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The “My Mobile” Handbook

Guidelines and scenarios for
mobile learning in adult education

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Lifelong Learning Programme



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> 1

Introduction to and rationale for the handbook

› Katja Friedrich

The present handbook is the result of a two-year European Learning Partnership. The Grundtvig partnership **MyMobile** responded to the current trend towards individualisation in mobile and network communication. It reacted to today's socio-cultural and technological developments, in which computers, laptops and mobile phones provide ubiquitous individual access to communication, entertainment, shopping, internet, media offerings or knowledge archives. For adult users, particularly older persons, degrees of access differ greatly: in some professional and personal contexts, practically no mobile applications are in regular use. Considering the dynamic development of the smart-phone sector and e-learning, there is an urgent need for a constructive response in adult education towards enabling specific target groups to participate in the digital world, making "mobile learning" accessible to more adults.

These technological developments create new pedagogical challenges and offer opportunities for learning at any location — particularly for those who have difficulty with learning. Teaching institutions are called upon to respond to this development. Societal individualisation is producing a demand for new and informal paths to learning, outside of formal educational structures. It is essential that these learning contexts be utilised effectively for lifelong learning. Here, mobile learning can provide new insights and options; it offers possibilities for learning in individualised contexts. Especially for target groups that are educationally disadvantaged, developing didactic methods in mobile learning can lead to more inclusive and effective paths of transfer.

This cooperation among four partner institutions in several European member states (Belgium, Germany, Italy and UK) generated a coherent and comprehensive overview of their successful approaches, which are described in this handbook. Through the mutual development of a shared understanding of "mobile learning", assessment based on practical learning scenarios, and the dissemination of examples of best practice with the aid of this handbook, the project **MyMobile** supports the idea of lifelong learning as a key concept of the European information society.

What you can expect from this handbook

Chapter 2 outlines the project design, the collaborative process in the learning partnership, and the project outcomes and results.

Chapter 3 introduces the basic concept of mobile learning and the theoretical groundwork of the **MyMobile** project. The authors Pachler, Seipold and Bachmair are members of the London Mobile Learning Group at the Institution of Education, University of London. They establish the thesis that the use of mobile devices for learning in an informal context is inevitable, and they deliberate on whether institutional pedagogy is necessarily the most efficacious context for learning.

Chapter 4 gives a review of the training scenarios tested by the four partners in their countries. The first workshop, realized by the Institute of Education, University of London, focused on the integration of young adult learners at a distance to formal education. The second and third scenarios were developed by the University of Florence. One focuses on adults' self-promotion skills for job seeking, through digital storytelling and the use of mobile phones; the other develops young adults' self-expression skills through mobile storytelling. Scenario four depicts mobile learning situations from a cross-generational house in a rural area of Germany working with older persons. And the second German workshop — scenario No 5 — was addressed to young adults who are attending college or university to qualify as educators. The two Belgian scenarios relate to a workshop entitled "Become a Media Coach" that trained educators who are working in cultural, social, or educational organisations. A mobile dimension was included throughout the project.

Chapter 5 aims at identifying some trends in the practice of mobile learning in adult education and provides some recommendations for policy, practice, and research. The authors attempt to identify strengths and weaknesses of the project scenarios as realised in order to derive implications for practice and policy for mobile learning and adult education.

Chapter 6 includes a list of apps and tools used or mentioned within the scenarios, along with other tools that partners consider relevant. **Chapter 7** contains information about the authors of the handbook.

With this handbook, the European Learning Partnership **MyMobile** intends to contribute toward implementing the concept of mobile learning in adult learning and the dissemination of this concept in the European context.

We look forward to your feedback on the project experience, the outcomes and results, on the handbook and on our recommendations about mobile learning. Please respond to › www.mymobile-project.eu/spip.php?rubrique7



> 2

MyMobile | Partner information and project description

> Daniel Zils

In order to expand didactic and pedagogical options and to accelerate transfer in the dynamic and innovative field of mobile learning, the European project **MyMobile** was realized by an English/Italian/German/Belgium partnership. Within Europe, this area is unevenly developed. In some countries, especially the Anglo-Saxon sector, a great deal of experience is already available. **MyMobile** aimed at investigating the advantages presented by methodical-didactic options for "mobile learning" and at multiplying them at the European level.

The aim of the partnership was to cultivate exchange on existing approaches and methods in mobile learning. Within the partnership overall guidelines for mobile learning in adult education in the context of lifelong learning were developed. These general principles were applied and tested in diverse learning scenarios to form practical guidelines for multipliers which are now available in this handbook, showing how mobile learning scenarios and methods can be integrated into adult education and further developed.

The transnational partnership aimed at promoting the transfer of didactic approaches to "mobile learning" developed in various areas of Europe, while adapting approaches developed in schools or universities to the specific circumstances of adult learning outside of formal educational programmes, connecting and combining various didactic approaches.

The mutual efforts of the partners and their continuing education agencies in BE, DE, IT and UK ensured an active exchange across borders on the partners' experience and their examples of best practice in the area of acquiring media literacy with the aid of the mobile phone.

This partnership intentionally brought together representatives of the scholarly and practical realms. All partners have extensive experience in continuing education; the Belgian and German partners are active in the specific field of promoting media literacy. The British and Italian partners have already worked for several years on theory and practice of conceptions for mobile learning.

• The German partner : medien+bildung.com gGmbH

medien + bildung.com

medien+bildung.com, media+education.com (m+b.com), was founded by the Media Authority of Rhineland-Palatinate (LMK) in December 2006 as a not-for-profit Ltd. The organisation is commissioned by its company member LMK and mandated by the Ministry of Education, Science, Youth and Culture Rhineland-Palatinate (MBWJK).

The work of m+b.com derives from the responsibility of the State Media Authorities for the protection of minors in the media. This not-for-profit organisation therefore develops, realises and evaluates offerings in practical media training for various educational sectors in Rhineland-Palatinate. Among the partners are day-care centres, schools and extra-curricular school programmes, teacher-training institutes and universities, agencies for youth work, and adult education institutions. In diverse workshops, all target groups and age brackets are offered suitable learning opportunities and options for experimentation with new educational models and conceptions.

The participants in m+b.com programmes include persons of all ages: children and adolescents, parents, adults, teachers, social educators, students, university teachers, and other multipliers.

m+b.com is specialized in practical projects in the areas of audio, video, and multi-media (TV, film, radio, radio plays, internet, mobile phone applications, etc.) and has cultivated long-term partnerships in education and continuing education. The organisations' trainers visit the clients on location, providing comprehensive services: media education competence, conceptions tailored to specific needs, and appropriate technical equipment. Due to its activities in diverse educational sectors, m+b.com has particular expertise in areas of interface, such as the junctures between day care and schools, schools and vocational training, formal and informal educational structures, professional training and practical work contexts of teachers and educators.

The role of medien+bildung.com in the project is the administration and coordination of the overall project. They hosted the kick-off meeting and took the lead in managing the production of audiovisual tools for multiplication. Their pilot workshop was held with multipliers from the "Cross-Generational House" in Wittlich.

- The British partner : Institute of Education, University of London



The Institute of Education (IOE) is an internationally respected research centre in the field of education. The IOE was ranked number one in the UK for education research by the most recent Research Assessment Exercise, and scored a 93% rating in the 2009 National Student Survey, placing it fourth in the country for student satisfaction. The IOE offers an exceptionally wide range of masters and doctoral degrees to professionals in the field of education and related social sciences. It is home to the largest education library in Europe. International students receive dedicated support from the IOE, while the diverse IOE community provides a valuable multicultural learning environment.

The London Mobile Learning Group (MLMG) brings together an international, interdisciplinary group of researchers from the fields of cultural and media studies, sociology, (social) semiotics, pedagogy, educational technology, work-based learning and learning design. Members work on a theoretical and conceptual understanding of mobile learning and its application in practice. Further information is available at > www.londonmobilelearning.net

The IOE hosts the London Mobile Learning Group and work with a range of partners regionally, nationally and internationally, in England amongst others with institutions risk-learners.

The role of the IOE in the project is to lead the scholarly steer and Europe-wide dissemination. The IOE hosted the final conference in June 2012. Its pilot Workshop was held with learners at a certain distance to education at Uxbridge College in London.

- The Italian partner : Facoltà di Scienze della Formazione, Università degli Studi di Firenze



The University of Florence is one of the largest institutions of higher education in Italy, with about 60,000 students and a number of departments and faculties that together form the Faculty of Education (FoE). The FoE offers several courses and masters in the fields of K - 12 education, professional and vocational training, multicultural education, adult education, lifelong learning, e-learning and educational technology, social inclusion and special education.

The FoE collaborates with the Ministry of Education and other local public bodies concerned with education, and also with the private sector. In particular, major research activities and projects are underway in the fields of educational methods and technologies, new media and education - thanks to the Educational Technology Laboratory (ETL).

The ETL has been involved in several public initiatives relating to teachers' training in Education and ICT. Since 2001, the ETL team has offered a Master's degree in "Designing and Managing Online Education" and graduate certificates in instructional technology, instructional software design, and distance education. Recently, the ETL promoted and managed ENSEMBLE, an European project on mobile learning and social inclusion within the framework of the Life Long Learning Programme (2008-2010).

The role of the FoE in the Project is to lead designing "Principles of mobile learning in adult education" and also to lead evaluation. The pilot workshop of the FoE was held with multipliers who are trainers working in adult education.

- The Belgian partner : MEDIA ANIMATION asbl



Média Animation ASBL (MA) is a media and multimedia education resource centre for the Belgian French-speaking community's education system. It is recognized and subsidized by the Ministry of Education and Ministry of Culture. It is also a centre for (lifelong) adult education (lifelong during education). Média Animation was founded in 1972. It was granted crucial funding to implement research, information, training and educational publication. Média Animation's mission is to support those active in the field of education (inside and outside of school systems) along two complementary action lines: consultancy, audiovisual and multimedia production - professional production support for those working in cultural and educational fields; media and multimedia education - raising awareness among political authorities and education authorities, training teachers and educational mediators (social workers, educators,...), publishing educational works, initiating research studies.

Média Animation is also in charge of coordinating the main European network for media educators > www.euromedialiteracy.eu

Média Animation's scope of actions is :

- to promote the integration of media and multimedia education into school curricula, to advise educational and political decision-makers and to raise awareness of this issue.
- to stimulate media and multimedia education as part of a citizenship approach for the benefit of society as a whole.
- to offer professional services helping non-profit organizations and educational institutions in the context of media and multimedia production.



The activities of the centre are designed to address a variety of target groups : teachers, teacher trainers, social workers, community workers, as well as adults involved in different areas (citizenship education, intercultural education,...).

The expertise and fields of activity of Média Animation are closely linked to the objectives and methodologies developed in this learning partnership.

The role of MA in the project is to lead on developing a concept for multiplication.

• The leading idea of the MyMobile project

To achieve the objectives mentioned above and involve the beneficiaries of the project, the partners realized the following actions, part-funded by the European Commission via the Grundtvig Programme :

- International mobilities : their aim was to promote exchange of visions and experiences on mobile learning between the partners in order to build a common lexicon on the topic and identify possible instructional strategies and educational uses of mobile devices ;
- National Workshops : to shift from the sharing of experiences to the involvement of the beneficiaries and start developing general guidelines, workshops were designed and carried out at the national level with the aim of testing specific instructional approaches based on the use of mobile devices ;
- Evaluation of national workshops : through visits and virtual meetings, partners were involved in a mutual process of peer reviewing in order to evaluate the impact and the results of the national workshops ;
- Definition of guidelines : at the end of the process (sharing, designing and testing, evaluating) a set of methodological recommendations for practitioners and designers were developed.



• Outcomes and results of the project

There were several outcomes realized as a result of this European partnership. The transfer of experience within Europe and the development of a conception for training multipliers in the field of mobile learning were achieved, through partners sharing their experiences in mutual visits during the workshops and evaluating each other's workshops. The partnership worked on training multipliers, in particular Media Animation addressed trainers rather than students. Moreover, this handbook is addressed to multipliers in adult education. In Chapter 3 of this handbook are guidelines on the general principles for mobile learning in adult education, which are another outcome of this partnership.

The partnership published this handbook, in which examples of successful scenarios and techniques for mobile learning in the area of adult education are shown. All information that was gathered throughout the partnership can also be found on the project website > www.mymobile-project.eu.

