian language and culture.

As we have seen, the development of this MOOC opened the path to an analysis about the usage of digital tools in order to foster the learning process of local language and culture. It was a chance to re-assess the learning materials created within the previous E-LOCAL experience, to create a new course based upon them, and to modify it in order to be closer to the users' needs, once it was realised that the effectiveness of the first editions was not as hoped for. With its finalised characteristics though, the E-LOCAL MOOC can be said to be meeting also the objective of efficiency as more users manage to successfully complete it.

The MOOC based upon the E-LOCAL Moodle course of Italian language and culture represented a good example in which theoretical knowledge and practical experience combined in order to reach a clear, final goal: the creation of a digital resource for language and culture learning, supporting – in particular, but not exclusively – international students (Valva, 2018a). In other words, the E-LOCAL MOOC is a model, among others, of usage of technology for language and culture learning contextualised as much as possible in the learners' reality. In fact, MOOCs offer the possibility to remove barriers for accessing and attending courses (in

terms of physical presence, but also as far as login credentials are concerned, as we have seen), at the same time they claim to maintain the characteristics of academic courses (insofar as they are developed by the university). In this perspective, they may have a strong impact upon the educational community, and upon the internationalisation of higher education in particular.

The numerical impact of the E-LOCAL MOOC is estimated at about 1000 registered users per year, whereas its completion rate is estimated to be around 20%, which is ten points beyond the commonly set completion rate of 10%. We have seen that, as far as the MOOCs are concerned, the completion rate is not necessarily a good indicator to monitor the effectiveness of the courses, as the users can benefit from their contents even without terminating all the activities. This is particularly relevant in the case of a MOOC for learning languages and cultures, aimed at helping global people to integrate local realities.

Moreover, MOOCs are often criticised for being new tools conveying old approaches, finalised at the mere, passive transmission of contents (La Grassa, Troncarelli, 2016); in many cases in fact, MOOCs seem to revise old characteristics of distance learning by inserting them in a new technological support (Troncarelli, 2016). This is however very much depending upon the production of dedicated learning resources, and the implementation of the E-LOCAL MOOC went exactly in the direction of having specific, customised resources in a platform also offering the assistance of a tutor. In such a way, the learners do not feel the isolation which is often associated to the MOOC paths. In other words, the successful impact of similar learning proposals is based upon a combination of factors, including both the learning materials themselves, and the support provided to the users during the learning process.

There are other possibilities, however, that can be exploited to pursue these goals even further. The mobile dimension of learning, in fact, which is becoming more and more relevant in recent times, invites to take into larger consideration technological tools explicitly conceived for mobile devices. In this regard, learning Apps represent the latest border of educational technological developments. A learning App dedicated to local languages and culture will be the object of the third case study under investigation in this thesis and it will be discussed in the following chapter 4.

4. Case study 3: the ILOCALAPP project and the UniOn! App

This third and final case study under examination will focus upon UniOn! – a mobile application for the incidental learning of languages and cultures – and its possible contexts of usage. UniOn! was developed within the ILOCALAPP project, the third coordinated by the University of Bologna after E-LOCAL and E-LOCAL for all. As we will see, the focus of the project was still on less used languages, and its final product – the UniOn! App – was still conceived for mobility students. The tool realised, however, is very different from the previous ones, as it makes the most of the advances in digital technology to experiment alternative learning modalities and spaces. In this case in fact, the users are immersed in the second language environment, and they exploit "connectivity, learning on-the-go, experiential, social, and contextual learning" (Ceccherelli *et al.*, 2016: 4).

The specificities of the ILOCALAPP project will be the object of the initial paragraph of this chapter. Subsequently, we will introduce the methodological framework underpinning the App creation, with a focus upon the involvement of the users and their specific role in the App design. The chapter will then move to illustrate the App development and its features, before discussing the details of the App testing and subsequent revision that led to the final release. Some new contexts of usage will conclude the chapter, along with an overture to possible future developments. As it was in chapter 2 for the E-LOCAL courses, also in this chapter the focus will be on the Italian version and on the city of Bologna in particular, which in this case plays indeed a central role.

4.1 An overview on the ILOCALAPP project

ILOCALAPP stands for *Incidentally Learning Other Cultures And Languages through an APP*; as it was for E-LOCAL, the acronym reveals the main features of the ILOCALAPP project, which was aimed at developing an App for the incidental learning of four cultures and languages: Finnish, Italian, Polish and Portuguese, meant to offer to mobility students the possibility to get acquainted with local language and culture in a smart, creative way (Valva *et al.*, 2018). In this initial paragraph we will recall some preliminary information about the project organisation (timing, partners, goals, target groups) along with its founding principles.

4.1.1 Preliminary information about the ILOCALAPP project

ILOCALAPP was a three-year Erasmus+ project funded under the Key Activity 2[13]. It lasted from October 2015 to August 2018 and it was carried out by a transnational consortium composed by the Adam Mickiewicz

[13] As anticipated, Erasmus+ is the programme of the European Union supporting education, training, youth and sport and running from 2014 to 2020. It replaced the Lifelong Learning Programme (LLP), which operated in the period 2007-2013. In Erasmus+, the Key Activity 2 is that dealing with cooperation for innovation and the exchange of good practices, whereas under the LLP, KA2 was the specific action line for languages.

University (in Poznań, Poland) the University of Lapland (in Rovaniemi, Finland), and the Centre for Social Studies of the University of Coimbra (in Portugal), and coordinated by the University of Bologna in Italy. This latter involved two Departments, the Department of Computer Science and Engineering and the School of Languages and Literatures, Interpreting and Translation. All the partner institutions participating in the ILOCALAPP project were also part of the E-LOCAL and the elocALL projects; they had therefore contributed to the creation and the diffusion of the E-LOCAL courses, as we have described in chapter 2 above.

The main output of the ILOCALAPP project was a mobile application for language learning, including a significant amount of culture-related materials, and genuinely fostering mobility. The App was named UniOn!, in reference to university life and to the fact of being activate, on. The exclamation mark was also embedded in the App name, to reinforce the idea of action and integration (Cervini, 2018). The main target group envisaged by the ILOCALAPP project was, in fact, constituted by university students spending a mobility period at one of the European universities involved in the project. The App eventually turned out be useful also for other categories of people visiting those cities, but – being chiefly oriented towards the specific and concrete needs of mobility students – it was specifically designed for that group.

The three years of the ILOCALAPP project were organised around three macro-phases, as follows:

1. The first phase was dedicated to the methodological discussion, and it included the drafting of methodological documents as well as the end users' consultation. In this phase the users' needs were analysed using a participatory approach, and the methodological framework for the UniOn! App was fully outlined.
2. The second phase was dedicated to the production, and it included both the development of learning contents and their technological implementation. As we will see, the end users were involved also in this phase as they were invited to test the first prototypes.
3. The third phase was dedicated to the piloting of the final prototype, its revision on the basis of the feedback collected, which led to the release of the finalised App (Valva *et al.*, 2018).

It is interesting to note that – as it was for the E-LOCAL project – also the path followed by ILOCALAPP presents many similarities with the Action Research approach suggested by Bax (2011) in order to investigate if and how the educational practice can be benefitted from technological innovations, and for which the analysis of the users' needs represents an important step.

In the following paragraphs, we will follow the chronological development of the project activities in order to trace and discuss the specificities of the UniOn! App and its impact, if any, upon the internationalisation of the universities involved. Before doing that however, we will introduce the founding principles that were at the basis of the ILOCALAPP project.

4.1.2 The ILOCALAPP founding principles

The ILOCALAPP project essentially aimed at disseminating knowledge about languages and cultures to everyone, maintaining the 'for all' spirit that was intrinsic in the elocALL project. For that purpose, it was decided to exploit a mobile learning solution, which could allow for a more outreach strategy in comparison to the previous Moodle-based courses (ILOCALAPP Consortium, 2016a). Learning through mobile technologies, in fact, offers more opportunities for authenticity and inclusion, and it helps removing the boundaries between educational settings and life, also letting the users co-construct meaning and knowledge (Cervini *et al.*, 2016). This was in line with the internationalisation actions envisaged by 2011 Modernisation Agenda of Higher Education in Europe that confirmed that learning mobility helps individuals increase their professional, social and intercultural skills and employability (European Commission, 2011).

As we will better outline below, the project followed the principles of incidental learning, relied upon the learners' participation in the process of meaning-construction and exploited the geo-localisation of relevant contents in order to enable the users to integrate in and interact with the city hosting them. With the App developed by the ILOCALAPP project, the "formal aspects of learning are interlinked with the informal learning experiences" (Sharples *et al.*, 2015: 11), which may take place at any time and at any place. Learning takes place in informal settings, it is contextualised in the University city where the students arrive and it is embedded within their daily activities on the basis of their position within the city; as such, it differs from the conventional ideas of language and culture teaching (Ceccherelli *et al.*, 2016).

After E-LOCAL and elocALL, ILOCALAPP was the third project coordinated by the University of Bologna dealing with languages, cultures and mobility and facing topics like raising language awareness, enlarging access to language resources, preserving linguistic and cultural diversity, promoting the internationalisation of education (Ceccherelli *et al.*, 2016). With ILOCALAPP, the focus was upon interaction and integration; i.e. upon an approach for which language proficiency and intercultural comprehension are fostered by a technological tool and finalised to let the learners interact and integrate. In this regard, the ILOCALAPP project addressed three specific EU priorities:

i. First of all, it fostered mobility by providing students with more opportunities for gaining additional skills through studying or training abroad. In order make learning mobility a concrete and exploitable opportunity for a growing number of students, the 'right tools' have to be identified, and the ILOCALAPP project worked in that direction.
ii. Secondly, it promoted innovative methods for the acquisition of languages, intercultural skills and also digital competences. In such a way, ILOCALAPP developed three out of the eight EU key competences for lifelong learning, namely communication in foreign languages, digital competence and cultural awareness.

iii. Finally, ILOCALAPP enhanced digital integration by promoting access to Open Educational Resources and learning through them (Ceccherelli *et al.*, 2016).

In the following paragraphs we will illustrate in which ways these three priorities were addressed while developing the UniOn! App, and which concrete results were obtained once the App was released and used by mobility students.

4.2 The project methodological framework

Before designing and developing the UniOn! App, the project Consortium invested time into exploring relevant research pertaining to the project objectives. The results of this investigation were collected into a methodological document, called Methodological specifications (ILOCALAPP Consortium, 2016a) and upon which the following sections are based.

The Methodological specifications contain the methodological framework for the project, including the approach to learning and the core values sustaining the ILOCALAPP idea. The document also incorporates the results of the users' consultation and the principles for the App development. The theoretical reflections were combined with the input received by the end users and resulted into a dedicated methodological document facing the practical implications of having a *learner* who is at the very same time also a *user* of the App (Valva, 2018b).

The remaining of this paragraph is dedicated to outlining the methodological specifications as they were dealt with in the project methodological document, whereas the users' consultation and the App development will be the object of two dedicated paragraphs following this one.

4.2.1 The ILOCALAPP approach to learning

The UniOn! App was developed starting from the assumption that it should convey informal, incidental and – evidently – mobile, context-aware learning.

As we have shown in chapter 1, mobile technologies have opened up for new, stimulating learning possibilities for higher education students insofar as they can make boundaries between educational settings, life and work more permeable (Macdonald, Creanor, 2010). Nowadays in fact, the ways in which we learn and interact with each other are increasingly mediated by technological devices (Burnett, 2002). On the one side, learning has become more accessible and participatory, with more opportunities for authenticity and inclusion; on the other, "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" (Lankshear, Knobel, 2006: 65). From this perspective, using the mobile App leads to learning technological skills as well because

"technology and technological skills are also intertwined in the mobile application with languages and cultures" (ILOCALAPP Consortium, 2016a).

As for informal learning, it is usually defined in opposition to learning in institutionalised contexts, from experts; informal learning does not take place in formal environments and it is more experiential, peer or practitioner learning (Laurillard, 2007). Learning occurring in informal conditions has "no curriculum, or teacher, or formal feedback, or goals, or assessment", but it implies nevertheless "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" (ILOCALAPP Consortium, 2016a: 9). In other words, learners mediate with their local context to construct their own learning environment, and they define their own goals, forms of practise, feedback, adaptation, collaboration and reflection (Laurillard, 2007).

Even though it has been a phenomenon known since the 1970s (Livingstone, 2001), the recent developments of mobile technologies have created new supports for informal learning and new ways for approaching it. In this regard, "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" (Clough, 2015: 43).

When it comes to incidental learning, as we have seen, it is a form of informal learning, which is not planned nor intentional; it is a by-product of other activities and it happens without learners being conscious of it (Kerka, 2000). Incidental learning is very typical of childhood, whereas for adults it is usually associated to socialisation and linked to the socioeconomic, political and cultural context. As such, incidental learning is based on prior knowledge and it is mediated by available means and tools, and by the preferred learning styles as well (ILOCALAPP Consortium, 2016a). In incidental learning, learners are in contact with factual information and engaged by it, they learn by doing and they interact "with knowledge, experience, other individuals and experts, the task at hand and with the immediate context where learning is taking place" (ILOCALAPP Consortium, 2016a: 8).

To continue with the assumptions underlying the UniOn! App, mobile learning is not the mere application of e-learning on mobile devices, but it is rather a separate type of learning with its own peculiarities (Quinn, 2011). Mobile learning focuses upon the learners' ability to cultivate and exploit connected networks of information for problem solving (Mundie, Hooper, 2010) and, as such, it is out of the classroom logic and layout. According to Vavoula and Sharples (2002: 152), learning can be mobile in three different ways: "it 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".

At its early stages, the features of mobile learning were identified by Klopfer *et al.* (2002) in: portability, social interactivity, context sensitivity, connectivity and individuality. Ten years later, Castillo and Ayala (2012b: 2293) confirmed those features by stating that mobile learning is: situated, personalised, collaborative, ubiquitous and lifelong. Consequently, mobile learning provides opportunities for expanding traditional teaching methods, as well as informal and incidental learning.

In particular, due to the ubiquity of mobile devices and their social use, mobile learning is becoming more and more context-aware. Mobile devices allow to situate learning into the same context in which it is applied, and the immediate applicability is an engaging element for students. Learning experiences can exploit the learner's environment, which becomes itself a learning resource. Contextualised learning is also personalised, and controlled by the learner, even though in a collaborative form, as learners can build shared knowledge (Traxler, Kukulska-Hulme, 2016).

As outlined in 1.5 and 1.7 above, mobile learning also implies some challenges, which are to be faced when planning an educational App. First of all, mobile users are more likely to be distracted, because of the mobile device itself (e.g. messages, notifications, and so on) and because of the contextual environment in which mobile learning takes place. In addition, a major challenge of mobile learning is that the same learning material can be used in very different surrounding contexts. As a remedy, context-aware learning integrates the contextual resources (i.e. the input of any kind coming from the context, as well as the clues making that input understandable) into the learning content; in fact, context-sensitive learning content can be delivered to the learner and the mobile device can provide relevant feedback upon the learner's actions (Laine, Nygren, 2016).

The small screen of mobile devices, especially of smartphones, can be a further challenge. The small size impacts upon the creation of learning materials and makes compact texts preferable. However, the users can always return to the content, whenever there is a longer pause along the day, since people take mobile phones everywhere with them. Moreover, the knowledge gained through mobile learning should be applicable in real-life situations; therefore, the information available within the App should be easily retrievable in order to be instantly applicable. This issue also pertains to the above-mentioned context-sensitiveness, which can be additionally linked to interaction as well. In fact, because of context-sensitiveness of the learning content, the learner is encouraged to interact with surrounding objects and phenomena (Laine, Nygren 2016).

4.2.2 Cultures and languages in the UniOn! App

As anticipated, the App to be developed by the ILOCALAPP project had to include both languages and cultures, conceived as closely related concepts, placed side by side and assigned with an equal status (ILOCALAPP Consortium, 2016a). As we will show, three main reasons were at the basis of this choice:

i) the decision to anchor the App contents to the latest approaches about intercultural communicative competence;
ii) the absence of explicit language teaching within the App contents, insofar as learning were conceived as incidental;
iii) the awareness that including the local, cultural dimension within a mobile application for language learning was an innovative element with regard to the state of the art (Cervini, 2018).

For the project purposes, the definition of language proposed by Geeraerts (1995) was accepted, considering language as embedded in the overall cognitive capacities and referring to "the experiential and pragmatic background of language in use and the relationship between language and thought" (Geeraerts, 1995: 111–112). From this viewpoint, language could not truly exist without the relevant cultural practices, as it is embedded in them; language both reflects and constructs cultural reality for its speakers (Kramsch, 2003), it conveys information and provides knowledge with structure, and culture is integrated in it (Kramsch, 1993). In this regards, cultures and languages are to be considered 'mutually dependent' in the App developed by the project (ILOCALAPP Consortium, 2016a).

This does not mean however that language and culture are inseparable entities; on the contrary, their relation is complex and multidimensional, as they constitute the complex language-culture nexus, which is connoted both historically and ideologically (Risager, 2006). Language and culture can be both inseparable and separable, depending on whether the focus is upon the linguistic practice, linguistic resources or the discursive construction of the 'linguistic system' as a unified, cohesive system (Risager, 2006). However, the (in)separability of language and culture has a lot of further implications for teaching/learning, upon which we will go back in chapter 5.

Kramsch (1995) identified two ways of dealing with culture in language teaching:

i) culture as a representation of a particular social group "through art, literature, social institutions or artefacts of everyday life";
ii) culture as "the attitudes and beliefs, ways of thinking, behaving and remembering shared by members of that community" (Kramsch, 1995: 2).

From the 1980s onwards the cultural aspects of language learning have gained a central position in language teaching (O'Dowd, 2006), with the first way identified by Kramsch (1995) dominating the scene until recently. In UniOn!, culture was meant as the representation of a social group expressing through art, literature, institutions, artefacts and daily actions. The contextualisation of language-culture expressions within local, cultural reality, and within real-life situations experienced by mobility students, is very strong, though (Cervini, 2018).

This is in line with the model of intercultural communicative competence, which includes two broad categories of cultural knowledge: i) knowledge of social groups and their products and practices in both cultures, and ii) knowledge of processes of interaction at individual and societal levels (O'Dowd, 2006). The intercultural perspectives, in fact, underline the interactive process of culture learning and the interconnectedness between the culture and language learning; the aim of intercultural learning being the successful interaction with members of other cultures and the understanding of how members of other cultures see and interpret the world (ILOCALAPP Consortium, 2016a).

Intercultural learning is meant as an interactive process involving the development of skills, attitudes, cultural awareness as well as knowledge. As a result, learners are expected to gain critical cultural awareness, i.e. a more critical view on their own culture due to the encounter with another culture. Critical cultural awareness is enhanced when interaction with partners involves negotiation of meaning and explicit comparison rather than simple exchange of cultural information (O'Dowd, 2006).

All these concepts were already analysed and exploited during the design of the E-LOCAL courses, they were also faced when developing the Italian MOOC and they were once more taken into account when developing the UniOn! App. The fact that all the ILOCALAPP partner institutions had participated in the former projects facilitated the task of creating a learning tool comprising both language and cultural components, as they could build on previous experience and rely upon previous knowledge.

Nevertheless, the UniOn! App required a stronger integration of culture in the learning materials, when compared to the E-LOCAL courses, because the learning materials had to be contextualised in real-life situations of the mobility student in the local culture. The intertwinement of linguistic and cultural components had to be a motivating and engaging factor for the App users. The innovation of the UniOn! App lied precisely in the combination of cultures and languages as intertwined elements, and in its being tailored to mobility students. When UniOn! was designed and launched there was no other App with those features, nor there is a similar App at the moment, as far as we know. In other words, there is abundance of applications for language learning, and also the applications for less commonly taught languages – such as those covered by the ILOCALAPP project – are increasing, but none with a similar approach to cultural understanding, with geo-localised contents oriented towards the specific students' needs (ILOCALAPP Consortium, 2016a).

4.2.3 The ILOCALAPP core values

The core values identified for the ILOCALAPP project were based upon the four principles for learning with digital technologies identified by Lankshear and Knobel (2006), for whom learning should be: i) efficacious; ii) integrated; iii) extensive and iv) critical. We will briefly describe the four principles here below.

1. The principle of efficacious learning. In order to be efficacious, learning has to be connected in meaningful and motivating ways to related social practices, understood as "ways of using language, acting and interacting, believing, valuing, gesturing, using tools and other artefacts within certain (appropriate) contexts" (Lankshear and Knobel, 2006: 196). From such a perspective, learning is conceived in terms of "trajectories through diverse social practices and institutions", it is a progression towards a fuller understanding, and it must put the learner "on the right track toward becoming a competent participant" (Lankshear and Knobel, 2006: 196).
2. The principle of integrated learning. Three conditions are necessary for learning to be integrated. First of all, it must occur inside the socio-cultural practice and not at a distance (i.e. learning *within*, *in situ*, rather than *about* the practice); secondly, the various parts composing the social practice are to be learnt in their relationships and not as chunks to be composed thereafter (i.e. they are intertwined elements); thirdly, learning does not have to be "in conflict with the identities we are called to be in the rest of our lives" (Lankshear and Knobel, 2006: 197).
3. The principle of productive appropriation and extension in learning. Learning should build on previous knowledge and experience, because, "if learners already know how to perform discursive roles and tasks that can legitimately be carried over into new discursive spaces, this can be used to advantage to enable learning and proficiency in a new area" (Lankshear and Knobel, 2006: 198). This principle also implies an effort to reduce any eventual clash between different socio-cultural identities during learning.
4. The principle of critical learning. Learning should prepare learners to understand the nature and the limitations of the various sets of social practices. In this regard, it should "create spaces for developing and negotiating differing points of view on social practices, identities, institutions and the like" (Lankshear and Knobel, 2006: 199). This also means creating spaces for experiencing different and competing sets of practices and deciding how to handle their divergence.

Starting from these principles, the ILOCALAPP Consortium selected some core values supporting the improvement of the quality of mobility through language proficiency, intercultural understanding, interaction and social integration of the student. From this perspective, the ILOCALAPP core values also reflected the learning concepts at the core of the project: mobile, informal and incidental learning (ILOCALAPP Consortium, 2016a).

The methodological core values of the ILOCALAPP project were organised along the three following thematic clusters:

i) as for the learner's participation, the App is meant to be collaborative and participatory; in this regard, the learner/user is in control, and learning and usage of the App are constructive (i.e. they include the possibility of co-construction of contents);

ii) as for the cultural immersion, the App is meant to be integrated and situated; i.e. learning is context-aware and context-specific, involving authentic, real-life situations;

iii) as for the type of learning and activity, the App is meant to be informal and incidental; learning represents a by-product of other activities carried out by the users, situated outside the classroom and linked to their daily lives (e.g. exploration of the new city, observation of the new location, interaction in the new place).

Moreover, as illustrated by figure 19 below, these three clusters of core values were incorporated in – and at the same time they are sustained by – the concept of 'mobile': student mobility, mobile devices, and mobile learning.

Figure 19. The ILOCALAPP core values.

A relevant support in transforming the core values into practical design solutions was provided by the end users who were consulted throughout the project, as we will illustrate below.

4.3 The users' consultation

The active and ongoing contact with mobility students, as well as their collaboration and participation throughout all the stages of the App development, was considered necessary to keep up-to-date with their current lifestyle and potential changes on the way. The App had to be relevant to their social, cultural and historical realities in order to capture the users' interest. In this regard, one of the major challenges of the project resided in the considerable foresight needed to produce an App appealing for students beyond its launch scheduled for 2018 (ILOCALAPP Consortium, 2016a).

In line with this perspective, the current features of the UniOn! App derived from a careful end users' consultation, initially carried out in 2016 and then continued under diverse forms when potential users were called to test the prototypes available at the different stages of production (as we will show in 4.6 below). In 2016, before the beginning of the development stage, the end users were consulted by means of traditional channels (online surveys and face-to-face reviews) and also applying some principles based on the user-centred design approach and the participatory methodology (Mirri *et al.*, 2017). In particular, the 2016 end users' consultation consisted of three main activities – i) an online survey, ii) focus groups and iii) experience prototyping sessions – which will be the object of the following sections. Before entering into the details of the consultation however, it is necessary to specify the project approach to the consultation itself, and to collaborative learning practices.

4.3.1 Towards collaborative practices

Learners have access to both conventional and computer-related, screen-based dominions, and they have to develop the skills to explore both of them. In particular, learners are getting accustomed to inhabiting the emerging space of digital media, which is characterised by a change in social relations. While social relations pertaining to industrial and post-industrial space are enclosed and purpose specific, social relations in the space of digital media are open, continuous and fluid (Lankshear, Knobel, 2006). These differences influence the type of practices that people develop, and accounting for all available sets of practice represents a relevant educational challenge as incidental learners who are engaged with technological environments may end up developing new user identities, upon which learning can possibly capitalise (ILOCALAPP Consortium, 2016a).

The recent technological evolutions have changed the nature of communication, also impacting upon learning environments and learner identities. Communication has become individuated but multidirectional (i.e. it is not anymore from a centre to a mass but it is targeted to single individuals from many locations), and the audience has become interactive (Snyder, 2002). These changes in communication combine with changes in the learners' attitude, whereby learners have become capable of multitasking, of spreading across practices and discourses (ILOCALAPP Consortium, 2016a).

In light of these considerations, educational mobile applications are to be approached as a completely new kind of setting for learning and not as a book with different chapters (ILOCALAPP Consortium, 2016a).

> *"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" (ILOCALAPP Consortium, 2016a: 12).

In order to enable the potential users of the App to contribute to the definition of contents and functionalities, the project Consortium developed a consultation strategy "situated on the interface between the multimedia design, digital literacy and language teaching/learning" (ILOCALAPP Consortium, 2016a: 13). The strategy combined quantitative and qualitative methods and hinged upon the specific features of mobile, incidental learning, which is collaborative-oriented, as well as upon expectations and previous experiences. The consultation utilised three different tools, which reached a huge, diversified audience of potential users, and whose results led to the definition of the App features.

4.3.2 The ILOCALAPP online survey

As a first step of the end users' consultation, the ILOCALAPP team designed an online survey to investigate the students' views on language and culture Apps and the usage of Apps and mobile devices in their everyday life. It is worth mentioning that the survey itself was designed through a collaborative method, which took into account the partners' diverse approaches to consultation. The final goal of the survey – which is reported in Appendix G – was to identify the cultural areas of contents to include in the App, as well as contents and features capable of motivating the users.

The online survey was launched in all partner institutions on 16 February 2016, it was advertised among more than 25.000 people, and when it was closed on 28 March 2016 it had obtained altogether 2350 answers from all over Europe and the world (Mirri *et al.*, 2017).

The questionnaire consisted of 20 questions, which were grouped into three parts:

i) the first part focused on cultural areas of interests, and on views on learning languages and cultures through Apps (it included questions 1-6);
ii) the second part was dedicated to technical details about the usage of Apps and mobile devices (it included questions 7-14);

iii) the third part was about some personal details to identify the profile of respondents (it included questions 15-20).

The remaining of this sub-paragraph is elaborated from the 'Report on students' needs and expectations: the online questionnaire' published by the ILOCALAPP Consortium (2016b). We will discuss here below the responses to the questions, while providing some comments as well and some conclusions summing up the results. In particular, the three following sub-sections will include the details about the three parts of the questionnaire, whereas in the final sub-section we will provide some remarks about a gender analysis of the results.

4.3.2.1 Part 1: cultural areas and views on language and culture Apps

The first part of the ILOCALAPP online survey consisted of six questions dedicated to investigating the respondents' interest about cultural areas and their views on language and culture Apps.

Question 1 was about the cultural areas of interest. Respondents were invited to choose among a list of possible areas only those that they found more relevant. The three most interesting cultural areas were "art and literature" (63%), "habits and lifestyle" (57.8%), and "history and traditions" (50.3%). On the contrary, the areas that obtained less responses were "sports" (12.6%), "politics and religion" (22.6%), and "environment and nature" (28%). The other options gained about 40% of responses: "music" (43.3%), "movies" (42.7%) and "cuisine" (40.7%). Figure 20 below summarises the results of Question 1.

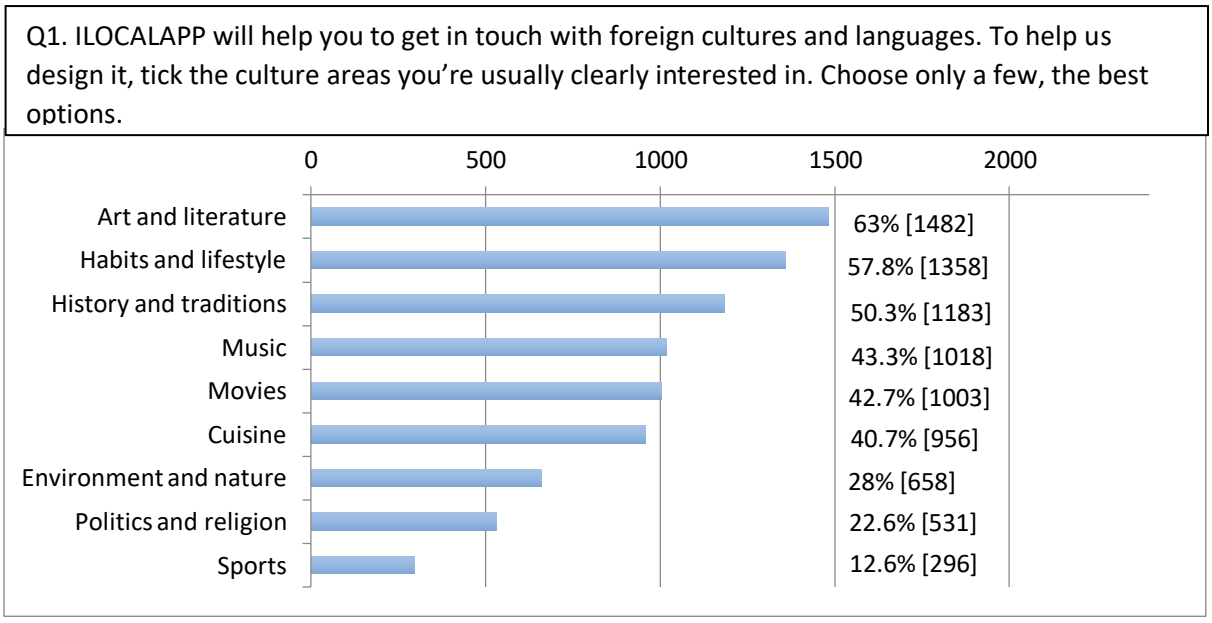

Figure 20. The cultural areas of interest in the ILOCALAPP survey.

