

## *Inspiration book*

Quality development  
at school

**In-company classes**

Motivating teaching  
and learning methods



Education and Culture DG  
Lifelong Learning Programme

**Q**uality development at vocational schools, leads to sustained cooperation with industry and services. Modern industry relies heavily on an educated and thoroughly skilled workforce. "In-company classes" provides an excellent and powerful method to obtain long lasting results.

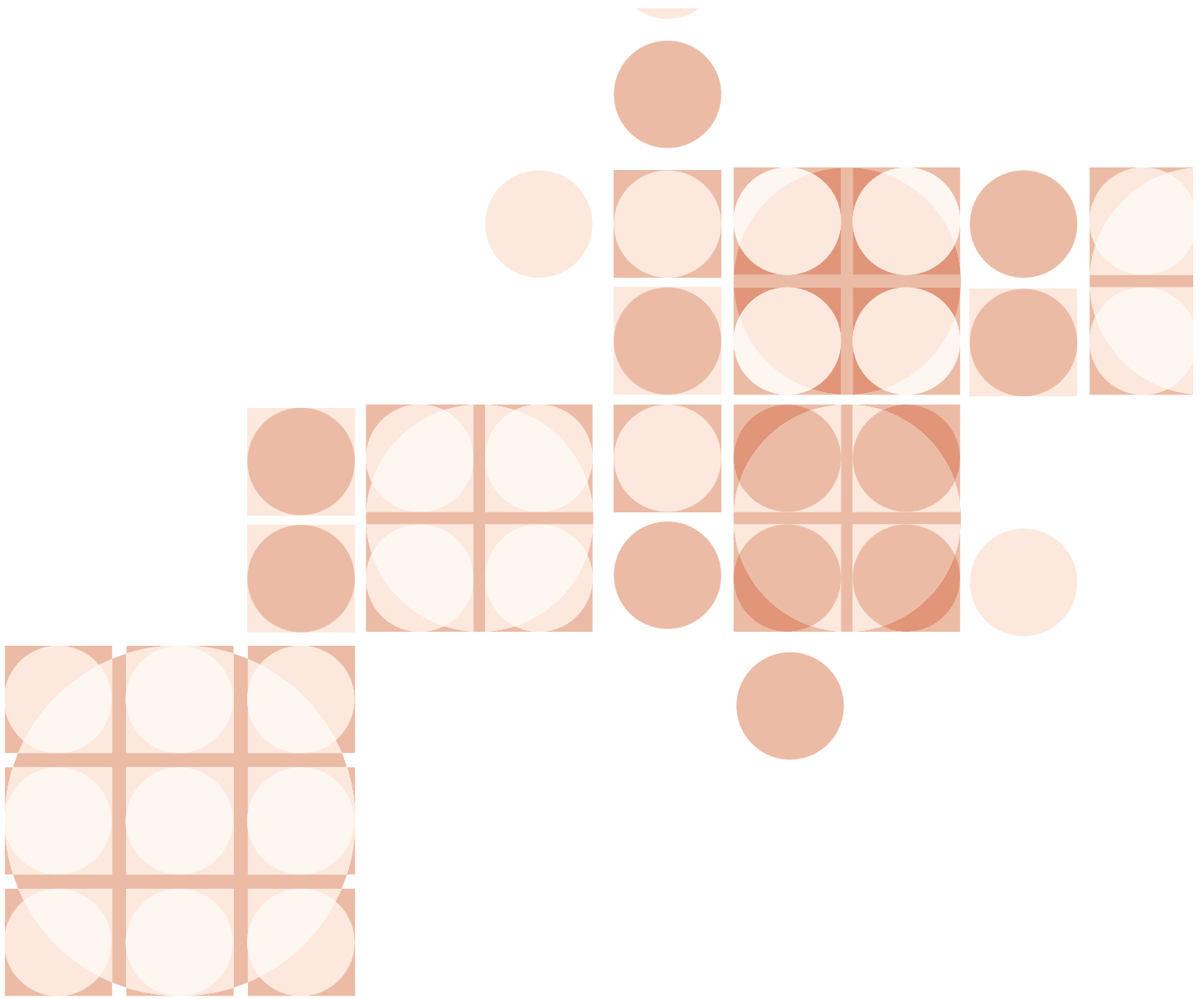
This inspiration book will guide you through the process of organising in-company classes at school.

