
A European inventory on validation of non-formal and informal learning:

Examples of Good Practice - Cockerill Sambre (Belgium)

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1.0 EXAMPLES OF GOOD PRACTICE - COCKERILL SAMBRE (BELGIUM)

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1.1 Introduction

Cockerill Sambre is a Wallonia-based steel making business, which, since 2002, has been part of the Arcelor Group, the world's biggest steel maker.

Group-wide restructuring means that Cockerill's blast-furnace activities will end in 2009 and the workforce will be cut by 25%. As part of the restructuring plan, the company's training department teamed up with researchers from the University of Liège (CRIFA) to develop a methodology for transferring the knowledge and skills of workers leaving on early retirement to other workers within the firm. The project involved:

- identification of skills profiles and key individuals to act as "trainers"
- development of training techniques and tools
- validation of these tools and desired outcomes within the firm (training centre and Human Resources department)
- implementation of training plan

The project was funded entirely by Cockerill Sambre. There was no centralised budget; instead each sector was allowed to set its own budget for the exercise.

The project partnership included CRIFA, University of Liege: Centre de Recherche sur l'instrumentation, la formation et l'apprentissage.

1.2 Project development

The project developed as part of a bottom up process. When Cockerill Sambre was forced to encourage early retirement to a percentage of their work force there were complaints from the work floor that a considerable amount of knowledge was being lost, and there were fears for the impact of this on the effectiveness and safety of production processes. The company's response to this was to attempt to transfer the knowledge of those taking early retirement to newer members of the work force through a validation and training procedure. Cockerill Sambre worked with CRIFA on the design of the validation and training process, whilst encouraging their staff to participate actively in the design of the tools and materials to be used, and in the training process itself. There were several negotiations with staff to ensure that they were happy with their involvement in the validation and training activities, and the resulting materials. These negotiations were successfully concluded so there was not a need for union involvement.

1.3 Policy background

In Belgium, there is still a tendency to give greater financial support to class room based learning because it is easier to quantify and understand than work based learning. This was felt to be a missed opportunity as real learning often happens ‘on the job’.

1.4 Activities

The programme developed by Cockerill Sambre involves the following activities:

Developing competence profiles

Through working with employees, CRIFA has identified competency profiles for four different types of post:

- Foundry workers
- Network Managers (staff who maintain electricity, water and other systems)
- Agglomeration process workers
- Workers in the coke plant

For each different sector, CRIFA worked with an identified ‘expert worker’ (an experienced individual who was about to retire) to identify:

- The main tasks involved in delivering their work
- The sub-tasks of each main task
- The problems which could potentially arise in association with each sub-task
- The order in which the tasks (and any problem resolution) should be carried out
- How these tasks should be taught to others (by explanation, demonstration, models, videos, documentation, allowing staff to ‘have a go’ before being corrected if necessary)
- This information was stored in Excel worksheets so it could be easily updated

Developing fiches

For each type of activity or sub task, three fiches were drawn up using the above information:

- A description fiche
- A problem fiche
- An order of operations fiche

These fiches used clear and simple language, and a common system of graphics, offering a user friendly guide for each activity. Plastic covered copies were made available at each place of work. Each fiche was drawn up in Word so it could be easily updated and reprinted.

Developing manuals

Those workers responsible for maintaining the supporting infrastructure networks needed more in-depth supporting information due to the more technical nature of the tasks involved. However, the same principles were followed, and CRIFA worked with experienced individuals to translate the complex and sometimes confusing manuals previously used into user friendly guides using photos and graphics, based on a common presentational style.

Developing training tools

A practical model was built in one case to help demonstrate how to do a task, in other cases videos were developed to help in the training process.

Delivering training to tutors

Once the supporting materials were ready, CRIFA then trained up the ‘experienced workers’ as tutors who could pass on their knowledge to young members of staff. Roughly half of all the experienced workers who were about to leave the company agreed to act as tutors, mainly for one specific competency. Negotiations with the management ensured that tutors did not lose either salary or benefits through their involvement in the tutoring process, however the tutors still maintained all their other production related duties.

The tutors also received special training in pedagogical techniques, including advice on how people learn, and guidance on how to evaluate learning activities and double check that learning has actually taken place.

Delivering training to new workers

In order to prioritise the training to be delivered to the newer workers, each sub-task was given a rating according to how frequently it was carried out, and how important it was. Most of the training was delivered ‘on the job’ with only workers in the Coke plant receiving class room instruction. Each worker has a training book which acts as a check list of competencies they have learnt, and are going to learn. Periodically, a ‘validation committee’ consisting of the tutor, worker and direct manager meet to agree the competencies the worker has acquired and award an appropriate salary increase .

1.5 Learning assessment

Turning ‘tacit’ knowledge into ‘explicit’ knowledge

The CRIFA approach is based on the understanding that it is crucial to transfer the implicit knowledge held by the more experienced older workers into explicit competencies and techniques which can then be taught to others. Previous to the validation activity, new people joined the company with no specific training, and frequently with little schooling (primary or lower secondary level). They then learnt the trade through watching older and more experienced workers over a number of years. In this way, they learnt how to deal with problems and difficulties as they arose. It is estimated that learning in this way at Cockerill Sambre took between 3-5 years, as this was the time it took for a worker to witness the majority of the problems which can develop on the job, and to learn how to deal with them.