Question 2 was about what makes motivating an App for language and culture learning. The most motivating feature was “short, useful learning moments” (48.6%), followed by “being able to track my progress” (44.2%) and “efficient” (44.2%). “Interactive” obtained 42.7% responses and “simple enough to use” 40%, whereas the features identified as less motivating were “fun” (31.8%), “attractive” (31.3%) and, perhaps surprisingly, “game-like elements” (16%). These results show that motivation was linked more to usefulness and efficiency that fun and attraction.

Question 3 was about the previous usage of language and culture Apps, and the vast majority of respondents (77.5%) had not used an App for language and culture learning before. The 22.5% of respondents who claimed to have used an App for language and culture learning were invited to specify what App(s) they had used. Many respondents named more than one single App, however the mostly mentioned App was by large Duolingo (42.6%), followed by Memrise (11.2%), Babbel (11.1%) and Busuu (3.6%). Then, about 60 other Apps were mentioned but with very small numbers per each of them. Some of them were quite new, and therefore not frequently used yet, or they had only a regional distribution.

Question 4 asked to those who had claimed a previous usage of language and culture Apps to describe what they liked in those Apps. In total, 485 respondents (out of 528 who declared to have had a previous experience) indicated the positive features. The answers to this question were grouped into the following seven themes (please notice that some respondents indicated more than one features, so the total is more than 100%):

1. Simplicity of the App and easiness of use (35.5%);
2. Possibility to track and test your progress (18.8%);
3. Interactiveness (14%), referring to both the nature of activities and to the possibility to communicate with other users;
4. Game-like learning through scores obtained and levels achieved (12.4%), which was the least motivating feature in question 2 but which was appreciated in the App experienced;
5. Short learning moments, short steps (12.2%), referring to a relaxing usage during breaks;
6. Practising pronunciation, possibility to hear words or phrases pronounced by a native speaker (9.3%);
7. Intuitive design, attractiveness (8.5%).

To sum up, students who had already used an App for language learning appreciated “simple, functional design and short steps, progress tracking, sometimes game-like learning and the possibility to interact or at least practise pronunciation” (ILOCALAPP Consortium, 2016b: 9).

Question 5 asked to those who had claimed a previous usage of language and culture Apps to describe what they did not like in those Apps. In total, 415 respondents (out of 528 who had had a previous experience)

focused on negative features, which were grouped into the nine following categories of themes (here again some respondents indicated more than one features):

1. Missing elements (23.6%), i.e. the App did not provide a complete set of materials;
2. Repetitiveness and low level of learning (22.4%);
3. Issues with costs, including commercial content (12.5%);
4. Design issues (8.6%);
5. Technical problems (5.7%);
6. User-related issues (4.8%), mainly related to schedules and timing;
7. Visual issues (2.2%);
8. Too many notifications (2.2%);
9. Miscellaneous comments (6.3%), including compatibility with the device and language selection.

The shortcomings identified by those with a previous experience with language and culture Apps reinforced the idea of having complete learning materials, intriguingly combined to give value to the learning experience, within an up-to-date designed App and comfortable to use.

Question 6 was the final question of the first part of the questionnaire, and it simply invited the respondents to add any remarks to the questions answered up to that point. The answers provided – about 50 – were categorised into three main topics:

1. Culture-related learning, meaning that the App should connect language learning with cultural information, i.e. include information about local cultures (indeed, some respondents acknowledged the innovation of the project in the inclusion of cultural aspects and pointed out that the majority of the Apps just focused on grammar and vocabulary);
2. Interactiveness either with other learners or native speakers, referring to the possibility to contact people to speak with;
3. Simple approach, with an easy and functional design.

In short, these final open comments highlighted the necessity of a connection to reality presented in a simple way as key for a successful App. With Question 6 the first part of the questionnaire related to the cultural areas of interest and the views on language and culture Apps was concluded.

4.3.2.2 Part 2: usage of Apps and mobile devices

The second part of the ILOCALAPP online survey consisted of eight questions (questions 7-14) investigating the role of the Apps and of mobile devices in the respondents' daily practices.

Question 7 was about the operating system on the respondents' smartphone. The most widespread operating system was Android OS (61.7%), followed by Apple OS (24.2%) and Windows 10 Mobile, Windows Phone, or Microsoft Mobile (9.7%). Moreover, 3.1% of respondents did not know the operating system on their smartphone, and 1.3% stated that they had another operating system. Among those who chose the 'other' option, there were also some respondents (0.7%) who specified in the open-ended answers not to have a smartphone at all.

Question 8 was about the frequency of battery charge, and the vast majority of respondents (59.8%) stated to charge their smartphones daily. 15.8% of respondents said to charge their smartphones twice a day, and 6.2% charged them more often than twice a day. In addition, 11.9% claimed to charge their smartphones every other day, and 6.3% charged them even more seldom. The answers to this question depict the respondents as active smartphone users, since they charge them quite often.

Question 9 enquired about how many Apps were installed on the respondents' smartphone. The majority of respondents (41.8%) declared to have 10–20 Apps installed, 28% stated to have less than 10 Apps and 17.7% to have 21–40 Apps. As for the other available options, 4.8% declared to have more than 40 Apps, whereas 7.7% had no idea about how many Apps were installed on their smartphone. Question 10 asked about how many Apps the respondents had installed themselves on their smartphones: 42.6% of respondents had installed themselves 6–10 Apps, 22.6% of respondents had installed less than five Apps and 20.4% had installed 11–20 Apps. As for the other available options, 7.4% of respondents said to have installed themselves 21–40 Apps and about 2.3% to have installed more than 40 Apps. Finally, 4.6% had no idea about the number of Apps they had installed. Answers to questions 9 and 10 showed quite a lot of variation between the number of Apps in the respondents' smartphones, and also in their activeness of installing Apps.

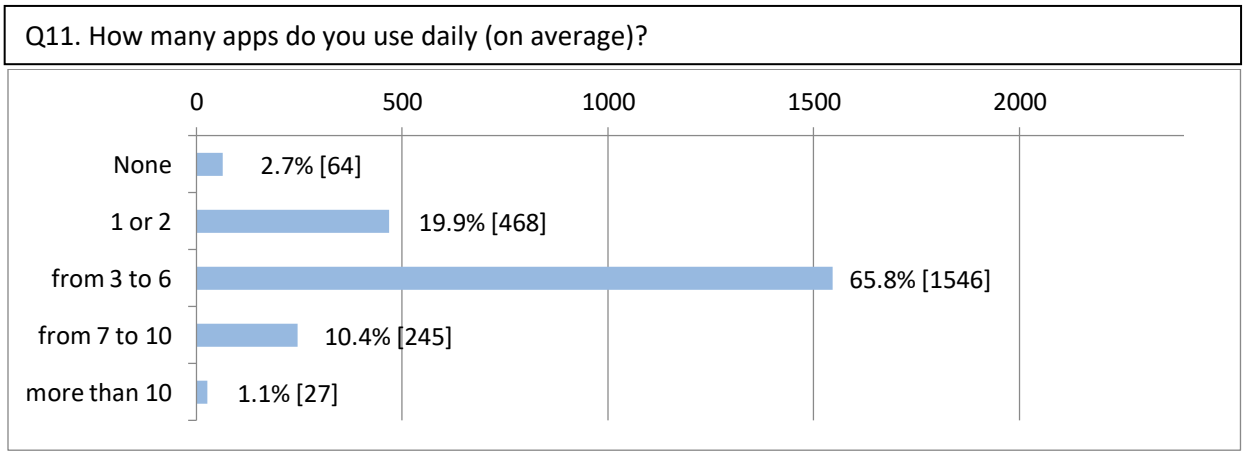

Figure 21. The daily usage of Apps in the ILOCALAPP survey.

As shown in figure 21 above, Question 11 investigated the number of Apps used with a daily frequency by the respondents. The vast majority of them (65.8%) stated to use 3–6 Apps daily, 19.9% used one or two Apps every day and 10.4% used 7–10 Apps daily. More than 10 Apps per day were used by 1.1% of respondents, whereas 2.7% affirmed not to use any App every day. Question 11 let intend that only a limited number of Apps reached a daily frequency of usage, and this was confirmed by Question 12.

Question 12, in fact, kept investigating about the frequency of Apps usage by asking to rate how often the respondents used some specific Apps. The respondents could choose among daily frequency (value 1), weekly frequency (value 2) or less often (value 3). The most often used Apps were Facebook (with an average value of 1.3), WhatsApp (with an average value of 1.5) and Gmail (with an average value of 1.8). The other Apps to be rated obtained the following average values: Instagram (2), Google Maps (2.2), Google+ (2.6), Google Drive (2.7), Twitter (2.7), Telegram (2.8), TripAdvisor Hotels Restaurants (2.8) and Foursquare (3). The average values reported do not take into account the great difference in the number of users for each App, and also the great difference between the number of users for each proposed frequency. The table below provides a clearer overview on such differences.

App	Respondents for Daily frequency (1)	Respondents for Weekly frequency (2)	Respondents for Less often (3)	Total users per App	Average frequency value
Facebook	1834	161	254	2249	1,3
WhatsApp	1573	127	443	2143	1,47
Gmail	1084	487	583	2154	1,77
Instagram	808	265	845	1918	2,02
Google Maps	262	1121	770	2153	2,24
Google+	227	206	1372	1805	2,63
Google Drive	126	334	1347	1807	2,68
Twitter	178	142	1423	1743	2,71
Telegram	144	103	1449	1696	2,77
TripAdvisor	27	280	1499	1806	2,82
Foursquare	15	29	1598	1642	2,96

Table 7. Frequency of Apps usage in the ILOCALAPP survey (adapted from ILOCALAPP Consortium, 2016b).

Question 13 asked how often the respondents shared data (text, images, videos) on social networks (Facebook, Twitter, Instagram, etc.): 38% of respondents (894) stated to share data on social networks sometimes (once a week), whereas 30.2% of respondents (709) affirmed to share data rarely (once a month). The other options of frequency obtained lower percentages: 11% of respondents (259) shared data once a day, 10.6% (250) never shared data on social networks and 10.1% (238) shared a few times a day. The majority of respondents declared to share data, even though the frequency of sharing varied notably. Social networks were indeed part

of the respondents' daily life (as also suggested by the results of Question 12), but maybe with a rather passive attitude for some of them, at least as far as data sharing was concerned.

Question 14 ended the second part of the survey and enquired about the habit of installing Apps with offline maps and/or city guides or similar when planning a trip: 53.5% of respondents stated that they usually did install such Apps, whereas the remaining 46.5% stated that they did not. All in all, installing Apps functional to trip planning seemed to be a quite common trend among the respondents.

4.3.2.3 Part 3: the respondents' profile and some conclusions

The third and final part of the ILOCALAPP online survey consisted of 6 questions (15-20) and focused on the respondents' personal details in order to have a profile of their background.

Question 15 was about the age group. 42.9% of respondents were aged 19–22 years and 37% were between 23 and 26 years. The other age groups obtained less replies: 7% of respondents were aged 15–18 years, and also 7% were over 30 years old; 6% were between 27 and 30 years. Indeed, the largest age groups were in line with the expected target group of the UniOn! App.

Question 16 was about gender. The vast majority of respondents (77.3%) were female, 20,.4% were male, and the remaining 2.3% answered that they did not wish to specify. An analysis of the gender differences in the survey result will be provided in 4.3.2.4 below.

Question 17 was about the first language of the respondents. They had to choose among the four languages of the ILOCALAPP Consortium, and they could also select 'other' and then specify which one. Italian was the first language of the majority of respondents (53%), followed by Polish (22.3%). The third largest group was composed by 'other' languages; in total, 45 different languages were mentioned with those with more respondents being Russian (46 respondents), German (41 respondents), Spanish (39 respondents), English (35 respondents) and Ukrainian (31 respondents). Finally, 4.6% of the respondents selected Portuguese as their first language and 2.6% were native speakers of Finnish.

Question 18 was about the current location of the respondents: 43.5% were located in Bologna, Italy, when they were submitting their answers to the online survey; 27% were in Poznań, Poland, 5% were in Coimbra, Portugal, and 2.9% were in Rovaniemi, Finland. The remaining 22% reported different locations around Europe and the world.

Question 19 invited the respondents to identify themselves within one of the proposed positions. 39.4% of the respondents identified themselves as students planning to go on an exchange (and this is in line with the answers about the age group as it is usually between the 19 and 22 years that students start planning mobility), 33.1% were exchange students (past or present) and 12.9% were international degree students. Together, these three groups made up 84.4% of respondents, confirming the project main target group. The remaining

14.6% chose the option 'other' and most respondents identified themselves as 'just students', but also as teacher, researchers, academic staff and travellers. Moreover, the answers to questions 17-19 also confirmed that the questionnaire managed to reach various people both within and outside the Project Consortium, thus providing the results with an enlarged perspective.

Question 20 was the last one and asked to those interested in the project activities to leave their e-mail address; 28.3% of respondents left it.

All in all, the survey results confirmed the project expected target group in terms of age and positions (young adults, planning or taking a mobility period). The results also confirmed the expected most commonly used mobile operating systems (Android, 61.7%; iOS, 24.2%) and the most frequently used Apps (Facebook, WhatsApp, GMail). A further relevant aspect was that 53.5% of the respondents declared that they usually installed Apps with offline maps and/or city guides or similar when planning a trip. In addition, the results could be used to better identify the areas of contents to include in the App, the features motivating the uses of language and culture Apps and also the features mostly appreciated as well as those perceived as negative in other Apps (see 4.4 and 4.5 below). As for the areas of contents, the App could contain all the topics proposed, with geo-localised contents to be exploited in real-life situations and to integrate the new environment. The App should propose short and useful learning moments (useful from the students' perspective), be interactive and efficient, and also easy to use (Mirri *et al.*, 2017).

It must be added, however, that most respondents provided their answers based on expectations, and not on previous direct experience as only 22.5% of them had used a language and culture App before. Those with a previous experience valued mostly simple, functional design features, short steps and progress tracking. The same group criticised Apps with incomplete sets of material, and also monotonous contents, repetitiveness and low learning levels. These hints had to be exploited to design an App providing a sense of completeness, with intriguingly and logically combined contents, and also with a clear connection between the learning experience and real-life situations (ILOCALAPP Consortium, 2016b).

4.3.2.4 An analysis of gender differences

The ILOCALAPP survey was returned mostly by female respondents: 1816 out of the 2350 total respondents (i.e. 77.3%) were female. As for the remaining respondents 480 were male (20.4%) and 54 did not wish to specify their gender (2.3%). A gender breakdown was made when analysing the replies to the 20 questions of the survey, and the main results are reported here below.

As for the cultural areas of interest, the most popular cultural area was "art and literature" for both female and for those who did not specify their gender. This area was the second most popular for male respondents, whereas they selected "history and traditions" as their first option (in contrast, "habits and lifestyle" was the

third most interesting area). Female respondents considered “habits and lifestyle” as their second area, and “history and traditions” as the third one. So, male and female respondents had the same three options in the first three positions, but with a different ranking. For those who did not specify their gender, “music” was the second area while “habits and lifestyle” was the third one.

Also the factors that make motivating the use of a language and culture App differed between genders. “Short, useful learning moments” were the most motivating factors for female respondents, followed by the possibility to track progress and the efficiency. On the contrary, efficiency was the most important factor for male respondents (this factor was in third position for female respondents), “short, useful learning moments” were their second option and simplicity of usage was the third. For those who did not specify their gender, the biggest motivation factor was “fun”, followed by the possibility to track progress and the attractive layout.

As for the previous experiences, 21.4% of female respondents had already used Apps for language and culture learning before. The percentage of users with previous experiences increased to 24% for those who did not wish to specify their gender and to 26.2% among male respondents. Among the most appreciated features of the used Apps, female respondents and those not wishing to specify their gender pointed out the tracking progress, while male respondents highlighted the easiness. Among the negative features, there was mostly the lack of interactivity for female respondents, the repetitiveness for male respondents and miscellaneous factors for those not wishing to specify their gender; the limited amount of exercises and flexibility was reported as a shortcoming by all gender groups.

Android was the most popular operating system among the three groups, with 64.4% among male respondents, 61.1 among male and 57.4% among those not wishing to specify their gender. In this latter group, 18% declared to have a device mounting an iOS (less than in the other two groups: 25.8% female and 20% male respondents has an iOS) and 14.8% a Windows OS (more than the in other two groups: 9.4% female and 10.4% male respondents had a Windows OS). As for the frequency of battery charge, there were no relevant differences among the three groups, with female respondents and those not wishing to specify their gender charging their phones a little bit more often than male respondents.

The overall number of Apps installed on their smartphone was slightly lower among the respondents who did not wish to specify their gender and higher among male respondents, whereas female respondents and those not wishing to specify their gender were aligned in the number of Apps installed by the users themselves, when compared to male respondents who declared to install a bit more Apps.

There were no important differences among the three groups as far as the average number of Apps used daily was concerned. Moreover, for all gender groups, Facebook was the App used most often, followed by WhatsApp and GMail. As for data sharing, the majority of female respondents and of those not wishing to specify their gender declared to share data sometimes (once a week), whereas the majority of male

respondents declared to share data rarely (once a month). Once a month was the second most frequent choice for female and for those not wishing to specify their gender, and, similarly, once a week was the second most frequent choice for male respondents. The other options obtained less replies in all the gender groups.

When asked if they installed Apps with offline maps and/or city guides when planning a trip, 53.5% of female respondents and 54% of male respondents answered that they did; those not wishing to specify their gender were in equal number for both options, 50% said that they did and 50% said that they did not.

Coming to personal details, the most represented age groups were 23-26 and 19-22 (in this order) for all gender groups; and the most represented first language was Italian and the second one was Polish for both female and male respondents, whereas for those not wishing to specify their gender Italian and Polish had the same number of respondents. Other was the third most represented option in the three groups, whereas Portuguese was the fourth most represented option and Finnish the fifth for female and male respondents, while for those not wishing to specify their gender the fourth and the fifth most represented choices were inverted. Consequently, Bologna was the most selected current location of female and male respondents, followed by Poznań, other, and – outdistanced – Coimbra and Rovaniemi. Those who did not specify their gender selected mostly Poznań, followed by Bologna, other, and – again outdistanced – Coimbra and Rovaniemi.

The majority of female respondents and of those not wishing to specify their gender identified themselves as students planning to go on an exchange, whereas exchange students (past or present) were the second most represented category in those two groups. For male respondents the first two most represented categories were the same, but their ranking was reversed. International degree students were the third most represented category for male and for those who did not specify their gender and other was the fourth; for female respondents other was the third most represented category and international degree students was the fourth.

Finally, the e-mail address to be re-contacted was left by 27.3% of female respondents, by 32.7% male respondents and by 24% of those not wishing to specify their gender.

To conclude, the gender analysis showed some differences among genders as far as the motivation factors for using a language and culture App were concerned, and also some minor differences in the cultural areas of interest. More male respondents had had a previous experience with a similar App, and the positive and the negative features reported for previously experienced Apps differed a bit among the three groups.

As for the technical details, Android was the most popular operating system among the three groups, and there were no relevant differences concerning the frequency of battery charge. Similarly, there were no important differences among the three groups in the average number of Apps used daily and the Apps used most often were also the same in the three groups.

Some minor differences emerged in the overall number of Apps installed on their smartphone and also in the number of Apps installed by the users themselves; similarly, there were some differences also in the frequency of data sharing and the attitude to install a dedicated App when planning a trip. Finally, the most represented age groups and first languages, cities and positions were quite alike among the three groups. More male respondents than representatives of the other groups left their e-mail address to be re-contacted for the ILOCALAPP project purposes.

4.3.3 The focus groups

The end users' consultation consisted of other two important steps, in addition to the online survey described in 4.3.2, that is to say the focus groups, which will be discussed in this section, and the experience prototyping sessions, which will be analysed in the following section.

The focus groups were dedicated meetings with smaller groups of students held in all ILOCALAPP partner institutions in April 2016. The aim of those meetings was to get feedback and comments from participants on the functionalities, the interactions, and the flow of the application, in terms of how and when offering contents and activities. The final goal of the focus gruops, in fact, was to find concrete hints for progressing in the definition and the design of the functionalities and the services of the App (ILOCALAPP Consortium, 2016c). In total, 51 people took part in the focus groups (eight in Bologna, 11 in Rovaniemi, 16 in Coimbra and 16 in Poznań), 35 female and 16 male. Each focus group, however, involved maximum eight participants, so some institutions conducted more than a single session. Participants were selected among the identified target groups, they were all international students, some were exchange students and other were degree students. Focus groups took place in small meeting rooms with round tables, they were planned to last no more than two hours, and they were conducted by at least two facilitators. One facilitator had the role of driving the discussion, making sure to involve all the participants; the other facilitator had the role of taking notes and recording the sessions (Mirri *et al*., 2017).

All the focus groups were organised with the same outline, and after the introductory remarks (i.e. a presentation of the project and the participants, and an explanation of what the focus group was intended for), the discussion focussed around the following six main topics, previously agreed by the project teams.

1. Content organisation. Participants were asked to discuss the overall App organisation, different from the traditional Apps for language learning and meant as contents and services supporting mobility (hence learning was meant a sort of 'side-effect' of the App usage), and they were also asked to discuss some specific issues such as the possible division of the contents into three main categories to be selected by the user (i.e. 'in the place', 'daily activities', 'culture') and the notifications related to geo-localisation.

2. App usage. Participants were presented three possible different periods during which the App could be used (i.e. before going to the place, during the stay, and after the stay) and they were invited to discuss the implications.
3. Usage frequency. Participants were presented some issues related to the balance and duration of usage (e.g. Shall the users be required to spend a minimum and/or a fixed amount of time per day with the App? Will they feel (too) pressured or will they prefer to be encouraged to use the App?), and also to the notification system (when, how often, how to send notifications?).
4. Interface. Participants were asked to discuss the following issues: Shall we use icons or texts of instruction? Or both? Shall we have a presentation video? How do we monitor progress? Shall we use 'game-like elements' to monitor and show the progress of the user?
5. Cultural areas. Participants were presented the possible cultural areas to include in the App, which were those proposed in the online survey (i.e. Art and Literature; Cuisine; Environment and Nature; Habits and lifestyle; History and traditions; Movies; Music; Politics and Religion; Sports), and they were invited to discuss them.
6. Interaction. Participants were asked if interaction with other learners and/or with native speakers was relevant and how it could be organised, facilitated (ILOCALAPP Consortium, 2016c).

The comments coming from all the focus groups were analysed and the following, overall results emerged.

1. Content organisation. Participants underlined the importance to relate information to the user's position. In particular, it was considered strategic an integration in the App with mobile/web mapping services, such as Google Maps. Information about public transportation, events and points of interest, links to existing Apps was defined as interesting, as well as information about useful services (e.g. pharmacies, hospitals, citizenship/immigrant services). Language tips of immediate use were particularly appreciated, they had to be context-related and they had to include 'how-to' phrases, survival dictionary and handy expressions. Cultural issues, both in terms of cultural heritage and habits, ways of living were considered crucial for the successful exploitation of the App. Finally, offline availability of 'static' contents and services was marked as important, as well as the idea of bookmarking places to go back to.
2. App usage. The emphasis was on the usage of the App during the stay, which was identified as the period in which the App could be more useful. Also the usage before going to the place was considered relevant in order to start to know the language and the place, to have communication tips, and to get used to the App. In contrast, the usage of the App after the stay did not emerge as

strategic, but it was said nevertheless to be possibly valuable in order to keep the language alive, and to update information for future users.

3. Usage frequency. Participants stressed that there should be no obligation in the App usage, the App should not force the users to do a minimum set of activities, even if some notifications could be exploited as motivational input (eventually by means of game-like elements). The user should be left free to decide and modify the level of notifications and also to adapt the rhythm of App usage to their needs. Ideally, the frequency of App usage could be higher at the beginning of the stay and lower after some months. Simplicity and easiness emerged as the most important features, but also efficiency was significant (i.e. the App should not be slow, but it should not be battery-consuming or perform technical problems as well).
4. Interface. Participants declared to prefer a user interface based on a combination of icons and language of instruction, with priority to images. The user should have the possibility to change the language of instruction and the language linked to the icons (English in principle, but then they could switch to the local language). A tutorial was considered useful by most participants, but it should be simple and concrete, in local language (to get familiar with the sound) with English subtitles. Some participants, though, claimed to rather prefer external links or FAQs, instead of a tutorial. The game-like elements were acknowledged as useful to stimulate and to monitor progress.
5. Cultural areas. In general, participants agreed with all the suggested cultural areas. Some areas were considered more relevant than others, but they were all worthy being included. Participants also suggested to include cultural dos and don'ts, to have activities/tasks culture-related and to include links to cultural/social events.
6. Interaction. Two complete opposite positions emerged from the focus group sessions in this regard: interaction was considered as important among participants in Bologna and in Coimbra and as not relevant among participants in Poznań and in Rovaniemi. On the one side, participants in Bologna and in Coimbra considered important to interact with both native speakers and other users, possibly integrating or linking other existing networks and social media in the App. On the other side, participants in Poznań and Rovaniemi claimed that there was no need to add functionalities to support interaction, since there were plenty of other means, tools, channels, and strategies to exploit for obtaining interaction (Mirri *et al.*, 2017).

To conclude, the focus group experience proved to be stimulating – and also thrilling – in all ILOCALAPP partner institutions. The discussion, in fact, was lively, and brought concrete suggestions and hints for the App

development. The results obtained within the focus groups were also helpful to organise the experience prototyping sessions, which are the object of the following session.

4.3.4 The experience prototyping sessions

The final step of the ILOCALAPP users' consultations consisted in the so-called experience prototyping sessions, which were conducted in May 2016 in the project partner institutions with the aim of getting feedback and comments from participants on the functionalities, the interactions, and the flow of the developing application, by means of a realistic simulation in a real-world context (ILOCALAPP Consortium, 2016d).

Experience prototyping is a method focusing on how tasks are experienced by the users, it aims at gaining understanding of the users' experiences in a real-world context with the purpose of evaluating design ideas. In other terms, through experience prototyping the designers can investigate the users' needs as actors role-playing real users in a real environment; and this lets emerge the users' point of view and approach in concrete situations. The experience prototyping consists in a realistic simulation, and it allows for visualising human behaviour and for sharing even minor and hardly describable qualities. The prototypes could be a physical model of a specific touch point, a sketch, a sign and so on; in any case they have to highlight the service's most important or unusual features, according to the designers' needs (ILOCALAPP Consortium, 2016d).

For the ILOCALAPP purposes, the specific goals of the experience prototyping sessions were:

i) understanding the users' experiences with the App prototype in a real-world context; and
ii) understanding the users' needs and the users' point of view in a real user environment.

To reach those specific goals, three tasks were identified that the participants had to complete during each experience prototyping session at each partner institution, namely:

i) buy a bus ticket;
ii) visit a monument (or a museum or a library);
iii) eat typical food.

In total, ten people took part in the experience prototyping sessions, five male and five female. Some were international and/or mobility students, other were local students enrolled either in Foreign Languages or Computer Sciences degrees. The specific multimedia contents (pictures and texts) were customised for each partner institution (i.e. for each of the four versions of the UniOn! App) starting from some common mock-ups, which were used as prototypes models for the participants. The sessions were conducted outdoor, in the urban environment; they were guided by two facilitators applying the 'Think aloud protocol', i.e. asking the participants to think aloud while they were performing the three established tasks (Lewis, 1982). The ILOCALAPP experience prototyping sessions lasted about two hours each; they were informal and aimed at

letting the participants feel free to provide comments and suggestions; pictures and videos were taken, though, along with textual notes, in order to facilitate the analysis of results (Mirri *et al*., 2017).

The notes and the reports for each session were analysed, and some common remarks were identified, which were summarised in the following categories of issues.

- Navigation among the contents and the services. It was said to play a strategic role, therefore navigation tools should be adequately provided to go back to the previous content/menu/interface, to go back to the index page, and to move across the different services/content/functionalities related to the same content (e.g. tips to talk, cultural and historical information, practical information, games, external links, etc.).
- Interface, layout and their configuration. Opposite positions emerged about background and foreground colours and about font size, which means that customisation was needed and that the application should include the possibility to let the users choose their preferred combination of typographical aspects. In addition, the interface should let the user scroll long content and enlarge images; the interface should also help the user to identify the content typology (e.g. cultural information, language tips, games, and so on).
- Vehicular language vs. target language. The interface and the content should be provided both in English and in the target language; the App should let the user choose the language. Icons and visual clues should be exploited as much as possible in the App interface, though.
- External links and social network connections. They were considered very important by the majority of participants. In particular, they expressed interest in having: i) additional external/official information related to the presented topics; ii) the possibility to share information/pictures/comments; iii) the possibility to be connected with the other users; and iv) the possibility to exploit existing functionalities and social networks.
- Practical and cultural content. A good balance between historical/cultural content and practical information was required by the participants in the experience prototyping sessions.
- Audio content. Audio was considered relevant in particular for the language tips, with the aim of effectively support the users in their daily activities and in learning the language.
- Online vs. offline App. Most participants showed interest in having some contents available also offline, 'static' contents not needing online functionalities or services could be made available also offline, whereas services needing a connection (e.g. the notifications related to the user's position) could not (Mirri *et al.*, 2017).

All in all, the experience prototyping sessions confirmed the positions that had already emerged from the focus groups and allowed to derive concrete hints for further progressing in the definition and design of the App functionalities and services.

4.4 The App development

After the end users' consultation described in the previous paragraph – and after the analysis of all the comments received – the project teams started to actually develop the UniOn! App. The first step of the development process was the creation of a map of contents to be used as an overall framework, then the learning materials created for the E-LOCAL courses (see chapter 2 above) were analysed in order to check if they could be possibly re-contextualised, and finally the actual App creation and implementation process took place, also taking into account the specificities of App-content design. In this regard, it is worth specifying that such procedural pattern along with the operating tools developed represent a further example of replicable model, as we will better outline in chapter 5. The following sub-paragraphs will illustrate all the above-mentioned phases.