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# Preface

The main aim of TEACH, LEARN AND QUALITY or TL+Q is to improve the quality of vocational education and training within Europe by means of creative and motivating teaching and learning methods which are embedded in a quality system supported by industry and services.

TL+Q focuses on actions that affect school management and class practice. The produced didactic support and tools for quality assessment have been tested, evaluated and validated during the project. All testing took place in cooperation with the associated partners such as industrial enterprises and services, advisory bodies and in-service training institutions. Validation was achieved by the TL+Q industrial partners. Moreover, the validation process was also monitored by official educational policy makers.

Setting up a quality system in schools stimulates reflective skills and competences. Gradual but constant improvement of the school quality results in a better educational performance and an enhanced employability. By introducing creative and motivating methods, students' attitudes will improve and their eagerness and readiness to keep learning for life will be stimulated. Teaching and learning will keep pace with the changes and demands of industry and services.

TL+Q developed three key items, which contribute to the improvement of educational quality:

- Quality development at school,
- In-company classes,
- Motivating teaching and learning methods.

The results of the exploration and practical research on each item are assembled in three inspiration books. These three inspiration books contain evidence-based examples of good practice, transferable methodologies and testimonies of management, teachers/trainers and students.

The inspiration books support schools and companies as well as students who take part in in-company classes exchanges and are downloadable from the web site [www.tlqproject.eu](http://www.tlqproject.eu)

To facilitate the reading of the inspiration books, we agreed on the use of 'school' and 'students'. When talking about 'a school', we also refer to a training centre, a centre for vocational education or a formation centre. And when talking about 'a student', we also mean a student or a trainee.

'A teacher' can also be a trainer or mentor and 'a principal' is to be considered as the head of the organisation, training centre or enterprise.

We don't make any gender distinction using names or titles, so 'a student', 'a principal', 'a teacher', ... can be male or female.

And finally, this inspiration book is used as part of an **international course on educational quality**.

See <http://ec.europa.eu/education/trainingdatabase> or

<https://webgate.ec.europa.eu/llp/istcoursedatabase>.

Search within the thematic field of the training: Pedagogy and didactics, School improvement and quality evaluation, School management and school autonomy and Quality development and Educational quality. Course title: 'Teach, Learn and Quality' or 'Teach, Learn and Quality for adult education'.

## ■ Chapter 1

# Introduction

Education has been the most important tool for developing the quality of life in the history of mankind. Education has also been an important tool for improving the quality of craft, industry and science. Today, the developing industry in the new century relies more and more on an educated and thoroughly trained workforce. Quality performance is a strong tool to achieve good results and maintain professional competence. Thus, along with the development of processes or services to achieve customer satisfaction, the demand for highly qualified and well educated workers is becoming more and more essential. One of the solutions to meet the requirements of the industry is to organise company training for the students, which is sometimes referred to as on-the-job learning.

More and more, companies working close to educational and training organisations want to co-organise and improve training programmes as part of their company policy. This policy involves common benchmarks in order to meet present-day business requirements and keep the professional standards of skills of the staff in general and the involved personnel in particular at an appropriate level. Human resources, production managers, team leaders and all other workers need to update their skills and knowledge to provide the young generation with the opportunity to learn and benefit most from the training period. The skills and knowledge gained during the training should not be wasted. Eventually, companies hire young employees that have had their training in the same or some other company, as students. However, on-the-job learning requires determination and commitment, and in some cases thorough and reliable observation.

The companies need employees with good competencies. The schools train the students to become employees, so a good relationship between the school and the company is essential.

Vocational schools mainly rely on company training, which is to a large extent prescribed by the national curricula. A study plan is made for each and every individual. The company training period is usually tailored according to the needs and abilities of the students. Sometimes, when the region does not provide enough training opportunities, the school organises projects and tasks to be performed in the school facilities under the supervision of the teacher. Similarly, for students with special needs, the training places are accordingly planned. However, this inspiration book does not deal with the company training programmes, but rather with a new teaching method, which takes place within the company (in-company classes). The method has been tested in Flanders, Finland and Spain. This innovative method not only motivates and broadens the teaching and learning possibilities from the

pedagogical point of view, but it also provides the student with a robust theoretical and practical knowledge based on constructive teaching and learning.

This inspiration book will be a systematic guide for the teachers and the company coaches in the planning, operation and the reporting of the in-company classes. In the inspiration book we will refer to this new method by using the abbreviation ICC.

