

# LABOUR MARKET INTOUCH

## MOBILE GAME-BASED LEARNING FOR NON-ROUTINE SKILLS TRAINING

[www.intouch-project.eu](http://www.intouch-project.eu)

### ABSTRACT

The need to compete in a job market renewed by the world-leading financial crisis, led companies to search both a different expertise and a better way of continuous training for workers. The InTouch project is aimed to define an innovative approach in order to improve workers' non-routine key competences in a flexible and technologically advanced way, as well as in line with job market new needs. In order to meet workers' and SMEs' needs, InTouch partners choose the most flexible learning media, namely mobile devices, and an engaging learning solution, serious games. The games describe 30 situational learning cases related to the ten non-routine skills found through the project, and use different types of interactions, according to the subject. To extend their knowledge, users can exchange their personal opinions and experiences on the eHow Community, a portal built to share knowledge in order to contribute increasing SMEs' capacity and competitiveness by upgrading the skills of the working population. This article describes the design methodology, the technological choices made to achieve this goal and the perspectives of the eHow Community.

### KEY WORDS

m-learning, serious games, lifelong learning, non-routine skills, collaborative learning

### 1. Introduction

In November 2010 a consortium of European partners started working on "Labour Market InTouch: new non-routine skills via mobile game-based learning" project, funded by Leonardo da Vinci Multilateral Projects for Development of Innovation Program.

In 2020 almost three quarters of jobs will be in services [1], especially in business services. In the service sector, there is a clear tendency towards the broadening of the required skills portfolio linked to "non-routine" tasks.

Following the "New Skills for New Jobs" strategy ([www.intouch-project.eu](http://www.intouch-project.eu)), the partners are developing an innovative m-learning kit for working adults focused on crucial non-routine skills, in order to improve interaction and collaboration and to provide SME employees with the key skills needed to answer to labour

market requests and to deal with the changes taking place in the economy.

### 2. The 10 non-routine skills

Field research has been conducted seeking to define the top 10 crucial transversal competences for non-routine tasks. Each InTouch project partner interviewed managers or/and employers of business service SMEs in order to detect which are the more requested non-routine skills in labour market. After the analysis of gathered data, the results highlight the ten most considered non-routine skills:

- **Communication:** ability to express ideas and reflections clearly, make contact easily & quickly with others and maintain relationships to provide feedback.
- **Planning:** ability to define priorities, anticipate trends, and recognise key stages that one should pass and methods that should be applied.
- **Conflict management:** fairness and objectiveness in conflict situations, ability to act as a mediator in conflict situations and resolve conflict.
- **Openness to change:** ability to take challenges, initiate and implement changes, be able to adapt your behaviour to the changing environment, and take responsibility for change.
- **Decision making:** ability to take responsibility for decisions taken, their timeframe, consequences and risks.
- **Teamwork:** ability to manage processes and people in teams, coordinate general & individual goals and integrate differing opinions.
- **Flexibility:** using a flexible (but not conformist) style when interacting with other people.
- **Strategic thinking:** ability to produce a clear and consistent picture of the long-term future.
- **Initiative:** self-confidence in identifying new opportunities, seeking out and implementing new activities.
- **Learning and improvement:** ability to apply knowledge in practice, improve professional knowledge and personal behaviours, to strive to learn more and to learn from own experience.

### 3. An integrated learning context

The InTouch project provides the learner an integrated learning context:

- 30 games for mobile phones to teach adult workers how promptly answer to non routine situations at work;
- an e-how community online for sharing ideas on how to use skills for personal and organisational benefits among SME's employees.

#### 3.1 The innovative m-learning kit

The project aims to develop an ad hoc mobile learning kit for adult learners based on a set of games designed to challenge players to confront them with non-routine tasks involving skills like planning, teamwork, communication, conflict management and others.

All games are designed to be easy to use on a large variety of mobile phones with different operating systems. Devices interface and context of use has been taken in account too, that's why the games are designed in order to be short, simple and to have a really straightforward interface with very simple functionalities.

All the games have the same characters and settings in order to keep the narrative and graphic consistent. The games interface and characters are characterised from comic style.



Figure 1. InTouch games characters

The games, developed to achieve different learning goals and concentrate on different skills, foresee different kinds of interaction:

- **Branching stories:** in this kind of game, the user reads the story and has to take different decisions. The story develops in different ways according to the choices made by users and the final feedback is the result of the combination of the choices[2].