4.4.1 The ILOCALAPP map of contents

The specific design of the map of content was inspired by the principles and theories that were discussed in the project methodological document (i.e. informal and incidental learning; mobile, situated, context-aware learning), and also by cognitive sciences and by the affordances of technology, geo-localisation above all (ILOCALAPP Consortium, 2016a).

As anticipated, the main aim was the enhancement of the fruition of authentic input, through the language in use in context-aware interactional frames and specific places. The cultural values related to specific places and habits were also to be let emerge in an authentic and relevant way. For such purposes, the linguistic contents had to rely upon the most probable oral exchanges in a given situational context, while capitalising at the same time on the most interesting cultural pieces of information (ILOCALAPP Consortium, 2016a).

In line with these principles, the ILOCALAPP map of contents was created. It was a document containing the overall structure for all the topics to be included in the four versions of the UniOn! App. In this perspective, the map of contents was a common framework for all the four languages/cultures/cities, but it also contained the elements which were specific for each of them.

The map of contents shows the organisation of the App structure in eight main categories, each of them including from three to six sub-categories. The eight main categories had to be the same for the four versions of the UniOn! App, whereas the sub-categories of contents were supposed to be similar but not identical in the four versions. This variation takes into account the specificities of each town offering different typologies of

Points of Interest to be geo-localised. Each sub-category then contains specific texts and insets, covering practical information, cultural issues and language elements; and several texts within each sub-category point to geo-localised places (or POIs, Points of Interest). Finally, each of the four versions of the UniOn! App also contains a 9th category called WordZ and showing the word or phrase of the day selected among the whole vocabulary of the App. This 9th category was initially supposed to be 'Me in... (Bologna, Coimbra, Poznań, Rovaniemi)', i.e. it was supposed to be customisable by the App users and to be used to include their preferences, in the idea of co-constructing materials. This idea was eventually abandoned for the difficulties in creating a suitable model, and the 9th category became a way for highlighting the vocabulary presented in the App.

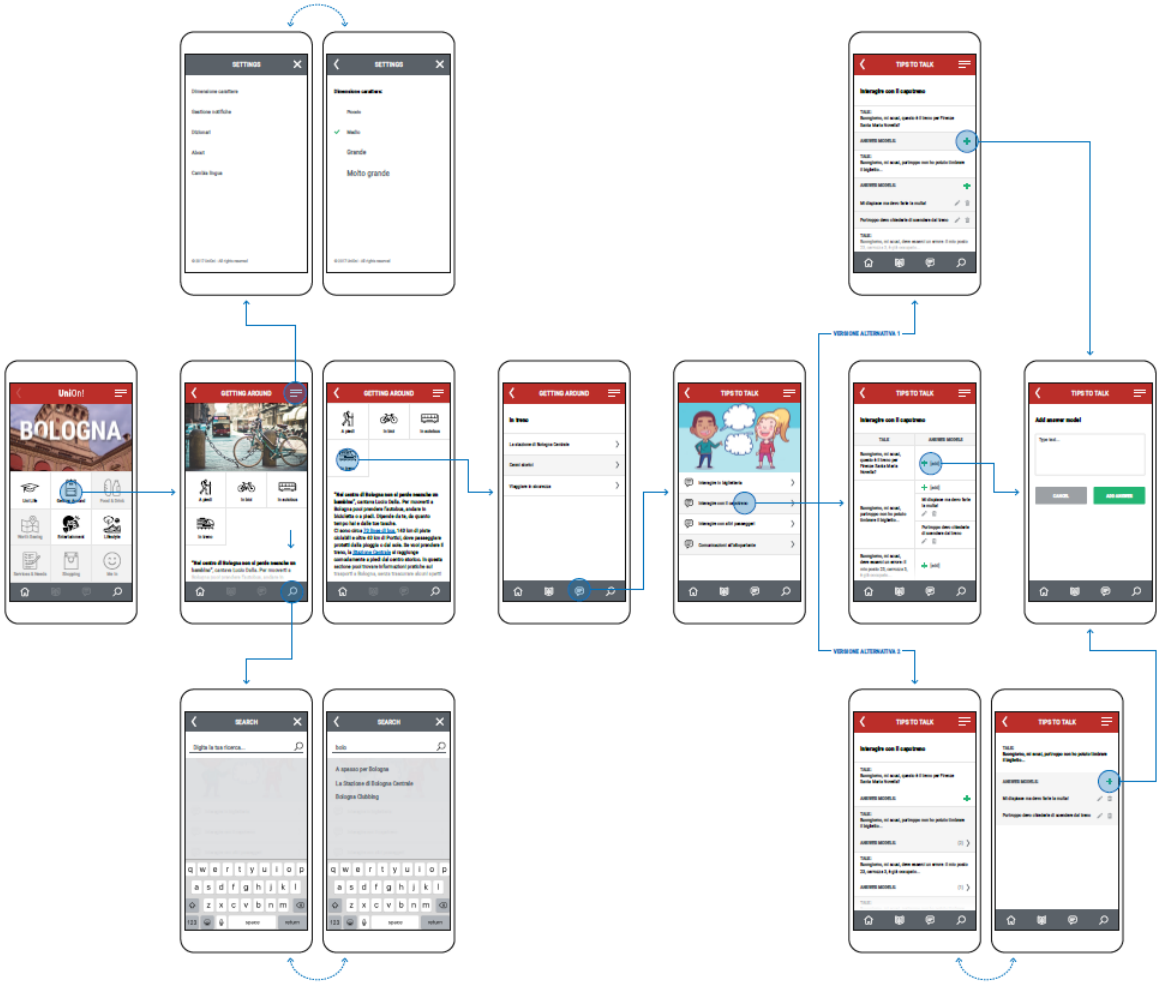

Figure 22. An example of the UniOn! interaction flow.

The map of contents was initially created as an excel file, then it was further elaborated during the development process with the aim of visually representing the information to be contained in the App, as shown by figure 22 here above. From this viewpoint, it was a functional tool both to provide the overall framework for all the contents and to visualise the flow of information.

At an initial stage, contents were supposed to be accessible through three different main entries ('in the place', 'activities', 'culture') and the eight main categories of contents should compose the entry 'In the place', also corresponding to the experiences lived by mobility students in the hosting town (Bologna, Coimbra, Poznań, Rovaniemi). This initial idea was then reconsidered, and the eight categories became the entries composing the App home page. Cultural contents were embedded within each category, and specific language information was provided through dedicated insets, as we will show in 4.5 below where we will describe the specific features of the UniOn! App.

4.4.2 The production and implementation process

Once the map of contents was approved, the project teams analysed the learning materials which were produced for the E-LOCAL courses in order to verify to what extent it could be possible to restyle some of the E-LOCAL materials and make them re-usable through mobile devices. In fact, even though the tools approached by the two projects were different (Moodle courses in the first case and learning Apps in the second), the E-LOCAL materials represented a plentiful, verified and appreciated learning resource to start with in order to plan the new materials. The re-contextualisation of the E-LOCAL contents could consist in the mere re-use of previously exploited, or in the re-writing of specific contents. In this regard, the analysis carried out by the project teams included specific suggestions for re-contextualising the E-LOCAL contents and it was the starting point for the actual production of learning materials. It must be said however, that the E-LOCAL materials acted more as a source of inspiration than as actual materials to be included in the App, being the approach to mobile learning very different from that of a desktop course and requiring dedicated materials to be functional to its purpose.

The production of the App materials and their technological implementation followed a plan that was previously agreed at Consortium level. All the materials produced for each of the four versions of the UniOn! App were shared through a dedicated structure of Google Drive folders, which was chosen because of its flexibility and because it allowed for joint work on documents. In total, the creation of the learning materials for the UniOn! App lasted about one year (from 1 November 2016 up to October 2017), with their technological implementation and some refinements also taking place in the following months. For each of the four versions of the App, about 150 main texts were produced, to which all the insets concerning the lexical notes, the tips to talk, the dialogues, and so on, are to be summed. The overall textual information is

impressive. Specific templates for the UniOn! App contents were created, and they were available for the main typologies of texts, including games. In addition to textual contents, also multimedia contents (images, audio, video) were created, along with the graphical layout and interface.

All typologies of contents – textual learning materials and related multimedia items – had to be integrated within the four versions of the UniOn! App. The App final release, in fact, was made possible through a content authoring pipeline, which was organised in three main steps that went on in parallel for the four App versions, as reported here below.

1. Step 1. It consisted of the textual content design and writing; a dedicated Language and Culture Task Force for each App version (i.e. one for each city/language/culture) was in charge of selecting and creating all the linguistic and cultural content to be included in that version of the App.
2. Step 2. It consisted of the multimedia design and an ICT Task Force was in charge of developing the multimedia items (including interface and layout) for all the App versions, in order to ensure graphical uniformity. The ICT Task Force collaborated with the Language and Culture Task Forces in order to select the most appropriate images and videos for the texts, whereas the audio files were selected by these latter.
3. Step 3. It consisted of the integration of content in the App and the ICT Task Force was in charge of integrating all kinds of content within the four versions of the App.

Moreover, to optimise the timing of these three steps, the contents of each version of the UniOn! App were produced in parallel but in four separate packages; each package included all the three steps mentioned above, which were connected to one another. In the end, some time was dedicated to the necessary refinements in all steps before the launch of the finalised versions to be tested by pilot users (see 4.6 below).

4.4.3 The specificities of the App contents design

When designing the App contents some specificities were taken into consideration, which pertained to the practical implications of creating a mobile, learning tool.

A first point of attention concerned the layout of the texts, as the layout on the smartphone differs from the layout on the computer screen and this affected inevitably the writing process of texts to be read on the smartphone. The spot receiving most attention among mobile phone users is the centre of the screen rather than its top, therefore attention was paid to let the most significant element (information, image, task) appear in the screen centre whenever it was possible (ILOCALAPP Consortium, 2016a).

A second concern was the size of text, which was largely discussed in order to find its appropriate dimension. As the screen of the mobile phone is small, it is generally assumed that shorter texts are to be preferred to longer ones. However, since people take mobile phones everywhere with them, they can always return to the

content later on, especially if it has really managed to capture their interest (Cervini, 2018). In other words, texts can be longer provided they really capture the user's interest. It would be important, though, to announce somehow the size of the text so that the users can plan their interaction with the App (ILOCALAPP Consortium, 2016a). In the end, it was established not to include this information for UniOn!, as it was decided to try to take texts quite short and quickly scrollable down, so that the users could visually catch their size.

Thirdly, the content of each text had to be planned in such a way that each new sentence could contribute to developing the idea in the prior phrase, and that the opening lead could enable the readers to set their expectations about the whole content. The information should be innovative, interesting, helpful, entertaining, with no space for vague wordings and long sentences. Moreover, each component of the content (sound, image, font size and colour, layout, word or phrase) should be meaningful or bear some function, and not be just be put there simply to adorn or distract (ILOCALAPP Consortium, 2016a).

In this regard, particular attention was paid to the use of visual elements, which had to be relevant to the purpose. Eye-tracking movements in text and image on the mobile phone differ (with a text, eyes scan the screen from the top down, while with an image eyes become transfixed on it) and when an image (or a video) is inserted into a text, it distracts the user's attention away from the text (ILOCALAPP Consortium, 2016a). That is why unnecessary video and images to 'adorn' the text were to be avoided, and it was opted to limit images and video to those only functional to the information.

As for the format of the text, it was decided that each text should have a title and a maximum of 500 words. Specific templates were created for the text opening each category of the App and for the texts to be inserted in the sub-categories, with indications also about the usage of multimedia items.

Finally, a note about the longevity of texts is necessary, i.e. about the time between the texts' creation (not only the writing process but also the development of related audio-video material, the selection of places to be geo-localised, etc.) and the release of the final version of the App, available on the stores. Practical information included in the texts, which are up-to-date when writing the texts, could be modified before the final release or even after the final release of the App. Also other typologies of information (e.g. notes related to people's habits, or institutional information related to university) could change. To reduce this risk, it was important to adopt some strategies, such as linking to official web pages or making sure to include data resulting from the users' consultation (Cervini, 2018).

4.5 The App features

The UniOn! application exists in four versions, one for each city involved in the ILOCALAPP project. In fact, the contents of the App aim at supporting mobility students in their daily life and activities in the city hosting them for their mobility period, and helping them integrate in the local environment. The contents of the App are

organised in order to facilitate this goal, and also its functionalities pursue the same objective, as we will illustrate in the following sub-paragraphs.

4.5.1 The App content organisation

As anticipated, in all the four versions of the UniOn! App, the contents are organised in eight main categories, and then in thematic groups, or sub-categories, and then again in texts and insets. In other words, the contents of the App branch out from a macro-level constituted by the category, they pass through intermediary sections (the sub-category and the text) and they reach in-depth sections with the insets (Valva, 2018b).

The eight main categories are the same for the four versions of the App, whereas the sub-categories are similar but not identical in the four versions, insofar as they allow for the specificities of each city/language/culture. The eight main categories are depicted in the App home pages through icons and short labels, under a picture of the city and its name, as shown in figure 23 below. The content of the eight main categories is the following:

1. Uni Life, including information about university and student life;
2. Getting around, including information about transportation, walking and cycling;
3. Food & Drink, including information about restaurants, cafés, canteens, bars;
4. Worth seeing, including information about monuments, buildings, squares, parks;
5. Entertainment, including information about cinema, theatre, museums, music;
6. Lifestyle, including information about nature, sports, well-being;
7. Needs & Services, including information about health, housing, post, money;
8. Shopping, including information about markets and supermarkets, shopping centres, design (Valva *et al*., 2018).

Figure 23. The home pages of the four versions of the UniOn! App.

In addition, there is a ninth category, which is called WordZ and which daily shows the word (or the phrase) of the day. This category is specific for each of the four versions of the UniOn! App (Valva, 2018b).

Within each category and sub-category, the texts contain language, culture and practical information. The texts also include multimedia items, such as audios, images, and/or videos, selected to be functional to the textual information provided, and they also link to external resources, services, and web sites whenever it is necessary. In particular, specific language information is embedded within each category/sub-category, it is available in the texts and it includes both lexicon and tips to facilitate communication (Valva *et al*., 2018).

Moreover, for each category gamification elements are also available and can be accessed from a specific icon depicting the games. Three different formats of game (matching, filling in the blanks, multiple choice) were available for the authors to choose, and they were created ad hoc with information pertaining to the category of contents in which they are inserted. In fact, the games of UniOn! can be played at any time, as an introduction to the category (so before actually reading the materials of that category) or on the way out of the category (i.e. once all the other contents have been exploited). This latter solution, however, has to be preferred in order to foster memorisation of category's language contents (Valva, 2018b).

The App contents can be navigated starting from a specific category, or searching for a specific item within the search function or exploiting notifications related to geo-localised information. In other words, all the App contents are accessible without following any suggested order: the users can move through the categories and sub-categories menus following their needs (or their curiosity); they can alternatively use the search function and look for specific information; or they can follow the notifications sent, which are based on geo-localisation, and read about the information related to their current position (Valva, 2018b).

Finally, as envisaged during the users' consultation, the UniOn! application can be used almost entirely offline, even if links to external resources require a connection. Some settings are customisable (the font size of the texts can be adapetd, the notification system can be switched off, the default language can be changed), a selection of dictionaries is proposed to the users as additional tools, along with the possibility to create and save notes; a link to a dedicated Facebook group is also available to exploit social networking (Valva, 2018b).

4.5.2 The App functionalities and services

UniOn! is a hybrid application; i.e. it works on devices mounting both Android and Apple Operating System, that it to say the two most commonly used Operating Systems, as it was shown in the initial project survey (see 4.3.2 above). Initially, it was decided to have it working also on Windows phone, but this created some problems in the implementation, and the idea was abandoned.

UniOn! exploits the users' geo-localisation, it is equipped with context-awareness functionalities and it also integrates the most commonly used mobile applications and social media (e.g. Google Maps and YouTube). More in detail, the functionalities and the services provided by the UniOn! application include the following items.

- Maps, geo-localisation and notification system. The Points of Interest (PoIS), which were selected by the authors when creating the contents, are displayed in the App through a map, which is included from Google Maps, thanks to the use of its Application Programming Interfaces (APIs). A marker is associated to each PoI, and Google Maps opens up when the user clicks on it. Notifications related to geo-localised contents appear if the user is less than 100 meters far from the PoI. This information is not known to the users, and this distance was set after several attempts to find the optimal distance in order to avoid too many notifications but also to avoid a poor system, not notifying adequately (see 4.6.1 below). Every 30 seconds the system checks if the user position has changed and sends notifications accordingly.
- Search. This function is associated to a specific icon, always visible in the bottom bar of the application. It works on all the titles of the texts, and also on specific keywords, which were identified for each text. This means that if the users type a word that is not in a text title nor in the keywords list, that word is not found by the system. This aspect could be improved by adding more words on the keywords list, but it could result into a slower functioning of the application, and therefore it has been avoided so far.
- Links. They are both internal, i.e. to different sections within the application, and external, i.e. to external web pages or to external services. Internal links are characterised by the green colour of the linking word(s), whereas external links are in the standard blue colour.
- Language tips. The so-called 'Talk' sections are associated to a specific icon, which is available in the bottom bar but is clickable only when that specific content is available (usually at sub-category level. In addition, 'Lexicon' sheets are also available but are not associated to a specific icon, they can be reached through internal links.
- Videos and audios. Videos are embedded in the application from YouTube, therefore they require a connection to be accessed. Audio is enabled thanks to libraries applying the text-to-speech technology for mobile applications. The text-to-speech for English is included in the installed App, while all the other languages require a data or wireless connection. The quality of the text-to-speech is not always excellent though, especially for some languages the prosody is not always as accurate as it was supposed to be.

- Additional tools and services. They are identified through a burger icon, which includes threefold information, namely the settings (that enable the users to adapt font size within each page and to turn the notifications on and off), the language (that includes the selection of dictionaries and the access to the notes), and a third page with information about the App itself. The switch to the English version of the texts is available through the settings but only when the user is on the text page, and not from the home page or from the sub-categories entry pages for instance. This was an explicit choice of the authors of the Italian and the Polish App, who wanted the users to start with – and be focused on – the target language; the switch to English had to be considered only as a final option in the incidental learning perspective. This aspect, however, was criticised by the users, especially by those with lower levels of language competence, as we will discuss in 4.6 and 4.7 below. As for the Finnish and the Portuguese App, English was chosen as the default language and no switch to target language was planned, the local language was included within the default English texts (Valva *et al*., 2018).

The features described here above pertain to all the four versions of the UniOn! App, unless it was differently specified. However, each version had its own specificities within the common framework of agreed features. We will account for the specificities of UniOn!-Bologna in the following sub-paragraph.

4.5.3 The specificities of UniOn!-Bologna

UniOn!-Bologna is the App for incidentally learning Italian language and culture, whose contents are geo-localised in the city of Bologna. In total, UniOn!-Bologna contains 112 texts, subdivided within the eight main categories and referring to 106 geo-localised Points of Interest.

The icons of the App home page are associated to labels in Italian, whereas all texts are both in Italian, which is the default language, and in English. As anticipated, the users are encouraged to use the Italian version as much as possible in order to foster language learning, and clues for understanding the texts without recurring to their translation are provided. However, from each single text it is possible to switch to its English version, and this functionality was particularly appreciated by users with lower levels of language competence, even though some of them claimed that they would prefer the possibility to have all the App contents directly in English without switching any time.

The 'insistence' on the Italian version of the texts as the default version was part of the strategies to encourage incidental learning, along with paraphrases, explanatory notes, cross-references, lexicon sheets, and so on. In addition, all the texts of the Italian version are marked with a coloured flag indicating if they are 'appropriate'

for the beginners, intermediate or advanced levels, i.e. if their contents may be considered adequate for users having different levels of language proficiency. Texts marked with green flags were conceived as indicated for beginners, yellow texts for intermediate users and red texts for advanced users. This system was meant to provide the users with an indication of the expected difficulty of each text, and not to let them disoriented if finding difficulty in understanding a text (Valva, 2018b).

In particular, in order to enhance the understanding of the texts, and the incidental memorisation of words and expressions useful for interacting in the places, some expedients and presentation strategies were adopted, namely:

i) a frequent and redundant exposure of the learner to the same word, in meaningful collocations, as this is the key to form-meaning association;

ii) the association of the words to reformulations, synonyms, definitions, examples in order to facilitate the comprehension of lexical input;

iii) the meaningful and contextualised re-use of the words through the replies to the open questions, proposed at the end of the texts to enhance active repetition (Cervini, 2018).

This latter feature, i.e. the open questions proposed at the end of the texts, was a specific characteristic of the Italian version of the UniOn! App. The open question were meant to invite the users to reflect upon the texts and upon the information provided, thus indirectly encouraging learning. The users could reply to the questions orally or using the notes available in the App. Moreover, these open questions proved to be particularly relevant during some experimental usages of the App that were conducted with the users (see 4.6 and 4.7 below).

Figure 24. Examples of UniOn!-Bologna contents.

All the texts of UniOn!-Bologna contain an image, selected to visualise the contents and also the places the texts were associated with. Some texts also include audio, videos and links to internal and external resources, in the modalities indicated for all the four versions. As for the internal resources instead, some specific items in the texts link to i) Lexicon sheets, i.e. explanatory notes for the vocabulary included and ii) Talk sections, i.e. conversational examples with prototypical questions and answers (Valva, 2018b). Those two sections are associated to the sub-category level, as all texts belonging to the same sub-category share some common lexical and communicative specificities.

Finally, UniOn!-Bologna also includes eight games, one for each main category, exploiting the three different formats available for their production and focusing mainly upon the lexical expressions presented within the category they are referring to.

4.6 The App testing

If the users' consultation was – strictly speaking – an activity planned for the first phase of the ILOCALAPP project, the users were actually consulted all along the various project phases, even though with different modalities. The initial consultation was, in fact, aimed at identifying useful elements for designing the App, while the following users' involvement was aimed at testing the App. During the App development, which lasted about one year from November 2016 up to October 2017, preliminary tests with the available App prototypes were conducted. Once the App was completed a piloting was organised with the aim of identifying any shortcoming before the final release planned for August 2018. Moreover, after its finale release, the App was still somehow tested, even though with a different approach as we will show in paragraph 4.7 below. This paragraph, on the contrary, is dedicated to illustrating the tests carried out before the App final release.

4.6.1 Preliminary tests during the development phase

During the development of UniOn!, preliminary tests were carried out as long as the prototypes were ready. Similar tests were carried out in the four cities of the project, but we will refer here below mainly to the tests conducted in Bologna with the application of Italian language and culture.

4.6.1.1 The first preliminary test

The first preliminary test took place in Bologna in January 2017, after the implementation of the first two categories of contents (i.e. the categories concerning Uni Life and Getting around), and it involved a small

group of five mobility students spending either a semester or a full year in Bologna[14]. The participants in this initial assessment had different a background in terms of geographical origins (they came from Europe, Brazil, USA) and fields of study (education, law, history), and also their level of language competence varied from A1 to B2 of the Common European Framework of References for languages (Council of Europe, 2001), i.e. they ranged from absolute beginner students to students with an intermediate level (Valva *et al.*, 2018).

Students were asked to fill out a preliminary questionnaire to provide some background information, and a feedback questionnaire to assess the App prototype. In addition, their comments were also gathered through an informal face-to-face review, which took place after a field activity with the App prototype in the urban environment. All in all, the test consisted in pretending to have just arrived and using the App to find useful information for their needs; the participants were invited to go through the contents at home at first, and then to move around the city both on their own and with the project team. The results of this test were elaborated and resulted in the observations that we summarise here below.

As a first point, participants in this preliminary test were very enthusiastic about the application itself, and about the idea of being part of the development process; indeed, they appreciated a lot the participatory process put in place and claimed that it was the 'right way' to develop similar tools, in their opinion. Secondly, many different issues were faced with the five participants in this initial test, which were grouped into the five following topics.

1. The eight main categories of contents to be included in the App were discussed with the participants, and they were all confirmed as relevant. However, the participants could fully exploit only the first two of them, which were the only ones ready when the test took place. This resulted into a sense of disorientation because the participants expected to find some topics in the application, but they were not available yet, as they were to be included in the following categories of contents. Nevertheless, the discussion about the expected topics was beneficial insofar as it confirmed that the planned contents were in line with students' expectations.
2. The App was meant to address heterogeneous groups of potential users, especially as far as their language competence was concerned. This unconventional approach impressed the participants because they were accustomed to language tools usually conceived for a specific level, whereas this App was not. A clarification was needed however to let them better understand the implications of this method, and once they were informed about the methodology behind this approach, even though they claimed to agree in principle, they suggested helping the users by labelling the contents at least in

[14] Students decided to participate in the test on a voluntary basis, therefore this was not a scientific sample. Nevertheless, the group turned out to be sufficiently heterogeneous for the specific purposed of the preliminary test.

terms of 'easy' and 'difficult'. This suggestion proved to be very relevant, and the finalised version of the Italian App contains indeed indications about the levels of difficulty, as explained in 4.3.5 above.

3. English as a vehicular language was not included in the App for Italian language and culture when this first preliminary test was conducted, therefore the participants were a bit disappointed and stated that for students with lower levels of language competence it is essential to have at least the titles in English (so to understand the main topic of the text) and also the possibility to switch languages could turn out to be very useful. Actually, the functionality allowing to switch from one language to another had already been planned but it was not developed yet.
4. Similarly, as not all the App functionalities were available in the initial App prototype, they were presented to the participants, and their role was explained. As it was for the expected topics, also the discussion about the expected functionalities proved to be relevant because the participants found them all important, and they did not indicate any additional functionality to include.
5. Text style, format and length were also discussed with the participants, who stated to prefer short, simple and fresh texts, with up-to-date information.

To conclude, this first preliminary test allowed only for a partial exploitation of the App characteristics due to the fact that the prototype was in its initial stage, and not only the contents but also the functionalities were not developed in their entirety. Notwithstanding, the issues and the questions raised by participants in this preliminary test were all relevant and useful for refining the App development (Valva *et al.*, 2018).

4.6.1.2 The second preliminary test

A second preliminary test was conducted in September 2017, again in Bologna, with an advanced prototype of the App already including six out of the eight main categories and also almost all the planned functionalities. This test involved a larger group of participants, as it was composed of 33 international students, either on Erasmus mobility (the majority, 22 out of 33) or enrolled in international degrees at the University of Bologna. The test took place during the activities of the European Researchers' Night and the Welcome Day for international students[15], it could therefore benefit from an institutional framework (Valva *et al.*, 2018).

Participants had to enrol in advance to take part in the test, they were divided into teams and they had to follow an itinerary within the city centre using the UniOn! App. The itineraries were built around three specific topics (namely: i) Culture and History; ii) Culture and Leisure; iii) Culture & Delicatessen), and each of them

[15] The University of Bologna organised a Welcome Day for exchange students and for students enrolled in international degrees during the European Researchers' Night. The event concerned all the aspects related to students' life, and it was the chance to let the students discover the opportunities provided by the University.

included five relevant places selected from the six available categories of contents. The test was organised in a gamified manner, and the 'rules of the game' were quite simple:

- UniOn! and the geo-localisation system had to be activated on the participants' smartphones;
- the teams had to move around following the suggested steps of the itinerary;
- once they reached the places indicated in their itinerary, the participants had to take a picture of the whole team in front of the place as a proof of accomplishment;
- the teams had to get back to the starting point as quickly as possible, with the pictures of the five places in their itineraries.

At the end of this second preliminary test, the participants were invited to submit an evaluation questionnaire assessing topics, texts, usability, and geo-localisation through a five-point agreement scale; the evaluation questionnaire also asked to provide comments and suggestions. The evaluation questionnaire was returned by 28 out of the 33 participants in the test, and the results of the rating of the proposed statements are summarised in figure 25 below. The majority of respondents found the application easy and user-friendly; they mainly considered the topics included in UniOn! as useful and interesting. As for the texts, they majority of respondents were neutral about the adequacy of their length, whereas they were judged easy to understand by most respondents. The geo-localisation was the feature encountering more doubts, with most respondents considering it not adequately notified (that aspect was actually still to be refined at the stage of this preliminary test).

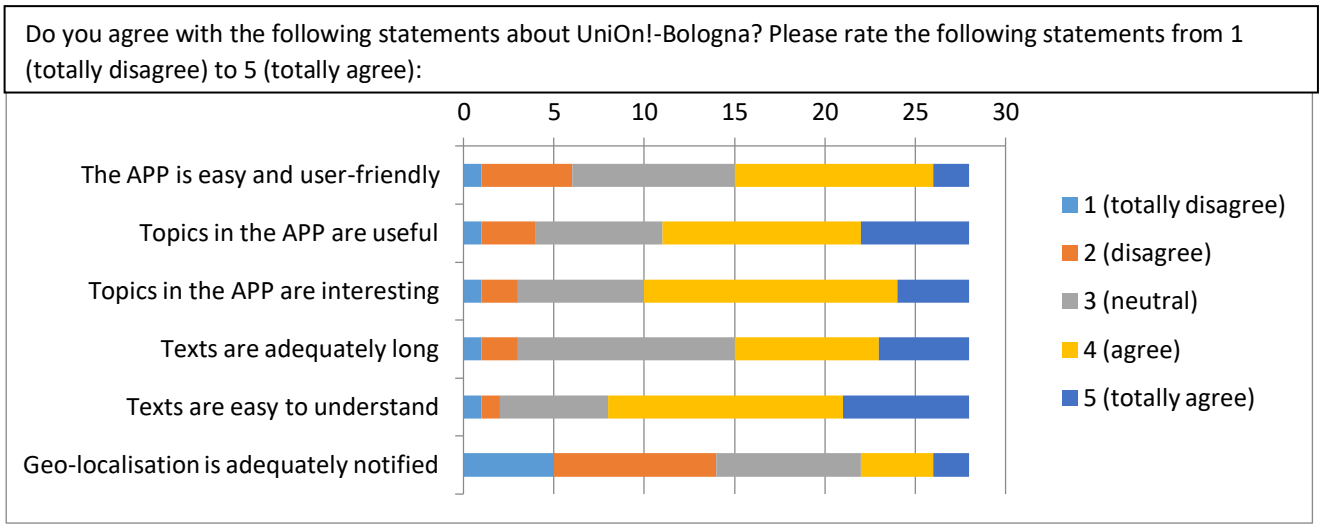

Figure 25. The evaluation of the App prototype during the 2nd preliminary test.