## — 1.1 Definition

ICC means a method of moving part of the classroom teaching and learning processes to company premises. The teacher will have the opportunity to teach theoretical subjects and at the same time show the students how this theory can be applied on the work floor. It is essential for students to observe how theory is put into practice.

Unlike with an internship, the ICC target group should be first chosen and accordingly planned for the study period/module. The teacher, in collaboration with the company representative, should schedule and plan the training period in line with the course contents and in line with the process requirements of the company. Finding the right company that provides the opportunity and services might sometimes be challenging. For example, in small towns there are fewer companies and these are usually small sized with limited capacity. An important requirement is that to implement the ICC, a partner company should first be committed and also have enough resources to provide the support necessary during the entire process.

This new concept of teaching is supposed to take place in the school classrooms and in the workshops of the company up to a certain extent. There are various methods of how to implement the ICC, depending on the size and field of the target group, the work environment and the nature of the task. The question of how often the ICC should take place, i.e. how many days per week/ month/ period is up to the teacher and the company coach to answer. However, these should all take place in real work situations/ environments, such as factories, warehouses, construction sites, service centres, healthcare centres, etc.

To assure quality output, similar to any other educational process, the ICC period must include the following stages: planning, evaluation and feedback. The results will be disseminated to other groups, as well, and the results will be shared with the other teachers during the planning period of the timetables of the following study year.

In all cases the activities and processes adapted during in-company classes should always match the attainment goals of the particular target group.

## — 1.2 Why in-company classes

ICC is an instrument that offers educational organisations and their teachers a new and innovative method, adapted to the vocational education system. A teaching programme that involves the learning and experience of the craft in the immediate vicinity of the actual processes in a working place is expected to motivate the students in their studies and assure their effective participation. The ICC provides better and faster understanding of the theory. Hence, the information is memorised for a longer time not only because of the link between theory and practice but also because of the repetition done by the professional on the work floor.

The ICC inspiration book works as a guide to the teacher, providing quality tools to organise and control the processes of teaching. Also the company personnel is informed about the details of the process and expected to use the inspiration book as a guide during the ICC period.

The inspiration book will provide teachers, students and company personnel with systematic information of the process and details of the different stages of the ICC. It is essential for the teacher to introduce the entire process to the students before the start of the ICC period. However, the teacher will make use of the inspiration book in creative and innovative methods to motivate the students and involve them in the teaching and learning process more effectively. The ICC adds a new measure of quality in the way of teaching and achieves better learning outcomes. The ICC is a good opportunity for the student to understand the structure and functionality of a company in its early stages.

In some cases ICC offers a fair financial benefit to educational institutions since it reduces costs in various ways in terms of shared spaces, materials, tools, etc. During the ICC the teachers also get first-hand information and experience on the latest industrial technology. On the other hand, also the company benefits during the ICC phase. The training of new and skilled technicians takes place under their supervision, thus, enhancing the recruitment of new employees in a more efficient manner.

The ICC process also includes parents/guardians to participate in student presentations and company tours that will involve them in the learning process and at the same time have better understanding of their children's study field.

Group	Benefits
Student	<ul style="list-style-type: none"> <li>▪ motivation; genuine information</li> <li>▪ outcomes/products are put into use/service</li> <li>▪ social skills</li> <li>▪ self-confidence</li> <li>▪ involvement</li> <li>▪ appreciation</li> </ul>
Teacher	<ul style="list-style-type: none"> <li>▪ Innovative teaching methods</li> <li>▪ appreciation</li> <li>▪ credibility</li> <li>▪ competency</li> <li>▪ social skills</li> </ul>
Educational organization	<ul style="list-style-type: none"> <li>▪ shared space</li> <li>▪ reduced costs</li> <li>▪ information on new technologies/processes</li> <li>▪ new educational platforms</li> <li>▪ better cooperation with companies</li> </ul>
Company/employee	<ul style="list-style-type: none"> <li>▪ better knowledge of the educational programmes</li> <li>▪ better recruitment</li> <li>▪ branding</li> <li>▪ motivation of employees</li> <li>▪ self-esteem and recognition</li> </ul>
Parents	<ul style="list-style-type: none"> <li>▪ information</li> <li>▪ involvement</li> <li>▪ better support to the student</li> <li>▪ better understanding of the educational system</li> </ul>

### — 1.3 Target group

#### — 1.3.1 Why define a target group?

A clear and explicit definition of the target group that one has in mind when starting a project of ICC, is the first and foremost concern in developing the project. On the one hand we should formulate the specific objectives and on the other we should search for a suitable company.