As another outcome, the audiovisual tools, which were produced in the workshops can be found on the project website. There are tutorial-videos on how to use mobile phones for learning, videos or dynamic images that show the teaching and learning practices, even some learner products from the national workshops.

In addition to the website as a platform for sharing information, a moodle-platform was used by partners as an internal work space. UNIFI set up a blog for their national workshop, which was used by the students and Media Animation had a moodle platform for their students, too.

One outcome was will be a final dissemination event hosted by the IoE in London in June 2012. At this conference the partners presented results of the national workshops and their overall outcome of the work of the partnership. In addition to practical considerations a theoretical perspective on the field of mobile learning in adult education was presented. Material relating to the final dissemination event, such as video-recordings of the talks and accompanying slides, can be found on the project website > www.mymobile-project.eu.

It is planned for, the results of the partnership to be published in the form of articles.

> 3 Mobile Learning | Some Considerations

> Norbert Pachler, Judith Seipold and Ben Bachmair

Introduction

At the time of writing, Mobile Learning as a field of enquiry and practice has a tradition of more than a decade within the field of educational practice, although it is only really starting to be taken seriously since smartphones have reached a significant market penetration with around 50 per cent of internet access now coming from mobile devices rather than desktop computers, and since the iPad has reinvigorated interest in tablet computers. Nevertheless, how teaching and learning with mobile technologies is realised diverges greatly. In this report we present scenarios mainly for use in learning in informal contexts with so-called at-risk learners.

To provide a general context for these scenarios, this section outlines more generally the approaches to learning with mobile technologies that seem to be popular and it discusses which aspects need to be considered in planning mobile learning, such as paying due attention to the knowledge and expertise learners bring with them from their everyday lives.

At a first glance, the use of mobile technologies for learning is not obvious. This is because mobile technologies are commodity items and originally not designed for learning but for entertainment, communication, networking etc. and they are sold as part of users' lifestyle choices and for media consumption. At a second glance, though, a manifold range of opportunities emerges. No standardised concepts exist for the systematic use of mobile technologies for teaching and learning. But some trends can be discerned (see e.g. Seipold 2011; Pachler et al. 2010; Bachmair et al. 2011).

Before we look at these trends, let us consider some more general issues about mobile devices and services and learning (see e.g. Pachler, Bachmair and Cook, 2010; Pachler, Bachmair and Cook, forthcoming).

Some general and conceptual issues

One key general observation concerns the growing significance of mobile devices in learners' everyday life-worlds. This significance manifests itself, among other things, in their use for identity formation, social interaction, making meaning in and of the world, leisure pursuits etc. We see a danger in formal and informal education failing to keep pace with the developments in technology use in daily life, as a potential disconnect between the two is likely to lead to an increase in the questioning of the relevance of education and its approaches in particular by the at-risk target group that is already at a distance to education.

With the availability of smartphones, such as the iPhone or the Samsung Galaxy, at increasingly affordable prices, more and more learners have at their constant disposal personally owned and technically highly capable computing devices characterised by what we call 'convergence' of services and functions in a single device, ubiquitously linked to online repositories, services, databases and networks. This trend can be seen to be accelerating (see e.g. > www.guardian.co.uk/technology/2012/jun/27/smartphones-iphone-mobile-market)

These technological developments coincide with significant **transformations** in other areas of life: society, culture, media, education, the economy, etc. Key features of these transformations are the increase in **provisionality** and **fragmentation**, as well as the **individualisation of risk-taking** and **new learning habits**, all of which are intimately linked with the growing importance of mobile phones. Paradigmatic changes in the world of media from a push to a pull model on the one hand afford device users growing agency in decision making and an increase in choice, for example in relation to access to information; on the other hand they transfer responsibility for initiative to the users/learners and require them to familiarise themselves with the wealth of information on offer and to make use of the opportunities available (see Pachler et al. 2010, pp 11 ff., 205 ff., 249 ff.). These opportunities are mostly subject to market principles and users/learners are mostly left on their own when navigating the new media landscape. Whilst mobile device users often develop significant expertise in their everyday life-worlds, this expertise tends to be 'naïve', i.e. unreflected. Yet, they are forced to make choices and take risks, which could prove costly, both in financial terms (for example downloading and subscribing to unsuitable mobile phone apps and services) as well as in relation to acquiring necessary prerequisites for the job market or further study, for example by spending their time on activities that are not tested in examinations or recognised by institutions. One integral feature, therefore, to some of the scenarios discussed in this report is the mobile portfolio which allows learners and facilitators to add a level of (meta)reflection to their 'being in the world'.

The characteristic features of what we call the '**mobile complex**', in particular everyday life-worlds becoming learning spaces linked to ones media habits, not only provides an ideal application field for mobile devices for learning but in our view it makes the use of mobile devices for learning (in informal contexts) inevitable. Indeed, the question arises whether institutional pedagogy is necessarily the most efficacious context for learning.

This is underlined, of course, by the communicational **advantages** of mobile devices, which are closely linked to our conversational definition of learning, namely learning as the outcome of effective communication and as socio-culturally bound and contingent on factors such as co-learners, time, location, (technical) resources etc. Viewed from this perspective, mobile device use can be purposive engagement with the cultural resources and digital artefacts.

A portfolio comprises artefacts which result from or emerge through the process of learning. For a **mobile portfolio** the functionalities of the mobile phone are used for producing artefacts. As a concept that aims to frame mobile activities and to support reflection, the mobile portfolio tends to take the form of a photo report of the teaching and learning process. Participants as well as the facilitator take photos – casually or deliberately – for example of key words (from the board), of a presentation, of a screen or a book, of documentation of their own learning in informal contexts, of social activities of the learners or of impressions of the social climate etc. In addition to photos, sound recordings or videos are possible. The mobile portfolio is an almost ideal intersection between everyday life practices with media production, naïve forms of reflection such as a holiday photo collection and the deliberate appropriation of knowledge and skills in formal learning institutions. Mobile portfolios are the outcomes of the mobile as the students' everyday life resource. Combined with existing portfolio techniques, the m-portfolio bridges the gap between everyday life and formal learning institutions, between the naïve and the trained expertise of learners. It links media use at home, on the go or with peers with deliberate learning. It makes visible the options of the personal media devices as resource for learning and reflection.

Another obvious question arising from the very name of the phenomenon under discussion here, 'mobile' learning, is **who or what is mobile?** For us the answer is clear: mobility is turning the environment into a site for learning (see Kress and Pachler, 2007). This, of course, requires a certain disposition on the part of the learner, which needs to be nurtured. In particular in relation to at-risk learners we know from research about the importance of social milieu-related dispositional differences in users/learners, which need to be taken into account when conceptualising scenarios for mobile learning in informal contexts.

In our work (Pachler, Bachmair and Cook, 2010; Pachler, Cook and Bachmair, 2010), the notion of **appropriation** is particularly important. Appropriation can be understood as being in juxtaposition to learning as a transfer of knowledge. By appropriation we mean the processes concerning the internalization of, and externalization into the pre-given world of cultural products in school, college and university but also, importantly, in everyday life. In short, we consider mobile devices to afford contexts for human development and learning.

Indeed, we see **user-generated contexts** as a key asset of mobile device use for learning (see e.g. Cook, Pachler and Bachmair, 2012). Mobile devices enable the user to create synergies across knowledge distributed of people, communities, location, time, social contexts, sites of practice, networks, systems etc. and negotiate a mutual understanding of learning situations with others, with whom they are affiliated in increasingly loose configurations. Mobile devices not only enable users to transcend the limitations of their immediate physical environment, but also enable external representations of knowledge through social interaction and the augmentation of internal conceptualisations of knowledge.

Building links to the everyday life of learners by referring to structures, agency and cultural practices

Mainly because mobile technologies and their functions are designed for communication, entertainment and consumption, they are first and foremost related to aspects of learners' everyday lives outside of educational contexts. However, this doesn't mean that the use of these devices, their functions and their content in these contexts is un-reflected. Quite the contrary: everyday life use of technologies is intentional. Everyday use – e.g. making appointments with friends, using the calendar function of the mobile phone or accessing the internet with its social networks – indicates not only communication, entertainment and consumption. Users of mobile technologies communicate, structure, organise and order, plan, network, furnish information, assess, evaluate and produce. In the process they are friends, managers, producers, journalists, reviewers etc. The challenge is to acknowledge such activities taking place in everyday life as competences which have relevance for formal learning and thus to relate formal learning and everyday life meaningfully to each other. This can be realised e.g. by considering in which structures people are acting, which structures they are constructing, which competences they are establishing in this process and which routines they are developing in the process (see the model of socio-cultural ecology by Pachler et al. 2010):

- **Structures** are for example structures of mass communication and everyday life, e.g. learning environment, home, school, peers, leisure time. Learners navigate within these structures and use them but they also produce structures, which is an important and emancipating aspect. Orientating oneself is as important as is to provide orientation.



- **Agency** means the ability to act in the world with all available structures and to appropriate these structures. Part of this is that each individual has a subjective perspective on the world. This indicates that agency is affected by subjectivity and that – as a consequence – appropriation and learning are first of all and always subjectively meaningful. The aim is for school learning to moderate between subjective perspectives of the learner and objective requirements of school.
- People develop routines through their activities and they construct **cultural practices** and relate them to the cultural practice of other people or institutions. These cultural practices enable young people to act confidently and safely in situations and within structures. Here it becomes necessary to acknowledge e.g. the organisation of everyday life, networking, media reception and production or investigation competences of the learners in relation to curricular requirements and to make them available for school learning.

The terms and concepts of structures, agency and cultural practices evidence the fact that engagement in media activity is an intentional activity, usually on a low level of reflection or consciousness, which is also dependent on the social and cultural situation of media use. These aspects are important for teaching because they help to consider that learners from different social milieus experience different **availability** of technologies, attitudes towards learning, availability of information etc.

Two common approaches to implementing mobile technologies

What can mobile learning look like in practice? Mobile learning practices are potentially manifold and creative – even if there are also challenges such as cost of devices, difficulties in purchasing mobile devices, compatibility of devices, expensive internet connections, focus of learners on the devices rather than on the curricular content and so on.

In general it is possible to distinguish two main approaches of the implementation of mobile learning practice (see Seipold 2011). They tend to focus on formal educational settings but often also apply to projects in informal settings such as workshops, clubs, charities, multigenerational houses etc.

When considering the approaches discussed below readers should bear in mind Rogers' (2006) definition of learning in informal contexts as "a natural activity which continues at all times; it is highly individualised, contextualised... It is almost always concrete, limited to the immediate need; it is always embedded within some other activity. It is associated with our identities – either with confirming and fulfilling our identities in a changing world, or with changing our identities. It is our own individual way of making sense (meaning) of life's experiences and using that for dealing with new experiences. ... like breathing, it is the (mental) process of drawing into ourselves the natural and human environment in which we live ... and using it to build up (develop) ourselves."

1. **Top-down approach**: often mobile devices are implemented into learning contexts from top to bottom which means they are set-up in relation to already existing teaching and learning structures. This happens often within big projects that have large budgets. In such projects, whole grades, years or even schools are provided with mobile devices such as iPads. A benefit of this approach is that learners who are structurally disadvantaged are not excluded because all learners own the same devices through which equal opportunities are ensured. Risks extend especially to two aspects: first, it may be possible that technologies now have to be used in situations that didn't require the use of technologies before and that learners and teachers need to adjust their teaching and learning process to the requirements of technology and infrastructure. This can result in excessive demands. Second: because tools from everyday life can now be used in formal learning contexts, conflicts might arise; this could happen because learners often are not allowed to use the mobile devices they are used to using in their everyday lives and how the use corresponds to their patterns of use or usage preferences, their agency and their cultural practices. A major handicap of this approach is to alienate the learners from their own and personal learning resources in their everyday life.
2. **Bottom-up approach**: the bottom-up approach takes account of available resources such as devices and know-how of learners and facilitators. This is cost-saving because no devices have to be supplied. Besides, learners are confident with their devices and can revert to their routines, competences and knowledge when using them. Such projects benefit also from a range of resources originating from the everyday life of learners. If they get the opportunity to work in a self-directed manner when using mobile technologies, contents and other resources supporting their creativity, learners often build exciting connections between formal educational contexts and everyday life – and at the same time the outcomes are still re-usable and assessable in the categories of formal learning. However, one needs to take into consideration that some learners don't own mobile devices, or that they have only old models at their disposal, which don't have all the features that new devices boast. In this case learning groups are the solution. The cost question still exists in relation to the internet or connection cost. Wireless connectivity could reduce this problem but connectivity remains a practical problem, which requires careful attention. And finally, the diversity of devices and models can be a challenge, which, on the other hand, can be considered in advance when planning carefully.