As for the comments and the suggestions provided by the respondents, the idea of an App for supporting mobility students was warmly welcomed also by the participants in the test. On the contrary, the major disappointments pointed out were about:

i) the prototype not being available for iOS devices at the time of the test;

ii) notifications related to geo-localised contents not working properly;

iii) the search function not including yet the expected key-words.

It must be specified, however, that the participants had the chance to use the application only during that gamified test, which lasted for about two hours, and that thereafter they were asked to submit the evaluation questionnaire. Their feedback was therefore the result of first impressions collected on the spur of the moment, even though with a formal questionnaire. Nevertheless, those first impressions reflected quite well the state of the art of the App implementation (Valva *et al.*, 2018).

4.6.1.3 The Coimbra test and some conclusions about the preliminary tests

In October 2017, another important preliminary test was carried out in Coimbra. This test concerned specifically the geo-localisation and the related notification system, which were two aspects needing major improvements, as it was pointed out during the second preliminary test. Before the Coimbra test, several unsuccessful tests had been conducted – in all project cities, both with the project teams and with external participants – with the aim of finding the optimal solutions to manage the notification system. The Coimbra test represented a turning point in this regard because thanks to this *in-situ* check some bugs were determined affecting the map markers, the points of interest distance and the related notification. Once the bugs were identified, the major problems about geo-localisation and notification system were solved. The Coimbra test was the final preliminary test, before the actual pilot phase with a finalised prototype took place; it did not concern the App as a whole but only a specific feature – the geo-localisation – which was indeed one of the App innovative aspects as it allowed for contextualising contents and integrating them in the users' environment.

All in all, the feedback collected during the preliminary tests confirmed that the UniOn! idea met the users' interest; the topics presented in the App were considered useful and interesting, and the texts understandable, even though quite long for some participants in the tests. The App was also considered user-friendly as the layout was regarded as intuitive because the icons helped identify the contents, and the design quite attractive. Instead, there were more critical positions about the notifications related to the geo-localised contents as the system was not perfectly working yet.

Finally, it is worth mentioning that during the preliminary tests the application was not available on the stores yet; on the contrary, it had to be downloaded and installed as an .apk file and it worked only on Android

devices. This meant that the link for downloading the application had to be distributed to all participants in the testing activities, along with instructions about how to use it, and this made all the process a bit complex (and disappointing for those who could not be involved because of the Operating System of their device). For the pilot phase though, the application was available on Google Play Store and on Apple Store, thus making easier the access for pilot users. Besides, the overall structure of the pilot phase was strongly influenced by the preliminary tests. In particular, three notions were retrieved from the lesson learnt during the preliminary tests:

i) contextualisation (i.e. the tests have to take into account who the users are and what kind of needs they have);

ii) autonomy (i.e. even if guided, the participants in the test are to be let autonomously use the tool in order to perform concrete actions);

iii) accuracy (i.e. the participants in the tests are to be clearly told what it is expected from them, when and how, and for what purposes).

Such an approach created commitment and engagement, and made the feedback received more reliable (Valva *et al.*, 2018).

4.6.2 The App pilot phase

In the project application, the pilot phase was defined as the "testing of the App by a group of selected students who will be provided with the tool and asked to use it for a defined period of their mobility experience" (ILOCALAPP Project Website). For those students who were absolute beginners in the language, the pilot phase could be preceded by a two-month optional attendance of the online E-LOCAL courses, with the possible assistance of a tutor. The details of the pilot phase along with the feedback collected are reported in the following sections.

4.6.2.1 The organisation of the pilot phase

The first organisational step of the pilot phase was the selection of pilot users, which started in November 2017 in all the four partner institutions of the ILOCALAPP project. The criteria for selecting the pilot users were agreed upon by project teams and are summarised here below.

i) The major group of pilot users had to be composed by university mobility students, i.e. by foreign students spending a learning period (a semester, a full year) in the university of one of the project cities. This criterion was linked to the fact that mobility students represented the main target group of users identified by the project teams.

ii) Other groups of students could be accepted, both national and international. For instance, university students coming from different places of the same country could be involved (this typology of users was not so much interested in language information – insofar as they were usually native speakers – but they could appreciate cultural and practical information), or high-school students in their final years (as potential future mobility students, and also with the specific aim of providing relevant comments about the contents being very close in terms of age and cultural background to the major group).

iii) The overall number of pilots could be flexible but had to range from 20 to 40 pilots per institution (and consequently per App version), so in total the pilot users were expected to range from 80 to 160.

iv) All levels of language competence were accepted and welcomed, being relevant to test the impact of the App upon different levels and the possible occurrence of incidental learning in different circumstances.

v) The App being compliant with Android and Apple operating systems, pilot users with devices mounting one of those operating systems were accepted, as it was relevant to test the App response in different platforms (Valva *et al.*, 2018).

As far as the University of Bologna was concerned, all incoming students of AY 17/18 were informed about the ILOCALAPP project and the UniOn! App via e-mail, and they were invited to participate in the pilot phase. The students were informed about the characteristics of the pilot phase, which consisted in the usage (testing) of the final prototype of the App through the use of an evaluation grid to analyse the contents, the features and the functionalities. In total, 68 incoming students replied to that invitation, even though those who actually tested the App were less. In addition, in Bologna also high-school students were involved, as we will specify below.

As a second step, a preparation based upon the E-LOCAL Moodle courses was offered in December 2017 and January 2018 to the users who required it. This opportunity was meant to help pilot users who were beginners to feel more comfortable with the App testing. As for the Italian course, it was organised in blended modality, exploiting the materials available on the E-LOCAL online platform and offering also in-presence meetings with a tutor. The in-class meetings were aimed at discussing any critical aspects found with the learning materials and/or just at refining communication skills. It must be said, however, that only a limited number of users benefited from this optional preparation opportunity: 50 students asked to have the possibility to take the Italian course, 31 actually registered to the platform and 16 did the online activities. The assistance of the tutor was required only twice online (for clarifications about some grammar aspects) and only three people attended the in-presence meetings that were scheduled to help the users. This scarce participation in the preparatory

activities could be linked to many factors: on the one side, there are logistic reasons to consider (some students were not in Bologna at the time, the in-presence meetings overlapped with regular classes, and so on); on the other side, the App testing was not perceived as requiring a specific preparation by many of the potential pilot users, even though at an initial stage 50 people has asked to take the E-LOCAL course. Notwithstanding, this optional course in preparation to the App testing could be regarded as a first attempt of combining two different tools providing language and culture learning, needing further action in order to be effectively exploited, though.

As a third action, in January 2018 an introductory seminar was organised in each partner institution with the aim of presenting the UniOn! App to the pilot users and also instructing them about their testing activity. The participants in the introductory seminars were also illustrated the forms created by the project Consortium to collect their feedback, both as far as their expectations and their actual assessment of the App were concerned. In fact, after the introductory seminars the participants were invited to submit a preliminary questionnaire including information about age, gender and nationality, but also about language background and experience with technology. The final goal of this questionnaire – which is reported in Appendix H – was to collect background information about the pilot users and their expectations (Valva *et al.*, 2018).

The questionnaire was returned by 93 students at Consortium level, i.e. by about 20-25 people per institution.

The most represented age group among the respondents was the 19-22 group, followed by the 23-26 group. The two most represented groups are the same as those of the online survey of the end users' consultation (see 4.3.2 above). All the age groups were represented among the respondents, though. Also in this case the vast majority of respondents were female (72%), 25% of respondents were male and 3% did not wish to specify. The languages reported by the respondents as their first language included indeed a huge variety, with Italian, Chinese and English being the languages with more respondents. Also Russian, Turkish, German, Dutch, Czech and Portuguese had several respondents each, whereas other languages only had one or two respondents each (including Akan, Cantonese, Catalan, French, Greek, Hebrew, Hindi, Hungarian, Japanese, Korean, Nigerian, Polish, Serbian, Slovak, Spanish, Ukrainian and Vietnamese). English was reported as their second language by 72 out of 93 respondents, alone or in combination with other languages (French mainly); other languages reported as second languages were Polish, Spanish, Russian, Chinese, Portuguese, German, Moldavian. The provenience of the respondents is in line with the first languages indicated and included various countries all over the world.

The majority of respondents were Erasmus students, but also students enrolled in international degrees, high school students and other typologies (e.g. visiting researchers, foreign workers) were represented. The level of competence in the language of the App also varied a lot among the respondents as they ranged from beginners to native speakers. The majority of respondents (56%) had already used an App for language and culture

learning, which is indeed an interesting result: in the survey launched less than two years before (i.e. in February-March 2016, see 4.3.2 above) only 22.5% of the respondents had had a previous experience with an App for learning languages; this datum reflects the increasing spread of educational Apps among students. The Apps previously used were mainly Duolingo and Babbel, but also other Apps were mentioned (e.g. HelloTalk, Memrise, Reverso). Finally, as for the respondents' expectations about using the UniOn! App, they were associated to getting to know more about the city while also learning the language, in a different, interactive, funny way. Expectations concerned mainly everyday facts and vocabulary, helpful to manage daily situations in the new places. Expectations were also linked to the very testing activity, which was regarded as stimulating and empowering for pilot users.

4.6.2.2 The feedback collected

The pilot activities lasted from February to April 2018. In total, more than 100 pilot users were involved at Consortium level, among which 40 tested the Italian version UniOn!, geo-localised in Bologna. In addition to mobility students testing the Italian App, a specific path was organised for the students of the high school Liceo Laura Bassi, whose pupils were called to test the App and to deliver a final report[16].

The pilots were free to use the App on their own to test it, they were invited to move around the city and carry out their regular activities, using the App to perform some tasks (e.g. visiting a library or a museum, taking a bus, going shopping, and so on). Nonetheless, a couple of meetings with the pilot users were organised during the testing phase with the aim of checking progress and possible doubts. Moreover, during the testing period, the pilot users were provided with evaluation grids meant to help them analyse both contents and functionalities. The evaluation grids (see Appendix I) included the issues that the pilot users were asked to consider while using the App and upon which they were asked to give their opinion in their final assessment (Valva *et al.*, 2018).

At the end of the pilot phase, the pilot users' feedback was collected through an evaluation questionnaire (see Appendix J), which – after asking for preliminary background information – invited to assess items pertaining to topics, language, design, layout, and geo-localisation. The items were structured in 16 Likert-scale questions to

[16] Several classes of the high school Liceo Laura Bassi of Bologna were presented the ILOCALAPP project and were involved in the App testing. In particular, a class of the school was selected to be involved in a dedicated project of 'alternanza scuola-lavoro', during which the pupils were called to analyse ILOCALAPP and reflect upon its European and international dimension. The activity included several seminars, workshops and meetings, and in the end the students had to deliver a detailed report about UniOn! usability, effectiveness and potential future developments.

be rated with a five-point agreement scale[17]. In total, 80 pilot users returned the evaluation questionnaire at Consortium level, and 30 of them were pilots of the Italian App.

The first section of the questionnaire investigated background details, namely age, gender, languages, position. The most represented age group among respondents was the 19-22 age group, and the majority of respondents were female (72.5%; 25% were male and 2.5% did not wish to specify their gender). As for their first language, also in this case the respondents reported a huge variety, with Italian, English and Chinese being the languages with more respondents. Also French, German, Japanese and Russian had several respondents each, whereas other languages only had one or two respondents each (including Akan, Cantonese, Catalan, Czech, Dutch, Hindi, Hungarian, Korean, Polish, Serbian, Slovak, Spanish, Turkish, Ukrainian and Vietnamese). English was reported as their second language by 50 out of 80 respondents, alone or in combination with other languages (Chinese, French, German, Italian, Japanese, Spanish, Polish); other languages reported as second languages were Creole of Mauritius, Czech, Finnish, Nigerian, Russian, Portuguese. Also in this case, the majority of respondents were Erasmus students, but also students enrolled in international degrees, high school students and other typologies (e.g. visiting researchers, foreign workers) were represented. The level of competence in the language of the App also varied a lot among the respondents as they ranged from beginners to native speakers.

The second part of the questionnaire was aimed at the assessment of 16 statements concerning various aspects of the App, the respondents had to express their agreement using a 1-5 scale. The results of this assessment are reported in figure 26 below. As the figure shows, the topics included in the App were judged useful and interesting by the majority of respondents. As for the texts, they were maybe too long, even if the number of neutral respondents and of those disagreeing with that statement is almost the same; texts were considered understandable by the vast majority of respondents, though. Most respondents were neutral about the intuitiveness of language learning, but almost the same number of respondents agreed with that statement, and only a few respondents disagreed. All in all, the App was judged as user-friendly by the majority of respondents, the same applied to the design considered attractive, and to the layout perceived as intuitive with the icons helping identify the contents. The number of notifications was considered adequate by the majority of respondents, but the geo-localisation still received many neutral comments. Many respondents were neutral also about the usefulness of the games to retain information. In general, the App was considered

[17] As it was for the questionnaires used for the E-LOCAL courses and for the E-LOCAL MOOC, also during ILOCALAPP the questionnaires including rating questions used a Likert scale to measure the attitude of respondents towards the suggested statements. The scale consisted of five options, ranging from 1 (= totally disagree) to 5 (=totally agree). Some examples are available in the appendices of this work.

useful during the stay and also before the stay, whereas many respondents disagreed about its usefulness after the stay. The majority of respondents would recommend the UniOn! App to their friends.

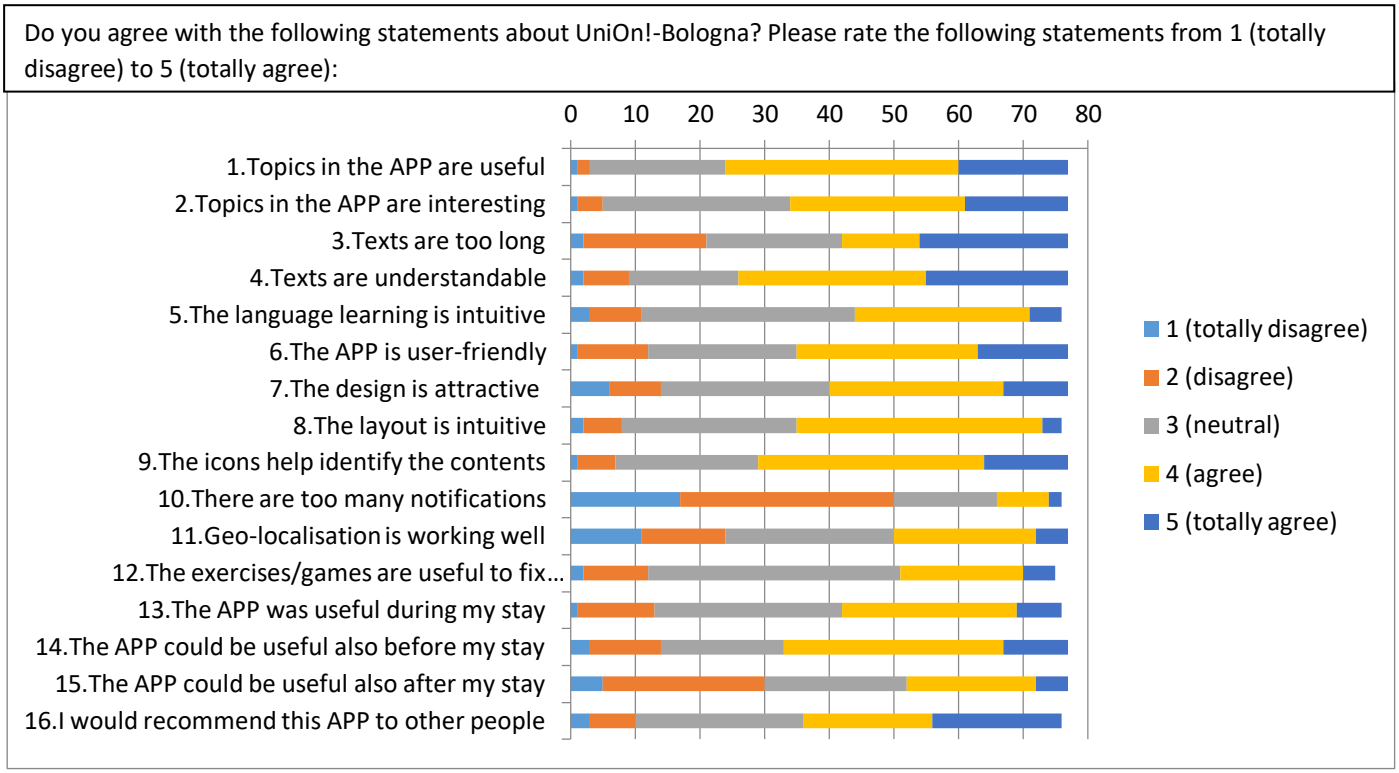

Figure 26. The assessment of the UniOn! App by the pilot users.

Finally, the third part of the questionnaire was devoted to the 'Me in…' category and to open comments. As said, the 'Me in..' category was initially supposed to be a space for the users to store information about their personal experience in the city and the question about it in the evaluation questionnaire asked what the pilot users had used it for. It emerged that many pilot users had not used it at all, and those who did use it claimed that it was not so useful either because it was not working well or because its functions could be replaced by notes. During the revision of the App, the idea of the 'Me in…' category was abandoned and the 9th category became Words, a space to focus upon vocabulary.

As for the open comments, the App was appreciated because if provided basic, useful information about the local reality. However, the design and the layout were judged as needing to be improved (with more colours, more modern features, and a better readability) and the categories and also the single texts were considered too long. Some technical problems were also pointed out (e.g. with the back button, with the navigation among contents, with the access to games), and they were fixed during the revision along with the absence of

some specific themes, which were taken into consideration by the project teams and eventually added. Other pilot users complained about the absence of 'more standard exercises', which had to be added in their opinion even in a playful, gamified modality. These comments confirmed somehow the exceptionality of this App, whose unconventional features might turn out to be disorienting for some users. Other users commented about the access to some specific contents (in particular to the Lexicon and Talk sections), which had to be made easier from their viewpoint, and some respondents proposed to have the option to include the comments of the users about the places visited. To conclude, many respondents also suggested to replicate the UniOn! model for other cities/languages/cultures, which was indeed a possibility considered also by the project teams.

The assessment and comments reported here above referred to the four versions of the UniOn! App. Each task Force then analysed the specific assessment and the specific comments related to each single version. The overall evaluation of UniOn!-Bologna did not differ significantly from the evaluation received by the other versions of the App. All in all, the feedback about UniOn!-Bologna was collected through different means: the evaluation questionnaires which were described here above were one modality, but also the face-to-face reviews during the meetings with the pilots were useful to discuss their opinions, and the reports submitted by the high-school students at the end of their dedicated path proved to be relevant as well in order to gain insights about the App.

The feedback collected about UniOn!-Bologna in all modalities confirmed that the topics were considered useful and interesting and the texts understandable, even though quite long. UniOn!-Bologna was judged as user-friendly, with still some problems reported as far as geo-localised contents were concerned, but with a system generally working. Language learning was considered quite intuitive, facilitated by the design of the App that was functional to the information conveyed.

The specific indications received were utilised during the revision of the App, which followed the pilot phase. During the revision phase – which took place in parallel for all the four versions of the UniOn! App – all the contents of UniOn!-Bologna were reviewed. In particular, some texts were simplified, or differently arranged, and other texts were also added, following the suggestions received by the pilot users. Moreover, the indication of the level of difficulty was added through that system of coloured flags that we have described in 4.5.3. In addition, the lexical notes were better organised and included visual examples, and also the Talk section was refined. During the revision, the 9th category WordZ was created, which implied a careful selection of the vocabulary to be included. Finally, almost all the texts were provided with the final questions representing a specificity of the Italian version of the App, as they directly address the users with the aim of stimulating their active engagement.

4.6.3 Additional tests before the App launch

As far as the Italian version of UniOn! is concerned, two additional tests were conducted before the launch on the stores of the finalised App. Those additional tests were carried out within two Summer Schools which took place in Bologna in summer 2018, that is to say:

i) the International Summer School in Digital Storytelling We Tell (www.wetell.eu/summer-school); and

ii) the Italian Language and Culture Summer School 2018 (https://events.unibo.it/italian-language-culture-summer-school).

Among the participants of the two Summer Schools, 15 people in total participated in the tests:

i) seven of them were US American students of Media and Journalism attending the WeTell Summer School, they were all beginners in Italian language;

ii) the other eight participants belonged to the Italian Language and Culture Summer School, they were beginners as well, but they came from different parts of the world and they had different fields of study.

In both Summer Schools, a formal presentation about the App, its features and its functionalities was delivered to the participants at the beginning of the testing. In the first case however, after this initial presentation the students were supported by a tutor, who used UniOn! as an integration to regular Italian classes, which were included in the Summer School as an optional activity for people coming from other countries. In the second case, the students were only presented some examples and possibilities of usage of the App, and then they were left free to use the App to autonomously test it. In both cases, the testing lasted about three weeks. At the end, the first group submitted a survey of feedback about the App and the students of both groups were invited to participate in a face-to-face review of the App effectiveness, through structured interviews.

Both the written survey and the oral interviews focused upon the following four sets of issues.

1. An overall assessment of the App concerning topics, texts, lexicon, usability, comprehensibility, usefulness, and effectiveness. The users were invited to express their agreement with 15 statements (similar but not identical to those used during the pilot phase) through a Likert scale running from 1 (totally disagree) to 5 (totally agree).
2. The user's own perception of learning, with a focus on the perceived changes both in language and culture competence due to the use of the App. Here again, the users were invited to use a 1-5 Likert scale running from 1 (totally disagree) to 5 (totally agree) to express their agreement with the proposed statements.
3. An open reflection about some specific features and in particular about the 'add notes' functionality as a possibility to include the user's own experience within the App.

4. Some personal information aimed at identifying the profile of the App users (Valva, 2018b).

The results of the tests carried out within the Summer Schools – collected both by written and oral surveys – can be summarised as follows.

In general, the topics faced by UniOn-Bologna were considered useful and interesting, the texts quite understandable, and lexicon sheets and games useful to understand and memorise vocabulary. The interaction was facilitated by Talk section and also by the open questions at the end of the texts, which could stimulate the active use of language and the self-reflection. All in all, the App was judged user-friendly but quite complex.

As for the perception of learning, the App was regarded as useful to better understand the local environment and to get familiar with Italian culture; it made the users more confident with receptive skills (understanding written and oral texts) but not necessarily more confident with productive skills (speaking and writing). However, the participants felt overwhelmed by the information provided within UniOn!-Bologna and sometimes they did not feel encouraged to use the Italian version, as they reported frequent switches to the English version. As for the notes, they were used by the participants of the first Summer School, who were encouraged by their tutor to do it, in order to write down phrases, responses, and proper spelling of words.

Moreover, the participants in these tests claimed that they did not have the chance to fully exploit the potential of the App. This was due to time reasons mainly, as their stay in Bologna was planned to be short. The limited amount of time at their disposal influenced their attitude, as they were not motivated to reach a high proficiency in the language; in contrast, they were particularly interested in practical information to be immediately used. The perceived complexity of the App contents, as well as their the partial satisfaction about language learning, could be also linked to the fact that the participants in these tests used the App only for a short period. In addition, most participants were English native-speakers and the others were very fluent in English: in many circumstances, they (wrongly) expected that their English competence would suffice to make the most of the local environment.

For all participants, the preliminary study of Italian before this experience was limited or null; on the contrary, all testers had had at least a previous experience with other Apps for language learning, which influenced their judgement, being UniOn! very different from a conventional App for language learning. The participants in the first Summer School, though, had a more positive feeling about the impact of the App upon their progress in language learning, also because they were supported by a tutor.

Finally, it is also worth mentioning that when the above-mentioned tests were conducted (i.e. in June-July 2018), the App was still a prototype – even though a final prototype – and some minor refinements had still to be implemented. In addition, the total number of students involved in these final tests before the App release was quite limited. Nevertheless, the UniOn! Summer 2018 testing was extremely useful to begin to focus upon the users' perception of learning since the participants were encouraged to gain awareness about their

improvement in certain skills, while assessing the App effectiveness. (Valva, 2018b). This approach was maintained also for the assessment of the App after the end of the ILOCALAPP project, as we will explain below.

4.7 The App usage after the end of the ILOCALAPP project

Once the ILOCALAPP project terminated in August 2018, old and new possibilities of usage opened up for the UniOn! application. First of all, the App was promoted among the incoming students of the four institutions who participated in the project, and it started to be regularly used as a supporting tool. Moreover, in Bologna some experimental modalities of usage were tested, involving also the presence of tutors. In the following sections, we will account for the usage of UniOn!-Bologna by the incoming mobility students of the University and we will also illustrate the experimental usages. In all cases, the participants were invited to provide their feedback about the App and about their experience with the App. In particular, the feeling of the users about a set of given assertions was investigated; the statements concerned the App features but were also related to the users' perceived progress in language proficiency, their knowledge of cultural aspects, and their integration within the local reality.

4.7.1 The usage by incoming mobility students

Starting from AY 18/19, information about UniOn! was included in the information package given to incoming students, either enrolling in an international degree or spending an exchange period at the University of Bologna. In September 2018, all the incoming students were given preliminary information about the App through an e-mail message, and at the beginning of the academic year they could also assist to a quick oral presentation[18], if they wished. They were then left free to use the App in an autonomous modality, i.e. with no tutor assisting them, and deciding themselves if, when and how to exploit UniOn!.

Three months later, they were invited to submit an assessment questionnaire. This was on a voluntary basis and, in total, 30 students returned the questionnaire.

The assessment questionnaire, which is reported in Appendix K, was structured in four parts:

i) the first part aimed at assessing the users' engagement with the App by investigating the modalities of usage;

[18] During the Welcome Day for international students, a presentation about UniOn! contents, services and functionalities was offered to interested students. For many of them, that was also the chance to ask for more information, and to install and start using the App.

ii) the second part was aimed at an overall assessment of topics, materials, services and functionalities (this was very similar to the assessment proposed to pilot users during the ILOCALAPP project, and also to the assessment proposed to participants in the additional tests before the App launch);
iii) the third part was about the users' perception of learning as far as the language skills (listening, reading, speaking, writing) were concerned, but also in terms of familiarity with the Italian culture and understanding of the local environment;
iv) the fourth part was about personal information (age, gender, origin, languages, position, field of study, etc).

The first part of the questionnaire concerned the assessment of the App engagement and consisted of 10 questions. The majority of respondents had been in Italy for more than three months, when they submitted the questionnaire, but they had used the App for less than one month. On average, UniOn! was used once or twice a week and especially before going to a specific place (42% of respondents); also the usage while walking around the city was quite spread (35% of respondents). The App was mostly used by browsing its contents (65% of respondents), but also the search function was exploited (31% of respondents). The App was used to get cultural information (67% of respondents) and also to get practical information (63% of respondents), whereas it was less used for language information (14% of respondents; it was possible to give more than one option for this answer). The time spent on each text was limited for most respondents, as 77% of them declared to go quickly through the texts; the remaining 23% declared to read the entire texts without necessarily using the insets. Finally, only 10% of the respondents declared to use the note functionality, whereas the Lexicon sheets and the Talk sections were regularly consulted by 25% of the respondents. The remaining of the respondents only used those functionalities on a random basis.

The second section of the questionnaire was about an overall assessment of the App, the respondents were invited to express their agreement with 15 statements using a 1-5 Likert scale. The results obtained in this second part are summarised in figure 27 here below. As shown in the figure, the vast majority of respondents considered the topics contained in UniOn!-Bologna useful and interesting. Nobody disagreed with the statement concerning the intelligibility of the texts, whereas a few respondents disagreed about the usefulness of the lexicon sheets, even though most of them considered the lexicon sheets useful to both understand texts and memorise words. Similarly, links to web resources were judged useful and the Talk section was regarded as supporting the interaction with other people in the different places, even though a minority of respondents disagreed with those statement. The same considerations can be applied to the open questions at the end of the texts, which stimulated self-reflection and active use of words for most respondents. Also the games were considered useful to retain vocabulary. All in all, the App was judged user-friendly and the geo-localisation well working. UniOn!-Bologna helped learn the language intuitively for the vast majority of respondents, and it was

useful during their stay. The global positive assessment was also confirmed by the replies to the final question of the second part of the questionnaire, which shows that the majority of respondents would recommend the App to their friends.