By asking experienced workers to explicitly identify their competencies, and the problems which can arise during their work, Cockerill Sambre have managed to build up a system where most of the problems which occur in the workplace can be simulated, and thereby dealt with in a far shorter period of time. This has condensed the learning process, cutting the learning of many tasks down to a few months. An advantage of this type of training, as opposed to a class room based training exercise, is that workers learn from experienced workers how things are *really* done on the job as opposed to how they are ideally done in a text book situation. For this type of work the physical means of doing something is particularly important, and this is difficult to learn from a book. In addition, as many of the new people being trained had a negative experience of school, it was felt to be important to differentiate this training from classroom tuition in order to encourage participation.

Learning is assessed by a ‘validation panel’ (see above) using a retrospective analysis of what a worker has learnt over a period of time. The worker’s training book, or checklist, is useful in supporting this process.

1.6 Project management and monitoring

No overall evaluation of the project has so far been carried out. There was an attempt to assess the cost of implementation in one sector, but given that there are so many costs which are difficult to quantify e.g. investment of staff time, it has been difficult to do a proper cost benefit analysis. One of the main benefits of the training will be avoidance of problems and dangerous situations, the benefits of which it is difficult to assess. The project has been unsuccessful in certain sectors, but it was felt that this is partly because the project was not so appropriate to these sectors, either because the transfer of knowledge was not felt to be so necessary, or because there were different claims on resources.

1.7 Drawing from other European experience

CRIFA have previously been involved in an ADAPT project and an ESF project in this field and has worked on a similar competency assessment exercise in the field of refuse collection and recycling in Luxembourg. They find validation methodologies to be particularly transferable between different sectors.

1.8 Outcomes and benefits

- **For the individuals**

The main outcome for the new workers is that they now have more formalised training which allows them to learn quicker. In addition, they have their competencies recognised, which means that they achieve a salary increase. For the experienced workers, the main outcome is an appreciation of their own competencies, training in tutoring and the satisfaction of knowing that their skills are being passed on to a younger generation and their work will continue into the future.

- **For the organisation**

Cockerill Sambre have reduced the significant loss of knowledge which can be associated with a large scale reduction in more experienced staff, in addition to improving knowledge management within the organisation, and integrating health and safety mechanisms into wider training.

1.9 Sustainability

This activity will continue while members of the workforce are being shed, until 2009 at least.

1.10 Transferability & dissemination

Cockerill Sambre have not yet disseminated information about their project very widely. This was partly because they felt that the project had been developed by their own workers in a way which was relevant to their own particular context. The involvement of staff in the development process is a key part of the activity, and Cockerill Sambre feel that the resulting fiches and paperwork would not be particularly useful to other companies/organisations, without their going through the same development process for themselves. However they acknowledge that they could disseminate the development model itself more widely and would be very happy to do so if people were interested.

1.11 Success factors and barriers to be overcome

Success factors

The following factors would seem to have led to the success of the project:

- Involvement and goodwill of the workers – at all levels of the hierarchy
- Development of clearly understandable training materials
- The emphasis on making implicit knowledge explicit
- Tutors have been well motivated
- Tutors employed had the right level of expertise to pass on the knowledge
- Each area of training adapted to suit the work practices it was dealing with
- Practice was based on proven theories:
 - knowledge management
 - Constructivism
 - Cognitivism
 - Applied teaching methods
 - Application of ‘made to measure’ toolsets (ergonomics etc.)

Barriers to take up

The following barriers were identified during the validation process:

- Developing a common vocabulary was a significant issue. There were a number of different buildings and sectors involved in the process and even groups working in similar sectors used a very different set of terms for similar tasks. This had to be rationalised when developing the task fiches and manuals;
- There was some resistance amongst some sectors due to the resources required
- There was some resistance amongst older more experienced workers who had been through several different restructuring processes and felt that this was expecting too much from them.

1.12 Looking to the future

When looking towards the future it was felt that the following factors could help support the further development of this type of activity:

At project level

- It was felt that an overall evaluation exercise would be useful, and Cockerill Sambre are interested in finding out more about the Corus Netherlands model for analysing the overall financial benefits of validation exercises.
- Another possible ‘next stage’ could be for the workers to receive certification for their competencies, but this would require a more outward looking approach to the exercise. At present, Cockerill Sambre is mainly looking inwards towards the needs of the organisation, rather than outwards towards the needs of individuals who have left the company.
- It was also discussed whether the experienced workers could be given a certificate for their training in tutoring skills. This was felt to be a relatively sensitive issue, however, as it could lead to changing expectations by these workers in relation to their position within the company. The company was also slightly resistant to the idea of formal certification as this would require a greater level of external verification in order to ensure that the certification was fully valid and transferable outside of the organisation.

At national policy level

- More support for work based learning

At EU policy level

- Keep funding validation activities