The following outline or blueprint can link the teacher, the school organisation and the company, clarifying the links between expectations of the target group and the realisation of ICC. Also the choice of the company and the procedure as to how to develop ICC within the company should be elaborated.

Defining the target group and the learning objectives creates the right frame in which the process evolves. It will stimulate the students of the target group and



motivate them during their studies. The ICC teacher will try to avoid expectations that are unrealistic, and yet will set targets that each student must achieve. Therefore a realistic and well-defined objective plan, tuned on the official learning attainment goals, could guarantee the success of the project. Depending on the target group, ICC can occur in different formats.

### — 1.3.2 How to choose the company

Determining the needs and criteria which each of both partners requires:

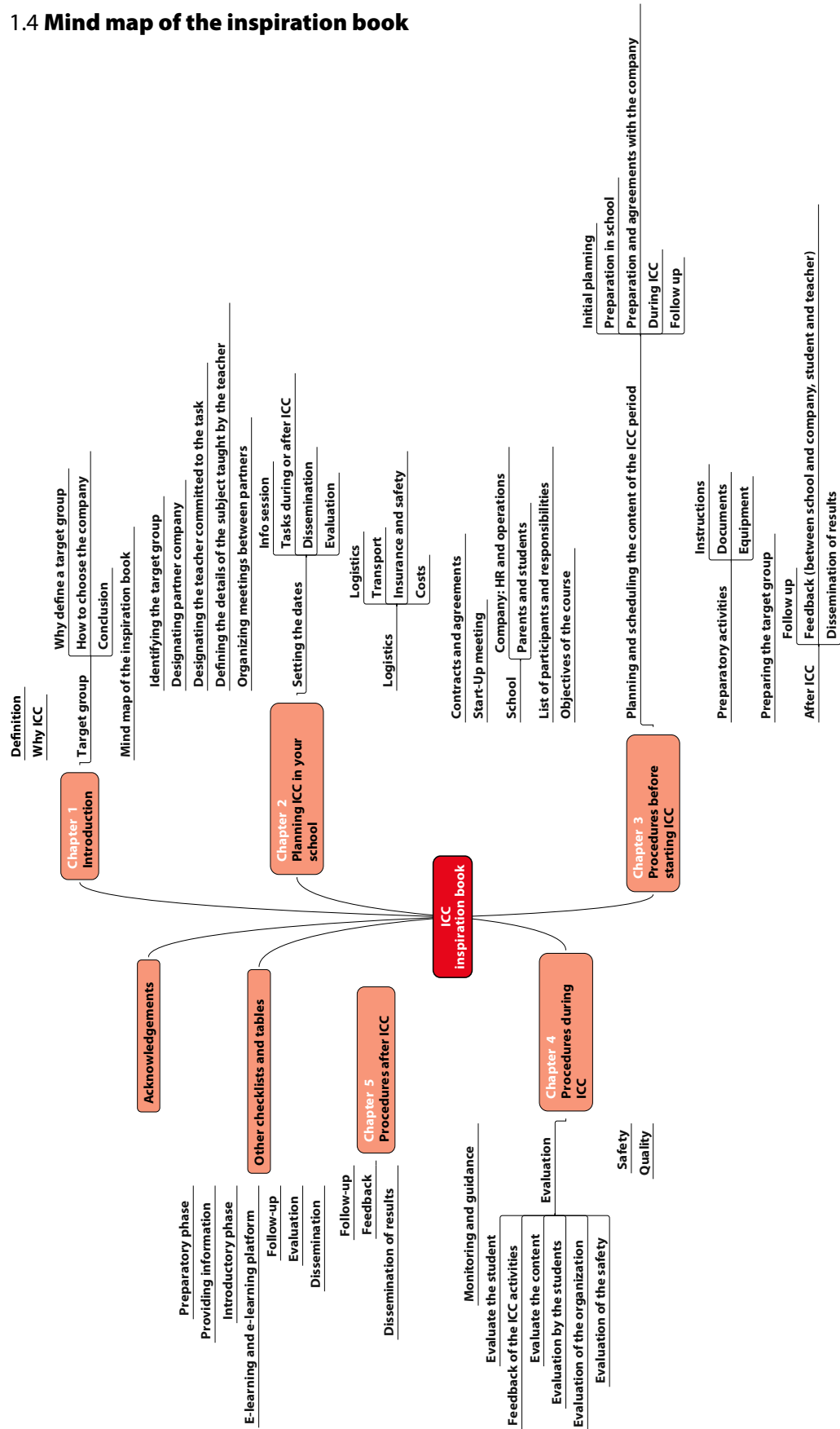
- The school is in search of a suitable company for an existing target group
- The company is in search of a target group for cooperation