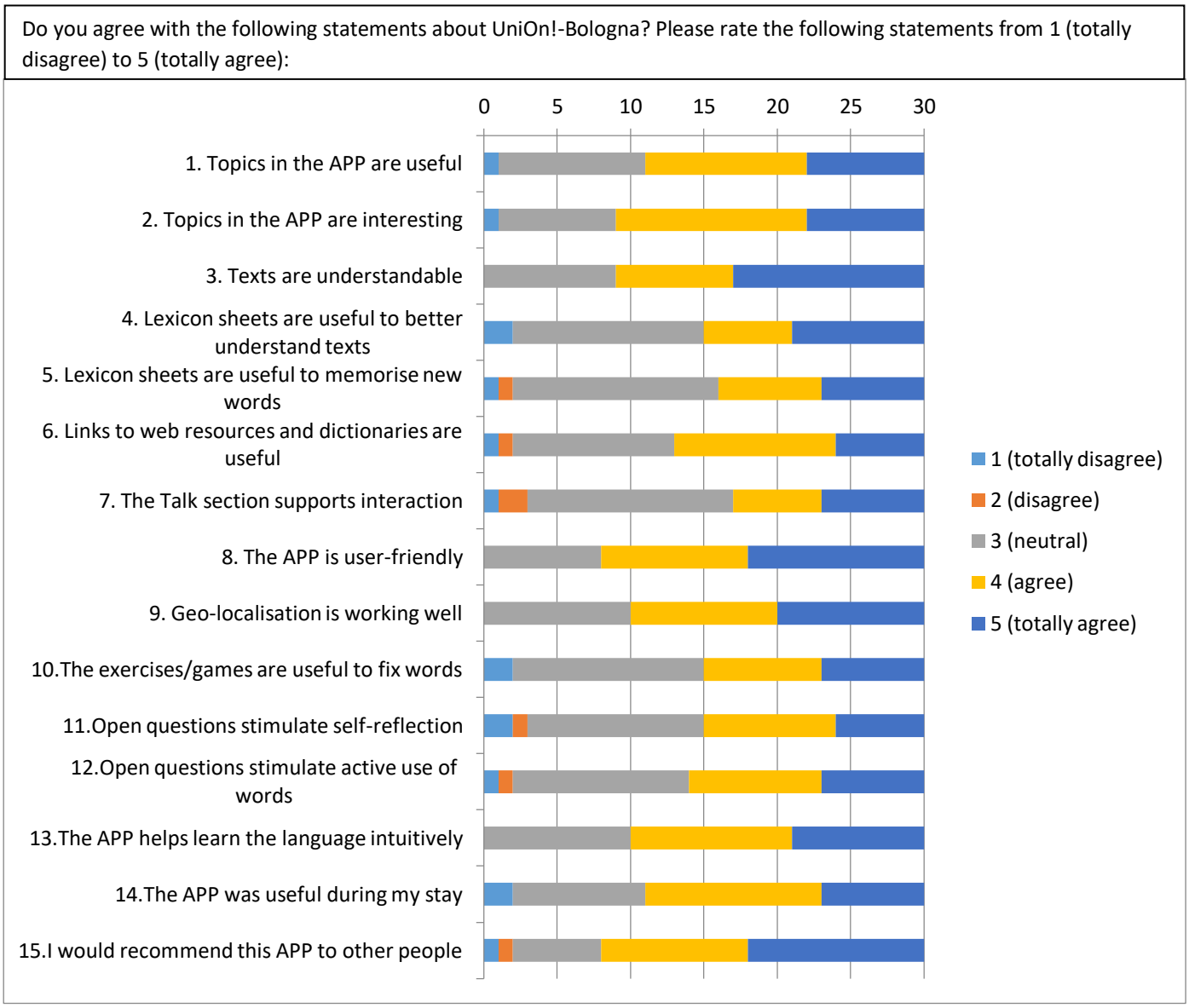

Figure 27. The results of the incoming students App assessment.

It must be specified, however, that the responses to the questions of this second part seem to partially contradict some of the indications emerged in the first part of the questionnaire. For instance, in the first art only 14% of the respondents had declared to explicitly use the App to get language information, whereas in the second part there were no respondents disagreeing with the statement about the usefulness of the App for

learning language intuitively. This inconsistency might be explained with the fact that – even though they were not using the App for explicitly finding language information – the respondents learnt nevertheless language through the App usage. A further point of attention pertains to the Lexicon sheets and the Talk sections, which were regularly consulted by 25% of the respondents as for the responses in the first part, but they were regarded as useful by a larger number of respondents in the second part of the questionnaire. Moreover, even though the time spent with the App declared in the first part of the questionnaire was quite limited, the App was judged relevant and worth using, as it was confirmed also by the results of the third section of the questionnaire.

The third part of the questionnaire focused upon the perception of learning and invited the respondents to rate their progress in cultural understanding and language skills, again through a 1-5 Likert scale. The results of this third part of the questionnaire are summarised in figure 28 here below.

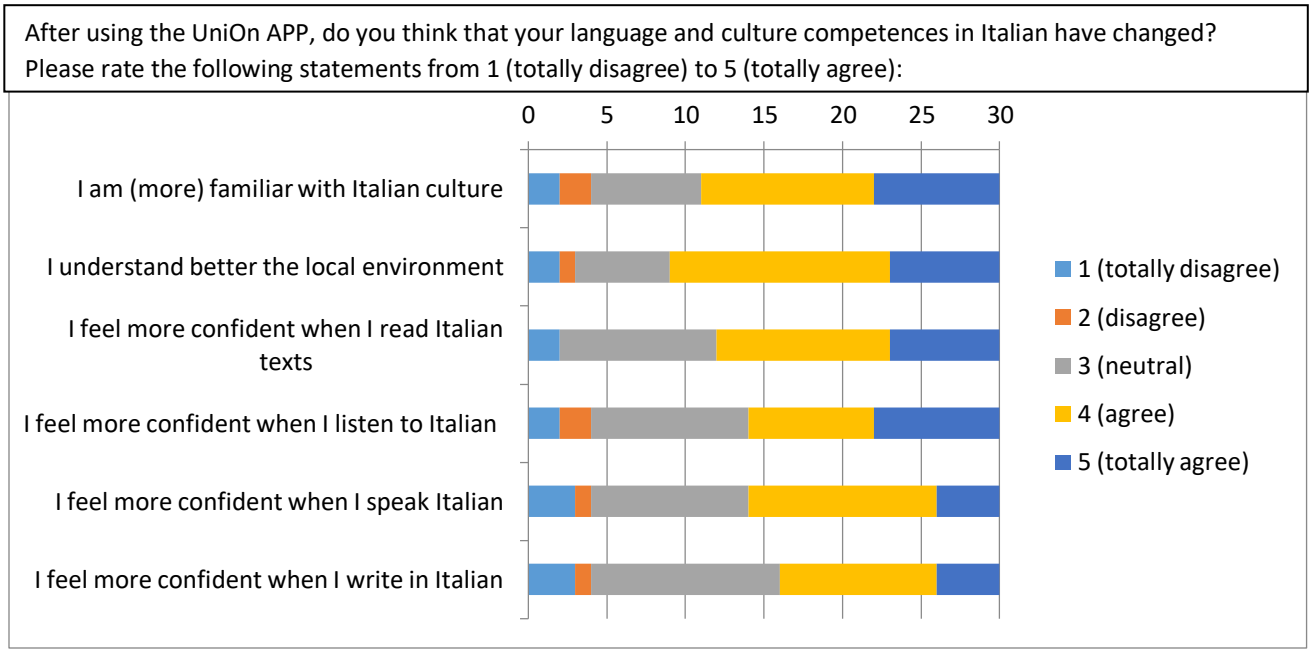

Figure 28. The perception of learning reported by the incoming students.

As the graph shows, the majority of respondents declared to feel more familiar with Italian culture after using UniOn!-Bologna and also the understanding of the local environment was perceived as improved after using the App. As for the language skills, after using the App most respondents felt more confident when reading Italian texts (only two out of 30 respondents disagreed with that statement, and ten were neutral) and when listening to Italian (four respondents disagreed with that statement, and again ten were neutral). As for the improvement of the speaking ability after using the App, 16 respondents out of 30 claimed that they felt more

confident when speaking in Italian (the same number as for the listening abilities), four disagreed and 10 were neutral. Finally, the writing skills were perceived as improved by a slightly lower number of respondents (14 out of 30), 12 were neutral and four disagreed with the proposed statement.To conclude, the fourth and final part of the questionnaire consisted of 13 questions and investigated personal details in order to get a profile of the respondents. The most represented age group was the 23-26 age group, followed by the 19-22 group, in line with all the previous questionnaires. The genders were better balanced in this case though, with 57% of female respondents, 37% of male respondents and 6% not wishing to specify their gender. The geographical origin of the respondents was indeed varied and covered the entire world, as it was confirmed also by the first languages reported. As for the second languages, in contrast, English was the most represented as usual, alone or in combination with other languages. It is relevant to note that some of those respondents who declared English as their first language, then affirmed not to know any second language at all, whereas all the others declared at least a second language.

The level of competence in Italian language varied among the respondents, but the majority declared to be intermediate, either lower (30%) or upper (47%). In addition, 57% of the respondents declared to have studied Italian for more than one year before their mobility experience, and during their stay in Bologna Italian was the language spoken at home by 62% of the respondents. For 24% of the respondents the language spoken at home while in Italy was English, though. Other languages were spoken at home by the remaining of the respondents, with Spanish being the most represented of the other languages. Italian was also the most frequently spoken language in class, both as far as the lessons delivered were concerned (87% of the attended courses were delivered in Italian, for the remaining part a combination of languages was used) and as for the interaction with professors and among students (in this case however, the Italian was mostly used in combination with other languages, depending on the communicative necessities).

The majority of respondents were Erasmus students (53%), followed by students enrolled in international degrees (30%), and the remaining were visiting students. The fields of study of the respondents varied a lot as well, including the humanities (literature, art, history), social sciences and economy (political science, international relations, business and administration), and sciences (biology, environmental studies).

Finally, 70% of respondents declared not to have used other Apps for learning languages and cultures. This result was unexpected, as the general trends reported an increasing usage of Apps for language learning. This was maybe due to the very formulation of the question, which did not specify ‘prior to this experience’: some respondents might have intended the question as ‘in parallel to the usage of UniOn!’. Notwithstanding, among the remaining 30% of the respondents who affirmed to have used other Apps, Duolingo and Babbel were the Apps mostly mentioned.

4.7.2 UniOn! used by Dickinson College students

In autumn 2018, a further testing experience was arranged with a group of ten US American students attending the Bologna Dickinson College for AY 2018/2019. They were 20-year-old students spending a full year in Bologna, and with a preliminary knowledge of Italian language and culture acquired before arriving (they all declared to have an intermediate level of Italian).

In addition to their regular classes, they were also attending a dedicated Italian course and the App testing was conducted in collaboration with their teacher. In total, the App testing lasted about 2 months and included several typologies of activities, as described below.

Initially, in September 2018, the Dickinson College students were simply invited to use the UniOn! App by their Italian teacher. The invitation was repeated both during in-class meetings and through messages published onto the Moodle platform of their Italian course. Their teacher presented UniOn! as an "App for the international students who want to explore Bologna, find out new aspects of the Italian culture and enjoy the learning of the Italian language". No formal, detailed presentation of the application was given. This preliminary approach was aimed at stimulating the students' curiosity and let them start to use the App autonomously.

After some weeks of autonomous usage of the application, the ten students were divided into five couples, and each couple was given a thematic itinerary to explore by means of UniOn!. The five itineraries were the following ones:

i) libraries;
ii) students' meeting places;
iii) students' eating places;
iv) music;
v) parks.

Each itinerary contained three places to visit, and each place was related to one or more texts in the App. In addition, each text also referred to specific language insets in the App. Students were invited to find the places included in the itinerary, read all the information about them available in the App – including all the in-depth sections related to them – and visit the places. Moreover, they had to answer some questions about their itinerary and then, using the questions as guidelines, they were asked to write down a short report about the places.

On 10 October 2018 a dedicated itinerary was organised, which included one single place from each of the five itineraries that the couples of students had to 'analyse'. Each of the five couples of students presented one place during the itinerary, using the information they could find within the application and staring from the questions and the report they had to write down. At the end of this activity, a moment of discussion about the

application was organised, during which the students provided their feedback. In addition to the oral feedback, the Dickinson College students also submitted a written questionnaire, assessing their perception of learning thanks to the usage of UniOn!.

As for their feedback about the activities and the UniOn! App, the students had positive reactions. The contents were found interesting and relevant to their scope, some texts (especially those of category 4 Worth seeing, which contained a lot of language of art) resulted difficult at a first approach, but in the end the students were satisfied because they managed to understand also exploiting the resources available in the App (i.e. Lexicon sheet, dictionaries, reformulations, and so on). The App was judged useful for their stay by almost the entire group, only a couple of students were a bit more sceptical and stated that they would prefer different modalities and different tools; in particular they claimed that they could find cultural and practical information on the net and that they appreciated better 'standard tools' for language learning. However, the group agreed that UniOn!-Bologna was useful to learn Italian intuitively.

Figure 29 below reports the perceptions of the Dickinson College students about their advancement in linguistic and cultural competence after using the App.

Figure 29. The perception of learning reported by the Dickinson College students.

As the graph shows, the Dickinson College students involved in the test showed interesting improvements in terms of familiarity with Italian culture and understanding of the local environment, as seven out of ten students declared to feel more familiar with the Italian culture after using the App (two participants were

neutral, and one person disagreed) and as eight out of ten students declared to better understand the local environment after using UniOn!-Bologna (one students was neutral, and again one person disagreed with that statement).

Finally, as for their perception of improvement of the language skills through the App usage, the majority (six out of ten) declared to feel more confident when reading Italian tests, and 50% also affirmed to feel more confident when listening to Italian and when writing. The improvement of speaking abilities was a bit less evident as only four students out of ten stated to feel more confident when speaking.

To conclude, formal tests conducted by the teacher during the regular in-class activities also confirmed the students' improvement in Italian language skills, even if it is not possible to make a direct connection between the usage of the UniOn!-Bologna App and the enhancement of language proficiency.

4.7.3 UniOn! used by CLE students

At the beginning of AY 18/19 a third experimental set of activities linked to the usage of UniOn!-Bologna was organised, involving this time a group of 30 students enrolled in the CLE (European Literatures) Erasmus Mundus Master Degree. The students came from all over the world, they were attending their first semester in Bologna and they were going to spend one or two semesters in Bologna depending on the individual mobility pattern. Their level of Italian language was B2 minimum, and four of them were Italians (coming from different cities, at their first experience in Bologna).

Their testing of the App was organised in several steps, both guided and self-regulated, and lasted in total about three months. To begin with, the CLE students were offered a formal and structured presentation of UniOn!, which aimed at describing in details the features, the contents, the various possibilities of usage, and also the typologies of information included in the App.

Right after that presentation, which was attended by 20 out of the 30 students of the group, a gamified example of App usage was organised consisting in a treasure hunt (where the treasures were actually places to discover) with a final photographic contest. The students were divided into four teams and they were given hints to find five places, they had then to walk around the city, find the places and take a picture of each of them as a proof. The pictures were then collected, and a jury voted the best one. This activity was meant to get the students started with the App: they had not used it before, they downloaded it during the presentation, and they used it as a support to the gamified activity.

At the end, a brief follow-up was organised, during which comments about the activity and the App were collected, whereas the 'award ceremony' for the treasure hunt and the photographic contest was postponed to the end of the whole testing period. After the presentation and the gamified usage of the App in fact, the students were invited to keep using the application during their daily routine in Bologna. Also the ten students

who could not attend the presentation were invited to do the same, so that the entire group of students could provide feedback about the App.

Three months later, in December 2018, the 30 CLE students were gathered for a focus group aimed at assessing the App. The focus group was conducted by a facilitator who raised assessment issues concerning the contents and the functionalities of UniOn!. In addition, also in this case the students submitted a written questionnaire about their perception of learning.

As for their feedback about the activities carried out with the UniOn! App, the CLE students declared to be satisfied and found the App useful to discover relevant aspects of the city. Both cultural and practical information contained in the application were appreciated, also by the Italian students involved in the experience, whereas the language information was exploited in particular to 'check and refine' some aspects. In this regard, the availability of vocabulary related to different areas (art, cinema, music, etc.) was judged extremely useful. All in all, the App was considered as useful to learn the language intuitively by almost all participants in the test, and as useful to get integrated in the city by the entire group. In this latter regard, 70% of the CLE students declared to feel more familiar with Italian culture after using the App, and 80% affirmed to have a better understanding of the local environment

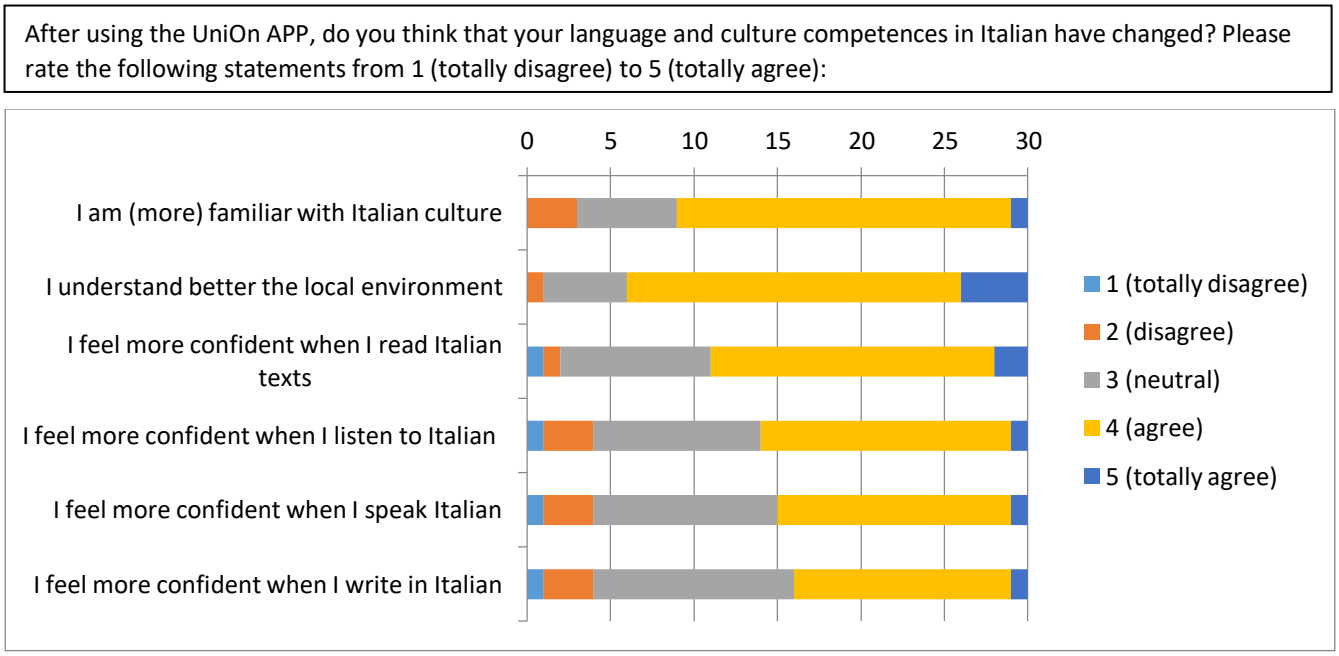

Figure 30. The perception of learning reported by the CLE students.

As for their perception of learning through the App usage, as figure 30 above shows, 63% of the participants in the testing declared to feel more confident when reading Italian texts after Using UniOn!-Bologna, 54%

affirmed to feel more confident when listening, 50% when speaking and 47% when writing. Hence, the majority of students perceived a general improvement in reading and also in listening, whereas about half of the students perceived improvements in speaking and writing thanks to the use of the App. Moreover, the number of students disagreeing is very low as for the reading abilities (only two people out of 30, with nine neutral respondents) and it increases for the other three abilities, for which four people out of 30 disagreed to feel more confident after using the App and there were 10, 11 and 12 respondents neutral for the listening, speaking and writing abilities, respectively.

4.7.4 Towards the assessment of incidental learning

The experiences reported in the previous sub-paragraphs show that the focus moved towards an attempt to assess the effectiveness of the UniOn! App as far as the incidental learning of language and culture was concerned. After designing, developing and finalising UniOn!, the attention was no more, or not only, on the appreciation of the features of this tools – which kept to be investigated, though – but it focused upon the efficacy of the incidental learning approach. Already with the final tests before the App release on the stores, an attempt in that direction had been made, as described in 4.6.3 above. After the App release however, the consideration of the effective learning though the App became more structured.

The assessment of incidental learning is indeed complex, as several elements co-occur to affect the learning outcomes, and it can be very difficult to identify and isolate the actual contribution of the App. These co-occurring elements can include the users' motivation, the duration of their stay, the duration, the frequency and the context of App usage, the users' daily activities, the users' interaction with local people, and so on (Taleb, Sohrabi, 2012; Burston, 2014).

In the tests previously described, we tried to take into consideration all the contextual elements mentioned here above, and we also tried to rely upon the users' perception of learning, by inviting them to reflect upon how their competences might have changed after using the App. Even though the formal testing is the most common – and maybe the most reliable – way to measure achievements in language learning (Straka, 2002), self-evaluation and self-assessment can be also used, especially in non-formal learning situations (Darginaviciene, 2017; Li *et al.,* 2015). Focusing upon the user's perception of learning, we aimed at investigating the personal feeling of the users about a set of given assertions pertaining both to their progress in language proficiency, but also to their understanding of cultural aspects, and – in conclusion – to their integration within the local reality (Valva, 2018b). Moreover, a combination of formal tests and surveys and structured interviews aimed at investigating the perception of learning could turn out to be an interesting strategy to assess the effectiveness of the incidental learning approach.

From this perspective, the dimensions under investigation have to include the user's background in terms of age, gender, origin, but also languages spoken, level of target language, previous learning experiences, and so on. The dimensions to consider should also embrace the user's engagement with the App, analysing the duration and the frequency of usage but also the context of usage, which could be completely autonomous as in the example reported in 4.7.1 or partially guided as in the examples shown in 4.7.2 and in 4.7.3. In this regard, when a facilitator supports the users – also by means of gamified activities – the level of involvement and engagement increases considerably, as it does the perception of learning. This final aspect could be particularly relevant in a pedagogical perspective aiming at integrating the App as a tool to support the other in-class activities, which was not originally planned by the App developers but proved to be an interesting insight when tested after the App release.

4.8 Concluding remarks about the UniOn! App

The finalised versions of the UniOn! App have been available on the stores since August 2018 for all the four cities/languages/cultures, and they are freely downloadable from all interested people[19]. Since then, they are being downloaded and used by incoming students of the partner institutions of the ILOCALAPP project, and also by other typologies of users (e.g. tourists, foreign workers, high school students). So far (September 2019), the UniOn! App has been downloaded by 2871 people, 943 have selected the Italian version, 1255 the Polish version, 345 the Portuguese version and 328 the Finnish version[20].

At present, the test with the incoming mobility students of the University of Bologna depicted in 4.7.1 has been conducted only once. It could be replicated for each academic year, or even for each semester. The questionnaire used in order to determine the App effectiveness was indeed comprehensive, as it included the assessment of the users' engagement, the evaluation of the App features, the perception of learning and the users' background information. The questionnaire could also be enlarged with a fifth part aimed at reporting possible future shortcomings (e.g. links not working, information to be updated). Likewise, experiences such as those depicted in 4.7.2 and in 4.7.3 (i.e. the guided or semi-guided usage of the App), or even the experiences depicted in 4.6.3 (i.e. other examples of guided or semi-guided usage but within the specific context of Summer Schools) could be replicated on a regular basis. That is to say that the App is suitable for various activities and

[19] The direct links to download the four versions of the UniOn! App are available at: http://www.ilocalapp.eu/results/how-to-get-the-union-app

[20] More in details, so there have been 943 downloads for UniOn!-Bologna (470 from Google Play Store and 473 from Apple Store), 345 downloads for UniOn!-Coimbra (173 from Google Play Store and 172 from Apple Store), 1255 downloads for UniOn!-Poznań (1110 from Google Play Store and 145 from Apple Store) and 328 downloads for UniOn!-Rovaniemi (147 from Google Play Store and 181 from Apple Store).

experiences, and it would be worth keeping alive the investigation about the efficacy of the incidental learning approach. Similar studies could be conducted also with the other three versions of the UniOn! App, i.e. the App for learning Finnish language and culture geo-localised in Rovaniemi; the App for learning Polish language and culture geo-localised in Poznań and the App for learning Portuguese language and culture geo-localised in Coimbra. A comparison among the results obtained with the four versions of the UniOn! App could be the input for more general considerations about language-culture incidental learning.

As for the results collected with UniOn!-Bologna, the first relevant aspect emerged during all kinds of testing was related to the importance of taking into account several dimensions when trying to define the App effectiveness, and basing all possible considerations upon the contextualised situations in which the App was experienced.

The use of UniOn!-Bologna was beneficial in order to acquire familiarity with Italian culture and to enhance the understanding of local environment. Almost all international participants in the tests shared this view and this was confirmed also by the Italian people involved in the testing activities (for instance by the four Italian students of the CLE group who came from different Italian regions and were at their initial experience in Bologna, or by the high-school students involved in the pilot phase).

As for the effective improvement of the four language skills (reading, listening, writing and speaking), the results about the perception of learning are more controversial. Reading seemed to be the skill more likely to be improved thanks to the usage of the App, as in all cases the majority of people who have tested the App – since the assessment of learning perception was introduced – affirmed to feel more confident with that skill. More generally, receptive skills (i.e. the understanding of written and oral texts) seemed to have been further benefited from the App usage when compared with productive skills (speaking and writing). Speaking in particular remained more difficult after using the UniOn! App.

Furthermore, the level of competence in the target language impacted upon the assessment of the App features and upon the perception of learning. The participants in the additional tests before the App launch were all beginners and declared to find the contents of the App particularly difficult. Similarly, also the participants in the pilot phase who were beginners affirmed to have difficulties with the Italian texts, whereas the participants in the tests conducted after the App release – who had all a previous knowledge of the language – did not report any particular problem with the texts. Furthermore, beginner users reported frequent switches to the English version of the texts, where the users who had an intermediate or advanced level of language proficiency did not. In other words, language learning with UniOn!-Bologna was not so intuitive for beginners as the understanding of the input was too demanding for them, even though those who were helped by a tutor could more easily overcome their difficulties in comparison to those who were autonomous users and for whom the difficulties turned out to be demotivating factors.

This leads to a further consideration about the context of usage. The users who had the chance to test UniOn!-Bologna within a guided context (i.e. the students of the WeTell Summer School experience described in 6.3.1 above and the students of the Dickinson College who participated in the test illustrated in 4.7.2) confirmed that the presence of a tutor facilitated their exploitation of the App contents, and made its relevance for learning more evident. As said, the App was not developed with this possible scenario of usage in mind, but it turned out to be suitable also to be applied in combination with regular, more standard in-class activities. The potentialities of such a combination are still to be exploited, though.

In addition, the duration and the frequency of usage also impacted upon the perception of learning. When the App was used for short periods, and/or with an irregular frequency, it was not considered too effective. It is difficult to identify the 'proper' duration and frequency but, in light of the tests so far conducted, a period of two-three months with weekly usages at least seems to be necessary to fully appreciate the potential of the UniOn! App. It is also true that mobility students may need the App support especially in the initial months of their stay, when they have to get familiar with many aspects of the new reality; an intensive use of the App in that period could result into a significant help in learning useful information.

To sum up, the incidental approach to learning fostered by the UniOn! App revealed valuable especially if certain conditions were met in terms of users' background and contexts of usage. In any case though, the App was perceived as an interesting, useful tool to convey language and culture. Moreover, the methodology for developing UniOn!, along with all the reference tools created in terms of procedural guidelines and frameworks, could be further exploited to adapt the App to new targets, thus proving the replicability of such a model. The implications of these considerations will be discussed in chapter 5, which is the concluding chapter of this thesis.

5. For a critical reflection upon the case studies

In the final chapter of this thesis we will provide a thorough reflection upon the three case studies discussed in the previous chapters. The reflection will be organised around the aspects that were presented as critical in the first chapter, and around the sets of research questions that were connected to those critical aspects. In the initial chapter of this thesis, in fact, we have introduced four issues as being critical when dealing with language and culture learning through technology, which led to the definitions of five sets of research questions. In the case studies presented in chapters two, three and four, those issues and those research questions were tackled from different perspectives, and the outcomes emerged can contribute to the analysis of the insights pertaining to language and culture learning through technologies.

We will begin with a discussion about the relation between technology and education, in light of the results presented above, and we will move to relate about the evolution of technological tools and educational approaches. The criteria for both designing and assessing educational technologies will be the object of the third paragraph, while the fourth section will be devoted to a possible theoretical framework for learning languages and cultures through technologies. The four critical issues presented in chapter one – and which inform the first four paragraphs of this final chapter – were all influenced by local and global dynamics, which constituted a dedicated set of research questions and which will be discussed in detail in section five. Finally, in the conclusions we will summarise the current and future usages of the tools described, while opening the path to new possible research perspectives.

5.1 The relation between technology and education

In chapter one we have wondered what the specific features of the relation between technology and education were, in particular in the field of language and culture learning. We have also questioned the possible changes within this relation in recent years, and how this relation could display in our specific context of examination. Hereafter we will provide an outline of how this relation was deployed in particular in the case studies examined, with two main focuses, one devoted to normalisation and the other to mediation, while also taking into account the role of the users.

5.1.1 From a polarised to a normalised relation

The relation between technology and education has generally been characterised by a polarised scenario, oscillating from – on the one side – an unconditional support of technology regarded as the solution to all pedagogical problems, to a total rejection of technology due to fear of interferences, on the other side. However, such a relation is much more complex than this vision polarised to two extremes, and it requires an

explanatory framework in order to be fully appreciated, which takes into account many, intertwining factors (Bax, 2003, 2009, 2011).

In particular, in the field of language and culture learning, a notion has been presented as relevant, i.e. the notion of 'normalisation' of technology in education. As we have shown, technology is said to be normalised when it is regularly used as an element of pedagogical practice, without consciously being noticed. In order for normalisation to be reached, a change in the users' attitude is needed, taking into account a mix of socio-cultural factors; moreover, in order to be normalised, technology must be also useful, that is to say that it must contribute positively to the learning process (Bax, 2003, 2009, 2011). The notion of normalisation was conceived in a context of CALL, but it presents some interesting aspects which could also be applied to the MALL domain. In particular, the regularisation of the usage of the device (be it stationary or mobile) in the educational practice and its relevant contribution to the learning process may be regarded as two important milestones for the normalisation of technology.

We might wonder if the three case studies analysed in this thesis can represent examples of normalisation, and to what extent this normalisation was achieved. To begin with, in the case of the E-LOCAL courses, their institutionalisation was one of the aims of the follow-up project E-LOCAL for all that carried out relevant actions for stabilising (normalising?) the courses within the partner institutions. As for the specific E-LOCAL course of Italian language and culture, normalisation could be said to have been reached at least for some years, between 2014 and 2017, when the E-LOCAL course was the official course of Italian culture and language at A1 level offered by the Language Centre of the University of Bologna. All incoming students interested in a course of that level were presented the E-LOCAL solution, and they had to go through that specific course as a regular (normal) part of their path. In addition, the E-LOCAL course of Italian culture and language has been used also by other institutions since it entered the eduGAIN network. In particular, the Language Centre of the Siena Unversity has been institutionally proposing the E-LOCAL course to its incoming students since AY 2014/2015[21]. As for Bologna, such a normalised role has been partially replaced by the E-LOCAL MOOC of Italian language and culture, since 2017 onwards. The E-LOCAL Moodle course still exists but it is not part of the Language Centre learning offer, and incoming students are eventually proposed to take the MOOC. Anyway, the E-LOCAL MOOC cannot be said to be fully normalised, as it is not conceived as a regular (normal) part of the incoming students' path: they may or may not take it, on a voluntary basis, it is not part of the Language Centre activities. As for the E-LOCAL courses of the other languages and cultures, they can be said to

[21] The Language Centre of Siena University has a dedicated web page to inform the incoming students about the E-LOCAL course of Italian. See https://www.cla.unisi.it/it/corsi/inglese/studio-autonomo/italian-a1-self-study-online-course for more details (last access 26 September 2019).

be normalised in the sense that they constitute a constant learning proposal for the outgoing students of the University of Bologna and a constant integration to in-class activities for students of those languages and cultures at the Department of Modern Languages, Literatures and Cultures. However, their effective impact should be further investigated in order for the E-LOCAL courses to be labelled as 'normalised'.

