Declic'In

Meeting n°1
Le Puy-en-Velay

20-21/11/2012

<u>Participants</u>:
CEPS: Oscar Martínez, Paco Gonzalez (ES)
Droit et Devoir Asbl: Samawi Bouchaïb & Anna-maria Toscano (BE)
Nieuwland Automatisering BV: Kars Kamp & Betty Meijer-Van Lith (NL)
BBAG: Klaus Schmidt & Annegret Kofke (DE)
TimeLab: Evi Swinnen, Isabelle Allaert & Jan Calliauw (BE)
FormaLab, Greta du Velay: Jérôme Combaz, Mathieu Gauzins & Pierre Carrolaggi (FR)
Foldarap: Emmanuel Gilloz (FR)

20/11/2012 (27 boulevard Bertrand)

1) Presentation of partners

2) Project presentation (after the project application) based on a conceptual map (cf. extract below).
Main steps/objectives:
• Building a 3D printer (young adults on a vocational integration process)
• Use it in real context (print "useful" objects)
• Take this as an opportunity to develop links with companies (local events, visits, presentations)
• Make links with jobs and employment
• Work on motivation of learners

The integration of these steps and the tracing of the process allows the partnership to draw a model "Motivating young learners to choose a career in the industry sector".
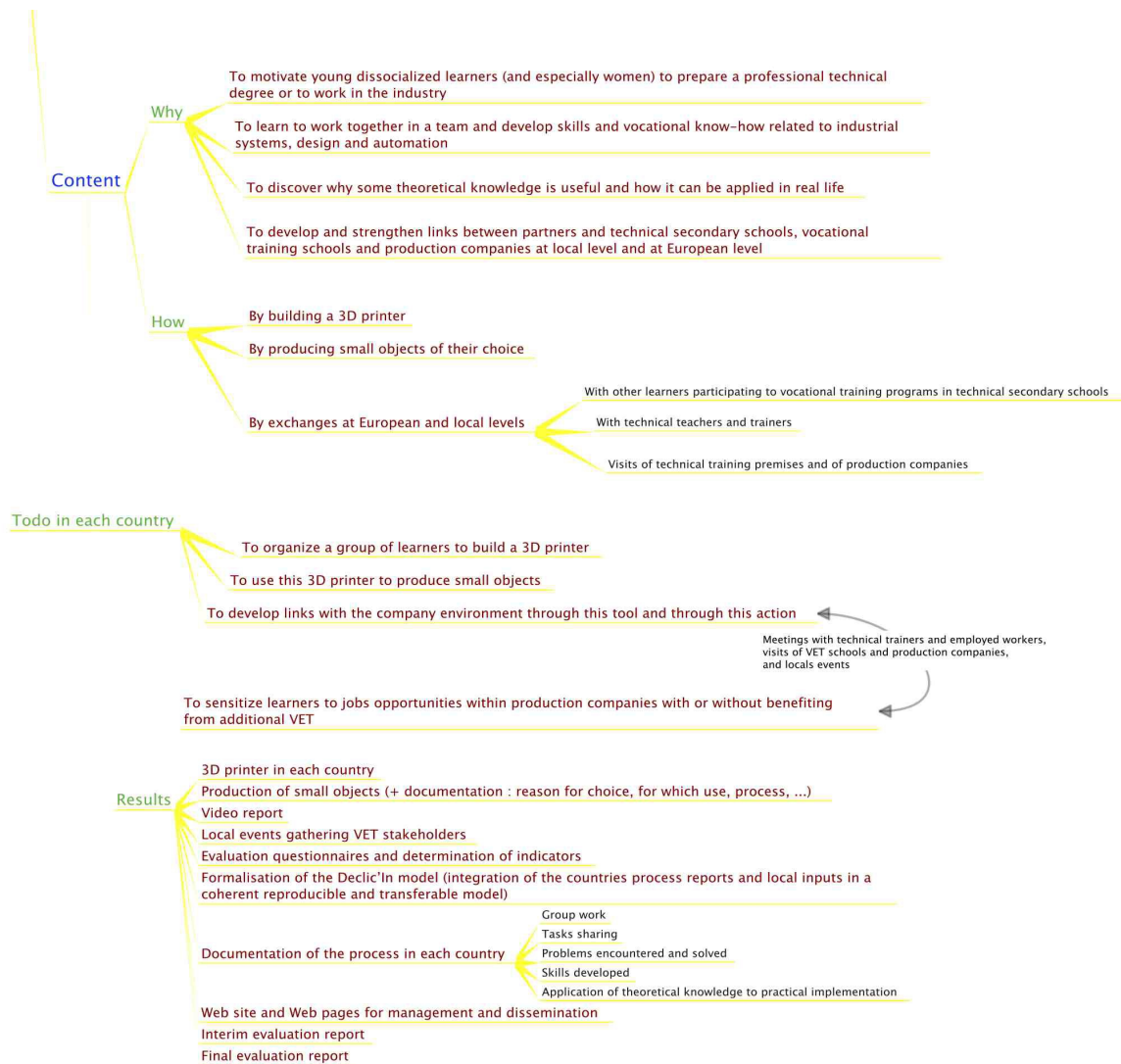The documentation of activities is important.
The steps have to be registered.
The data gathered will have to be formatted.

