

E-learning for Plastic Converters

LLP-LdV-TOI-2008-076

<http://www.adam-europe.eu/adam/project/view.htm?prj=6143>

Projektinformationen

Titel: E-learning for Plastic Converters

Projektnummer: LLP-LdV-TOI-2008-076

Jahr: 2008

Projekttyp: Innovationstransfer

Status: bewilligt

Land: BE-Belgien

Marketing Text: Main aims of this project

- 1) Define a generic competence framework for injection moulding and extrusion companies in Europe based on amongst others the European Qualification Framework (EQF).
- 2) Transfer the existing innovative learning material for plastic processing labourers of Vlaams Kunststoffcentrum (VKC) to other competence levels and to a European scale.
- 3) Disseminate the (intermediate)results of this project to plastic processing companies and education and training centres and prepare the exploitation activities of the partners.

Zusammenfassung: Reason for the project

Hundred thousands of unschooled or low educated people are recruited to work or are employed in plastic processing companies in Europe. The majority of these people are not interested in reading and studying, especially in long class-room training, needless theoretical or common explanations and manuals. They need direct and practical useful learning material.

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Beschreibung: A. Rationale of and background to the project (need analysis):

Today the European plastics processing industry employs more than 1,5 million people over more than 37.000 companies. Hundred thousands of unschooled or low educated people are recruited to work in these companies without education or background in plastics. The majority of these people are not interested in reading and studying, especially in long class-room training, needless theoretical or common explanations and manuals. They need direct and practical useful learning material. Employees on labourer level in plastic processing companies all over Europe are low educated.

At the moment in Europe, more specific in Belgium, Germany, Spain, France and Austria, all the learning initiatives for labourers in the plastic processing industry are mainly traditional theoretical class-room or general practical (on machine) training and education sessions. In none of these countries a plastic education specifically for labourers is successfully organised up till now. There is a strong need for vocational training and education initiatives adapted to the profile and learning possibilities of a labourer in the plastic processing industry.

The plastic processing industry is a relatively young industry of mainly SMEs, based on the knowledge and skills that are acquired only the last 30 – 40 years. The sector has always been perceived to have a relatively low technological value. However the increasing interest in plastic products and components, and different innovations in the field of equipment and tooling, products and applications are more and more

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demanding for the companies and their staff. Labourers, such as production workers, machine operators and line responsables, need to be trained to bring their knowledge and skill on a (necessary) minimum level.

Market surveys and studies executed and published since 2000 confirm this need and describe the acknowledgement of the sector of the need for more and better vocational training and education for their staff, but also the statement from the plastic processing companies that the staff is not following or participating not enough training courses.

Interesting reference documents (see separate documents in annex to this application form):

- French government and Nodal Consulting, extracts from study: 'Compétitivité de la plasturgie française dans l'union européenne', 2007 (annex 10);
- http://www.industrie.gouv.fr/ressources/publications/dossiers_sect/pdf/plasturgie05.pdf;
- Rapra Technology Ltd., Faraday Plastics, WMG; 'Benchmarking and Technology Survey of the UK Plastics Industry – 2001'; Oktober 2001 (annex 8).

Between 2005 and 2007 in Flanders (Belgium), the Flemish partnership of the ESF-project "Kunststofoperator" (05/EPD3/6.0/014) worked out a qualification framework for production workers and machine operators for plastic processing industry in general and VKC has developed two (Dutch) e-learning modules for production workers, one for injection moulding and one for extrusion companies. Together both processing techniques represent approximately 80 % of the total European plastic processing industry. The innovative learning material can be distributed electronically, is based 100% on high-quality images, video material and animations, and contains practical learning material that can be applied directly by the trainee in his working situation.

B. Concrete aims and objectives of the project:

The aim of this project is to:

- define a generic competence framework for injection moulding and extrusion companies in Europe based on the European Qualification Framework, and
- complete the existing e-learning modules with test and exercise material,
- to deepen the content of the existing modules to other competence levels, as there are next in line the machine operator and the production line responsible, and
- broaden the learning material to a European scale. (see scheme below)

The situation described under A will be addressed by these results:

- the e-learning modules will take into account the specific profile and learning situation of labourers in the plastic processing industry:
 - * easy accessible (via internet or CD-ROM) and to organise (no need for class-room training);
 - * possibility for trainee to determine its own rhythm and speed in the learning process;
 - * short learning modules and frequent test and exercise moments (target users typically do not have the patience to remain attentive in long training sessions);
 - * learning content handles practical and directly usable topics because of high-quality interactive illustrations, video material and animations;
 - * adapted learning material for each competence level and processing technique;

The links with the priorities of the call are:

- the improvement of the transparency and recognition of qualifications and competences, through the definition of sectoral qualification systems incorporating shared European instruments such as EQF;
- increasing the competence level of risk groups on the labour market: school drop-outs and low educated labourers;
- implementation of innovative (ICT-based) e-learning content based on innovative animations for self-tuition training and education of labourers in the plastic

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processing industry.

C. Pedagogical material

a) state of the art and limitations of existing pedagogical materials

In Europe in general there is hardly any organized education on plastic processing for labourers or low-educated people without background in plastics.

If vocational training and education is organized for labourers from plastic processing companies, these are typically theoretical class-room lessons or general practical training and exercises. In general these are :

- long sessions: several hours up to a full day or even more;
- topics/scenarios addressing several plastic processing topics and competence levels simultaneously: no difference between the different possible competence levels of a labourer and the different plastic processing techniques;
- not focussing on practical and directly useful knowledge and skills.