Creative and critical relationship between formal education and everyday life

To balance the tensions that arise from the use of mobile technologies between demands of the school/college/university and its curriculum on the one hand and informal competences, practices and resources from everyday life on the other is one of the biggest challenges with mobile learning. By referring to four parameters (see e.g. Pachler et al. 2010) it should be feasible to sensitize facilitators to such

areas, to balance tensions and to bring together those aspects that seem to be contradictory. The four parameters each span two poles and focus on the creation of content and learning contexts.

- **Parameter A** names the teaching setting (didactic setting), learning spaces and social form of learning and ranges between the practices of formal education and everyday life.
- **Parameter B** points to the relationship that the learner has to the object of learning and covers the range between mimetic reproduction and personal reconstruction.
- **Parameter C** covers the learners' individual expertise and covers the area between the pole of the curriculum and personal expertise.
- **Parameter D** refers to the span between different modes of representation such as written text in a book and moving images in films. Here, there are the two poles discrete (i.e. mono media, mono modal) and convergent (i.e. e.g. mobile and web 2.0 technologies).

The parameters are intended to illustrate that the use of mobile devices does not necessarily have to be on the innovative and challenging end of the spectrum on all counts, e.g.

A Practices of formal learning	---■-----	of mobile devices
B Mimetic reproduction	-----■-----	Personal reconstruction
C Curriculum	-----■-----	Personal expertise
D Representation: Discrete	-----■-----	Convergent

For worked examples, see Pachler, Bachmair and Cook, 2010. The parameters attempt to help to acknowledge learners' media use and content preferences, styles, expertise, competences, knowledge, etc., which they bring to formal education from their everyday lives and to provide spaces and places to use these resources for learning in the classroom, e.g. by bringing together formal and informal aspects.

Focal points of mobile learning

The following focal points represent the educational and didactic options within the four parameters (see Bachmair, Pachler and Cook, 2011). They can be used to guide the planning and analysis of mobile projects:

Mobile phone use:

- to integrate aspects informal learning
- to set up episodes of situated learning
- to generate learning and media contexts
- to construct conversational bridges
- to support learners as experts of media use in everyday life
- to set up responsive contexts for development and learning

For worked examples, see Friedrich, Bachmair and Risch, 2011.

Adult and work-based mobile learning

Mobile learning in the context of adult education and life-long learning has received relatively little systematic (research) attention to date (see e.g. Pachler and Cook, 2009), with the exception of the now defunct MoLeNET initiative, a mobile learning network in the UK involving some 115 further education colleges and 29 schools funded by the Learning and Skills Network, despite it having been found to be particularly suitable for supporting lifelong learning, for example in terms of social inclusion or participation (see Arrigo et al., 2012).

Whilst mobile learning can clearly provide ample opportunities for personal and individual growth, the relative paucity of public funding supporting adult education, certainly compared with school and university education, arguably has been one factor leading to these opportunities not having been harnessed to the full extent. In a 2009 report by the National Institute of Adult Continuing Learning (Schuller and Watson, 2009), for example, ten recommendations are made to promote the full role of learning in society 'from cradle to grave' among them to rebalance resources fairly and sensibly across the different life stages, inter alia on the grounds of the age profile of the population, and to build a set of learning entitlements, in an attempt to keep up with the changing patterns of work. Linked to the financial argument is the relative lack of stability and weakness of the institutional infrastructure supporting adult education and its fragmentation.

This situation contrasts with the field of work-based mobile learning, where a range of (research) projects are taking place and being reported (see e.g. Pachler, Pimmer and Seipold, 2011 or Pimmer, Pachler and Attwell, 2010).

We discussed earlier the socio-cultural ecology of mobile learning developed by the London Mobile Learning Group. Another approach which might be of relevance in bridging the gap is the social workplace learning continuum developed by Jane Hart to explain and support informal and social learning in organisations (see > www.c4lpt.co.uk/blog/2012/06/04/supporting-the-social-workplace-learning-continuum/):

The Social Workplace Learning Continuum



› Jane Hart, C4LPT, 2012

Hart proposes five points for consideration:

- think 'learning spaces/places', not 'learning rooms';
- think 'social technologies' not 'training/learning technologies';
- think 'activities' not 'courses';
- think 'lite design' not 'instructional design' — for organized activities; and
- think 'continuous flow of activities' not just 'response to need'.

Whilst the above makes no explicit reference to mobile devices, her continuum and points for consideration seem to offer useful docking points for mobile learning opportunities and interventions.

Conclusion

This section of the report has aimed to provide a brief overview of some of the key issues, from the perspective of the London Mobile Learning Group, which have framed the work of the MyMobile project conceptually. With this report, we hope to be able to contribute to the discussion of the use of mobile devices and services in adult education and learning, in particular through the scenarios we have developed and tested with reference to literature and practice in the existing mobile learning literature in an attempt to bridge the seeming divide between learning in formal and informal contexts.

Links

London Mobile Learning Group (LMLG) › www.londonmobilelearning.net

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> 4

Training Scenario n° 1

Bridging informal and formal education through mobile images Integration of learners at a distance to formal education

> Ben Bachmair and Norbert Pachler



Age of participants, size of group, setting and duration

- College for vocational education and training;
- Two-day workshop prior to the beginning of the academic year;
- Presentation of results of the investigation of the college as a site for learning and link to the life-world of learners outside of the college through digital images;
- Team teaching with specialization on IT and mobile learning;
- Collaborative group work.

Didactic/learning focus and purpose of activity

The main purpose behind the workshop is the bridging of the gap of contexts for learning inside and outside of formal education and training through the integration of personal preferences and expertise. The focus group are learners at a distance to formal education.

The intention is to open up new perspectives for participants onto formal learning environments in order to help them bridge perceptual barriers and for formal education institutions to recognise the value of widened contexts for learning and the modes of representation used by learners in their everyday lives.

The workshop aims to develop an integration of key features of formal and informal learning contexts around an investigation with the mobile phone, work in the computer room, convergence with the internet by means of smartphones or PCs, as well as the representation of digital artefacts created and/or selected by learners. The main focus is on linking formal learning contexts with the personal experiences of learners through a mobile phone investigation. Participants take photos from personally relevant areas of a formal learning environment for presentation on a t-shirt and/or PowerPoint/Prezi presentation. The context of participants everyday life is connected to formal learning environments by means of photos which participants carry from home or from a social site on the web, in particular Facebook, into the formal learning environment. Participants require access to the internet. In part they take the photos or bring other images from their everyday lives into the formal learning environments in order to represent and visualise their preferences and expertise in everyday life.

Intended learning outcomes

Integration of young adults at a distance to formal education into formal learning contexts

- as a person who has a personal life and expertise outside of formal education: "Bring images from at home, also from social websites into the school and combine them with the images of the investigation of the college".
- by discovering and investigating the college: "Wander around the college and take photos which are interesting for the college or typical for you within the college".
- by recognizing the self-representation 'work' of participants and facilitators as playing a meaningful part of learning contexts; images from the investigation of the college as a site for learning on the t-shirt: me as a part of the learning institution; images from outside of the formal learning context: me at home, me and the/my media, me on Facebook.
- by summarizing the bundle of images and selecting personally relevant images through group work for presentation in public in front of the group through a portfolio as well as a personalised t-shirt.

Target Group: young adults at a distance to formal education (at-risk learners, NEETs)

Becoming familiar with one's own mobile phone / smartphone within a formal learning context

- as a device for learning for an investigation of the physical and social environment.

- making first experiences of reflection on being in the formal learning environment by using documentary images mobile portfolio.

Target Group: young adults at a distance to formal education (at-risk learners, NEETs)

Becoming familiar with a mobile portfolio.

The portfolio summarizes the facilitator's impression of participants' habits (target orientation, play, self-representation). The impressions are objectified by photos, in particular those taken by the facilitator during the investigation of the college by participants and from other events during the two days of the workshop. "Take photos which show participants working, playing and presenting themselves". Finally and in parallel to the work of the participants, summarize images for the final presentation on Prezi/PowerPoint add explanatory keywords. During the presentation session the facilitator presents their portfolio.

Target Group: facilitators and participants

Type and number of phones used incl. apps; mode of data transmission

Participants and facilitators use their own mobile phones/smartphones. No apps are necessary for the workshop although they can be used for putting together presentations etc. Data transmission takes place via bluetooth, cable and/or WIFI. No data plan is required.

Additional media (computer software, projector, IWB, etc.)

The work on the images of the investigation of the college for the final multimedia group presentation can take place in a computer room or be carried out on portable devices (laptops, tablets, smartphones). A range of presentation software can be used (Prezi, Powerpoint etc). For the group presentation a data projector is required.

Procedures: description of practical realizations and lessons learned

At the beginning of the workshop, participants are invited to investigate the college campus in small groups and to take interesting, preferably striking photos with their mobile phones. Participants without their own mobile phone can be loaned a digital camera.

Additionally, participants are asked to bring photos from "home". The facilitators should not specify what is meant by "home", i.e. internet sites should not be excluded.

From the pool of pictures available, one is chosen per participant to be printed on a t-shirt. The t-shirt photos have to be delivered to a local copy shop at the end of the first day of the workshop.

Secondly, out off all the photos taken/brought in, groups will make a selection for a group presentation.

The photo T-shirt and the Prezi-presentation function as a portfolio with different modes of representation and different emphases on the participants' habits of learning. Their habits of learning include the categories of target-orientation, self-representation and play.



The curricular, 'didactic' rationale of the portfolio is to objectify the learning process from the perspective of an individual participant's learning process. A portfolio should make visible the learning or teaching outcomes already achieved.

Possible follow-up and variations and transferability (tools for assessment)

The desired follow-up would be the integration of mobile phones in regular class work, for example in the form of mobile student and teacher portfolios.

> 4

Training Scenario n° 2

Developing adults' self-promotion skills for job search through digital storytelling and the use of mobile phones

> Maria Ranieri and Isabella Bruni ¹



PARTICIPANT AT WORK

Age of participants, size of group

This scenario is addressed to adult learners, from 25 to 60 years old, in search of a first job or people with difficulties in finding a new job, in particular immigrants looking for new opportunities in the marketplace. The number of participants may vary from a minimum of 8 to a maximum of 20 people. Participants should possess an intermediate level of digital competence and skills. However, very often in this type of scenario participants possess low levels of media-related skills, particularly as far as mobile phones are concerned. In these cases, the initial phase of the instructional activity should be dedicated to technological familiarisation.

Setting and duration

The context for this scenario is characterised by a strong cooperation with local bodies operating in the field of adult education, and with job centres. They may provide support in the provision of infrastructures, equipment, advertising and target group involvement.

The scenario is based on the delivery of a workshop covering two months, with one 2-hour session per week for an overall amount of 16 hours. The first two weeks are dedicated to the introduction of basic ICT concepts and to the technological familiarisation.

Didactic/learning focus and purpose of activity

The main idea of this activity is to help disadvantaged adults developing digital competence and mobile literacy to promote self-representation and increase professional visibility for job searching through digital storytelling. This technique is based on the use of digital content such as images, sounds and video, to create stories particularly referring to personal life. Digital storytelling is a method that is being applied both in educational and professional contexts. It may prove to be effective for job search as the choice of finding a new job could be the result of a reflection on personal interests and experiences. Re-analysing their own professional experiences and putting them into words as in a narration can stimulate reflection on their own competences, and increase awareness and visibility. In particular, the focus is on how to design, implement and disseminate a multimedia CV (curriculum vitae) by using mobile phones and web 2.0 tools. A multimedia resum is not a substitute for the curriculum in a multimedia format, but a more concise tool to provide an effective presentation of a candidate in a few minutes highlighting in a creative and appealing way their skills and personality. In short, the multimedia resum is like a business card for the person who wants to let others know about their talents. It is a short digital product, easy to disseminate through web portals, and increasingly asked for by employers.