Target group	Company
What practical activities are important?	What practical activities are integrated?
What practical activities cannot be done at school?	What technical and industrial applications are available?
What technical and industrial skills are missing?	What technological knowledge is important?
What is the importance of maths training and other educational courses in the final attainment levels?	Do the practical applications require basic or thorough theoretical knowledge?
What is the level of knowledge, before the students start with ICC?	What is the level required in (foreign) languages, maths? What other skills are needed?

### — 1.3.3 Conclusion

Fixing the target group is one of the main priorities when planning the ICC period. Alternatives can be developed observing the curriculum objectives for the chosen target group, where personal approach and creativity are necessary. The combination of theory and practice in the correct proportions will stimulate the students to find the right amount of energy.

1.4 Mind map of the inspiration book



## ■ Chapter 2

# Planning ICC in your school

### — 2.1 Identifying the target group (checklist 6.1)

While searching for a suitable company for an existing target group, it is necessary to gather basic information on the students taking part.

The following list could be useful:

- number of students in the group
- educational level
- level of responsibility and interest of each pupil
- provision of pupils towards the ICC through the interview to detect motivating professional skills that may be more suitable for the ICC
- ability to adapt to new working environment
- flexibility of transportation
- the pro-active level of the student
- problem solving ability
- teamwork skills
- identifying students with special needs (accessibility, mobility...). Using interviews with the family.
- preparing the target group

## — 2.2 Designating a partner company

We need to find a partner company in order to create training opportunities. The next list can help us choose the most suitable one. It's very important to be familiar with the details of the activities taking place in the company.

- Designate a coach in the company to coordinate the ICC with the school teacher.
- Identify the work area and verify that the planned professional activities are relevant to competences required by the school curriculum.
- Ensure practical mobility between the study centre and the collaborating company.
- Define the maximum number of students that can work in ICC in one go, considering the available space and tasks to be performed.
- Define the number of sessions that can be performed at the company.
- Make sure the company is able to provide the basic and necessary teaching and learning infrastructure and aids, such as meeting spaces, computer(s) projector, equipment related to the task, etc.
- Ensure that the company respects all regulations regarding health, safety and security.

Task	Responsible	Success factor
Visit companies	Teacher	List of companies. Discard companies without good transport connection with school.
Find a coach in each company	Teacher/Company	Exchange contact data and schedule meetings to prepare ICC experience.
Know the productive process of the company	Teacher/Coach	Define a first schedule for ICC classes.
How many students can participate according to the available work space within the productive process?	Teacher/Coach	Make a list with the activity, the number of students that can do it, and the available work space to develop ICC.
Define responsibilities of each part (Students, teacher, school, coach, company)	School/Company	Insurances Prevention rules on security, safety and health at the company Working gear such as overalls, ...
Define/Write the contract	Teacher/coach	Sign the contract

### — 2.3 Designating the teacher committed to the task

The teacher committed to the task needs to be well acquainted with both the activities of the company involved in the ICC and the contents of the subject performed at the school. The teacher then establishes the common link between the respective activities and generates a schedule for the ICC.

- Organise the sessions and include different methods during ICC.
- List the objectives to be achieved according to the study plan.
- Maintain a positive attitude towards the ICC.
- Determine items to assess the achievement of competencies to be achieved.
- The teacher has to know the process of the company that will be included in ICC

Task	Responsible	Success factor
Choose the skills to develop in ICC	Teacher	List the skills to train.
Train different skills in different ways	Teacher	Define and list the activities /tasks that will be carried out
Link the activities with the curriculum contents of the subjects at the school.	Teacher/coach	List the activities linked with curricular content.
Choose the means and criteria to evaluate the ICC process.	Teacher(s)	Evaluate table/grid
Promote positive attitude in ICC	Teacher(s)	Make interviews with the students and promote a positive exchange of opinions among coaches and teachers.