It must be specified, though, that all the actors connected to the E-LOCAL courses (the staff who conceived and developed the courses, the students who took the courses, the teachers who used them) showed a 'normalised attitude': they did not think that the E-LOCAL courses could cope with all the aspects related to learning the E-LOCAL languages and cultures (attitude of omnipotence, the first of the two above-mentioned extremes), nor did they believe that the E-LOCAL courses could endanger other learning opportunities (attitude of fear, the second of the two extremes mentioned above); on the contrary, the E-LOCAL courses were considered as a useful support for some specific learning needs, positively contributing to the fulfilment of the pedagogical goals for which they were created. The same approach can be applied also to the E-LOCAL MOOC of Italian language and culture, even though its usage is more linked to personal decisions than to institutional paths.

Finally, as for the UniOn! App presented in the third case study, it is hard to say if it is normalised or not, partly because the experience is too recent and more time is required to verify if it can become of standard practice, and partly because of the very nature of the tool, which makes it difficult to measure how 'normal' its usage has become in a mobile, informal – and often personal – context, where learning is supposed to happen incidentally. UniOn! was often perceived by its users as something exceptional, unconventional, and this extra-ordinariness of the tool and of the approach to learning that it conveyed resulted into a less normalised usage. Indeed, the reaction to UniOn! could be described as polarised, with enthusiastic users with higher expectations on the one side, and sceptical users on the other sides. Notwithstanding, the latest experiences with UniOn!-Bologna illustrated in 4.7 show that the App could possibly move towards normalised paths.

5.1.2 The contribution of the users in defining the role of technology

To further exploit the notion of normalisation, Bax (2011) suggested to adopt an approach of Action Research, for which all the aspects connected to the normalisation of technology in education are to be considered after a need analysis and a subsequent action plan, taking into account the effective elements capable of benefitting the educational practice.

The Action Research approach was indeed adopted in all the three case studies presented in this work, and the need analysis was the starting point for the definition and the adoption of any subsequent action. Moreover, in our case studies, the need analysis was not only aimed at establishing if a technology was needed, as envisaged by Bax (2011), but it was especially finalised to gather insights about the features of the technological tools required by the users, in terms of both contents and functionalities. Furthermore, in the case studies under

examination, the need analysis showed an evolution and became more and more focused, taking into account also background information about the users, finalised to define their profile in order to better understand their needs. In this regard, also the attention to gender issues presented an evolution all along the three case studies, being less present in the first one and more and more present in the second and in the third ones.

In the initial E-LOCAL end users' consultation described in chapter two, the questions of the online survey focused on students' attitudes towards learning languages and cultures, and on the motivations for learning them, as well as on topics and technological solutions in language learning. In that case, only the respondents' knowledge of languages was investigated, and no other background question pertaining somehow to the personal domain was included in the questionnaire. Nevertheless, the results collected through that online consultation proved to be a first, valuable resource for identifying the key features of the E-LOCAL courses, insofar as they provided an extensive idea about needs and expectations of the students. Moreover, the relation between technology and learning which emerged from that survey was focused upon the efficiency and functionality of the learning environments: respondents showed a positive attitude towards virtually encountering other cultures and languages, provided that the learning materials were of high-quality and targeted to the purpose.

In the questionnaire and during the interviews used for selecting the pilot users of the elocALL project, the three main topics under investigation included the knowledge of foreign languages, the attitude towards e-learning and the factors contributing to enhance motivation in taking online courses. Here again the focus was upon online learning environments rather than on the respondents' background, with the respondents' attitudes playing an important role, though.

If the questionnaires used to assess the E-LOCAL courses did not include any background information about the respondents, and the same applied to the questionnaire used to assess the first edition of the E-LOCAL MOOC, the approach changed completely from the second edition of the MOOC onwards. From that edition in fact, major changes in the assessment questionnaire we operated, aimed at profiling the respondents in terms of background and expectations (it must be said, however, that the expectations of the respondents had been taken into consideration also in the previous questionnaires) and also including the users' perception of learning.

The same approach was maintained with the surveys related to UniOn!, in which the personal details of the respondents were always included as relevant parts of the investigation, and the users' perception of learning became relevant to assess the efficacy of the tool. We will return to the notion of assessment in 5.3 below, for the moment it is important to underline that within the ILOCALAPP project, the constant contact with students, as well as their participation throughout all the stages of the App development, was crucial to define the existing contents and functionalities of the UniOn! App. The consultation strategy elaborated by the ILOCALAPP

Consortium included multimedia design, digital literacy and language teaching/learning (ILOCALAPP Consortium, 2016a) and opened the path to the future characteristics of the App assessment.

All in all, in the reported case studies, the users' consultation proved relevant in defining a balanced relation between the technological tools and the educational purposes for which they were being created; indeed, the users can be said to have contributed to the creation of tailored, customised, functional learning paths and experiences, also pointing out the critical issues to be faced.

5.1.3 'Mediated' technology as a support to the learning process

A further relevant notion to be explored when analysing the relation between technology and education is the view of technology as a support to the learning process, and as particularly effective when a mediation is provided to bridge the gap between the tools and the actors involved in the educational practice. This is highly relevant because, as we have seen, the relation between the actors of the learning process and the technological tools does not take place in isolation. On the contrary, learning is a social process, it is culturally-based as understandings are constructed in culturally formed settings, and it is developed through communication and through assistance or instruction. This is the scenario in which technology is called to support learners and teachers in their educational practice. However, it is not sufficient to simply provide them with access to information and opportunities for interaction in order for technology to have an effective role in education; in contrast, it is also extremely important to include in the educational practice a 'mediation', the intervention of an expert capable of scaffolding the experience and checking that learning is taking place, while also offering educational examples and challenges. From this viewpoint, the role of mediation in the relation between technology and education is particularly emphasised (Bax, 2010), also in the perspective of reducing or compensating the transactional distance, i.e. the factors determining the relational and communicative space between the learners and the inputs of instruction (Cervini, 2015). In fact, the higher the transactional distance is, more efforts are required by the learners in terms of autonomy and motivation in order to successfully proceed in their learning experience (Cervini, 2015).

Our case studies have provided several examples of mediation, in the broader acceptation meant by Bax (2010), who was not referring only to experts acting as mediators, but also including the institutional settings and the structured activities as possible mediating actors. To begin with, the E-LOCAL courses were at first conceived to be autonomously taken by the learners, and as such they were developed and tested during the E-LOCAL project. The E-LOCAL courses were built in order to be independent online courses that could be taken without any teacher support. In that context, the function of mediation between the courses and the users was carried out by the institutions, i.e. by the project partners representing the institutions that were creating this opportunity for their students. The project partners mediated between the final users and the courses, by

providing them with necessary information and instructional directions, especially during the pilot phase during which the courses were tested. However, no form of assistance was planned after the pilot phase, even though the pilot users had showed the necessity to receive some sort of assistance, be it technical, motivational or content-related. In particular, the pilot users of the E-LOCAL courses had complained about the difficulty of taking the courses without the assistance of a tutor, and when the follow-up to the project was put into place, the users were offered the possibility to take the courses assisted by a facilitator.

During E-LOCAL for all, several modalities for supporting the fruition of the E-LOCAL courses were tested, starting from a tutor-based process that let the users interact with a tutor during their learning process, and also let the users interact among themselves. The interaction among the users of the courses relied upon the activities suggested by the tutors, both in class and within the platform, and also upon a dedicated Facebook group; in any case, the users were helped in solving their problems and/or in completing their tasks. In this context therefore, the mediation between the users and the technology was carried out by the tutors and by the activities that they proposed, and also by the group of peers. The feedback provided by the assisted users stressed the importance to have some 'human assistance' in taking the online courses; this was also confirmed by the data about the completion rate of the tutored courses, which was twice higher for tutored courses delivered in blended learning modality in comparison to the courses with full-distance tutoring. In short, in the elocALL experience, the intervention of a mediation was useful for scaffolding the users' experience: the interaction with tutors and with other learners had a motivational role and helped the users of the courses to tackle the challenges of studying a new language and related culture by providing more opportunities for communication, in addition to offering concrete support for exploiting the learning materials.

The E-LOCAL MOOC of Italian language and culture followed a similar path, as during the first three editions the role of mediating agent was carried out by the institution, which provided the users with relevant information to take the course, while also offering assistance for technical problems related to the platform. However, this kind of mediation was not enough for stimulating the users and letting them fully appreciate the course, and – as we have shown in chapter 3 – when a supporting system was put in place with the aim of assisting the users in their learning path, it had a positive impact on both the users' satisfaction and the completion rate. In particular, the completion rate of the new editions of the MOOC was more than doubled in comparison to the first editions, even though other factors (i.e. the improved evaluation system and the re-organisation of the course in two parts) have impacted upon this result. Anyhow, the supporting system of the E-LOCAL MOOC consisted in regular messages sent the users to highlight the milestones of the learning process and in the availability of a content-tutor in the Discussion Area, in addition to the presence of the platform tutor. With the content-tutor the users could discuss any issue presented in the units of the course, while the regular messages helped for monitoring and keeping the pace of learning. To sum up, even if the MOOC was conceived to be

taken autonomously, the presence of an expert within the platform could be beneficial and it might turn into a motivational input, in addition to solving the specific issue for which the tutor was invoked.

Finally, as for the UniOn! App, this tool was conceived for autonomous use even more than the others, and in an initial phase it benefited from an institutional mediation, devoted – again – at explaining and sharing information. After the final release of the App, the institutional mediation has still had an important role, insofar as it guaranteed the transmission of relevant information to the target users as well as references to contact in case of need. In parallel, other forms of mediation have also emerged, finalised to directly help the users in their interaction with the App. In particular, when the users were supported by a facilitator – also by means of structured and/or gamified activities – their level of involvement and engagement increased considerably, as it did the perception of learning. This proved to be particularly relevant in the perspective of integrating the usage of the App with other learning activities, combining in-class and out-of-class learning, even though the actual impact of this solution needs to be further explored.

To conclude, the successful impact of learning proposals involving technological tools relies upon a combination of factors, which include the soundness of the learning materials themselves, but also the context in which they are used, and the support provided to the learners during the educational process. In other terms, the technological tools are not valid educational tools *per se*, they are valid educational tools in relation to their users and their context of usage.

5.2 The evolution of technological tools and educational approaches

The second critical aspect presented in the first chapter of this thesis was linked to the volatility of technology due to its rapid evolution, and the rapid evolution of technology has several implications when this is used for educational purposes. Already back at the end of the 90s Levy (1997) identified a diffused trend to discard a technology when it was considered to be outmoded, even if it might prove to be still effective as far as its learning potential was concerned. Following this direction, we might wonder how the evolution of technology is impacting upon the educational approaches to the usage of technology itself. Or vice versa, we might question if the educational approaches are influencing the development of technological educational tools. And, furthermore, we might also consider what kind of pedagogical principles are still valid once a technology becomes obsolete so that they can be maintained also for newer technologies. All these aspects will be the object of the two following sub-sections, in light of the results of our case studies. In fact, the outcomes of the three experiences illustrated in the previous chapters allow to draw two important conclusions, whose implications will be discussed hereafter:

1. the values underlying all the three experiences presented in this work proved to be still valid, no matter what technology they were applied to;

2. the specific technologies did however need specific approaches, in particular mobile learning needed a dedicated approach.

Starting from the results of our case studies, we will firstly provide an account of what values are independent of the technological tools for which the learning path is designed, and we will conclude this paragraph with a discussion of the variables depending on the technological tools themselves.

5.2.1 Values independent of technology

As for the first conclusion derived from the case studies under examination, i.e. the validity of values beyond the technology they are applied to, we have noticed that our three case studies presented several affinities. This was particular evident with the E-LOCAL courses and the E-LOCAL MOOC, as the latter was based upon the former, but it was also true for the UniOn! App. In all cases in fact, there are some value that still remain convincing, even when the technological support may start to look obsolete.

To begin with, the combination of linguistic input and cultural materials as a way for introducing relevant information for learners was valid in all cases. The E-LOCAL courses, the E-LOCAL MOOC and the UniOn! App presented all integrated language and culture materials, even though the extent of that integration might be different. For the courses hosted within the dedicated Moodle Platform, and also for the MOOC, the two different aspects – that is to say the linguistic input and the cultural information – could be more easily identified by the learner insofar as the courses maintained a unit-based structure, and the labels of each single section helped categorise its content. Nevertheless, within each single section, language and culture could mix following the thematic pattern introduced. With the UniOn! App the thematic pattern was prevalent, and it is indeed more evident for the users, as the home page offers information categorised according to thematic criteria, and there is no unit-organisation within the App. In contrast, even within this predominant thematic structure, some labels help to recognise the information as more pertaining to the linguistic, communicative domain, or – on the contrary – as being more related to cultural aspects. In short, in the objects examined the value of intertwining language and culture learning, along with its intercultural dimension, is independent of the technological tool, whereas the extent of this integration may vary depending on the technology.

Secondly, the value illustrated above is strictly connected to the approach to student mobility. In all the three experiences, the learning tools were designed taking into account the specific needs of mobility students, as the first target users to be addressed. The rationale for designing the tools was that learning local language and culture is a necessary step for integration, even within a temporary experience. From this perspective, international students are supported in understanding their new linguistic surroundings, as well as the local values and behaviours, and student mobility becomes a channel for re-defining citizenship and identity. Again,

the means for attaining this goal might differ among the various technological solutions proposed, but the scope was the same.

To continue, a third value is linked to the role of mediation, which we have presented in the previous paragraph. If, in fact, the typology of mediation may be tool-specific – and therefore it might vary accordingly – the concept of mediation is transversal and independent of the specific technology to which it is applied. In other words, mediation represents an added value for the successful exploitation of technology for educational purposes, and as such it was conceived in the experiences illustrated, which showed that when a form of mediation was available the learning outcomes were more rewarding, along with an increased users' satisfaction.

Finally, a further common aspect concerned the elaboration of methodological specifications, as a procedural approach to the development of the specific learning paths. Those methodological specifications have always implied an analysis of the state of the art, the involvement of users (even though it might happen at different degrees), as well as the involvement of different kinds of expertise in an interdisciplinary dimension, and also testing and revision phases before reaching a finalised product. This procedural pattern represents a value independent of technology insofar as it could be replicated – with minor adjustments – also in different contexts, i.e. with different tools, and with different languages and cultures, too. Indeed, replicability was a key value of the E-LOCAL project, but it can be considered as a key value for all the three case studies examined in this work, as all the above-mentioned aspects go in that direction.

In the conclusion of this chapter, we will explore further the implications connected to the notion of replicability, which may indeed open new directions for research. Nevertheless, all the values that we have underlined show that the view behind the learning materials can prove not to be depending upon the technological tools and their subsequent use. The approach to learning providing a combination of linguistic input and cultural materials, the focus on targeted users and the role of mediation, along with a precise – and replicable – methodological pattern, constitute values that go beyond the specific technological solution to which they are applied.

5.2.2 Variables depending on technology

If it is true that transversal values exist, and that creating technological learning paths always implies a proper combination of pedagogical knowledge and technological expertise, it is also true that creating stationary learning materials is different from creating mobile learning materials (Fratter, 2016). In other words, different technologies require specific approaches and specific solutions. Applying the same methods to different tools does not automatically work; in contrast, it is likely that changes in methodology are required. In particular, mobile learning is a separate, definite type of learning and not the simple application of e-learning on mobile

devices. Moreover, the outcomes of different learning experience are not necessarily comparable, especially when we are considering a CALL and a MALL dimension, as each of them has its own specificities (Quinn, 2011; Kukulska-Hulme, 2018).

Adaptation is a key word in this regard. The three case studies that we have examined confirmed that the learning materials need to be contextualised to their usage in order to be effective. When developing the MOOC of Italian language and culture based upon the E-LOCAL Moodle course, there were some features that were confirmed and some other features that were changed. If we look closely to what was changed, we realise that the modifications concerned aspects associated to the specificity of the tool: the navigation system, the interface, the layout, some graphical and multimedia issues, the external references, the accessibility of the exercises. Moreover, the self-assessment and the self-evaluation procedures were customised to the new platform and to the new modalities of usage. The very contents were almost the same, but they were adapted to be used with a different tool, they were contextualised. This meant also a different way of presenting information in order for it to be functional: the e-story section was re-organised accordingly, the e-grammar was enriched with tables and examples, the e-culture and e-life sections became smoother, the e-language exercises were adapted to the characteristics of the new tool.

Similarly, the re-contextualisation of the E-LOCAL learning materials was a dedicated phase of the ILOCALAPP project, and this was not by chance. Before the creation of the contents for the UniOn! App, the E-LOCAL materials were re-contextualised in order to be re-usable with a new tool. The notion of re-contextualisation was particularly important in this case, as the tool under consideration implied a completely different approach to learning insofar as it entailed a mobile dimension.

Furthermore, the three case studies analysed in the central chapters of this thesis cover a time span of less than a decade and they account nevertheless for the mobile revolution happened in recent years. We have started from a computer-based (or better computer-assisted) approach with the E-LOCAL courses, we have moved to describe a MOOC compliant with mobile devices and we have ended up with a pure application for mobile devices. In other words, our case studies represented a chance to visualise the recent shift from CALL to MALL: if the E-LOCAL courses presented in chapter two fully pertained to the domain of CALL, with the MOOC experience depicted in chapter three we started to embrace the mobile dimension (even if the course was still conceived within a stationary logic) and with the final case study discussed in chapter four – the UniOn! App – we completely plunged into the MALL reality.

As we have seen, mobile learning has been proving to be particularly relevant in the field of language and culture learning, and especially in the context of higher education, and it has the potential to deeply change the way in which languages are learned (Heil *et al*., 2016). Nevertheless, this potential needs to be fulfilled with adequate learning solutions, as the simple introduction of a newer technology does not automatically imply

improvements in the learning process (Fratter, 2016). The notions of adaptation and contextualisation explored in this work reinforce the concept that specific technologies need dedicated approaches, and that the contribution of pedagogical research has to be aligned to the assets of instructional design in order to develop successful learning tools.

5.3 Criteria for designing and assessing educational technologies

Our case studies focused upon educational technologies, i.e. upon technological tools used to facilitate the learning process, and they can help identify relevant issues for designing dedicated tools and also some criteria useful for assessing the results. As said, in fact, when designing and assessing educational technologies, specific criteria are to be considered in order to identify the conditions that make them functional to their purpose. In this section we will consider firstly the issues pertaining to the design of educational technologies for language and culture learning, and then the issues related to their assessment, their impact and their effectiveness. The following sub-paragraphs will move from the outcomes of the three case studies presented in this work to go beyond their specificities and attain more general considerations.

5.3.1 Criteria for developing dedicated educational tools

Our three case studies offered the possibility to discuss the specificities of instructional design for CALL and MALL. We have already mentioned that creating learning materials to be used with the computer differs from creating materials to be used with mobile devices, and we have also highlighted the specificities of the two approaches, but we have not yet drawn the conclusions upon the relevant criteria to consider when developing dedicated educational tools. Instructional design is finalised at developing learning experiences and environments that can promote the acquisition of specific knowledge and skills in a more efficient, effective, and appealing way (Merrill *et al.*, 1996). Efficiency, effectiveness and appeal are indeed three relevant criteria, upon which the development of learning tools can be based; they were three relevant criteria also in our case studies, along with other factors that emerged as crucial. In fact, from the outcomes obtained all along the three experiences reported in this work, we can derive the ten following considerations.

1. Efficiency is a major issue. In the initial survey launched during the E-LOCAL project, the only feature which was regarded as very motivating for an online environment by the majority of respondents was efficiency. In a CALL perspective, in order for efficiency to be obtained, the learning environment must be technically well-made, i.e. it must be programmed to run well on the computers of the users, and it must be compliant with various web browsers. Efficiency is also obtained with clear functions, and clear instructions and directions, which make the learning environment simple to be used. Efficiency is a motivating feature also in a MALL dimension, as the initial ILOCALAPP survey confirmed, with the

respondents linking motivation to the usefulness and efficiency of the Apps. And, in order for Apps to be efficient, they should be compliant with the users' device and provide short, useful learning moments. Other relevant factors pertaining to efficiency concern navigation among the contents and the services, and also interface, layout, and customisation.

2. The effectiveness of a tool should be evident to its users in terms of learning progress. Keeping track of progress was reported as important for the E-LOCAL courses, and it was extremely relevant for the Italian MOOC, as major attention was paid to create an efficient monitoring system. The results of the ILOCALAPP survey also showed that the App users envisage to be enabled to track their progress. This is particularly relevant for 'standard' Apps for language learning, for which progress tracking is an acknowledged important feature.
3. The learning path should be designed to guarantee the users' autonomy, by providing both tools for (self)monitoring learning and several forms of feedback. In the E-LOCAL experience, flexibility and autonomy emerged as the main advantages of the online learning. Flexibility was conceived in terms of time and place of learning, but it also referred to the possibility for students to decide their own learning path, as far as the learning environment can foster autonomy and self-evaluation. As for the Apps, ways for (self)monitoring and providing feedback to the users are also to be taken into consideration during the design phase.
4. The extent of learners' participation, along with the extent of context-integration, are to be planned. The lack of interaction is a typical shortcoming for the online learning platforms. In particular, the lack of class interaction – both in terms of teacher's contribution and in terms of peers' exchange – was perceived as a big disadvantage during the E-LOCAL experience. This is also connected to the oral aspects of the language, which are generally considered as difficult to be learnt online. Interaction and practice of oral aspects of the language are considered crucial also in the mobile dimension, and here they can benefit from a stronger integration with the context, as they can exploit the context-aware functionalities to integrate contextual resources into the learning contents.
5. Visual appeal is important, but it should be finalised to the learning experience. In the initial E-LOCAL survey, additional features that emerged as motivating for the e-learning environment were visual appeal and fun. On the contrary, fun and attraction were considered less motivating in the initial ILOCALAPP survey. In any case, quality graphics and entertaining contents should be functional to the learning goals, both for CALL and MALL. In this regard, the design should be functional, and also the possible game-like elements should pursue learning purposes.
6. The type of learning covered (explicit or implicit, formal or informal, in or out of class) has to be considered and, similarly, also the possible forms of delivery (autonomous and/or assisted) are to be

carefully planned in advance. However, at the same time, the learning paths have to offer flexible solutions capable of adapting to different options. The learning platforms generally allow for this flexibility, but the learning materials are to be created taking into account how they will be exploited. In this regard, an autonomous fruition of the contents requires stand-alone products capable of being fully understood without a facilitator, even though a 'mediation' should always be enabled.

7. The learning paths should consider the opportunity of involving a facilitator at a certain stage. The tutors should have the possibility to use the tools embedded in the learning platform hosting the courses (e.g. forum, chat, and instant messaging) and also to exploit external resources (e.g. social networks). Supporting actions were acknowledged as relevant in all the case studies examined in this work. The presence of a tutor was identified as an added-value for the E-LOCAL courses, for the assistance they provided and for their competence. Also for the E-LOCAL MOOC the availability of tutors along with the encouraging mechanism turned out to be beneficial, and for the UniOn! App as well the experimented assisted usages were satisfactory.
8. The tools should cover a complete set of learning materials, organised in short learning moments and intriguingly combined to give value to the learning experience. This criterion proved to be valid both for CALL and MALL, in our case studies. Moreover, for the platform-based courses, frequent milestones are necessary to articulate the learning process. In addition, information must be up-to-date (therefore, mechanisms to check and potentially refresh the information are to be planned) and easily applicable in real-life situations (therefore, it must be retrievable without particular efforts).
9. The availability of learning materials also beyond the duration of the learning experience is to be planned. The users may want to have access to the learning resources also when they have finished the course, in order to check and revise, or simply refresh some contents. In this perspective, the access to the learning materials has to be guaranteed, for instance by having some downloadable materials and/or by offering the chance to re-enter the course at any time. For mobile solutions, also the offline availability of some contents has to be considered, in addition to their online exploitation.
10. The users are to be involved in the design process, as they can provide relevant viewpoints on both contents and functionalities. Again, this notion applies to both CALL and MALL. Our case studies confirmed that the users can play a crucial role when designing dedicated educational tools, and our case studies also showed the advantages of an instructional design becoming more and more inclusive as it was increasingly based on the involvement of the users, who were – in the end – directly engaged in the various development steps.

The above-mentioned criteria are not to be intended as exhaustive, as others might be added to the list of factors impacting upon the development of dedicated educational tools for languages and cultures. They

summarise, however, the main aspects emerged in this work that could be also applied to different situations, and, as such, they represent an attempt to go beyond the specific case studies under examination.

5.3.2 Criteria for assessing technologies for language and culture learning

The users play indeed a crucial role also when it comes to the assessment of educational technologies, as we have to refer to them in order to understand what impact the technological tools may have onto language and culture learning, and obviously also in order to measure their effectiveness. Impact and effectiveness have been mentioned several times as two relevant – but different – criteria for assessing the tools under investigation in this work.

The assessment of the E-LOCAL courses relied upon a final evaluation questionnaire, which the users were invited to return at the end of their learning experience. The questionnaire focused upon specific issues pertaining to the learning environment (i.e. the interface, the coherence, the autonomy fostered, the interactiveness, the pedagogical and intercultural assets, etc.), in addition to questioning expectations, possible shortcomings identified and possible suggestions for improvement. During the tutored phase, the final questionnaire also focused upon general and specific impressions related to the tutored course (i.e. the expectations about the tutored course itself, and also the usefulness, availability and clearness of the tutoring actions). The results of the assessment questionnaire, along with the number of registered users, might provide an indication of the impact of the courses.

As for the assessment of learning, the E-LOCAL courses offered a final self-evaluation unit (in addition to mid-term monitoring actions), which offered indications about the effectiveness of the learning path. The number of students managing to go through the whole course was another relevant indicator of effectiveness. When the courses could benefit of tutored activities, the criteria for assessing learning also embraced other typologies, as they could include also more structured and formal tests. This was the case for the E-LOCAL course of Italian language and culture offered by the Language Centre of the University of Bologna for some academic years, which included a final evaluation test (still computer based, but out of the E-LOCAL learning platform) where language skills were tested on the basis of the CEFR indicators.

Also the MOOC of Italian language and culture examined in this work included a final evaluation questionnaire. It included background information to investigate the profile of the users, their expectations and their satisfactions, and it required to rate some specific issues pertaining to both the contents (well-structured and easily understandable, interesting and useful, appropriateness of grammar explanations and exercises, amount of cultural information, and so on) and the learning environment (in terms of motivation and navigability). Moreover, the respondents had to rate their perception of learning as well (i.e. how improved they considered their language skills and their cultural understanding), and they had the option to leave open comments.

Here again, the results obtained with the questionnaire, along with the number of registered users, might provide insights about the impact of the MOOC. It must be specified, however, that – both for the E-LOCAL Moodle courses and for the E-LOCAL MOOC – the final evaluation questionnaire is returned on a voluntary basis, therefore it provides indications and trends but it does not account for the entire population of users. The number of registered users, on the other side, may seem a more reliable criterion, even though it does not coincide with the number of people managing to complete the learning path.

For the MOOC, the completion rate (i.e. the number of people obtaining the final certificate out of the number of registered users) is a stronger indicator of effectiveness, even though – as we have seen – this does not take into account the number of people for whom the course might have resulted as beneficial even without completing it. The results of the Final Assessment Unit go in the same direction, whereas the notion of 'perceived learning' may help identify the personal judgment of the users about how their language and cultural competences have improved, and as such it may result useful for determining the effectiveness of the course, but – as it is part of the final evaluation questionnaire – this information is provided only on a voluntary basis and therefore not available for the entire population of users.

As for the assessment of the UniOn! App, the pilot users' feedback was collected through an evaluation questionnaire including preliminary background information about the respondents and their rating of selected items concerning topics, language, design, layout, and geo-localisation. Right before the App release, the focused moved towards the users' perception and this approach was maintained also for the assessment of the App after the end of the ILOCALAPP project. In particular, since September 2018, the assessment of UniOn!-Bologna has involved the users' engagement with the App and the users' perception of learning, in addition to personal background information and an overall evaluation of topics, materials, services and functionalities.

Indications about the impact of the App are offered by the number of people using it, i.e. by the number of downloads of the App, and by the results of its overall evaluation (once more provided on a voluntary basis), whereas insights about its effectiveness can be gained through the declared perception of learning. As we have discussed, the assessment of incidental learning is particularly complex due to the very nature of this typology of learning, and it relies upon self-evaluation more than in the other cases. Nevertheless, the results obtained exploring the notion of 'perceived learning' have proved highly relevant for investigating the effectiveness of the App.

To sum up, on the one side we have to consider the assessment of the tools, which is more directly linked to their impact, and, on the other side, we have to analyse the assessment of learning, to which we can attach the conception of effectiveness. In our case studies, we started with as assessment of the tools, which was more feasible, in order to identify the impact of the proposed solutions, whereas the assessment of learning was

associated to self-evaluation and, at a later stage, to the users' perception. A combination of impact and effectiveness, though, can offer a complete overview about the validity of the technologies under examination.

5.4 Towards a theoretical framework for language and culture learning through technologies

In the initial chapter of this thesis we wondered if a theoretical framework for language education as a discipline could benefit from specific conclusions derived from specific case studies. The complexity and dynamicity of the phenomena under investigation might let prevail the uniqueness of each single situation; however, the search for more general considerations is regarded as particularly relevant for providing consistent input to the search for a framework applicable in a larger variety of contexts pertaining to language and culture learning through technologies.

All along this work we have showed that specific technologies need specific approaches (with a major difference between stationary and mobile learning), but we have also highlighted that some values are independent of technology and that the view of learning can be scaffolding the very development of technological tools for language and culture education, no matter what technology they are based upon. Following this direction, the focal point of the discussion concerns the factors to be taken into consideration when developing a programme for language and culture learning involving technological solutions, while also considering how educational design might change in order to take into account those factors.