Intended learning outcomes

The expected results refer to different dimensions:

- the development of technical skills;
- an increase in professional awareness;
- the development of strategies for self-promotion.

More specifically, it is expected that participants develop a reflective approach to their own career path through digital storytelling, thus highlighting their strengths and imagining possible career paths or re-training.

Participants should develop design skills and technical abilities relating to the production of a multimedia curriculum vitae, which should be adequate for the purposes of finding possible future jobs. In particular, the focus is on digital skills relating to the use of mobile devices and Web 2.0 tools for self-promotion and online job search.

¹ Even though scenarios 2 & 3 have been jointly conceived, Maria Ranieri (UNIFI) edited Training Scenario 2 and Isabella Bruni (MED) Training Scenario 3.

Type and number of phones used incl. apps; mode of data transmission

This scenario is based on the use of mobile phones with basic functions such as calling, texting and taking pictures. Participants' personal devices are used without any additional charges. Mobile phones can be used as digital cameras and archives, drawing on multimedia materials stored in them, particularly images for the creation of personal narratives. In some cases, mobile devices are used to quickly scan old photos and other content such as certificates of attendance and degree certificates. The different types of contents are transferred to the computer using a cable connection or via Bluetooth.



Moreover, mobile devices are used not only to capture multimedia material but also to interact with participants. Participants will receive encouraging SMS messages during the workshop period with three different purposes:

- to provide motivational support;
- to remind them of organizational aspects (scheduled lessons, places...);
- to give some tips about content and specific tasks (examples of how to solve the task...).

Additional media (computer software, projector, Interactive White Board, etc.)

A **projector** is used during the workshop sessions to show presentations and some examples of multimedia CV to participants;

Computers – it is necessary to provide one computer to every participant in order to allow him/her to produce a personal multimedia CV;

Software – open source or readily available software is used to create the multimedia CV. In particular, in the first instance, PowerPoint could be used (or OpenOffice). Simple to use and widespread, this software allows users to arrange different content in one slide using a range of models of layouts, and to export it as a single image.

As for the editing and the production of multimedia CVs, several tools can be used. In this scenario, which is characterized by the possession of basic mobile phones, PhotoStory3 is used, a free software for computers running a Windows operating system. This software is suggested because of its simplicity for all the required features, both audio and video in a single product, and for the availability in several languages.

A **blog** is used to support content delivery and sharing, and to allow interaction among trainers and participants in between the face-to-face meetings.

Procedures: description of practical realizations and lessons learnt

The workshop consists of five phases as described below:

- **Phase 1 Technological familiarisation.** This phase aims at providing participants with basic knowledge on the concepts of ICT and will familiarise them with the functions of their mobile phones.
- **Phase 2 Getting started with Multimedia CV.** This phase focuses on the presentation of the characteristics and advantages of a multimedia CV. Different types of multimedia CVs, depending on the aim, context and the individual's profile, are presented.
- **Phase 3 Brainstorming on their own CVs.** In this phase, participants are guided in a brainstorming session on the possible subjects to deal with in a CV, the possible aims and targets, and also on multimedia contents to be gathered or created through the use of mobile devices.
- **Phase 4 Designing and developing a Multimedia CV.** This phase focuses on methods and techniques to design and implement a multimedia CV, from storyboarding to the use of specific devices to implement it. At the same time participants start the creation of the storyboard.
- **Phase 5 Implementing and disseminating their own Multimedia CV.** The last phase is dedicated to the gathering of contents such as images and audio, etc., and to the creation of the multimedia CV. Once the multimedia CV is completed, it can be disseminated via the web.

The methodological underpinnings which guided the design of the instructional activities within this scenario take into account the specific needs of the target group. They can be summarized as follows:

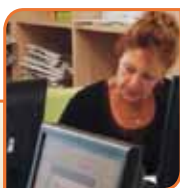
- a) In the initial phase special attention must be paid to socialization amongst group members and between them and staff in order to promote trust and willingness to share, which are necessary components for telling stories about themselves and for personal reflection as well as for increasing motivation;
- b) As far as the use of technology goes, it is suggested to adopt a strategy of gradual appropriation of tools. This helps participants to manage the cognitive load and allows them to develop self-confidence in the use of the available tools;
- c) A learning-by-doing approach is suggested, in order to always integrate theory into practice and support autonomous learning strategies, even at a distance;
- d) Individual work should be favoured to maximize the level of personal involvement.

Possible follow-up and variations and transferability (tools for assessment).

The scenario described above was tested in Florence (Italy) during the period May–June 2011, within the framework of TRIO, a regional project providing online training for lifelong learning in Tuscany, and with the support of the local job centres, which made available equipped rooms for meetings. The pilot test carried out in Florence highlighted two very important aspects related to the use of mobile technologies. One refers to the motivational dimension, the other to learning. Indeed, the use of new technologies is often accompanied by high expectations about the potential of digital devices, particularly when individuals have low levels of digital competence. On the one hand, training program promoters should manage not to frustrate these expectations, but on the other hand, they should try to relativize positions leaning towards a naive technological determinism. Therefore, it is important to encourage gradual media appropriation processes based on the development of socio-technical skills, reducing the risk of cognitive overload and feelings of inadequacy.



LEARNERS AT WORK WITH TUTORS



> 4

Training Scenario n° 3

Developing young adults' self-expression skills through mobile storytelling

› Maria Ranieri and Isabella Bruni



LEARNERS AT WORK

Age of participants, size of group

This scenario is addressed to young adults, i.e. graduate students, from 20 to 25 years old, in search of a first job after completing their academic career. The number of participants may vary from a minimum of 10 to a maximum of 20 people. Participants should possess intermediate level of digital competence and skills, especially as far as mobile phones are concerned.

Setting and duration

The context for this scenario is characterized by a strong cooperation with University and their job placement services. They may provide support in the provision of infrastructures, equipment, advertising and target group involvement.

The scenario is based on the delivery of a full immersion workshop during a weekend, with 8 hours of sessions per day for an overall sum of 16 hours.

Didactic/learning focus and purpose of activity

The focus of this scenario is to develop graduate students' capacity to express and represent themselves, mainly, but not exclusively, for job placement, by using digital media. In particular, it aims at developing mobile literacy to develop self-representational narratives through mobile digital storytelling. Mobile storytelling can be defined as a practice of personal multimedia storytelling based on the use of mobile devices. It stems from 'digital storytelling', a technique which is adopted for educational purposes to produce multimedia narratives. In particular, the use of this technique can provide young adults with the opportunity to explore their identities and communicate about themselves. Indeed, young adults' identities can be expressed through digital production, based on explicit personal narratives and all types of remixing. Moreover, mobile devices are refining the ability to track life in real time, through ubiquitous connectivity, multimedia functions and geo-location with an impact on the way in which people perceive their lives and relationships.

In this context, the main idea of the scenario is to support young adults' identity formation and self-representation in a delicate phase of their lives, which entails the translation towards adulthood and the emergence of the need for a better definition of themselves, especially for job placement. Mobile digital storytelling is proposed to the participants as a tool to reflect on their own competences and personal aspirations. In particular, the focus is on how to design and implement a multimedia self-presentation by using smartphones and mobile digital storytelling apps.

Intended learning outcomes

It is expected that students will develop the capacity of presenting themselves for specific purposes and of reflecting on their educational choices, in order to be able to choose a first job and a career which is consistent with the knowledge and the skills acquired in formal and informal contexts of learning. In particular, students should be able to use innovative and creative strategies for self-promotion and job search, from personal branding to job placement through social networks and online platforms.

The students should also develop design skills and technical abilities for media production and the use of mobile technologies, which can contribute to their professional qualification.

Type and number of phones used incl. apps; mode of data transmission

Mobile devices used in this scenario are smartphones, equipped with internet connection, camera and specific apps for the creation of digital stories. It is recommended to use personal devices of participants and to incur only the additional cost of purchasing

relevant apps. Mobile devices are used either as digital cameras and archives, or for the production of the personal multimedia story. Users may create new or draw on existing media contents, including images, stored in their personal mobile phones or their social networks, and then edit them and add their voiceover narrating, in order to obtain as a final product a brief audio-visual narration.

It is suggested to use apps for mobile digital storytelling to turn photographs into movies as a narrated slideshow: in fact these applications allow users to select some images from their archives and put them in a sequence, and simultaneously record a synchronised audio track. For the iOS operating system, the following apps are recommended :

1. Storyrobe 1.0 (> www.storyrobe.com Story by Robe Inc LLC, € 0.79) – it is an easy-to-use tool to create a digital story in three steps: choose images/videos, record story and share it. It is possible to select images from the personal archive or taking new images/pictures. The maximum recording time is set at 3 minutes. The integrated sharing options allow users to send products via email or upload them on YouTube (only for iPhone);
2. SonicPics 2.1 (> www.storyrobe.com by Humble Daisy, Inc., € 2.39) – it allows users to add images from their personal photo library or snap new ones, to arrange photos and record voiceover narrating images as users swipe through them. It is possible to record up to 60 minutes per session and select audio quality. Final movies can be published on YouTube, shared via Wi-Fi to computers or sent by email (available for iPhone, iPod Touch and iPad).

Additional media (computer software, projector, IWB, etc.)

No additional media are required for the production process, but computer and projector could be used to show the introductory presentation and some examples of digital storytelling, based on the use of mobile devices. A wireless connection should be available to provide participants with free connectivity for mobile devices.

Procedures: description of practical realizations and lessons learnt



The workshop consists of five phases:

- **Phase 1** Activation of pre-existing knowledge. This phase focuses on the activation of young adults' pre-existing knowledge and skills about the uses of their personal devices and the common strategies for job search.
- **Phase 2** Getting started with "personal" digital storytelling. This phase focuses on the presentation of different types of multimedia self-presentations, which vary depending on the aim, the context and the individual's profile. Characteristics and advantages of a multimedia self-presentation are highlighted.
- **Phase 3** Brainstorming on self-presentation. In this phase, participants are guided in a brainstorming session on the possible topics to deal with their self-presentations, possible aims and targets, and also on multimedia contents to be gathered or created through the mobile devices.
- **Phase 4** Designing a multimedia self-presentation. This phase focuses on methods and techniques to design and implement a multimedia self-presentation, from development of the idea to storyboarding.
- **Phase 5** Exploring apps and implementing a "mobile self-presentation". The last phase is dedicated to the exploration of the functionalities and apps of mobile devices and to the implementation of a multimedia self-presentation through a digital storytelling app.

The methodological underpinnings which guided the design of the instructional activities within this scenario take into account the specific needs of the target group. They can be summarized as follows:

- a) Before starting the work, it is important to activate participants' pre-existing knowledge and abilities about media, narrative techniques, and active strategies for job search ;



- b) It is suggested to engage participants immediately with a practical task, adopting a learning-by-doing approach, in order to capture their attention and exploit their familiarity with media ;
- c) However, it is fundamental to provide participants with the opportunities to revise their work in order to stimulate metacognitive processes and to consolidate knowledge and skills ;
- d) It is possible to organise participants in small groups promoting collaborative rather than individual work in order to favour peer learning and the exchange of information and knowledge.

Possible follow-up and variations and transferability (tools for assessment).

The scenario described above was tested in Florence (Italy) in December 2011, at the Faculty of Education, which provided rooms and equipment and involved about twelve students of the degree course in Educational Technology.

The pilot test carried out in Florence highlighted two important elements. The use of new technologies by young adults seems to be often characterized by high enthusiasm and a strong exploratory capacity, but these are not always balanced of by the capacity to reflect on and take up critical distance to the technology. In addition, mobile technologies are part of the everyday life of young adults and they are usually considered as entertainment tools or as tools for interpersonal communication. Therefore, possible resistance to assigning new significance to these tools in the workplace can emerge. To face this issue it could be helpful to clarify, from the beginning, the benefits of the suggested use, thus overcoming some cognitive rigidity and bring young adults to a more flexible application of the new media technologies.

The scenario could be varied by producing video rather than multimedia sequences and by involving the job placements services of the University directly. It could be implemented also with younger students, especially in vocational training programs.