## — 2.4 Defining the details of the subject taught by the teacher

Analyse professional achievement related to the contents of the subject and determine what can be developed for ICC.

Determine the objectives of the ICC that will help to achieve professional goals by the student in a real working environment, thus enhancing self-confidence. Design activities and classes that include more practical elements.

Task	Responsible	Success factor
Make a selection of skills to develop in ICC Analyze the subjects and train the skills needed with these subjects	Teacher	List of skills possible to develop in ICC
Schedule ICC sessions	Teacher/coach	Signing agreements

## — 2.5 Organizing meetings between partners

It is essential that the planning of the ICC includes at least two meetings with the company. One meeting with the management and one start-up meeting with the production unit are crucial. The company coach needs to be present at these meetings.

Further meetings should be organised during the ICC process for evaluation and feedback purposes.

## — 2.6 Setting the dates

### — 2.6.1 Info session

An info session is held at the school for the parents. Often the involvement of the parents is important. Later, another info session is held at the company itself.

### — 2.6.2 In-company classes

Dates of ICC are set in consultation with the company.

Depending on the implementation:

- full working days or half working days
- in one cycle or spread over the entire school year.

### — 2.6.3 Tasks during or after in-company classes

Task/project contents are determined in cooperation with the company, the teachers and the school.

#### — 2.6.4 **Dissemination**

Dissemination and a possible press conference as an outcome of the project (branding).

#### — 2.6.5 **Evaluation** (see checklist 6.6)

The evaluation is to be carried out continuously, during and after ICC. At the end of the project there is an evaluation of the process and achieved outcomes.

For more information on the method of self-evaluation and continuous assessment, we refer to Chapter 7 of the inspiration book on “Quality development at school”

### — **2.7 Logistics, transport, insurance and safety and costs**

#### — 2.7.1 **Logistics**

The school is responsible for the logistics.

A team of teachers take care of the planning.

All logistics must be defined and looked into to ensure the success of the ICC in all its stages.

The costs generated during the ICC period should not exceed that of tuition costs at school. Transportation and additional purchases should be kept to a minimum. However, for developing purposes, the school management (perhaps in cooperation with the company management) might include investments in equipment and material that could benefit future ICC activities.

Finally the company is responsible for delivering and providing the materials that will be used during the ICC. In most cases, the purchased material is a part of the normal production process.

#### — 2.7.2 **Transport**

Generally the school organizes the transport to the company.

#### — 2.7.3 **Insurance and safety** (checklist 6.7)

The health and safety department at the company prepares and introduces a brochure for the students containing information on rules and regulations, also on basic practicalities. Students can use their personal safety equipment provided by the school.

#### — 2.7.4 **Costs**

Students can use their personal safety equipment provided by the school. The sharing of costs should be agreed upon.





## ■ Chapter 3

# Procedures before starting ICC

### — 3.1 **Contracts and agreements** (checklist 6.2)

The contracts are drawn up by the company and the school.



### — 3.2 **Start-up meetings** (checklist 6.3)

Intake meeting (possible attendees: company department management, human resource manager, department head from the school, the ICC teacher)

Informative meeting at the start of every school year or as necessary (possible attendees: school management, parents, students, coaches, and teachers)

### — 3.3 School/school department

The school should include sufficient flexibility in the study guide, the students' timetables and the planning of other courses.

It is necessary to present the ICC planning before the start of the course. This planning synchronises school curriculum requirements with the aims and needs of the company. To maintain quality and efficiency an ICC session should be at least four hours per session.

Start-Up Meeting: School		
Who	Department: Teacher:	School department Teacher
What	Determine the contents of the lessons	Curriculum Goals
When	Define the period Define the day of the week Define the dates	January – June Tuesday See: time-table
Where	Define the company	Company

#### — 3.3.1 Company: HR and operations

Contact meeting with the company starts before the start of the courses.