3) SWOT open discussion: our organisations and the Declic'In project
Open discussion between partners to analyse the conditions for implementing Declic'In within their context. Main elements have been described on a SWOT format. They are summarised below.

Strengths	Weaknesses
- experience with DIY 3D printing (FL) - experience with Y (DE)	- transfer 3D printing machines --> tool for education (NL) - no technical experience (DE)
Opportunities	Threats
- easy access to VET school (FR) - integrate D'C in computing training (BE) - a new industrial opportunity (ES) - new tool for learners to detect barriers & competencies, to work with group (BE) - to co-design learning process with YL (ES)	- difficulty to find the right companies - risk to have the YL outside - managing the relations with the formal VET system (ES)

4) Graphical summary of the project

Content

Why
- To motivate young dissocialized learners (and especially women) to prepare a professional technical degree or to work in the industry
- To learn to work together in a team and develop skills and vocational know–how related to industrial systems, design and automation
- To discover why some theoretical knowledge is useful and how it can be applied in real life
- To develop and strengthen links between partners and technical secondary schools, vocational training schools and production companies at local level and at European level

How
- By building a 3D printer
- By producing small objects of their choice
- By exchanges at European and local levels
  - With other learners participating to vocational training programs in technical secondary schools
  - With technical teachers and trainers
  - Visits of technical training premises and of production companies

Todo in each country
- To organize a group of learners to build a 3D printer
- To use this 3D printer to produce small objects
- To develop links with the company environment through this tool and through this action
  - Meetings with technical trainers and employed workers, visits of VET schools and production companies, and locals events
- To sensitize learners to jobs opportunities within production companies with or without benefiting from additional VET

Results
- 3D printer in each country
- Production of small objects (+ documentation : reason for choice, for which use, process, ...)
- Video report
- Local events gathering VET stakeholders
- Evaluation questionnaires and determination of indicators
- Formalisation of the Declic'In model (integration of the countries process reports and local inputs in a coherent reproducible and transferable model)
- Documentation of the process in each country
  - Group work
  - Tasks sharing
  - Problems encountered and solved
  - Skills developed
  - Application of theoretical knowledge to practical implementation
- Web site and Web pages for management and dissemination
- Interim evaluation report
- Final evaluation report

5) Learners who will participate to the workshops

BE: >18 (avr. 35). Unemployed, low/no qualified, M/F, Mons area.
BEFL: focus on girls, open.
ES: 16-24, 10 girls, 4/5 boys, intercultural.
DE: >18, Brandenburg area.
NL: 18-27
FR: 18-24, disabled, M/F.

Declic'In will make sure that all learners can participate. Partners will organise communication and recruitment to include female participants.

6) Communication strategies
Communication has several targets:
- the learners themselves (one of the main objective of the project, to attract them to vocational careers in the industry, including qualifying training paths)
- trainers and training institutions (to explain the use of 3D printers, how to make links with the industrial sectors, how to develop related activities – they are the main dissemination target of the project).
- non formal learning organisations to show links that can be developed with the formal vocational training environment and to organise activities based on 3D printing
- companies to facilitate the employment (including on alternate training schemes) of learners who would have

experienced 3D printing.