PARTICIPANT RECORDING WITH HER SMARTPHONE





> 4

Training Scenario n° 4

Connecting older people in rural areas | Mobile learning scenario from a cross-generational house in Germany

> Daniel Zils



OLDER PARTICIPANTS SHOWING EACH OTHER PHOTOS ON THEIR MOBILES

Age of participants, size of group

This scenario is intended for adult learners aged 50 or older who are already engaged in cross-generational centres. Groups may vary in size from at least three persons up to as many as 20. No previous skills are required, but in practice it has emerged that levels of facility in dealing with the mobile phone will differ greatly within a group. If the majority of the group has little or no experience, then the fundamental explanations and exercises need to be adjusted accordingly.

Setting and duration

In the case described, the location was a cross-generational house, an open-access social centre where young adults and older persons meet and learn from one another in various fields in an informal setting. Due to the open character of the centre, course offerings spread over several meetings are subject to more fluctuation than workshops held in one unit.

This scenario was realised in three workshops lasting two hours each, held at intervals of one week and supplemented by a home assignment.

Didactic/learning focus and purpose of activity

The aim of this scenario is to familiarize the participants with the functionalities and potential of their mobile phones. They learn about the options their device presents for expressing themselves toward others and for keeping in contact over shorter or greater distances. While participants are often already practiced at communicating with a partner by telephone or SMS, the workshop aims at laying the groundwork for managing the camera and video functions and using these to send personal messages to others or to share pleasant experiences.

In the rural environment of the Eifel, maintaining contacts and networks with the aid of (mobile) media is an attractive possibility since individuals – particularly older persons – do not always have the option of getting together personally.

The starting point for this learning scenario is the fact that mobile phones are now quite commonly in use by older persons, more and more of whom even own smart phones. The modern mobile device or smart phone offers so many functionalities that make it possible to use this small multi-media device in many different learning and communicative contexts. Alongside the recording functions for sound and images, it provides storage space for large amounts of data and can also, for example, save geo-information directly in photos taken with the camera. In addition, media content that has been produced can easily be transferred to other devices.

Learning to handle the photo function with all its options forms the basis for this scenario and for many other possible areas of application to follow. In the Cross-Generational House in Wittlich, the focus is on the learners' acting and communicating as "experts in their everyday world". They are encouraged to address, with the aid of the mobile phone, the events and locations that are important to them and with which they would like to present themselves. A sequence of photos on the mobile phone might show a person making firewood, always readily available for sharing – just by taking the phone out of one's pocket or by forwarding the photo series digitally to interested parties. Another sequence might recommend a newly discovered ice-cream parlour to friends or family, with pictures of the specialties of the house.

This brings two major aspects of mobile learning into focus: playfully exploring one's own living environment (phases 1 and 2 of the workshop) and communicating or networking with the aid of mobile technology, which is available at any time in any place (phases 3 and 4).

The didactic setting takes conscious advantage of the heterogeneous skills of participants: those already experienced in handling various functionalities of the mobile phone can serve as tutors for the less experienced members of the group, helping to enable learning that

is centred on the participants and their needs. One special characteristic of the cross-generational centre does not yet figure in this pilot workshop as held, but can well be integrated into future learning situations: the encounter between younger and older persons can be very conducive to learning about the application of new technologies, with the younger generating providing explanations and support for older persons.

An special feature of mobile learning as realised in this learning scenario is the playful manner of accessing and exploring new technology.



MOBILE PHONE - KEY ELEMENT OF THE WORKSHOP IN THE CROSS-GENERATIONAL-HOUSE

Intended learning outcomes

The following learning goals were set up for the participants:

- confident handling of the photo and video functions on the mobile phone
- transfer of the outcomes from the mobile phone to other devices
- options for documenting knowledge, experience and directions from their everyday lives in photo sequences that are easy to comprehend
- production of web albums with Picasa and connection of photos with 'Google Maps'

Given that most participants have previously used the mobile phone almost exclusively as a telephone, this workshop proceeds in relatively small learning steps. In addition to the fundamental photo and video functionalities, emphasis is therefore placed on making the media content one has produced available to others. To reinforce learning, the individual steps covered during the workshop meetings are repeated individually in the form of a home assignment.

Type and number of phones used incl. apps, mode of data transmission

The participants use their own mobile or smart phones, so that they later can apply what they learn in their everyday life context. All the devices should be equipped with a camera for stills and videos. Furthermore, it is practical to use devices that enable a Bluetooth connection for transmitting the images. If this function is not available on some of the mobile phones, alternative means of transferring the data need to be identified and practiced, for example, via data cable. In the latter case, the participants should bring along their own data cable to ensure compatibility.

Additional media (computer, software, projector, IWB, etc.)

Data projector – for presenting outcomes to the group;

Computer – during the workshop, a computer is necessary for collecting and presenting the outcomes of the participants. Depending on their individual skills, participants may also download outcomes of the home assignment onto a computer at home and forward them to the trainer via e-mail;

Software – no special software is required, only Google web services are used. To access 'Picasa' and the connection with Google Maps, it is necessary to register (free of charge).

Procedures: description of practical realization and lessons learnt

The scenario can be divided into four workshop phases whose content is summarised here.

- **Phase 1 Introducing the technology.** During this phase, the participants familiarise themselves with the basic functionalities of their mobile phones, with which they will be working. They produce short photo sequences and present these to the group by transferring the images to the trainer's computer via Bluetooth or data cable. From there, the photos are projected with a data projector. The photo sequences, which are made of at most three pictures should tell a story.
- **Phase 2 The digital mobile journal.** In a home assignment, the participants produce short photo stories depicting events or information from their everyday lives. Those who are more experienced have the option of downloading their images to a home computer and sending them to the trainer via e-mail. The others transfer their photo stories to the trainer's computer at the beginning of Phase 3.
- **Phase 3 Publishing images on the internet.** Participants learn to use the Google web service 'Picasa', and they practice uploading and publishing their images on the portal. At the same time, they are given insight into relevant aspects of data protection and personality rights.

- **Phase 4 Significant locations for older persons in and around Wittlich.** In the fourth phase, the participants choose locations or institutions in their surroundings that they consider important, and they take photographs of these sites. For this step, it is advisable to use a smart phone with GPS. This makes it possible to connect the images directly with geo-information via GPS. Again, the participants publish their photos using Picasa. On the basis of the geo-information, "Google Maps" relates the images to existing maps. In this manner, over time a personalised city map can be developed, providing in this example a city map with information important for older persons in Wittlich.

This scenario proceeds in small steps to accommodate the wishes and needs of the target group. The trainer explains the exercises very simply, adapting as closely as possible to the needs and interests of older persons. Once the trainer knows the group with its diverse "mobile habits" and its information and communication needs, he or she can offer suitable learning methods.

Possible follow-up and variations and transferability (tools for assessment)

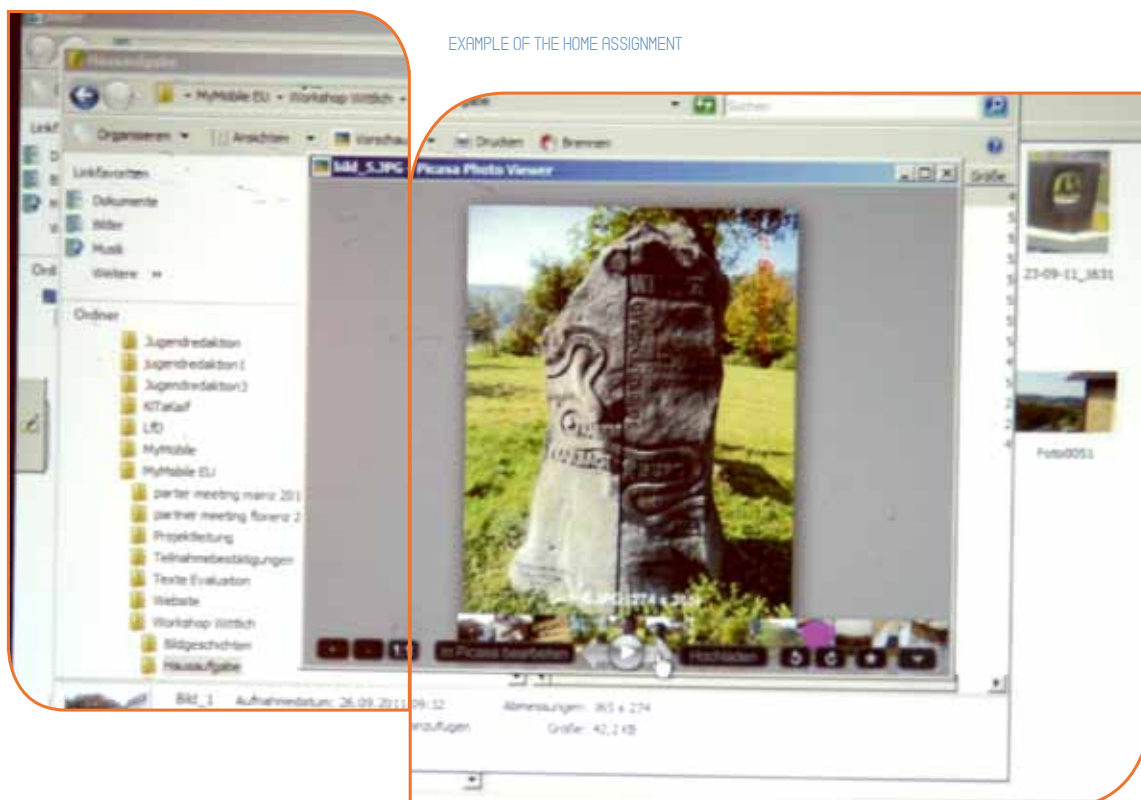
The scenario as described was tested at the cross – generational centre in Wittlich in September and October 2011. Thanks to the integration into the centre, 17 persons participated – a high number considering the informal nature of the house.

The difficulty of achieving as homogeneous a form as possible for the course – despite the different levels of skill and the variety of technical equipment owned by participants – was compensated by integrating the more experienced members of the group as peer-to-peer trainers in individual work phases. There was also a certain amount of fluctuation within the group, since the regular offerings of the cross-generational centre are not organised to build upon one another from one meeting to the next and thus do not require steady attendance.

One possible further development of the scenario could be the production of an internet offering as a space for exchange among older persons on their experience and their stories, allowing others who are no longer mobile to participate in their lives. In this context, the mobile character of the approach plays a major role.

As a medium for communication, the Picasa service portal can be used privately, by groups of friends, or by institutions working in an educational context. It is possible to post peer-to-peer offerings where more and less experienced users develop their mobile skills together, for example in the form of a "mobile café", or to create family offerings for older persons and their grandchildren.

This learning scenario can also serve as a basis for producing a city map for older persons that expands dynamically.



EXAMPLE OF THE HOME ASSIGNMENT



> 4

Training Scenario n° 5

Mobile learning in educational contexts | exploring the possibilities of cell phones in a university course for educators

> Daniel Zils



PARTICIPANTS PREPARING THE PRESENTATION

Age of participants, size of group

The scenario is addressed to young adults aged 20 to 30 years who are attending college or university to qualify as educators working inside or outside of schools. The size of the group can be varied, with as few as 10 or as many as 30 participants. They should already be experienced in handling the basic media options of the mobile phone, since the scenario does not include an introduction to these functionalities.

Setting and duration

This scenario is designed for integration into a professional training programme for teachers, educators, or vocational trainers. Therefore, cooperation with a university or comparable training institute is essential. This cooperation makes it possible to embed the scenario into a more comprehensive educational context; in the case described this was an introductory lecture course on media education.

Two workshops lasting two hours each are foreseen, with an interval of four weeks in between. During this time, the students produce media content of their own, working in small groups.

Didactic/learning focus and purpose of activity

The starting points of this scenario, in terms of didactics, are two basic tenets in the theory of mobile learning. Firstly, the mobile phone as a universally available small multimedia device is the most personal within the array of media currently in general use. It therefore permits access to a wide range of options for self-expression, which can be tapped into in learning contexts. Secondly, modern mobile phones offer many multimedia opportunities. They function as mini-computers equipped with a camera, a sound recorder, and a GPS receiver that can be used anywhere. This makes it much simpler to connect learning locations inside and outside of schools. The fundamental idea behind this approach is that, by experimenting with new forms of learning, particularly young persons not on the best footing with schooling and instruction can achieve learning success. As a typical embodiment of media culture, the mobile phone can help school students and vocational trainees to integrate the media skills they have acquired elsewhere as a new learning resource in the classroom, in their training or in continuing education.