Figure 2. Branching story interface

- **Interactive maps:** at the beginning of the game a typical trouble situation is described in a company. To solve the problem the user can choose three members of the company to talk to, but he/she needs to pick the right people to get the useful information. Once the user has read the three clues they can take a decision choosing one of the three available alternatives.



Figure 3. Interactive map interface

- **Multiple choice:** at the beginning of the game there is a description of a scenario and the aim of the game. The user has to help the main character with three different decisions and has limited time per question. The difficulty increases: in the first decision point only three out of the five listed options are correct, in the second one only two and in the third one only one. The final score and the feedback depend on how many correct answers the user chooses.



Figure 4. Multiple choice interface

- **Quizzes:**the game begins presenting a brief introduction of the maintopic, than the player has to try to answer correctlythe related questions. The player gets immediate feedback on the answer and a summary at the end of game. The key objective of gameplay is to gain points for fast and correct answers.

### 3.2 The eHow Community

Within the InTouch learning context, the aim of the eHow is to promote cooperative learning by connecting European employees who want to share, discuss and learn how to better accomplish everyday non-routine tasks, through an online community. The eHow Community will provide visitors with access to partners knowledge and project research and to other resources referred to non-routine skills through downloads and links to other parties product. The eHow will also contain contributions from people who haveexperience of how to complete a variety of non-routine tasks and are willing to share their knowledge. This will turn the eHowinto a library of best practices, an online community of individuals, SME employers, employees, managers and providers which are willing to share their knowledge.

### 4. Advantages of using an integrated learning environment

The combination of m-learning with web 2.0 e-How for improving collaboration, communication and effectiveness of work is seen as very useful for SMEs.

This integrated learning environment presentsseveral advantages.

The games are simple to use: no training or any special equipment is needed,as it can be played on mobile phones. Users are able to use the games anywhere and at any time, at work or at home or even on the way to/from work/home, at a convenient time. The games present examples that are relevant to the learner in enjoyable and an interesting way. Furthermore they have an inbuilt competitive aspect, which is an incentive for users to compete and create a challenge.

E-Hows are places where people and information can be accessed anytime. This kind of community is based on tools that combine creation of content easily with web delivery and collaboration. Contents are delivered in small pieces over time as part of a large process, which corresponds to the needs of SMEs staff for faster learning in the context of their work. Moreover the Internet not only makes a vast amount of information and resources readily available, but also brings people together in a shared environment to exchange ideas, learn and engage in collaborative decision making.

Through different expertise and knowledge of the participants, their innovative ideas can contribute to more effective problem solving and decision-making. In this way learning is real, because it's based on actual, not theoretical, models specific to the company and its human resources.

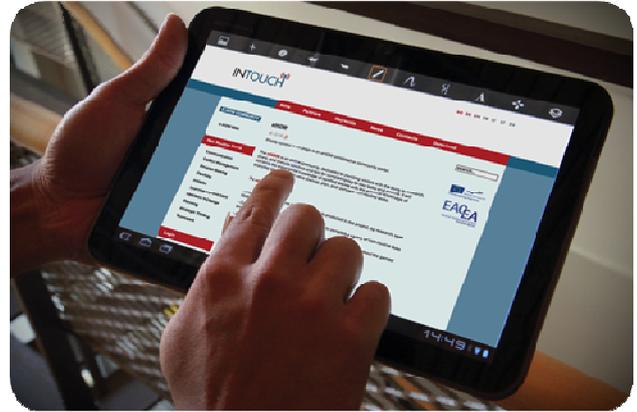


Figure5. An user visiting the eHow Community on a tablet

### 5. Conclusion

The InTouch project aims to define an innovative approach to the new generations of adult learners in order to improve their non-routine skills in a flexible and technologically advanced way as well as in line with the job market's new needs. To satisfy the need for flexibility, InTouch partners decided to adopt mobile devices and to develop a kit of 30 serious games.

The evolution of mobile devices, in terms of performance, improvement of display's resolution and dimensions, and faster internet connections, makesit possible to deliver educational contents having high multimedia and interactive features. Plus, it offers the users more chances to communicate, to confront and to be involved in the knowledge construction through the eHow Community, a flexible and open space for cooperative learning. The merging of mobile game learning and share of knowledge can be a further step towards a more flexible and mobile training for adult learners.

### References

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