At local/regional level in direction of companies
Declic'In has to show that it can bring benefits to companies, that learners have gained experience and know how in the digital commands of machines. Declic'In will list the transferable skills that are developed in 3D workshops. Channels are existing networks, personal contacts, companies we are used to work with, local governments, intermediary organisations in charge of employment, the use of practice periods in companies. Printed objects can be used to attract companies and to create interest.

7) Dissemination
Project has to exist as a EU level (communication is done in English) and local/national level (communication is done in country language). The common internet dissemination will be done through a pad (http://springpad.com/collab-accept.action?c=6q8btgof3sdkc8). All project resources and results will be there. Each partner have free access and full collaboration capacities.
Each partner is responsible for communicating in its own language through own web sites (links have to be exchanged).

Process
Results
- model
- documentation
- 3D printer
- tips to convince companies, argumentation
- equal access method
- motivation method

Use of videos, photos and pdf documents.

8) Evaluation
Objectives of the evaluation are:
- Prove objectives are reached == activities planned are done.
- Show that our model is interesting
- EU added value (what we do together is better that what we would have done alone)
- Questionnaires and/or interviews with learners at the beginning and at the end

Criteria
- Number of learners
- M/F ratio
- Gender (qualitative)
- Qualification
- Duration
- Number of drop (abandon) and reasons
- Number of companies approached
- Positive ending
- Sustainability
- Number of staff and qualification
- Partnership (diversity, accuracy, participation...)
- Finances (overall cost)
- Empowerment
- Documentation
- Transferability
- Impact on organisation

9) Workshop
Part of the afternoon has been devoted to a practical workshop. Trainers have been put in the situation of the learners in this project where they will have to imagine and print useful objects. A second objective was to discover the town of le Puy-en-Velay. The instructions have been given as follows: "*Make a tour of the city and think about an object that can be useful or related to the town and that can be printable with a 3d printer. This object will aim to improve the urban furniture, giving more value and must be in the direction of inhabitants or tourists. Take some pictures, draw your object*

and make a short feasibility study answering the following questions:
- *The name of the object:*
- *Aim of the object:*
- *Evaluation of needs:*
- *Material needed:*
- *Final material (prototype will be in plastic):*
- *Duration of the process:*
- *For who?*
- *Quantity:*
- *Distribution:"*

Grids have been given to draw the object.

21/11/2012 (FormaLab, avenue du Docteur Durand)

This day was centred on the 3D concept. It took place in the FormaLab. Emmanuel Gilloz, inventor of a folding 3D printer, the FoldaRap, has been invited to present the concept of 3D printing (cf. Link to his presentation). He has presented his own experience and has answered questions. Greta has presented work done with the digital engraving machine

Printers links
MAKE's Ultimate Guide to 3D Printing: http://blog.makezine.com/2012/11/07/makes-ultimate-guide-to-3d-printing/
List of 3D printers: http://edutechwiki.unige.ch/en/3D_printing#List_of_3D_printers
RepRap family overview: http://www.robovergne.com/fr/reprap/la-petite-famille-reprap/
RepRap complete family tree (by Emmanuel Gilloz): http://reprap.org/wiki/RepRap_Family_Tree
Printing workflow: http://www.digitalfanatics.org/2011/09/3d-printing-work-flow/

FoldaRap links
http://reprap.org/wiki/FoldaRap
http://fr.ulule.com/foldarap/

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Specific responsibilities of each partner

a) Motivation of learners will be coordinated by Droit et Devoir
The question to solve is how best can we motivate learners, on which factors can we act in order to orient them towards the industry. But also, as part of the evaluation: how can we prove that the Declic'In process is motivating for learners.

b) Equal opportunities will be coordinated by the Spanish team
- equal access in the training course
- equal participation in further vocational training
- job opportunities
- The composition of the Declic'In group will be analysed, how does it work?
- Relations with the local environment
- communication (with companies, trainers, target learners)

c) Development of communication strategies with companies (will be led by Netherlands)
- benefits for companies
- selection of companies
- channels to communicate with companies
- benefiting from practice periods within companies
- use of 3D printed objects to "attract" them, to gain interest

d) Dissemination (France). *cf. previous page*

e) Evaluation (TimeLab). *cf. previous page*

Next meeting date is set on 3-4 april in Mons (Belgium).