In the meeting, agreements are made about: (see checklist n°1)

- content
- tasks
- timing
- equipment
- material

Start-Up Meeting: Company		
Who	Department: Teacher: Students:	Name of the school Name of the teacher Name of the class
What	Technical, pedagogical and practical items	<ul style="list-style-type: none"> <li>▪ Defining the technical content and goals of the curriculum</li> <li>▪ Timing and scheduling</li> <li>▪ Preconditions and safety regulations (PPE, clothing, tools, etc ...)</li> <li>▪ Participation</li> <li>▪ Insurance</li> </ul>
When	Define the company	One year before the start

### — 3.3.2 Parents and students

Before starting ICC, the school team and the company send an invitation letter to the parents. In addition to the programme of the visit, the invitation could also include:

- Basic short information on the ICC programme
- Facts concerning the practical issues:
  - Formalities: Insurance, transportation, safety gear, etc.
  - Timetables: ICC dates, parents' visit in the company, parents' meeting.
- Contact details.

#### Start-Up Meeting: Parents and students

Who	Address of Company:  Contact persons: Chef, Coach:	Address  Name contact persons
What	Technical, pedagogical and practical items	<ul style="list-style-type: none"> <li>▪ A number of lessons will be taught at the company</li> <li>▪ Use the most modern equipment in an industrial environment</li> </ul>
When	Define the company	2 months before the start

### — 3.4 List of participants and responsibilities

The company	The school	Others
Chief Executive Officer HRM ....	Staff	Government <ul style="list-style-type: none"> <li>▪ National</li> <li>▪ Regional</li> <li>▪ Ministry of Education</li> <li>▪ Department of Work</li> </ul>
Coach: contact between the workplace and school	<ul style="list-style-type: none"> <li>▪ Administration</li> <li>▪ Insurance</li> <li>▪ Attendance</li> <li>▪ Prevention</li> <li>▪ Logistical support</li> </ul>	<ul style="list-style-type: none"> <li>▪ Organizations</li> <li>▪ Training organizations</li> <li>▪ Trade unions</li> <li>▪ Professional organizations</li> <li>▪ Educational organizations</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Middle management</li> <li>▪ Teacher(s)</li> <li>▪ Students</li> </ul>	
	<ul style="list-style-type: none"> <li>▪ Parents</li> <li>▪ Entourage</li> <li>▪ Others</li> </ul>	

### — 3.5 Objectives of the course

Students	<ul style="list-style-type: none"> <li>▪ Achieve the curriculum objectives in a real situation</li> <li>▪ Provide subject matter based on a real situation</li> <li>▪ Students learn to know the real work environment</li> <li>▪ Link the theoretical content to the practical realisation</li> <li>▪ Be involved</li> <li>▪ Achieve learning outcomes in a real situation</li> </ul>
School	<ul style="list-style-type: none"> <li>▪ Cost reduction</li> <li>▪ Space saving</li> <li>▪ Branding</li> </ul>
Teachers	<ul style="list-style-type: none"> <li>▪ Learn new techniques and technologies</li> <li>▪ Professionalising</li> </ul>
Company	<ul style="list-style-type: none"> <li>▪ Recruitment of staff</li> <li>▪ Inflow of skilled or future employees</li> <li>▪ Branding</li> </ul>

### — 3.6 Planning the content of the ICC period

#### — 3.6.1 Initial planning

Collecting information	<ul style="list-style-type: none"> <li>▪ Acquire knowledge</li> <li>▪ Collect documentation</li> <li>▪ Structuring ideas</li> </ul>
Informing the company	<ul style="list-style-type: none"> <li>▪ Management</li> <li>▪ Middle management</li> <li>▪ Company collaborators</li> </ul>
Informing the authorities	<ul style="list-style-type: none"> <li>▪ Ministry</li> <li>▪ Inspection</li> <li>▪ Trade Unions</li> </ul>

### — 3.6.2 Preparation in school

Organizational	<ul style="list-style-type: none"> <li>▪ Teacher cooperation and integration of the ICC into the timetable of the study year<sup>1</sup></li> </ul>
Administrative	<ul style="list-style-type: none"> <li>▪ Risk</li> <li>▪ Job description</li> <li>▪ Planning and listing of activities</li> <li>▪ Insurance</li> <li>▪ Ergonomic requirements and health research</li> <li>▪ Certificates</li> <li>▪ Contract: company, student and school</li> </ul>
Guidelines and rules	<ul style="list-style-type: none"> <li>▪ Safety</li> <li>▪ Guidance</li> <li>▪ Lesson content</li> <li>▪ Discipline /attitude</li> <li>▪ Evaluation</li> </ul>
Practical	<ul style="list-style-type: none"> <li>▪ Transportation</li> <li>▪ Organization of the breaks</li> <li>▪ Food /drink</li> <li>▪ Communications</li> <li>▪ Personal Care</li> </ul>