In light of the experiences examined in this work, a theoretical framework for language and culture learning through technologies could be based upon the three following assets, which will be discussed hereafter: i) the actors; ii) the objects and iii) the instruments.

5.4.1 The actors involved in the learning process

The main characters involved in the learning process are indeed the learners. In our case studies, we have presented tailor-made solutions, created after analysing the learners' needs and involving frequent consultation activities all along the development phases and before the launch of the finalised products. We have also presented the implications related to the fact the learners are at the same time the users of the proposed technological solutions. This is a very first aspect to be taken into consideration, and not to underestimate: the learning process takes place through technological tools to be used by the learners and the learners/users have to be enabled to easily utilise all the functionalities necessary for their learning activities; at the same time, specific competence of the learners/users may turn out to be beneficial also for learning languages and cultures, in a mutual, reciprocal influence positively affecting the educational dimension.

A second relevant point is the identification of the target users, for whom the educational tools are developed. The customisation of the learning solutions is possible only if the final target users have been clearly identified,

and if their needs have been analysed accordingly. The tools presented in this work were all conceived for international, mobility students, i.e. for a precise category of users sharing similar, specific requirements in terms of language and culture learning. The fact that the courses and the App proved valuable also for other categories of users constitutes an added value that does not cancel the validity of the customised approach. We are aware that it is not always possible to address only a precise typology of final users, but the more specific the target group is, the more effective the learning solution will be.

However, even within a specific group of target users, there may be considerable differences in terms of initial language proficiency and also in terms of cultural background. For the E-LOCAL courses and also for the E-LOCAL MOOC, the target users were supposed to be beginners in the language, whereas the UniOn! App addressed heterogeneous groups as for the language level. The former approach is indeed more common and relatively more straightforward, but the latter solution is also feasible, provided that the tool is equipped with the right instruments to let all the heterogeneous language levels exploit the learning contents. Moreover, the users differ also for many other background characteristic (e.g. origin, field of study, previous experiences, etc.) and consequently their approach to learning will not be the same. In this regard, it is important to include in the proposed solution a variety of materials and a variety of activities capable of suiting the diverse learning styles and the diverse learning needs.

Furthermore, the learners are not the only characters involved of the learning process with technological tools. On the one side, we may have the facilitators, who support the learners by providing advice, help, and motivational input. Even if the facilitators are not a compulsory element of the technological learning process, we have seen that their presence is highly beneficial. On the other side, we may also consider also the content creators as actors of the learning process. Those who produce and implement the learning materials do not interact directly with the learners, but they strongly influence the learning process, nevertheless. The authors, the designers and the developers impact onto the learning process insofar as what they produce can affect how the learning process takes place. In this regard, we have seen that multi-disciplinary teams involving different kinds of expertise co-creating the tools are likely to produce more effective solutions.

Finally, in our case studies, a role in the learning process was played also by the city where the learning experience was situated, which can be regarded as another actor of the process to all intents. The learning situations of the E-LOCAL courses were settled in the cities of the project, the same was for the MOOC of Italian that had Bologna as its setting, and the role of the city was still more valuable for the UniOn! App, whose contents were geo-localised in the cities of the ILOCALAPP project. If we consider the Italian case, the role of Bologna in the learning solutions discussed in this work became more and more relevant, moving from a background position with the E-LOCAL Moodle and MOOC courses, to a key position with the UniOn! App, whose learning materials referred to specific places of the city to be exploited for educational purposes.

To sum up, learning languages and cultures through technologies does not only involve the two main actors of all learning processes, i.e. learners and teacher. In contrast, when educational technology is in place, around the learners who are the main actors of the learning process there are many other actors, all playing strategic roles, and functional for the effectiveness of the learning process.

5.4.2 The objects of learning

The objects of learning constitute a second element to examine when building a theoretical framework for language and culture learning through technologies. In this regard, the main objects are evident from the very label of such a framework, i.e. language and culture. Some specifications are however needed for both terms, as they are not so self-explanatory as they may seem.

First of all, as far as the language is concerned, in our case studies both foreign and second languages were involved. Foreign languages are characterised for not being spoken in the country where they are learnt, therefore input and reinforcement from the environment are absent, and they are usually provided recurring to technology; in particular, authentic input is obtained through audios and video, and also real communication is fostered through technological tools. In contrast, second languages are spoken in the environment where they are learnt, the learners are constantly immersed in the language, which is also acquired spontaneously (sometimes with errors) in daily life, as it happens with the mother tongue (Balboni, 2018).

When taking the E-LOCAL courses, the learners could be engaged with either a foreign or a second language, that is to say that they could take the course while at home in preparation to their mobility experience (the language in that case was a foreign language) or they could take the course once arrived at their destination (in a situation of second language). Moreover, in most cases the learners could start studying the foreign language at home and then move and continue to study the language in the environment where it is spoken. The same paradigm applies also to the MOOC of Italian language and culture, whereas the context of usage of the UniOn! App is more that of second languages as – even though its contents could be likely read before the mobility experience – its contextualisation within the local reality is a crucial aspect of the proposed learning path.

The different context in which languages are learnt impacts upon the input available to learners, and it has to be taken into consideration when programming a learning path. In 'standard' foreign language learning, the teacher is usually the only native (or advanced) speaker available to students, therefore he or she is the model and/or the person who chooses the models among the many available possibilities. That is to say that (almost) the whole input is the teacher's hands. Moreover, the objective of foreign language teaching is to start the acquisition process, effective communication being the main initial aim. Learning arrives at later stages, "in order to make communication not only *effective* but also formally *correct* as well as socio-culturally *appropriate*" (Balboni, 2018: 16). In contrast, in second language learning, the learners have many other kinds

of input in addition to the teacher, and the process is more similar to acquisition, even though it is incomplete and the language is not fluent. A turning point for shifting from acquisition (i.e. spontaneous, within the environment where the language is usually spoken), to learning (i.e. guided, within a formal course) may be the level of language proficiency. With beginners the difference among foreign and second language teaching are more evident, whereas from the threshold level (i.e. B1 of the CEFR) foreign and second languages start becoming more and more similar (Balboni, 2018).

All this said, what is relevant for our discussion is that language education is meant to facilitate language learning or language improvement. It is important to establish if we are in a domain of foreign or second language, but it is far more important to develop technological learning paths capable of helping the learners with their acquisition and learning processes. In other words, the educational plan and the specific language learning activities are to be aimed at creating the conditions for learning to take place, and any technological tool has to be built with these considerations in mind (Balboni, 2018).

A framework based on the experiences discussed in the central chapters of this work does not apply to the mother tongue, even though there might be some similarities with second language acquisition and with formal learning of languages at higher levels. Nevertheless, the cultural aspects included in the learning materials may turn out to be relevant also for native speakers, as it was pointed out by some users during the testing experiences. Indeed, many students, who were native speakers of the language, found the cultural information contained especially in the UniOn! App interesting and useful for their daily life.

These considerations lead us to the second object of our framework, culture. In all our case studies, cultural and linguistic contents were intertwined in the learning materials. The underlying assumption was that language could not truly exist without the relevant cultural practices, as it is embedded in them; culture is integrated in language, which conveys information and provides knowledge with structure, both reflecting and constructing cultural reality for its speakers (Kramsch, 1993, 2003). From this perspective, culture was conceived as something people are usually unconsciously part of (Bartlett, Davidsson, 2003), and the learning materials were created taking into account both culture-specific approaches, i.e. including the specific features of a specific culture, which are reflected in behaviours and communication, and culture-general approaches, i.e. concentrating upon skills and knowledge potentially relevant in various cultures so as to adapt to different situations and foster intercultural behaviours and communication (Bennett 1998; Samovar, Porter 2004).

As we have seen, providing a definition of culture is a difficult task, as “culture is pervasive and ultimately embraces everything that a group is concerned about and must deal with” (Schein, 2004: 85). For this reason, culture is usually defined according to three different levels, i.e. according to different degrees to which cultural phenomena become evident to the observers. The first level is that of the artefacts, that is to say tangible manifestations, visible organisational structures and processes. The second level concerns various

beliefs, values, norms and rules of behaviour that members of the culture have espoused and use as a way of depicting the culture to themselves and others. The third and deepest level includes the underlying assumptions, which are basic, unconscious and taken-for-granted beliefs, perceptions, thoughts and feelings (Schein, 2004).

In the case studies we discussed, culture was conceived in very broad acceptation, and it covered both practical, daily information and art, literature, and history. It focused more on the first and more explicit of the three levels of culture mentioned above, but it also included some aspects of the other two levels. The learning materials were conceived in such a way to provide a clear, overall picture of the cultural aspect of a given culture and context, but also took into account the intercultural dimension and they provided the instruments to go beyond the representation provided and autonomously find more information. All these aspects have to be analysed when building language and culture learning paths based upon technological tools.

5.4.3 The instruments enabling language and culture learning

As for the instruments necessary for building a path for language and culture learning based upon technological tools, the main aspect to consider is the learning environment in which learning takes place.

The concept of 'learning environment' encompasses the educational setting in which learning is facilitated, and it may refer to the diverse locations and contexts in which students learn, but also to the diverse factors influencing learning. In fact, the learning environment can impact upon motivation and engagement, and also the interactional dimensions that it enhances – both among learners and with possible mediators – are part of its characteristics (Bates, 2015).

In our work we have referred mainly to virtual learning environments, i.e. online learning spaces conveying personalised learning experiences. However, in some cases, also physical learning environments have been exploited, for instance during the in-class meetings of E-LOCAL tutored courses or during the guided activities with the UniOn! App. The virtual learning environments examined differed insofar as they pertained to different tools (Moodle, MOOC, App) implying also different learning modalities (CALL and MALL). Regardless of the tool and the modality, though, the virtual learning environment had to cover all relevant factors contributing to successful learning. In all the case studies presented, the initial investigation was devoted to identifying the key features of the learning environment to be developed, in terms of functionalities to include, but also as far as the organisational structure and the motivational and engaging aspects were concerned. Moreover, the co-construction of the learning environment was particularly relevant in our cases because of the technological dimension implied, and it resulted into customised learning experiences.

In addition to the specific features of the technological tool to be used, the other components taken into consideration were the characteristics of the learners; the objectives of the learning path, as well as the

activities that could support those objectives and the possible assessment strategies to include (Bates, 2015). Our experiences confirmed that both the teacher's and the student's perspectives are to be included in the development of a learning environment. In particular, the students' perspective is particularly relevant when adult, mature learners are the actors of the learning process, as they are "capable of creating their own, personal, relatively autonomous learning environments" (Bates, 2015: 492).

A further aspect to consider when dealing with the instruments facilitating language and culture learning through technologies is that of the vehicular language used to convey information and instruction.

In the E-LOCAL Moodle courses and in the E-LOCAL MOOC, English was used to introduce the cultural parts, as A1-A2 levels in target language would not enable to deal with complex cultural concepts. However, the target language was used whenever possible also in the cultural parts, for instance by referring to culture-specific concepts using the local name. Balboni (2018: 18) defines a lingua franca[22] as a "simple, essential, efficient communicative tool, as neutral as possible in terms of *cultural* perspective, in order not to pose *intercultural* problems". From this perspective, English was the vehicular language of the E-LOCAL courses to integrate in the learning materials cultural notions and principle of intercultural communications; it was an instrument to convey information useful to communicate, and not an instrument to be used to communicate.

As for the UniOn! App, the situation is a bit different. English was still conceived as the vehicular language, but at different degrees. UniOn!-Coimbra and UniOn!-Rovaniemi have adopted the same approach used for the E-LOCAL courses, that is to say that information is provided in English and specific concepts, terms, notions are expressed in the target language (i.e. Portuguese and Finnish). Moreover, English is the language of the instructions in the sense that all labels, tags, etc. are provided in English. For UniOn!-Bologna – as we have seen – and for UniOn!-Poznań a different approach was adopted: all contents are in the target language (i.e. Italian and Polish) and for each text the English translation is available. The reasons for this difference reside in the target users addressed – mainly beginners in the first case, and of heterogeneous levels in the second case – but also in the interpretation of the notion of incidental learning, which was somehow guided through the use of a vehicular language in the first case and left more to the choice of the users in the second case.

To sum up, creating a learning environment implies the provision of a comprehensive view of learning to be applied to a specific programme, and it involves several components to be included depending on the specificities of the context.

[22] The notion of lingua franca – and in particular that of English as a Lingua Franca (ELF) – does not come without implications from a socio-economic viewpoint. To a certain extent, ELF as a multilingual way of using English is claimed not to be dependent upon the practices and representations of native speakers. However, ELF may pose threat to linguistic diversity and to fairness. See Gazzola and Grin (2013) for more details on this debate.

5.5 The local and global dynamics

In the initial chapter of this thesis, a fifth set of questions was introduced, which concerned the local and global dynamics impacting upon language and culture learning. We wondered, in fact, how the educational approaches may be influenced by the local and the global dimensions, which are inevitably involved in language and culture learning. If these elements were included all along our discussion, we will now proceed to analyse them in light of the case studies examined in the central chapters of this work.

5.5.1 A context of multilingualism

In our case studies the focus was upon Italian as a foreign/second language, but also other languages were involved, namely Finnish, Polish and Portuguese as for the UniOn! App, and all the former plus Dutch and Hungarian in the case of the E-LOCAL courses. We have mentioned several times that the underlying idea of all the projects discussed in this work was linked to the creation of learning paths based upon technological solutions for languages that are relatively less widely used and taught, and we have also already discussed the EU aspiration to multilingualism, as a key property of Europe's identity (Extra, Yagmur, 2012). As a matter of fact, the case studies examined in this work stemmed from projects elaborated in the context of EU policies for languages, which – along the years – have moved from sporadic initiatives to structured, inclusive actions, embracing comprehensive approaches (Ceccherelli, Valva 2016).

Although the acquisition of communicative competence in more languages has been promoted in Europe since the Fifties[23], the most relevant initiatives have been elaborated from the Nineties onwards, and the realisation of an inclusive policy for language learning took shape only in the following decade. Language competences were identified as "an essential component of a competitive knowledge-based economy" in the European Council of Barcelona of 2002 (Council of the European Union, 2011: 3), which established that EU citizens should know – in addition to their mother tongue - at least two foreign languages, which should be taught from a very early age (a concept known as 'MT+2', or 'mother tongue plus two'). In the Nineties, the Council of Europe[24] generated important documents such as the European Charter for Regional or Minority Languages[25]

[23] The study of languages was initially encouraged by the European Cultural Convention adopted in 1954; to be party to the European Cultural Convention is a condition to become members of the European Higher Education Area (EHEA). In 1966 the European Commission recommended to master at least one foreign language, and in 1984 the Commission and the Council already affirmed that citizens had to learn at least two community languages in addition to their mother tongue (Siguán, 2005).

[24] The Council of Europe was established in 1949 and includes 47 members states, 28 of which are members of the European Union (See https://www.coe.int/en/web/portal/home, last access 26 September 2019).

[25] The Charter is the European convention for the protection and promotion of languages used by traditional minorities. Adopted as a convention on 25 June 1992, it actually entered into force on 1 March 1998. A major reform was agreed in

(1992), the Common European Framework of Reference for Languages[26] (1995) and the European Portfolio for Languages[27] (1997). The European Day of Languages[28] was instituted in 2001, and it was followed by the Action Plan for Languages (2003) and the Strategic Framework for Multilingualism (2005). In 2006, communication in foreign languages was acknowledged as the second of the eight key competences "necessary for personal fulfilment and development, social inclusion, active citizenship and employment" (Council of the European Union 2011: 1). Moreover, the 2008 European strategy for multilingualism (European Commission, 2008) indicates all the necessary steps to be undertaken to foster multilingualism, which is considered important for social cohesion and worker mobility. The document also focused upon languages in lifelong education, media, new technologies and translation services. Finally, the importance of language learning is also reiterated in the Council's 2014 conclusions on multilingualism and the development of language competences[29] (Council of the European Union, 2014).

If we look closer to the official EU discourse about language learning, we notice that in recent years it has embraced the achievement of the general socio-economic objectives, while preserving the cultural and cognitive aspects of language learning. In other words, the scope of EU language policy has enlarged. Languages are increasingly viewed as skills that can contribute to economic growth, competitiveness, mobility of labour, and employability. Nevertheless, language competence is also important for the integration and inclusion of EU citizens, and therefore for social cohesion (Gazzola, 2016). Linguistic and cultural diversity are said to have a significant impact on the daily life of citizens of the European Union due to media penetration, increasing mobility and migration and advancing globalisation. Europe's linguistic diversity constitutes a major cultural asset and the importance of multilingualism is not confined to economic and social aspects, but it includes cultural and scientific creation and transmission (European Commission, 2008); moreover, considered "the role played by languages in shaping and strengthening identity [...], it would be wrong for the European Union to restrict itself to a single main language" (European Commission, 2008: 61);

2018, and entered into force on 1 July 2019. More information is available at https://www.coe.int/en/web/european-charter-regional-or-minority-languages/home (last access 26 September 2019).

[26] Launched in 2001, the CEFR represented a turning point for language education as it can be applied for all languages and for multiple contexts. See https://www.coe.int/en/web/common-european-framework-reference-languages/home for more details, last access 26 September 2019).

[27] The European Language Portfolio (ELP) was conceived to be used in parallel with the CEFR. More information is available at https://www.coe.int/en/web/portfolio (last access 26 September 2019).

[28] Starting from 2001, the European Day of Languages has been celebrated every year on 26 September.

[29] From 1981 to 2015 about 200 official documents concerning EU language policy were published (Gazzola, 2016). In this section, we have mentioned only the latest and mostly relevant for our purposes.

In short, “a good command of foreign languages is a key competence essential to make one's way in the modern world and labour market. Multilingualism is not only part of the European heritage but also a chance to develop a society which is open, respectful of cultural diversity and ready for cooperation” (Council of the European Union, 2011: 4) and “a broader choice of languages, including less-widely used languages and the languages of neighbouring countries, should - where possible and appropriate - be offered at all levels of education in a lifelong learning perspective, and greater information and guidance about these should be made available by appropriate language and cultural institutions” (Council of the European Union, 2011: 5).

However, the learning of languages is a specific issue of the European integration process and multilingualism represents “one of the greatest assets in terms of cultural diversity in Europe and, at the same time, one of the most substantial challenges” (European Commission, 2017: 7), as the objectives set out in the Barcelona Council have not yet been met: schooling offers the possibility of learning two foreign languages, but almost half of EU citizens only speak and understand their mother tongue (European Commission, 2017). This still inadequate multilingual competence remains one of the main obstacles to benefit from educational and working possibilities across Europe, and Europe's linguistic diversity still needs to be turned into more opportunities rather than being considered as a limitation (Council of the European Union, 2019).

5.5.2 Language, culture, identity

In our case studies, we have presented language and culture as intertwined in the learning materials created and mutually interdependent. We have tried to provide a definition of culture, and we have also specified that the approaches adopted when building the various learning programmes aimed at fostering intercultural communication. The relationship between language and culture is indeed complex, as we have already anticipated all along our discussion, and it is deeply rooted in people’s world views. Languages is used to convey and maintain cultural ties, people’s opinions are dependent upon and influenced by culture, and they are described by the language that conveys that culture. Similarly, the understanding of a culture and its people can be enhanced by the knowledge of their language. All this said, learning a new language also implies the learning of a new culture (Leveridge, 2008).

However, from a teaching perspective, language and culture can be considered both as separable and as inseparable entities, depending on what we decide to focus upon and on the pedagogical choices we make. When the focus is upon language use in different situations, culture is regarded as the context, whereas when the focus is upon thematic areas (e.g. literature, history, ways of life, work and leisure, institutions, political issues, etc.), culture is seen as content. Anyway, language can be used in any cultural context and any topic can be chosen as thematic content for a particular language, with more or less ease depending on the characteristics of the language in question. However, language always carries meaning, and therefore culture,

and in both cases, i.e. both when culture is seen as the context and when it is seen as the content, language and culture can go beyond restricted, nationalistic conceptions and include wider scopes (Risager, 2006).

In many circumstances, culture learning is fact-oriented and regarded as "the collection of information about the high arts, history and institutions of another country" (O'Dowd, 2006: 228). As we have shown in our case studies though, culture learning includes more dimensions of culture, and intercultural learning implies raising critical cultural awareness in order to go "beyond a culture's products and practices and look more at the significance which they hold for members of that culture", and also to "look for the values and beliefs which underlie the facts and behaviour which they learn about the other culture" (O'Dowd, 2006: 229)., i.e. in order to embrace all the three above-mentioned levels of culture.

From this perspective, in the case studies that we have analysed, the selection of languages and cultures involved was conceived in order to broaden the educational catalogue, promoting less widely used languages, on the one side, and in order to foster cultural and social exchanges, also considering the economic impact that these may have (European Commission, 2017). Moreover, the intercultural dimension of language learning was supported by the combined use of local and vehicular language (English) aimed at introducing cultural contents, in the case of the E-LOCAL courses and MOOC, and at helping users with lower language proficiency in the case of the UniOn! App. This combination of language resources was meant to enhance the acquisition of communication skills in local language, while providing fully understandable contents for the learners (Ceccherelli, Valva, 2016).

The inclusion of a cultural dimension in language curricula is an important component for learning and professional mobility, moreover cultural activities contribute to improving people's experience, to knowing each other better and to understand what it means to be European, even though it is difficult to measure achievements in terms of culture or identity (European Commission, 2017). In our case studies we have tried to assess the perception of learning, also as far as the cultural understanding was concerned. This dimension was not explicitly questioned in the assessment of the E-LOCAL courses – even though in the face-to-face reviews the cultural components of the courses were greatly appreciated and indicated as crucial aspects to be learnt – but it began to be investigated while assessing the E-LOCAL MOOC, and it was exploited more with the usage of the UniOn! App. The results show that the tools have had a positive impact in letting the users understand the local cultural dynamics and have helped the learners to feel more familiar with local culture. The notion of identity was not directly tackled, but it indirectly emerged as attached to the learning experience in an international, mobility setting. Identity is indeed an umbrella term, which includes both individual and collective components; language is a major vehicle of identity, and the mother tongue is the cornerstone in the building of identity (Balboni, 2018; Janssens, 2018). However, mobility and connection have provided identity with new, swift dimensions, in which local culture and global citizenship combine and include a cosmopolitan

gaze (Beck, 2005). In line with this evolution, all approaches to language learning need to consider local cultural input, and integrate international, intercultural and global dimensions as well (Kramsch, 2014).

5.5.3 The internationalisation of (higher) education

According to the recent Report of the Italian Ministry for Foreign Affairs on Italian worldwide diffusion (2018), Italian is the fourth most studied language in the world, with more than two million people taking up its learning every year. However, Italian is not among the most widely spoken foreign languages in the EU context, where languages other than English, French, German, and Spanish in recent years, are studied only in a few countries and generally because of historic reasons or geographical proximity (European Commission *et al.*, 2012, 2017). Nevertheless, Italian is among the few other foreign languages that are learnt "by a minimum of 10 % of students in primary or general secondary education in any European country" (European Commission *et al.*, 2017: 13). As for the number of people learning Italian in Italy at any education level, data are indeed less precise. In the above-mentioned Report, the Italian Ministry accounts for about 50.000 people every year, but that figure only includes the institutions that took part in the survey, i.e. institutions issuing certificates and networks of private schools. The motivations for studying Italian – either as a foreign or as a second language – are connected to study/work reasons, but also to the possibility to access to the Italian cultural heritage in terms of literature, history, and art. In the same Report, the Ministry also affirmed that international students studying in Italy are to be supported in their learning of Italian, within the framework of the internationalisation of higher education, which is a priority that should not consist of only English-based solutions.

Indeed, language learning is considered essential for the internationalisation of higher education institutions and for enhancing graduate employability; at the same time learning mobility in the EU context, i.e. transnational mobility for the purpose of acquiring new knowledge, skills and competences, can strengthen employability and enhance intercultural awareness, creativity and personal development, as well as active participation in society (Council of the European Union, 2011). In other words, EU language policy aims at contributing to the achievement of two different socio-economic objectives, that is to say the promotion of intra EU mobility and, at the same time, the endorsement of inclusion and social cohesion (Gazzola, 2016).

It is undeniable that language learning can facilitate mobility and that – in principle – the already mentioned MT+2 formula envisaged by the institutions could equip EU citizens with useful skills for both mobility and inclusion insofar as the lack of appropriate language competence negativey affects the individuals' willingness to move aborad (Gazzola, 2016). However, language learning is a progressive process that can last many years: schools can provide students with some (language) skills, but it is not known if such (language) skills will be required in their (young) adult life; and languages could be learnt also at a later stage in a lifelong learning

perspective, but only a limited number of adults takes part in re-skilling and up-skilling activities (Gazzola, 2016; European Commission, 2017).

On the other hand, also a shared common language could facilitate mobility, but it does not necessarily foster inclusion. English is often pointed out as the language that could foster transnational mobility. However, some limitations and some implications are related to this point.

First of all, many people do not speak English at a proficiency level, even if it is taught in the vast majority of European schools (European Commission, 2012). This contradictory situation emerged also during the E-LOCAL for all project, for instance when the candidates to take the tutored E-LOCAL courses declared to have a good command of English, but in their final assessment claimed that they had had some difficulties in understanding explanations and instructions because of their lack of adequate English proficiency.

Secondly, English knowledge is often a requirement to enrol in international degrees and to embark in mobility exchanges, and it is a requirement for high-skilled jobs as well, but – even though English can be useful to access higher education programmes or to find a qualified job – it is not enough to fully integrate in societies dominated by the local language (Gazzola, 2016). Knowing the local language(s) makes a significant difference in the sense of belonging to the local community, and therefore it becomes an essential element when aiming for integration – even in temporary, relatively short experiences – and for more social inclusion in the long run (Janssens, 2018).

Furthermore, as mobility makes interactions more and more frequent both in the workplace and in private life, the situations in which intercultural communication takes place are more frequent, and it is undeniable that they would be benefited from a shared language. From this perspective, investment in local language skills would be part of an integrated approach to mobility and inclusion across Europe. In fact, mobility and inclusion remain two crucial challenges of multilingual European societies, and appropriate measures are needed in order to tackle them. Such measures could include – among other – "bilingual education, lifelong learning, translation and interpreting, provision of multilingual public goods, and a greater use of ICT in language learning and maintenance" (Gazzola, 2016: 144).

Across Europe, higher education is characterised by multicultural and multilingual settings – where mobility students, professors, and staff interact frequently combining a local language with a lingua franca and other languages – on the one side, and a trend to use English as a lingua franca (or as a *lingua academica*) on the other side, in order to attract students from abroad and to prepare them to act as global players. A common language is certainly needed before it becomes possible to communicate in the local language, and it is also needed for international interaction, but the use of an external lingua franca does not always favour inclusion, especially when the level of proficiency is low. In any case, functions and spaces of the lingua franca are to be calibrated and a balance is needed between it and the other available linguistic repertoires (Conceição *et al*.,

2018a). Students, professors and staff are to be encouraged to "to better manage, develop, and utilise the various languages in their repertoire" as "the ability to use one's entire linguistic repertoire and to develop one's multilingual competence constitutes added value" (Conceição *et al*., 2018b: 120) in terms of motivation and professional skills.

Following this direction, the promotion of multilingual competence could become an adequate response to the trade-off between mobility and inclusion (Conceição *et al*., 2018b), and it could also foster social cohesion, as a result from the balanced combination of mobility and inclusion (Grin, 2018).

5.6 Concluding remarks

After an introductive chapter about methodologies and technologies, in this work we have presented three case studies, referring to Moodle courses for language and culture learning, to a MOOC of Italian language and culture and to an App for incidentally learning languages and cultures. In this final chapter we have re-discussed the critical aspects emerged all along the discussion in order to provide a critical reflection in light of the experiences analysed. The three reported experiences are not to be intended as isolated blocks, as they are interrelated and inserted in the larger context of language and culture education for mobility students; nor are they to be intended as concluded. All the tools mentioned, in fact, are still in use, even though at different extents.

The E-LOCAL courses examined in chapter two represent the oldest tool, both in chronological order and as for the technology they are based upon. They were released in 2012 and they were updated in 2014, after activating experimental tutor-based activities. In 2012 the E-LOCAL courses were awarded the European Language Label (ELL), an award assigned to projects that have carried out innovative initiatives in order to find "creative ways to improve the quality of language teaching, motivate students, make the best use of available resources to diversify the languages on offer" (ELL web pages, information retrieved in July 2019). The E-LOCAL courses are used in the partner institutions of the E-LOCAL project, and after the inclusion of the E-LOCAL Platform of the University of Bologna in the eduGAIN network, they are accessible to many users in Italy and worldwide (see chapter two for more details). From 2017, the yearly number of registered users has been about 2.000 for the six courses available on the platform, but it has been diminishing since 2014 (it was more than 5.000 registered users in 2014 and about 4.000 per year up to 2016). These figures refer to the platform as a whole, and we do not have a detailed account for the registered users of each course, as we do not have evidence about the users completing the entire learning path. It is interesting, though, that the geographical coverage of the registered users is indeed huge and includes more than 130 different countries around the world. Nevertheless, the E-LOCAL Platform is based upon an obsolete version of Moodle, and a major update will be soon required in order for them to be still working properly.

The MOOC experience depicted in chapter three showed how it is possible to adapt valid learning materials to a different tool. After a pilot year in 2017, followed by a major revision in 2018, the MOOC of Italian language and culture has now a stable number of editions for each of the two parts (five per year) and also the number of registered users shows a stable trend and sums up to around 1000 people registering yearly. After the revision, also the completion rate is stable and it reaches 16% on average for Part 1 and 22% on average for Part 2, i.e. many points beyond the 'threshold' rate usually registered by MOOCs (see chapter one and three for more details). All this considered, we can assume that the Italian MOOC is functional for the discovery of Italian language and culture, and that it helps its users to get ready for their mobility experience and integrate the local reality.

Research in the field of CALL has demonstrated the relevance of computer usage for enhancing language learning, in terms of increased exposure time to target language and input diversification; research has also shown that CALL is suitable for developing, practicing and improving language communicative competences (Bárcena, Martín-Monje, 2014). The feedback obtained by the users of the E-LOCAL courses and of the MOOC of Italian based upon the E-LOCAL course goes in the same direction; moreover the analysis of the perception of learning carried out with the users of the MOOC also confirmed that the course is relevant for fostering both language skills and cultural understanding.