The existing e-learning modules of VKC describe the basic terms and practices of the two most important processing techniques: injection moulding and extrusion. At the moment only Dutch versions are available for production workers (= only one competence level!). The modules are taking into account the learning profile and limitations of the main target group, labourers of plastic processing companies: (see also B. aims and objectives of the project)

- trainees have easy access to the learning material (electronic distribution is possible through CD-ROM or internet),
- trainees may determine their own rhythm and speed in the learning process,
- short learning modules with frequent test or exercise blocks,
- only practical and directly applicable subject materials due to the interactive and clear multimedia components (i.e. illustrations, videos and animations),
- focussing on the knowledge and skills for one processing technique and competence level at the time.

These e-learning modules are unique in the plastic processing sector in Europe. The consortium partners have no information of similar learning material. Even suppliers of extrusion and injection-moulding equipment have no such learning material.

b) methodological/didactic approaches on which the products will be based

First, the consortium partners will define a generic competence framework for production workers, machine operators and line responsables for injection moulding as well as extrusion. The partnership will follow the publication of the European Qualification Framework (EQF) for this and take into account country specific competence descriptions and objectives as much as possible.

In a second phase, based on the competence framework, the existing learning material will be completed with test and exercise material and transferred to other competence levels and to a European scale. The learning materials will be derived from real-life working situations of a labourer, starting at his first contact with the work floor. Step by step the trainee will be taught the different steps of the plastic processing technique and how to react in specific work floor situations. Partners will use the STAR problem-solving method to adjust and implement the learning material (i.e. describe 1-the Situation, 2-the Tasks (different alternatives), 3-the Actions (cause-result), and 4-the Results (impact on the users)).

c) adopted measures for testing the materials on target users

At the beginning of the project each partner will setup a validation team of labourers and other staff members with different competence levels, from at least 3 plastic processing companies and interview the validation team members in order to define the detailed user requirements. The same validation teams will be consulted to test and evaluate the final materials.

Target group(s) to be addressed in short- and long-term and the anticipated impact

- Short-term (directly after the end of the project)

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- * Labourers of the members of the validation team and in plastic processing companies in the partner countries (increase the qualification of the labourers, increase the number of trained labourers)
- * Students and trainees in schools and training centres in the partner countries (increase the qualification of the graduates)
- * Other staff members of the validation team and in plastic processing companies, especially those without technical training or education in plastics (for example: packaging department, purchasing department, etc.) of plastic processing companies in a partner country (increase the qualification of the staff members)

- Long-term (starting 12 to 24 months after the end of the project)

- * Labourers and other staff members of plastic processing companies in other European countries (increase the qualification of the labourers and staff members, increase the number of trained labourers)
- * Labourers and other staff members in companies, that are not perceived as a plastic processing company by the outer world but that are using and handling plastic half-products or components, in the partner countries (increase the qualification of the labourers and staff members, increase the number of trained labourers)
- * Students and trainees in schools, competence centres or training institutes in other EU member states (increase the qualification of the graduates)

Indicators used to measure progress of the work and extent to which it will deliver the expected outcomes

For each work package, clear deliverables and a clear timing are defined. The progress of the work will be monitored by the project coordinator, which is responsible for meeting the timing and quality requirements. The steering group will supervise this project coordinator. The progress and quality of the work of the different partners will also be monitored during regular meetings of the consortium.

However two specific indicators will be used in this project to measure the progress of the work and the extent to which the expected outcomes are delivered:

- the number of competence levels for which e-learning modules are implemented for injection moulding as well as extrusion (goal = 3) is a measure for the progress of the project;
- the evaluation results of the validation teams will be a measure of the extent to which the project will deliver the expected outcomes.

Contribution to enhance the diversity of languages in the different activities

The generation of the learning material will be done by the content team (the 3 key partners in this project). The work will be divided over the 3 partners and each partner will deliver content in his own language. The different learning modules, delivered in 3 European languages (Dutch, German and Spanish) will be translated to English to obtain a test version of the learning modules. The different consortium partners will translate the tested version of the e-learning modules their own language (Dutch, German, Spanish and French) allowing the members of the validation teams to test and evaluate the e-learning modules.

Themen: *** IKT

- ** Unternehmen, KMU
- ** Erstausbildung
- * Lebenslanges Lernen
- * Fernlehre
- * Berufsorientierung und -beratung

Sektoren: * Verarbeitendes Gewerbe/Herstellung von Waren

- * Erbringung von Freiberuflichen, Wissenschaftlichen und Technischen Dienstleistungen
- * Erziehung und Unterricht

Projektinformationen

Produkt Typen: Homepage
Verfahren zur Analyse und Prognose des Berufsbildungsbedarfes
Lehrmaterial
Fernlehre
Unterlagen für offenen Unterricht

Produktinformation: E--learning modules, based on existing innovative learning material of Vlaams
Kunststofcentrum, for 3 function levels of labourers in injection moulding.

Projektwebseite: www.Plastlcourse.com

Vertragnehmer

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Partner

Partner 1

Name: Kunststoff-Institut für die mittelständische Wirtschaft NRW GmbH (K.I.M.W.)
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Organisationstyp: andere
Homepage: www.kunststoff-institut.de

Partner 2

Name: Clusterland Oberösterreich GmbH, Kunststoff-Cluster
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Partner 3

Name: Fundacio Privada Ascamm
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Land:
Organisationstyp: andere
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Partner 4

Name: Pôle Européen de Plasturgie
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Land:
Organisationstyp: andere
Homepage: www.poleplasturge.com

Project Tags

The project belongs to the following group(s):

EQF (<http://www.adam-europe.eu/adam/thematicgroup/EQF>)