This scenario aims at familiarizing future educators with this approach through experimentation and development. The students create examples of applications for mobile learning that can be used in the classroom, in vocational training, or in qualification courses. They develop methods for integrating external learning locations into the formal learning context, with the mobile phone serving as the mediator between the two spheres.

Intended learning outcomes

In this scenario, the participants are to learn the following:

- fundamentals of mobile learning with the mobile phone
- application of classroom content in mobile media contexts
- production of media modules for innovative classroom use of mobile media with an essential connection to everyday life

After a lecture presenting the fundamentals of mobile learning with examples of successful approaches, the participants themselves try out various mobile phone applications. Here, the students tap into their own experience in producing media content on the mobile phone, attempting to link it with elements of classroom content and to develop mobile learning scenarios of their own.





Type and number of phones used incl. apps; mode of data transmission

The participants use their own mobile or smart phones. All the devices should be equipped with a camera for stills and videos. To transfer content to a computer for further editing, a Bluetooth connection or a data cable can be used.

STILL FROM A SCREEN CAST MADE BY THE STUDENTS

Additional media (computer software, projector, IWB, etc.)

Data projector – for presenting the participants' outcomes;

Computers – the participants use computers to compile and edit their mobile outcomes and to create a screencast;

Software – participants decide for themselves whether to use apps in producing their media content or to rely only on the camera and audio functions of their mobile phones. If apps are used, attention should be called to the importance of choosing those that are free of charge. To create their screencasts, the students can use the programme Camtasia. With it, monitor content can be recorded on the computer and a soundtrack simultaneously added in. A free test version of Camtasis is available at > www.techsmith.de/download/camtasiatrial.asp

Procedures: description of practical realisations and lessons learnt

The blended learning scenario is structured in three phases, as summarised here.

- **Phase 1 Introduction.** In the first phase, the students are present at the university. They are familiarized with fundamentals of mobile learning involving the mobile phone and with successfully tested methods of treating the mobile phone or tablet as a learning tool in formal learning situations. In addition, the students are given individual work assignments to be realised independently during Phase 2.
- **Phase 2 Creation of screencasts.** Working in small groups, the students together develop mobile learning scenarios integrating the mobile phone into a vocational training context or classroom instruction. They also create a "screencast", a short learning video that connects monitor content of a PC or tablet with audio commentary they record themselves. These videos can range from PowerPoint presentations being read aloud to animated videos with a full soundtrack.
- **Phase 3 Presentation.** Again the students are face-to-face at the university, where they present their screencasts and discuss their outcomes with the other students. Relevant suggestions may be taken up and worked into the screencasts. The final results are uploaded onto the internal digital learning platform of the university (such as Moodle). Thus, an expanding pool of methods and knowledge is made available to future learning groups.



The blended learning scenario with face-to-face and self-learning phases accommodates the working patterns of students. Also, ideas about how to connect informal learning locations (outside of schools) with a formal school context can be tried out on site during the time between the university sessions. This is in accord with the essence of mobile learning inasmuch as the students themselves experience how the mobile phone serves as a communicative bridge between everyday learning and formalised qualification, an important learning resource.

Intentionally, the directions given to students are formulated flexibly, since the small groups are often quite heterogeneous in terms of their background in the field.

Possible follow-up and variations and transferability (tools for assessment)

The scenario as described was developed and realised by Maren Risch, media educator at medien+bildung.com in May / June 2011 at the University of Mainz in the Media Education Faculty. Thanks to its inclusion in an introductory lecture course, a large number of students were involved. The outcomes produced are available on the platform > www.medien-bilden.de under the heading "Mediacast". The students' assessment varied regarding the use of mobile phones in an educational context. Although none of them had previous experience with the mobile phone as a learning tool, the students were able to envision involving it in their later work as educators – particularly since they themselves had experienced how the enormous creative range made available by the multimedia mobile device had promoted their own individual learning strategies significantly.

There are many further learning contexts suited for the use of screencasts with mobile media input. A practical instructor can take photos on the mobile phone, load them onto the computer, and record a commentary to accompany them. In this manner, step-by-step instructions can be created, complete with images of the important work steps and valuable explanations about them.

An additional benefit of this approach is that it supports collaborative effort, particularly among persons working separately in time or space. Learners can direct questions or comments to others without real-time communication.

PARTICIPANTS PREPARING THE PRESENTATION





> 4

Training Scenario n° 6

Advertising and media literacy | Use of mobile devices

› Paul de Theux and Catherine Geeroms



Age of participants, size of group

The scenario is addressed to teachers and educators working in secondary/high schools (general, technical or vocational). The number of participants may vary from 10 to 20 persons. Participants should have a low or intermediate level of digital competences or skills. Teachers should be interested in media literacy, advertising and be curious about mobile technologies. They must also be intending to make use of media education in their courses/lectures.

Setting and duration

The workshop is organized in the context of continuous training for teachers. The context of this scenario is training about media literacy and more precisely advertising. Teachers come from different schools in their neighbourhoods. The training session is takes place within a

school which can give some support for technical and media devices (but this is not always possible).

The scenario lasts two full days (from 9.00 am to 4.00 pm).

Didactic/learning focus and purpose of activity

The main objective of the training is to allow teachers to use media literacy methodologies and tools to discuss and work on about **advertising** within their classroom. Therefore in this case we will develop a critical approach towards advertising with students for their course/lectures. Advertising has become important in social environment and is constantly in the media and public space; it targets young adults and it elaborates strategies of persuasion.

Initially, training will analyse the language and strategies of advertising discourses set up by advertisers and will propose a typology for them. Then, advertisements will be analysed using grids which are transferable to other examples. Based on these materials, trainers can expand to the expand the perspective to include the notion of audience and how advertisers exploit sociological concepts (sociostyles) to reach their groups; The training will also show how advertising agencies work and the process of creating a campaign. Throughout the training, the question of representations and stereotypes will be treated according to different approaches and codes.

The mobile devices should be used during two exercises. The first one is relates observation of the advertising environment and its representation and the second relates to the creation of an advertisement.

Intended learning outcomes

Four major outcomes are identified

- Identify different dimensions of advertising across six dimension of media literacy;
- Discover tools that enable critical analysis of messages delivered by advertising;
- Develop educational approaches to help teachers to assist students in developing a critical posture regarding the consumption and creation of advertising and to integrate available resources into their media approach, also outside of school;
- To use mobile learning and mobile devices

Type and number of phones used incl. apps, mode of data transmission

Each participant had to use their own device (Mobile phone with camera and Bluetooth or internet connection, Smartphones). MM Mobile app (free Media Marketing Mobile) and Instagram app (free).



Additional media (computer software, projector, IWB; etc.)

Computers and projector for the two exercises and internet connection.

Procedures: description of practical realisations and lessons learnt

1. Observation undertaken with the Mobile phone : what is advertising : representation of advertising

After an introduction to media literacy and advertising, people are invited to think about their representation and their students' representation of advertising. The group of teachers go out of the classroom and walk around the school. Trainers ask to them to take pictures with their mobile phones of any advertisements they encounter during the walk. Teachers come back to the classroom and present one of their pictures to the rest of the group (using the computer and projector). They also have to explain why they have chosen that particular picture. A debate about the significance of advertising will follow.

2. Analysis of Advertisements : Part 1

The six dimension of media literacy (languages, technologies, typologies, audience, authors/editors and representations) are presented to the teachers. The group is divided in sub-groups for analysing advertisements in different media through the six dimensions. The MM Mobile app allows teachers to download the "Campaign of the week".

3. Analysis of Advertisements : Part 2

The trainer presents and defines the characteristics of an advertisement: (base line, insight, signature, benefice, promise, etc.). Each participant analyses an advert using this conceptual grid on newspaper, TV and Internet campaign.

4. Advertising strategies

Strategies of advertising (information, suggestion, integration and dissonance) are described and analysed. The audience and means to target it are presented, with reference to the French analysis of sociostyles (B. Cathelat-France). Many examples are discussed.

5. Advertising company structure

Presentation of the main structures and jobs within an advertising company through the analysis of a movie (99 Francs-Director : Yann Kounen-France 2007).

6. Elaboration of an advertising

In small groups, the teachers create an advertising campaign inspired by all the rules and concepts they have learned during 2 days. Each subgroup takes, at random, one object and one description of a target audience. The group must create a campaign with the aim of selling the object to the target audience. They can use camera, video or microphone of their mobile phone or Smartphone, and computers, of course. They have about two hours to create all the characteristics of their advert. They have to design a poster and to upload it with the Instagram app to this social network. The account can be shared during future training and be used as a resource.

Possible follow-up and variations and transferability (tools for assessment)

This methodology can be applied to other thematic objects : websites, newspaper, policy communication, App, etc. Brainstorming about what participants can observe as advertising on their Mobile environment is also possible.



> 4

Training Scenario n° 7

How to combine Mobile learning with adults media literacy training

> Paul de Theux and Catherine Geeroms



Age of participants, size of group

The scenario is addressed to adult trainers/educators, from 20 to 65 years of age, working in schools, libraries, civil associations, youth associations, etc. who want become a "Media Coach" and embed media literacy into their professional activities. The number of participants may vary from a minimum of 5 to a maximum of 15 people. Participants should possess intermediate level of media competence and skills and also some digital competence. Because of the long-term training process of this training, participants need to be able to coordinate it with their employer and work time schedule.

Setting and duration

The context of this workshop is based on the European Media Coach schedule (European website > www.media-coach.eu) and adapted to the national/regional context of the participants. This workshop is a collaboration between media providers and media experts. The scenario is based on the delivery of a 6-month

workshop with a minimum of 8 full days of training sessions (general theory and exercises, technical, and theme-based training, 1-2 months to allow participants to elaborate their personal project and 1 day for presenting their project to a jury of professionals. To enhance the mobile dimension of the workshop, an online sharing platform should be created. The platform has to be chosen on the basis of the objectives of the project and the participants, and potential partners need to be trained to use this platform during the first workshop sessions.

Didactic/learning focus and purpose of activity

The main objective of the training is to teach trainers/educators to become "media coaches". "Media Coach" means being literate in media matters and competent to convey media literacy to others and teach them to have a critical mind when they use or create media. The purpose of the workshop is to produce a personal project focused on media literacy within the professional activity of the trainers/Educators, and adapted to their audience. Participants are free to use audio, script, visual and multimedia devices and languages but also to produce reports, radio reportage, video, website, social network, mobile apps, etc... The training also aims at sensitizing trainers/educators to the mobile environment within which the public lives and learns. At the same time, participants are trained to use an online sharing platform. The platform members are composed of all people involved in the project (participants, trainers and experts, partners, members of the jury, etc.).

The main design features of the workshop

This workshop should be conducted in partnership with different associations (training centres, print, radio or broadcast media, cultural associations, etc.).

Each **training day** pinpoints a topic relating to media literacy issues.

For example Media and Issues, Information journalistic / Audio-Visual,

Media - Culture - Leisure,

Media and Diversity,

Media and communication: the place of Mobile devices

Media Advertising.





Technical workshops will allow participants to conduct their own project. They need to be practical and efficient.

For example Audiovisual media: shooting, sound, storytelling, scenario, podcast, etc.

Information: to be informed and express itself in media

Create and edit on the Internet

Create and edit on Mobile devices

Additional half-days relate to news topics or special requests from the participants

For Example Rumours and conspiracy theory

Youth and media productions

Final evaluation is conducted by a jury of professionals in media and training. Participants have to present their personal project and to answer the questions of the jury. All projects are published on the online platform before the evaluation day. The online platform is presented to all participants during the first training day. Participants are invited to use and discover it with the help of the trainers and on their own. Thanks to this platform, they can be informed about the agenda, practical information and news, they can exchange on training content, participant projects – adding tips, information that might be useful to other participants.

Intended learning outcomes

Three major outcomes are focused on

- to become a media coach
- to realize a media literacy project
- to use mobile learning scenarios, mobile devices and be aware about mobile environment

Using an online platform is an opportunity to use mobility for learning but is also a challenge for the project if participants are not accustomed to dealing with mobile devices, social media and sharing data. More specifically, it is expected that participants develop a reflective **approach** to their own professional activities and think about the possibilities of using media and mobile devices within their future training. Participants should develop critical attitudes toward all media they encounter during the training and also be able to produce content on some of them.