On the other hand, our third case study presented in chapter four concerned a MALL experience. The four versions of the UniOn! App developed within the ILOCALAPP project are used by the international students of the four project cities, for which geo-localised language and culture contents are available, i.e. Bologna, Coimbra, Poznań and Rovaniemi. As stated, up to September 2019, about 3000 people have downloaded the UniOn! App, subdivided as follows: 238 people have downloaded the App for Finnish, 1255 people have downloaded the App for Polish, 345 people have downloaded the App for Portuguese, and 943 people have downloaded the App for Italian.

The number of downloads is the only factual information that we have for all the four versions of the App. For all of them, we also have the feedback collected during the pilot phase, which focused upon the appreciation of the tool in terms of contents and feature. For the Italian App, we also have data derived from several testing experiences, as we have discussed in chapter four, both before and after the App final release. In particular, for UniOn!-Bologna we have results concerning the perception of learning linked to the App usage, and also the interesting perspective of the guided context of usage. On the whole, the feedback collected confirmed the validity of the approach adopted and the usefulness of the tool.

The three case studies examined shared some common features (they all concerned tools for supporting language and culture learning, developed by multi-disciplinary teams and through the involvement of the end users; they all addressed international students) and they presented some specificities (the technologies were

different, as they were the context of usage). The implications connected to these common features and to the single specificities have been discussed in the previous sections of this final chapter. Incorporating both local and global dynamics, these implications pertained to the overall relationship between technology and education, to the evolution of such a relationship in connection to possible changes in the tools and in the learning approaches, and to the criteria for designing and assessing educational technologies for languages and cultures; all in all, they moved towards a theoretical framework for language and culture learning through technologies.

Furthermore, starting from the experiences discussed in the central chapters of this work, several protocols could be drafted concerning the development of technological solutions for language and culture learning, and taking into account the multidisciplinary approach that we have illustrated all along our case studies.

A first protocol could concern the development of Moodle courses for learning languages and cultures. During the E-LOCAL project, several tools (e.g. the Common Framework, the Storyboard, the Author's Guidelines) were elaborated that could be re-used to replicate similar solutions. As anticipated, other languages and cultures could be the object of new courses, and/or higher levels of language proficiency could be included. The customised Moodle platform hosting the courses would require a major update, but the procedural pattern would remain valid and valuable.

Likewise, a second protocol could concern the activation of tutored courses, including the various modalities and strategies to be explored. When the E-LOCAL tutored courses were activated, relevant insights and a lot of concrete hints were collected that could be possibly applied to similar situations. Indeed, the reports of the E-LOCAL tutoring experiences represent a rich, comprehensive and verified toolkit for organising tutored programmes based upon online courses for languages and cultures.

A third protocol could concern the creation of MOOCs for language and culture learning, based upon the existing E-LOCAL courses or built from scratch. The adaptation of the existing E-LOCAL courses to the new platform could benefit from the experience carried out with the Italian course, whereas the realisation of new MOOCS (here again for other languages and cultures and/or for other language levels) could equally exploit the existing model. In short, the procedural pattern put in place for developing the MOOC of Italian language and culture, along with the procedural tools created for that specific purpose, could be easily replicable for other situations.

Finally, a fourth protocol could concern the development of new Apps. Ideally, a UniOn! App supporting mobility students in the incidental learning of language and culture could be created for any language-culture to be geo-localised in any university city. Moreover, the methodological framework elaborated for UniOn!

could be applied to other target users (e.g. migrants, tourists[30], international workers, and so on) in the same and/or in other cities. This flexibility is also fostered by the open source code of the App that was released at the end of the project[31]. In addition, the participatory approach developed during ILOCALAPP, which implied the involvement of end users for the entire duration of the design and production process and in all the testing phases, could be extended to other fields of the education sector, for which such an approach is quite unexploited. The practical implications of having learners who are at the same time users could be a dedicated part of the protocol, as focusing on how a task or a situation is experienced by learners/users allows to gain significant understanding of the learner/users point of view, and interacting with them in the production phase makes it possible to have a final product meeting their expectations.

In this regard, it is worth mentioning that a real protocol for the production of learning materials was created for the Italian version of the UniOn! App. As the University of Bologna is organised in campuses that are located in several cities of the Emilia Romagna Region (Cesena, Forlì, Ravenna and Rimini, in addition to Bologna), a protocol was drafted in order to help the campuses to create their own version of the App. The actual production of other versions of UniOn! geo-localised in the other campuses of the University of Bologna is still under evaluation as we are writing. However, it could be an interesting test for applying a protocol that – if proved to be effective – could be adapted also for creating several, different versions of the UniOn! App.

To sum up, the actual and future usage of the technological tools discussed within our case studies combines with the potential future usage of the various outcomes of the projects which allowed for their development. In fact, not only the tools themselves can be the object of renovated and different learning paths, but also the methodological documents and the procedural patterns – after being elaborated in perspective protocols as discussed here above – could result into several and relevant possibilities of exploitation. In short, the case studies discussed in this work may lead to potential future research developments, opening up to new pedagogical contexts and supporting the shift towards a normalised relation between technology and education as far as languages and cultures are concerned. In such a shift, as we have shown, several factors are involved to determine the successful impact of educational proposals, and they do not include only the learning materials, but they also embrace the context of usage and the support provided to the users.

[30] In this regard, it is worth mentioning an interesting experience carried out in Bologna within the ItaCà Festival 2018 (https://www.festivalitaca.net/programma-2018/, last access 26 September 2019), during which the Italian version of the UniOn! App was used to elaborate special itineraries for tourists.

[31] The code developed for UniOn! was released as open source on a dedicated repository also containing all the data (i.e. texts, images, audio) included in the four versions of the UniOn! app, along with the graphical layout.

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Appendix A. The E-LOCAL Online Questionnaire

E-LOCAL: Survey for students

Project number 511734-LLP-1-2010-1-IT-KA2-KA2MP

The E-LOCAL project promotes multilingualism through the realization of online courses.

The meaning of this survey is to find out, how you and other young adults would like to learn languages *online*.

Please take the time to answer a few questions below - your answers are important!

1) Please choose your educational institution.:

- ☐ University of Bologna, Italy
- ☐ ICTS Rosa Luxemburg, Italy
- ☐ Adam Mickiewicz University, Poland
- ☐ ZSO 2 im. Charles de Gaulle'a, Poland
- ☐ University of Debrecen, Hungary
- ☐ Tóth Árpad Gimnázium, Hungary
- ☐ University of Lapland, Finland
- ☐ University of Coimbra, Portugal
- ☐ Katholieke Universiteit Lueven, Belgium

2) Which languages do you already know? Even elementary knowledge counts.

3) Would you like to learn more languages and cultures? If so, which one(s)?

- ○ yes
- ○ no

4) Do you think that learning one of these less known foreign languages could be useful for you in the future: Dutch, Finnish, Hungarian, Italian, Polish, Portuguese? If so, what for?

- ☐ to find a job
- ☐ to study abroad
- ☐ just to travel
- ☐ for networking
- ☐ other

5) In your opinion, is learning about cultures as important as learning about languages?

- ○ Yes, it's equally important.
- ○ No, it's less important.

6) Which aspects of a foreign culture are you interested in?

	1 not so interested	2 interested	3 very interested
History and traditions	☐	☐	☐
Art and literature	☐	☐	☐
Movies	☐	☐	☐
Music	☐	☐	☐
Cuisine	☐	☐	☐
Habits and lifestyle	☐	☐	☐
Sport	☐	☐	☐

7) Other things that are interesting in foreign cultures:

8) What makes an online learning environment motivating? Please choose from the following:

	1 not so motivating	2 motivating	3 very motivating
simple enough to use	☐	☐	☐

fun	☐	☐	☐
technically well-made	☐	☐	☐
efficient	☐	☐	☐
visually attractive	☐	☐	☐
interactive	☐	☐	☐

9) Other things that make an online learning environment motivating:

10) Would you like to test our online courses and so learn a new language for free? Please type your (institutional) e-mail address here:

Thank you!

Now please click the Submit button below.

Appendix B. The questionnaire for selecting the pilot users of the E-LOCAL tutored courses

This questionnaire seeks to find suitable pilot students for a tutored E-LOCAL online course at [*name of the institution*].

The E-LOCAL course selection encompasses online language courses for Dutch, Finnish, Hungarian, Italian, Polish, and Portuguese.

PLEASE WRITE YOUR NAME HERE:

- Knowledge of languages

1. What is your mother tongue?
2. How many foreign languages do you know? [1/2/more]
3. Which foreign languages do you know?
4. The language of instruction in E-LOCAL courses is English. Please estimate your level of English for learning purposes (choose among the following):
   - I have no problem learning even if English is the language of instruction.
   - I may face some challenges learning through English, but I'm very motivated.
   - I'm not confident enough in English and I may prefer a different language of instruction (Please specify which)

- Attitude towards e-learning

1. Have you ever taken an online course? [yes/no]
2. Have you ever taken an online language course? [yes/no]
3. From your viewpoint, please name the main advantages of online learning:
4. Can you think of any shortcomings of online learning?
5. Do you think that having a tutor in an online learning course has advantages? [yes/no] If yes, please specify:

- Motivation

1. Do you enjoy learning languages? [absolutely yes / usually / not really]
2. Please rate the following statements (1= no, 2=maybe, 3= yes):
    - I would be able to successfully take an online course without a tutor
    - I would be able to successfully take an online course only with a tutor
3. What motivates you most to take an E-LOCAL online course? Rank 1 to 4
    - Receiving ECTS study credits (if applicable)
    - Receiving a certificate of participation
    - Just taking this opportunity is important
    - It will allow me to interact more effectively with local people

We will select participants for the tutored E-LOCAL course in every institution. If you wish to be selected for the tutored course, please write your (institutional) e-mail address here:

Appendix C. The evaluation questionnaire to assess the E-LOCAL tutored courses

Name:

Surname:

Institution:

Language of the course: [select]

Dutch

Finnish

Hungarian

Italian

Polish

Portuguese

SECTION 1: GENERAL IMPRESSIONS

1. What were your expectations in participating in the E-LOCAL tutored course?

_____

2. To what extent were your expectations met? Can you please briefly explain why?

_____

3.Please rate the following aspects:

SPECIFIC IMPRESSIONS:	OVERALL RATING	COMMENTS
1. The presence of a tutor was useful.	①-②-③-④-⑤ *Disagree Agree*	
2. The availability of help from a tutor was sufficient.	①-②-③-④-⑤ *Disagree Agree*	
3. The guidelines from a tutor were clear and helpful.	①-②-③-④-⑤ *Disagree Agree*	

SECTION 2: SPECIFIC EVALUATION

Please rate the E-LOCAL learning environment that you have tried according to the following aspects:

SPECIFIC IMPRESSIONS:	OVERALL RATING	COMMENTS
1. The learning environment offers an interface that motivates students to try other languages.	①-②-③-④-⑤ *Disagree Agree*	
2. The learning environment is coherently put together.	①-②-③-④-⑤ *Disagree Agree*	
3. The learning environment fosters learners' autonomy.	①-②-③-④-⑤ *Disagree Agree*	
4. The learning environment is interactive.	①-②-③-④-⑤ *Disagree Agree*	
5. The learning environment offers pedagogically valid moments for experiencing the new linguistic and (inter)cultural settings.	①-②-③-④-⑤ *Disagree Agree*	
6. The learning environment allows students to challenge some cultural misconceptions and prejudices.	①-②-③-④-⑤ *Disagree Agree*	
7. The learning environment is user-friendly.	①-②-③-④-⑤ *Disagree Agree*	

SECTION 3: SUMMATIVE EVALUATION

1. Which shortcomings do you identify in the learning environment? Do you have suggestions for improvements?

   _____

2. Please write your general remarks about the course you have taken.

   _____

If you wish <u>to keep receiving news from E-LOCAL for all</u> you may leave your e-mail here: _____

Appendix D. The evaluation questionnaire to assess the E-LOCAL non-tutored courses

Name:

Surname:

Institution:

Language of the course: [select]

Dutch

Finnish

Hungarian

Italian

Polish

Portuguese

SECTION 1: GENERAL IMPRESSIONS

1. What were your expectations in taking the E-LOCAL course?

_____

2. To what extent were your expectations met? Can you please briefly explain why?

_____

SECTION 2: SPECIFIC EVALUATION

Please rate the E-LOCAL learning environment according to the following aspects:

SPECIFIC IMPRESSIONS:	OVERALL RATING	COMMENTS
1. The learning environment offers an interface that motivates students to try other languages.	①-②-③-④-⑤ *Disagree Agree*	
2. The learning environment is coherently put together.	①-②-③-④-⑤ *Disagree Agree*	
3. The learning environment fosters learners' autonomy.	①-②-③-④-⑤ *Disagree Agree*	

4. The learning environment is interactive.	①-②-③-④-⑤ *Disagree Agree*	
5. The learning environment offers pedagogically valid moments for experiencing the new linguistic and (inter)cultural settings.	①-②-③-④-⑤ *Disagree Agree*	
6. The learning environment allows students to challenge some cultural misconceptions and prejudices.	①-②-③-④-⑤ *Disagree Agree*	
7. The learning environment is user-friendly.	①-②-③-④-⑤ *Disagree Agree*	

SECTION 3: SUMMATIVE EVALUATION

1. Which shortcomings do you identify in the learning environment? Do you have suggestions for improvements?

   _____

2. Please write your general remarks about the course you have taken.

   _____

If you wish to keep receiving news from E-LOCAL for all you may leave your e-mail here: _____

Appendix E. The evaluation questionnaire for the Italian MOOC

Dear Student,

thank you for taking our course!

This is a short feedback questionnaire, please spend two minutes to submit it.

Your opinion is important to improve the next editions of the course. Thank you!

Personal information:

1. Age group: 19-, 19-22, 23-26, 27-30, 30+
2. Gender: M/F/I do not wish to specify
3. What is your mother tongue?
4. Do you speak other languages? Which one(s)?
5. Where are you from?
6. Your position: Erasmus student/student enrolled in an international course/visiting researcher/high school student/ other, please specify
7. Did you take any Italian course before this one? YES/NO

Information about the course

1. What were your expectations in taking this course? Were they met?

2. Do you agree with the following statements about the course? Please rate the following statements from 1 (totally disagree) to 5 (totally agree):
    a. The contents of the course are well structured.
    b. The contents of the course are easy to understand.
    c. The contents of the course are interesting.
    d. The length of the course is appropriate.
    e. Grammar explanations are clear.
    f. Grammar exercises are useful.
    g. The amount of cultural information is sufficient.
    h. The learning environment is motivating.
    i. The learning environment is easy to navigate.
    j. The course is useful to discover Italian language and culture.

3. After taking the course, how have your language and culture competences changed? Please rate the following statements from 1 (totally disagree) to 5 (totally agree):
    a. You are (more) familiar with basic Italian grammar
    b. You are (more) familiar with Italian culture
    c. You feel more confident when you read Italian texts
    d. You feel more confident when you listen to people speaking Italian
    e. You feel more confident when you speak Italian
    f. You feel more confident when you write in Italian
    g. You understand better the local environment

4. Did you identify any shortcomings in the course? If you did, which ones?
5. Do you have any suggestions for improvement? And/or any additional comment/remark?

Thank you for submitting this feedback questionnaire!

Appendix F. Examples of messages sent to the MOOC users

Welcome to **Unit 1 - Benvenuti in Italia! Orientarsi con l'italiano - Part 1**

Welcome again to the "**Benvenuti in Italia! Orientarsi con l'italiano - Part 1**" MOOC!

Start this week with **Unit 1**. In this Unit, Anna and Alex – the main characters of the e-Story – arrive in Bologna and meet their friends Lorenzo and Lucia. You will learn with them to say hallo and goodbye, to introduce yourself, to ask and express states of mind, as well as the numbers from 1 to 10 and many other useful words and expressions. In e-Culture you will find some general information about Italy and in e-Life you will get to know everything about greetings in Italy.

Don't forget to **interact with the other participants in the Discussion Area**, if you want to share your experience. It will be a good chance for peer learning.

Thank you and continue enjoying this course!

Welcome to **Unit 4 - Benvenuti in Italia! Orientarsi con l'italiano - Part 1**

Welcome again to the "**Benvenuti in Italia! Orientarsi con l'italiano - Part 1**" MOOC!

If you haven't started yet, it is not too late to do it. This course ends on 10 December, you still have 3 weeks to go.

If you have started, continue your learning experience with **Unit 4**. In this unit, Anna and Alex deal with jobs. You will meet new words and expressions concerning work, hobbies and sports, pets, and you will also learn how to express likes and dislikes. Some historical curiosities about the Italian language will be provided, along with some contemporary trends.

As usual, don't forget to **interact with the other participants in the Discussion Area**. It will be a good chance for peer learning.

Thank you and continue enjoying this course!

Appendix G. The ILOCALAPP Online Survey

ILOCALAPP - language & culture app for your mobile device

ILOCALAPP is a new language & culture app in the making.

Take five minutes to help us make it the best app in your everyday life.

1. ILOCALAPP will help you to get in touch with foreign cultures and languages. To help us design it, tick the culture areas you're usually clearly interested in. Choose only a few, the best options. *

- ☐ Art and literature
- ☐ Cuisine
- ☐ Environment and nature
- ☐ Habits and lifestyle
- ☐ History and traditions
- ☐ Movies
- ☐ Music
- ☐ Politics and religion
- ☐ Sports

2. What makes the use of a language & culture app motivating? Choose only a few options, those that actually motivate you to use the app. *

- ☐ Attractive
- ☐ Being able to track my progress
- ☐ Efficient
- ☐ Fun
- ☐ Game-like elements
- ☐ Interactive
- ☐ Short, useful learning moments
- ☐ Simple enough to use

3. Have you already used apps for learning languages & cultures? *

- ☐ Yes, the apps are:
- ☐ No, I haven't used any language & culture apps

4. If you answered *yes* to question 3, describe - in your own words - things you specifically liked in those apps.

5. If you answered *yes* to question 3, please name - in your own words - some features you did not like in those apps.

6. If you'd you like to add anything to what you answered to questions on this page, please type it here. If there's nothing to add, click *Next* to move on.

(1 of 3 pages)

ILOCALAPP - language & culture app for your mobile device

Answer a few questions about your smartphone use.

7. What is the operating system on your smartphone? *

- ☐ Android OS
- ☐ Apple OS (iPhone, for example)
- ☐ Windows 10 Mobile, Windows Phone, or Microsoft Mobile
- ☐ I have no idea
- ☐ Other:

8. How often do you charge your smartphone? *

- ☐ More often than twice a day
- ☐ Twice a day
- ☐ Once a day
- ☐ Every other day
- ☐ More seldom

9. How many apps are installed on your smartphone (more or less)? *

- ☐ I have no idea
- ☐ Less than 10
- ☐ 10 - 20
- ☐ 21 - 40
- ☐ More than 40

10. How many apps have you installed on your smartphone yourself (more or less)? *

- ☐ I have no idea
- ☐ Less than 5
- ☐ 6 - 10
- ☐ 11 - 20
- ☐ 21 - 40
- ☐ More than 40

11. How many apps do you use daily (on average)? *

- ☐ None
- ☐ 1 or 2
- ☐ 3 - 6
- ☐ 7 - 10
- ☐ More than 10

12. Rate how often do you use the following apps on your smartphone:

	Daily	Weekly	Less often
Facebook			
Twitter			
Instagram			
Whatsapp			
Telegram			
Google Maps			
Gmail			
Google Drive			
Google+			
TripAdvisor Hotels Restaurants			
Foursquare			

13. How often do you usually share data (text, images, videos) on social networks (Facebook, Twitter, Instagram, etc.)? *

- ☐ Never
- ☐ Rarely (once a month)
- ☐ Sometimes (once a week)
- ☐ Once a day
- ☐ A few times in a day

14. When you're planning a trip, do you usually install apps with offline maps and/or city guides or similar?*

- ☐ Yes
- ☐ No

(2 of 3 pages)

ILOCALAPP - language & culture app for your mobile device

Before submitting your answers, give some background information about yourself.

15. Age group: *

- ☐ 15 - 18
- ☐ 19 - 22
- ☐ 23 - 26
- ☐ 27 - 30
- ☐ 30+

16. Gender: *

- ☐ Female
- ☐ Male
- ☐ I do not wish to specify

17. First language: *

- ☐ Finnish
- ☐ Italian
- ☐ Polish
- ☐ Portuguese
- ☐ Other:

18. Present location: *

- ☐ Bologna
- ☐ Coimbra
- ☐ Poznań
- ☐ Rovaniemi
- ☐ Other:

19. Do you identify yourself as: *

- ☐ a student planning to go on an exchange
- ☐ an exchange student (past or present)
- ☐ an international degree student
- ☐ other:

Thank you!

If you want to know more about the app that is being planned and get updates along the way, type your e-mail address below and we'll keep you posted.

20. My e-mail address for joining the ILOCALAPP e-mailing list:

(3 of 3 pages)

Appendix H. The ILOCALAPP questionnaire to collect background information about pilot users

[questionnaire to be submitted after the introductory seminar]

Which seminar did you attend? In Bologna/Coimbra/Poznan/Rovaniemi

Personal information:

1. Age group: 15-18, 19-22, 23-26, 27-30, 30+
2. Gender: M/F/I do not wish to specify
3. First language(s):
4. Second language(s):
5. What is your language level in Italian/Finnish/Portuguese//Polish [language corresponding to the initial choice of city]:
   A1-beginner/A2-elementary/B1-intermediate/B2-upper intermediate/C1-advanced/C2-expert/native speaker
6. Position (Erasmus/international/visiting researcher/high school student/ other, please specify)
7. Where are you from?
8. Have you already used APPs for learning languages and cultures? YES (The apps are...)/NO
9. After the introductory seminar, is it clear what you are expected to do?
10. What are your expectations about testing the UniOn! APP?

Appendix I. The ILOCALAPP Evaluation Grids

While using the APP: an evaluation grid

While using the APP, please make sure to pay attention to the following issues.

The APP is not organised as an APP for language learning (in units) but as content (and service) supporting mobility.

The issues you should pay attention to are the following:

1. Cultural areas

   Does the APP cover all cultural areas which may be relevant for you? If not, what is missing? Or, what is not relevant?

   Are the cultural elements interesting, useful, well presented?

2. Language version of the app

   Is it possible/easy/useful to switch to English/local language? Is there any content you would like in a different language (which one(s))?

3. Language style

   Is the language clear, readable? Is it easy to understand?

4. Language information

   Is language information (such as lexicon items, tips to talk, etc.) useful? Is it sufficient? If not, would you like less or more language information?

5. Navigation among the contents and the services

   Is the APP easy to navigate? Are navigation tools clear, straightforward, intuitive in use? Is the search function working? Are internal links working? Are external links working?

6. Interface and layout

   Is the design attractive? Is the interface intuitive? Can you find what you are looking for? Are the icons clear?

7. Notification system

   Are notifications too many? Not enough? What is the right number for you?

8. "Me in …" category

   How would you use the "Me in …" category?

9. Exercises/games, Lexicon/Talk, other tools (dictionaries, etc.)

   Did you use them? What for? Were they useful?

10. Other remarks

    Are there any other issues? Please take note of everything worthy to report.

While using the app, please take note of every aspect which is worth reporting. And remember to take note also of the position in the app of the issue that you reported (so that it is easier for us to use your comment!).

Appendix J. The ILOCALAPP questionnaire to collect feedback about the UniOn! App

Which APP did you use? Bologna/Coimbra/Poznan/Rovaniemi

Personal information

1. Age group: 15-18, 19-22, 23-26, 27-30, 30+
2. Gender: M/F/I do not wish to specify
3. First language(s):
4. Second language(s):
5. What is your language level in Italian/Finnish/Portuguese//Polish [language corresponding to the initial choice of the city]:
   A1-beginner/A2-elementary/B1-intermediate/B2-upper-intermediate/C1-advanced/C2-expert/Native speaker
6. What is your current position: Erasmus student/student enrolled in an international degree/visiting researcher/high school student/other, please specify

After using the APP, how much do you agree with the following statements on a scale 1 to 5?

1= Totally disagree 2= Disagree 3= Partially agree 4=Agree 5=Totally agree

1. Topics in the APP are useful
2. Topics in the APP are interesting
3. Texts are too long
4. Texts are understandable
5. The language learning is intuitive
6. The APP is user-friendly
7. The design is attractive
8. The layout is intuitive
9. The icons help identify the contents
10. There are too many notifications
11. Geo-localisation is working well
12. The exercises/games are useful to fix information
13. The APP was useful during my stay
14. The APP could be useful also before my stay

15. The APP could be useful also after my stay
16. I would recommend this APP to other people

Open questions:

I used the “me in category” for: …

What would you change? What would you add? What would you remove? [one box]

Appendix K. The UniOn! assessment questionnaire

Please dedicate a few minutes to give us your feedback about UniOn and submit this short survey, it will help us improve the app.

Assessment of APP engagement [section 1/4]

1. How long have you been in Italy?

- Less than 1 month
- 1-3 months
- More than 3 months
- Other (please specify)

2. How long have you used UniOn?

- Less than 1 month
- 1-3 months
- More than 3 months
- Other (please specify)

3. How often do you use UniOn?

- Very often (every day, many times per day)
- Sometimes (once or twice a week)
- Seldom (less than once a week)
- Other (please specify)

4. When do you use UniOn? *(more than one option possible)*

- Before going to a specific place
- While strolling around Bologna
- After visiting a specific place

- Other (please specify)

5. How do you use UniOn? *(more than one option possible)*

- You search for key words
- You browse the contents
- You follow the notifications
- Other (please specify)

6. Why do you use UniOn? *(more than one option possible)*

- To get practical information
- To get language information
- To get cultural information
- Other (please specify)

7. How much time do you spend on each text?

- You just go quickly through it
- You read it entirely but you don't follow the links to in-depth sections
- You read it and you consult every suggested section (lexicon, tips to talk, links, etc.)
- Other (please specify)

8. Do you take notes (with the "add note" function in the Talk section and/or in the Settings)?

- No, I never take notes
- I sometimes take notes, answering to the open questions and/or adding input in the Talk
- I always take notes, answering to the open questions and/or adding input in the Talk
- Other (please specify)

9. Do you consult the Lexicon sheets?

- No, I never consult the Lexicon sheets
- I sometimes consult the Lexicon sheets
- I always consult he Lexicon sheets
- Other (please specify)

10. Do you consult the Talk section?

- No, I never use the Talk section
- I sometimes use the Talk section, if I need some specific tip to talk
- I always use the Talk section, and I also add my notes
- Other (please specify)

Overall assessment [section 2/4]

After using the UniOn APP, how much do you agree with the statements below on a scale 1 (totally disagree) to 5 (totally agree)? 1= Totally disagree 2= Disagree 3= Partially agree 4=Agree 5=Totally agree

1.	Topics in the APP are useful	1	2	3	4	5
2.	Topics in the APP are interesting	1	2	3	4	5
3.	Texts are understandable	1	2	3	4	5
4.	Lexicon sheets are useful to better understand texts	1	2	3	4	5
5.	Lexicon sheets are useful to memorize new words	1	2	3	4	5
6.	Links to web resources and dictionaries are useful	1	2	3	4	5
7.	The Talk section supports interaction with other people in the different places	1	2	3	4	5
8.	The APP is user-friendly	1	2	3	4	5
9.	Geo-localisation is working well	1	2	3	4	5
10.	The exercises/games are useful to fix words	1	2	3	4	5
11.	Open questions at the end of texts stimulate self-reflection	1	2	3	4	5
12.	Open questions at the end of texts stimulate active use of words	1	2	3	4	5
13.	The APP is useful to learn the language intuitively	1	2	3	4	5
14.	The APP was useful during my stay	1	2	3	4	5
15.	I would recommend this APP to other people	1	2	3	4	5

Learning perceived [section 3/4]

After using the UniOn APP, do you think that your language and culture competences in Italian have changed? Please rate the following statements from 1 (totally disagree) to 5 (totally agree):

1= Totally disagree 2= Disagree 3= Partially agree 4=Agree 5=Totally agree

a.	I am (more) familiar with Italian culture	1	2	3	4	5
b.	I feel more confident when I read Italian texts	1	2	3	4	5
c.	I feel more confident when I listen to Italian	1	2	3	4	5
d.	I feel more confident when I speak Italian	1	2	3	4	5
e.	I feel more confident when I write in Italian	1	2	3	4	5
f.	I understand better the local environment	1	2	3	4	5

Personal information [section 4/4]

1. Age group:
   - ☐ 15-18
   - ☐ 19-22
   - ☐ 23-26
   - ☐ 27-30
   - ☐ 30+

2. Gender:
   - ☐ Male
   - ☐ Female
   - ☐ I do not wish to specify

3. What is your country of origin?

   _____

4. First language(s):

_____

5. Second language(s):

   _____

6. What is your language level in Italian?
   - ☐ A1-beginner

- ☐ A2-elementary
- ☐ B1-intermediate
- ☐ B2-upper-intermediate
- ☐ C1-advanced
- ☐ C2-expert
- ☐ Native speaker

7. What is your current position?
   - ☐ Erasmus student
   - ☐ Student enrolled in an international degree
   - ☐ Visiting student/visiting researcher
   - ☐ High school student
   - ☐ Other(please specify)

8. What is your field of study?

   _____

9. Before going to Italy, how long have you studied Italian?
   - ☐ I haven't studied Italian at all
   - ☐ 1 month
   - ☐ 1-3 months
   - ☐ 3-6 months
   - ☐ 6-12 months
   - ☐ More than 1 year

10. While in Italy, what is the language spoken at home?
    - ☐ Italian
    - ☐ English
    - ☐ Other (please specify)

11. While in Italy, what is the language in which the courses you attend are taught?
    - ☐ Italian

- ☐ English
- ☐ Other (please specify)
- ☐ I do not attend any course

12. What is the language of interaction in class? With the professors? With other students?

_____

_____

13. Have you used other apps for learning languages and cultures?

- ☐ YES

  (The apps I used are _____)

- ☐ NO

Open questions

Do you have any additional comment?

_____

_____

_____