Type and number of phones used incl. apps, mode of data transmission

Each participant uses his or her own device (laptop, notebook, tablet or Smartphone).

Additional media (computer software, projector, IWB ; etc.)

Computers and projector during the first session and the presentation to the jury. Cameras, microphones, headphones, during the preparation of the personal project. Participants work on their own computer to upload the content.

Procedures: description of practical realizations and lessons learnt

1. Training sessions (5 X 1 day)

Face-to-face training sessions are organized with all participants. Each session comprises face-to-face input from trainers or media actors, practical exercises (analysis and production) and potential visits to media news rooms (TV, radio or newspaper). Each participants has to attend all training sessions.

2. Technical workshops (2 X 1 day)

Technical workshops are conducted by media practitioners, and each participants can choose two of them. The day is dedicated to production (video, radio or multimedia, web, mobile, etc.) and should help participants to implement their own media project.

3. Additional half-day

Participants are free to attend an additional half-day thematic session which corresponds to the news topic or with specific questions from the group.



4. Online platform

Participants are initiated into mobile learning through the establishment and use of an online platform. This platform allows them to be connected to the project and other participants outside the training session and during the period of individual work. We suggest allowing people to share resources and practices, their personal project and to prepare the evaluation in this way. We advise choosing a platform which is useful, easy to handle, and familiar to the majority of participants. Prior knowledge of the platform will help participants follow the mobile learning process, and this will also avoid participants dropping out of the mobile-learning process because they don't feel at ease with the online platform. Depending on the objective, you can choose an online storage system (e.g. Dropbox) an online sharing system (e.g. Google docs), a social network (Facebook, spruz, ning, etc.) or an online platform that combine different tools (like Moodle, Claroline). It is also important that somebody is able to administer the community throughout the project.

5. Personal project

Each participant should carry out a personal project in the form of report, video or radio reportage, fiction, articles, website, app, etc. Each project is made available to all via the online platform.

6. Evaluation

Each participant is evaluated by a jury of media professionals. Each participant presents their personal project and answers the question of the jury. Each participant is also invited to evaluate the "media coach" process by means of a questionnaire located on the sharing platform.

Possible follow-up and variations and transferability (tools for assessment)

Each participant becomes a media coach if they achieve the evaluation criteria (interaction between media literacy objective and animation objectives, achievement of the objectives, strength and weakness of the project, critical point of view regarding the project, perspectives after the project, and use of mobile technologies).

A possible follow-up of the mobile learning of this workshop could be:

- Short-term: the online platform becomes a lasting resource for future participants of a Media Coach session.
- Long-term: the online platform becomes a tool of project and group management for future participants of Media Coach sessions.



> 5

Mobile learning in adult education : lessons learnt and recommendations

> Maria Ranieri and Isabella Bruni ¹

Introduction

This chapter aims at identifying some trends in the practice of mobile learning in adult education and at providing some recommendations for policy, practice and research. It is based on the work presented in the previous chapters, on discussions in team meetings and on experience gathered by partners. More specifically, the scenarios described in Chapter 4 were tested in a series of workshops, which took place in 2011–2012 in respective partner countries. These activities, which are described in the reports available on the project web site (<http://www.mymobile-project.eu>), as well as the considerations offered by partners in their scenario presentations, help us to identify some trends that have emerged from experience and to draw relevant suggestions for policy and practice.

As background for our synthesis, we adopt the socio-cultural ecological perspective introduced in Chapter 3 combined with Hart's approach to the social workplace learning continuum. However, prior to presenting our synthesis, it is worth recalling some basic concepts relating to adult education. Since the 1970s the expression 'adult education' refers to

> "the entire body of organized educational processes, whatever the content, level and method, whether formal or otherwise, whether they prolong or replace initial education in schools, colleges and universities as well as in apprenticeship, whereby persons regarded as adult by the society to which they belong develop their abilities, enrich their knowledge, improve their technical or professional qualifications or turn them in a new direction and bring about changes in their attitudes or behaviour in the twofold perspective of full personal development and participation in balanced and independent social, economic and cultural development" (UNESCO, 1976, p. 4).

This wide definition of adult education has since converged with the concept of lifelong education meaning that all educational processes are understood as being carried out within the context of lifelong learning or adult education (Martínez de Morentin de Goñi, 2006, p. 13). Another defining characteristic of adult education is its inclusive nature. The same UNESCO declaration (UNESCO, 1976) states that adult education:

> "should meet [...] the specific needs of development, of participation in community life and of individual self-fulfilment. [...] In defining the content of adult education activities priority should be given to the specific needs of the educationally most underprivileged groups" (p. 7).

During the 1990s, the concept of lifelong education was expanded through the addition of the specification "for all": lifelong education is for all.

Briefly, the concept of adult education includes:

- (a) the idea of education as a permanent process converging with lifelong education;
- (b) the emphasis on the social, economical and cultural development of the person;
- (c) the need for increasing inclusion and participation of disadvantaged groups through the education for all.

With this in mind, in the following sections we will attempt to identify strengths and weaknesses of our scenarios in practice in order to derive implications for practice and policy for mobile learning and adult education.

Scenarios in practice: Strengths and Weaknesses

Looking at Strengths

Mobile devices as cultural / learning resources. Viewing mobile devices as cultural/learning resources opens the doors to a vision that considers them not so much for their technical functionalities but for the role they may play in people's everyday life as strategic tools for identity formation, social interaction, the derivation of meaning, and entertainment (Pachler, Cook, Bachmair, 2010). People appropriate mobiles according to their personal needs of socialization and deriving meaning. It is the recognition of people's agency in this media appropriation process that allows us to qualify media as cultural resources. This recognition in turn is a starting point to transform a cultural resource into a learning tool, particularly with disadvantaged people who are often at the margins of formal educational settings and need to be more motivated than others. In this perspective, mobile devices can provide multiple learning opportunities such as: (1) supporting

¹ Even though this chapter has been jointly conceived, Isabella Bruni edited the Introduction and the section Scenarios in practice: Strengths and Weaknesses - Looking at Strengths, and Maria Ranieri the section Scenarios in practice: Strengths and Weaknesses - Looking at Weaknesses, and the section Implications and recommendations.

exploration and widening the learning context; (2) enhancing self-expression and self-representation; (3) enabling media production; (4) supporting social networking and connections. We experienced the benefits of mobiles for learning in more than one situation. The German scenario, for example, focuses on the learners acting as “experts in their everyday world”: through the use of digital cameras and geo-location services, participants were encouraged to explore and map the places where they live and their daily lives, choosing situations relevant to them. In the Italian scenario, the production of a professional presentation was made entirely with smartphones, which integrate multimedia functionalities and editing in a unique application.

Inclusion and Participation. A key factor for the inclusive potential of mobile technologies is that their high level of penetration appears to range wide across various socio-economic backgrounds. The penetration of mobile phones and smartphones is now reaching saturation in Europe (ITU, 2011) with high levels of spread also among migrant populations. On the one hand, this phenomenon could be explained as a result of the affordable cost of these tools; on the other hand, it is likely an effect of their high social desirability: the new frontier of consumption as a manifestation of status (Merchant, in press). However, what we want to emphasize is something that goes more in depth than possession, that is, the high degree of personalization of mobile devices and their level of penetration in everyday life: mobile devices, and mobile phones in particular, are highly individualized, and always available in physical proximity to the subject.

Such a rate of penetration as well as this highly individualized form of appropriation can make mobile technologies a factor for inclusion and participation, enabling access to social networks and cultural resources and supporting forms of self-organized personal learning.

Obviously, as personal styles of appropriation and diverse advantages of different devices enable different uses, it is rather common to encounter, in the same group, people with very divergent levels of mobile expertise. At the moment, it is likely that young people exploit the potential of mobile technologies more than adults. However, the varying levels of mobile expertise between young people and adults should not necessarily be seen as a problem, as this seems to encourage discussion and the exchange of experience and skills both among peers and generations. Such an approach, for example, was clear in the German workshop, which involved some elderly people: the diversity of technical skills was balanced out not only by the direct intervention of the media educator, but also through a spontaneous process of mutual help and support between young adults and older people.

Bridging the formal and informal. A further strength of using mobile devices is that it enables linkage of different learning contexts: when cell phones are used in formal learning situations, it becomes possible to capitalize on the skills acquired by individuals in their daily lives, and enhance them in new ways. The boundaries usually drawn between formal and informal contexts become discontinuous, making possible the exchange of knowledge and skills, with positive effects on motivation and involvement of individuals. In such a way, at the centre of the learning process there is no longer the rigidity of institutional structures, but the subjects and their actual experience, creating a more flexible and appealing user-generated context. The process of bridging formal and informal learning through mobile technologies is relevant especially in the case of school-based situations: the mobile media skills of young people can be included in the classroom and granted a new significance, so that they can be exploited. We consider as an example for this process the British scenario, where the creation of a mobile portfolio was directly related to the exploration of the vocational training setting and the reflection on personal learning styles.

However, we must recognise that the success of this bridging effort cannot be taken for granted. To propose that learners use their personal media within formal educational contexts may be of interest for the learners, but can also upset them and evoke forms of resistance, especially among those subjects who feel a strong disaffection towards formal contexts. Bridging the formal and informal means re-interpreting spontaneous forms of appropriation and media use in a more explicit and reflective way, and this effort requires high levels of involvement and attention.

Looking at Weaknesses

Technological divide. Despite mobile devices and the internet being so widespread, people maintain very different levels of access to technologies. Mobile phones come with many different levels of complexity, some are characterized by very basic functions whilst others support multimedia applications and internet navigation. Obviously, people who have the latest models of mobile phone can access more services and undertake more varied activities through their tools. On the basis of our experience we cannot state that there is a correlation between an individual’s socio-economic background and the type of mobile phone they own (see e.g., Bachmair, 2007), but in the workshops we carried out, the option of multimedia communication through mobile phones proved to be less common than we expected.

For the most part, people, especially disadvantaged adults, didn’t have the latest generation of mobile phone and were unfamiliar with the use of sophisticated apps: their communication being primarily based on the use of voice and text messaging (SMS). In the first Italian scenario, for example, learners appreciated the reminders of appointments and tasks sent by SMS to their personal phones, but they were not able to exploit the potential of mobile multimedia communication, because their technological equipment lacked the necessary camera and internet connection. In order to explore the possibilities of creating real learning environments based on communication through mobile phones, we should use smartphones and exploit their potential for internet connectivity. But at the moment, not everybody can afford such a solution.



Motivation and expectations. As is well known, motivation and expectations have a high impact on people's agency and self-esteem. The use of technologies in a learning and social process can play an important role in reshaping motivation and expectations with implications for people's self-perception of their capacities and skills. This should bring us to pay great attention to such dimensions and to the delicate mechanisms that they generate. From this perspective, the experiences gathered in the national workshops highlighted two very important aspects relating to motivation, attitudes and expectations towards the use of mobile technologies. Firstly, it seems that in the case of individuals with a low level of digital competence (particularly with disadvantaged adults) the use of new technologies is often accompanied by a high level of expectations. So, training programme promoters need to try to manage these expectations. But at the same time, they should try to modify attitudes that lean towards a naive technological determinism. Therefore, gradual media appropriation processes must be encouraged by developing socio-technical skills and monitoring cognitive overload.

Young adults tend to use new technologies with high levels of enthusiasm and a strong interest in exploration, but they seem to lack the ability to reflect on or assume a critical distance toward these technologies. Moreover, as mobiles are usually viewed as entertainment tools or as tools for interpersonal communication, resistance to their re-definition in the workplace can emerge. This is the case in the Belgian scenario, where mobile devices were presented as an easy tool to connect trainers in an online learning environment, which did not meet with participants' approval. One strategy to deal with this difficulty consists in explaining the benefits of the unfamiliar media practices suggested, thus leading young adults to a more flexible use of digital media.

Digital skills and competence. As shown by research on the digital divide (van Dijk, 2005), digital inequalities between people depend not only on having or not having access to ICT, but also on their ability to effectively use it. In this perspective, emphasis should be placed on improving the use of ITC and related skills rather than on increasing the quantity of technological equipment. The concept of "digital literacy or competence" emerges as fundamental: this competence "involves the confident and critical use of electronic media for work, leisure and communication. These competences are related to logical and critical thinking, to high-level information management skills, and to well-developed communication skills. At the most basic level, ICT skills comprise the use of multi-media technology to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in networks via the Internet".² According to this definition, digital competence not only includes simple procedural skills, but also encompasses high-level abilities in logical and critical thinking, information management, and communication.³

Studies on factors influencing digital skills levels demonstrate that socio-cultural variables have a strong impact on them (DiMaggio et al., 2004). If we consider the contextual, cultural, and knowledge resources available to individuals and groups, the digital divide would therefore be the consequence of pre-existing inequalities, defining the gap between users and non-users of ICT. Coherently with this framework, one of the issues that emerged during the workshops of the MyMobile project was the contrast between participants' expectations and their actual technological skills. Indeed, even though all believed in the great potential of digital technologies, it seems that current gaps in knowledge and skills make technologies a barrier rather than a driver for democratic access to communication and information.

Implications and recommendations

Implications for practice

The analysis of the scenarios and their practical implementation allows us to make some suggestions for practice and design. These suggestions may be grouped around some of the points made by Hart (2012, see Chapter 3) applied to the context of mobile learning.

- **Think 'learning spaces/places', not 'learning rooms'.** Mobile learning means, first of all, learning everywhere and this in turn requires conceptualising the learning environment as a 'learning space' rather than a 'learning room'. Whilst a 'learning room' is a finite and fixed place with a limited number of resources, a 'learning space' is an open context of learning where the learner generates his/her own learning paths. In other words, mobile learning is based on users generating their own contexts for learning. All these considerations have relevant practical consequences for design. Indeed, the focus should be put on learners rather than content by providing the learners with a scaffold and support in order to enable them to manage their 'learning space'. To a certain extent, we can say that designing mobile learning means – amongst other things – to design effective metacognitive tools for increasing the learner's agency in an open, rich, authentic context for learning.
- **Think 'activities' not 'courses'.** Considering that mobile devices are mainly viewed by users as informal and personal tools to be used in daily life, they could hardly be seen as a means to deliver formal courses. As Laurillard (2007) underlines, mobile technologies render digitally-facilitated site-specific learning activities possible, that is, they can teach about the world while you experience it in a completely contextual manner. This brings us to suggest that, when designing mobile learning, designers should think 'activities' rather than 'courses'. These activities can be conceived as triggering inputs for learning or as stimuli for re-definition and learner empowerment. On the one hand, they should play on learner agency and his/her being an expert user of media in everyday life. On the other hand, they should suggest unexpected practices of re-definition or re-signification to generate learners' transformation and change. Types of mobile learning activities suggested in the scenarios are indicated in the following tables with references to mobile everyday practices.

² See on the Internet: http://ec.europa.eu/education/policies/2010/doc/keyrec_en.pdf.

³ For further analysis see: Calvani, Fini, Ranieri & Picci (2012).

Mobile uses and mobile learning activities

Mobile uses

- Accessing web information and navigation
- Recording pictures and videos of friends and personal experiences
- Taking and sharing pictures of holidays, places, surroundings
- Documenting learning/working experiences
- Connecting with people (social mobile networking)
- Arranging meetings, navigation and micro-coordination

Mobile learning activities

- Information problem solving within the context (inquiry)
- Creating a self-presentation or a digital storytelling (identity formation)
- Creating and sharing maps and geo-tagged contents (exploration and widening learning context)
- Creating portfolio and multimedia resume (awareness and empowerment)
- Participating in mobile learning groups or communities (participation and engagement)
- Organising learning activities

› The table is partly adapted Merchant (in press).

- **Think 'continuous flow of activities' not just 'response to need'.** As we all know, learning is a continuing process. Some benefits of mobile phones such as, for example, 'portability' and 'ownership' seem to be particularly appropriate to support this idea of continuity in learning. As pointed out by Laurillard (2007), the ownership of devices, which characterizes mobiles, entails a higher degree of control of learning that facilitates continuity between contexts and continuity of learning. From this perspective, the design of mobile learning should respond to this expectation of continuity and activities should be planned as 'continuous flow' rather than 'discrete experiences'. This is particularly true for adult learners, as the emphasis in adult education is on the full and global development of the person.

Implications for research

The MyMobile project was not aimed at developing new theories or gathering empirical data on mobile learning in adult education. However, in order to transfer knowledge and develop scenarios, the partnership began reflecting not only on practice but also on research issues and questions in this field. As already stated in Chapter 3, research on mobile learning and adult education is very scant and there would be a number of topics that should be investigated. Although we did not reflect systematically on research gaps in the field, the analysis of our experiences brought us to identify at least three research areas that deserve more consideration.

Mobile learning and cultural practices in adults' everyday lives

Although the history of mobile learning goes back to the 1980s (Kukulska-Hulme et al., 2008), until now an emphasis on technical aspects has prevailed whilst pedagogical and cultural issues remain underexplored. Although recent approaches to mobile learning have shifted the focus from the mobility of the devices to the mobility of students and the context of learning (Sharples, 2005) in addition to concepts of agency, structure and cultural practices (Pachler, Bachmair, Cook, 2010), an emphasis on technologies as driver of change is still dominant (Selwyn, 2011). We believe that more attention should be paid to the interplay between mobile technologies, cultural practices and learning opportunities, especially in the field of adult education. Indeed, if mobile devices are understood as cultural and learning resources, we need to better understand how adults appropriate them, especially considering the new forms of nomadism characterizing our contemporary societies. While we have begun to gain insight into mobile media appropriation processes among young people (see for example Caron & Caronia, 2007), we know much less about adults' habits and practices – with some exceptions such as Licoppe & Zouinar (2009).

Research and development of Life Long Learning Apps (LLAs)

The market for apps is experiencing exponential growth, which runs parallel to the spread of smartphones and the consolidation of some operating systems such as Android and iOS. According to one recent survey (Nielsen, 2010), the most popular mobile apps are games, followed by maps and social networks applications, but the educational sector is also in constant expansion, so that all the main apps stores have a specific section for education and training. Educational apps are specifically designed for children and young people and they support learning on a variety of topics, such as mathematics, science, language and arts, with special attention also given to accessibility. However, to develop and implement apps for adults and older people, research must reflect and define instructional principles and methods that are appropriate to this specific target group. Learning on the move is a challenging activity which requires a learner able to self-manage his/her learning. Autonomy and metacognition are general requirements for effective learning but in the case of mobile



learning they are even more important. Therefore, research should pay attention to developing and providing a scaffolding to help people manage their cognitive load in ubiquitous learning environments. In this area, some suggestions may come from the Theory of Cognitive Load by Sweller (1988) and the Multimedia Learning Principles by Mayer (2001). In particular, according to Mayer, learners learn better when they receive different stimuli (e.g. words and pictures) in a coherent manner (multimedia) and close to each other (spatio-temporal proximity); when irrelevant words and figures are eliminated, given that working memory has a limited processing capacity (material coherence); when unnecessary different formats are not used (redundancy) and an informal, conversational style is used (personalization).

Mobile devices for community building: what is the impact?

There exist a growing number of projects based on the use of mobile devices, particularly mobile phones, to favour and support community building in remote locations lacking infrastructures for physical mobility. Although this is a relevant topic for its social implications, there is little research on the social impact of mobile learning, especially in the context of disadvantaged people. Evaluation of the effectiveness and the impact of an innovative learning activity is always complex. Scholars such as Huberman (1973), who dedicated most of his research activities to the evaluation of educational innovation, show how manifold variables, attributed to individual psychology, interpersonal and collective relationships, institutional and organizational aspects, local and national political decisions and so on, come into play. The levels involved are, therefore, multiple and it is not always easy to deal with this complex web of links and relations.

The matter becomes even more complex when dealing with mobile learning. Scholars who have dealt with this issue emphasize that research in this regard is still underway and requires further efforts (Traxler, 2007; Arrigo et al., 2008).

Implications for policy

Adult education is an ongoing process. Adult education relates to the social, economic and cultural development of the person. Adult education is education for all, especially for disadvantaged groups. Given these expectations and considering the barriers we have experienced through the implementation of our scenarios, what are the implications for policy and lifelong learning? We don't have enough data to derive strong final recommendations for policy on mobile learning and adult education. We just conclude this chapter by underlying three main points for further consideration and policy making:

1. **Research in the field of mobile learning and adult education.** Investments in research on mobile learning and adult education is limited. But, as indicated in the previous paragraph, there are several areas of interest that deserve consideration and this requires a strong engagement of public institutions in funding research activities and projects in this field.
2. **Provision of technologies and promotion of digital/media literacy.** As we have seen through the analysis of our experience, the technological divide and lack of literacy still impact negatively on learners' experience of learning and knowing. Although digital innovation has to do more with social practices than with technologies, the lack of material infrastructures and cognitive skills is a factor of exclusion that public institutions must counteract for the future.
3. **Developing mobile services for adult learners.** There is an increasing interest in the development in mobile services for the public sector. For example, the International Telecommunication Union (ITU) in collaboration with the Organisation for Economic Co-operation and Development (OECD) and the United Nations Department of Economic and Social Affairs (UNDESA) has recently published a study on the economic and social impact of the use of mobile technologies to foster m-government⁴ and transform public service delivery (OECD-ITU, 2011). The document states that:

› "M-Government is not intended to eliminate existing on-line and off-line modalities of service delivery, but it affords powerful and transformational capacity to the public sector not only by increasing access to existing services, but also by enabling the design and delivery of new services (e.g. through new levels of civic engagement in policy development and democratic decision-making)" (OECD-ITU, 2011, p. 12).

From this perspective we believe that new mobile services for distributing training should be designed and implemented to support lifelong learning and adult education for all. Research in this area and supportive policies would be crucial to the development of an equal and democratic society today.

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⁴ In this document M-Government is defined as : «the adoption of mobile technologies to support and enhance government performance and foster a more connected society» (OECD-ITU, 2011, p. 12).

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> Paul de Theux and Catherine Geeroms

Books and Reports

Literature database > http://bit.ly/m-learning_lit

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- United Nations Educational, Scientific and Cultural Organization (2012), Working Paper Series on Mobile Learning, available at > bit.ly/L3e4UU

Conferences

- IADIS International Conference Mobile Learning 2012 > www.mlearning-conf.org
- mLearn 2012 – 11th World Conference on Mobile and Contextual Learning > bit.ly/Lk6NQe

Websites

- MyMobile Project > www.mymobile-project.eu
- Medienundbildung.com > www.medienundbildung.com
- Media Coach Project > www.media-coach.eu
- London Mobile Learning Group > www.londonmobilelearning.net
- Educational Technology Lab > www.lte.unifi.it/mdswitch.html

SoMobNet > www.somobnet.eu

I Education Apps Review > www.iear.org

MOTILL Project > www.motill.eu

The Children's App Manifesto > childrensappmanifesto.net

ENSEMBLE Project > www.ensembleproject.org

MoULe Project > moule.pa.itd.cnr.it/index.php?lang=en

mLearnopedia > cc.mlearnopedia.com

Mit 80 Apps um die Welt > bit.ly/apps-for-android

Social bookmarks

> bit.ly/mobile-tag

> bit.ly/apps-tag

> bit.ly/iPad-tag

> bit.ly/iPhone-tag

Online tools

> www.facebook.com

> maps.google.com

> picasaweb.google.com

> www.ning.com

> www.spruz.com

> www.dropbox.com

> www.claroline.net

> www.techsmith.de/download/camtasiatrial.asp

> prezi.com

Apps

> www.mm.be, by Fingerapps, for free

> instagr.am, 2012 INSTAGRAM, INC., for free

> www.storyrobe.com, Story by Robe Inc. LLC, € 0.79

> www.sonicpics.com by Humble Daisy, Inc., € 2.39

All the above resources are available on **MyMobile Group** in Diigo:



> 7

Biography

Ben Bachmair was until his retirement in 2008 Professor of pedagogy, media education and media enhanced learning at the University of Kassel, Germany. Currently he is visiting professor at the Institute of Education, University of London. He is a founding member of the London Mobile Learning Group. His specialisms include: mass communication and education, media and learning, mobile learning, media socialization and media reception, media within the cultural development, to which he has published widely.



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