<sup>1</sup>. Huge groups to be avoided

### — 3.6.3 Preparation and agreements with the company

Accommodations	<ul style="list-style-type: none"> <li>▪ Classroom</li> <li>▪ Machines</li> <li>▪ Installations</li> <li>▪ Material</li> <li>▪ Dressing room ...</li> </ul>
Timing	<ul style="list-style-type: none"> <li>▪ Frequency</li> <li>▪ Duration of ICC</li> <li>▪ Dates</li> <li>▪ Timetable</li> </ul>
Safety	<ul style="list-style-type: none"> <li>▪ Instructions</li> <li>▪ Safety equipment</li> <li>▪ Security measures</li> </ul>
Communications	<ul style="list-style-type: none"> <li>▪ Person/task matching               <ul style="list-style-type: none"> <li>· Teacher /company</li> <li>· Company /content</li> <li>· Company /student</li> </ul> </li> <li>▪ Briefing and finalising</li> <li>▪ Evaluation</li> <li>▪ Monitoring</li> <li>▪ Support</li> </ul>
Content	<ul style="list-style-type: none"> <li>▪ Function of curriculum subjects</li> <li>▪ Application</li> <li>▪ Environment, safety ...</li> <li>▪ Quality control</li> </ul>

### — 3.6.4 During ICC

Logbook in the company and reception	
Briefing	<ul style="list-style-type: none"> <li>▪ Arrangements</li> <li>▪ Security</li> <li>▪ Method</li> <li>▪ Timing</li> </ul>
Instruction	<ul style="list-style-type: none"> <li>▪ All partners</li> </ul>
Feedback	<ul style="list-style-type: none"> <li>▪ All partners</li> </ul>
Evaluation	<ul style="list-style-type: none"> <li>▪ Self</li> <li>▪ Product</li> <li>▪ Process</li> </ul>
Follow-up visits	<ul style="list-style-type: none"> <li>▪ School staff</li> <li>▪ Management Company</li> </ul>

### — 3.6.5 Follow-up

Reference group <sup>1</sup>	
Consulting the company and the school	Achieved results Inventory of setbacks and pitfalls SWOT-analysis <sup>2</sup>
Reflection by all partners	Students Teachers School Company
Evaluation	During After Are the objectives reached Peer-assessment and self-assessment <sup>3</sup> Continuous assessment

1. A reference group consists of people with knowledge on education, entrepreneurship, ICC, collaboration school – enterprises and who act as critical friends in the process. They help to maintain the quality standards of the project.
2. For more information on SWOT-analysis, we refer to Chapter 7.2.8 of the inspiration book on “Quality development at school”
3. For more information on the method of peer-evaluation and self-evaluation we refer to Chapter 7 of the inspiration book on “Quality development at school”



### — 3.7 Preparatory activities

The preparatory activities of the ICC are not limited and the methods are open for development according to the requirements. However, for achieving fluency in the ICC process the teacher has to have good knowledge about the company and its different operational stages. It is also recommended that the teacher considers at least the following issues: instructions, documentation and equipment.

#### — 3.7.1 Instructions

- As the first and most important step in the ICC the teacher must get the approval of his supervisors and the contact person in the company.
- The teacher has to make sure that all parties involved in the process are committed and understand the requirements of the process and the importance of their role within.
- Make sure that all the students understand the regulations and the safety measures of the company. If necessary, the students take a training course on safety. The instruction should also include case scenarios to give a better understanding of the potential risks.
- Punctuality is crucial in the ICC process. A clear and updated timetable should therefore be always available to all the parties in order to avoid misunderstanding. The timetable has to be based on the work floor processes.
- During ICC the company provides the students with some knowledge on the history, the customer service and the economic status of the company (to be defined by the company). However, it is important that the teacher gives some information prior to the presentation given by the company. This is also possible during the theory classes in the company.
- It is recommended that the teacher organizes a parents' meeting where the different stages and the expected results are discussed and explained in detail. During this meeting the parents should already know about their planned visit to the company.

#### — 3.7.2 Documents

Documentation is important in systematic tasks where the information flow involves many parties. All must be aware of the programme that should be easily available in case of need. Make sure that all the documents and checklists are ready before starting the process. The activities should be documented for follow-up and evaluation purposes.

E-platform - It is highly recommended that the teacher sets an electronic working platform on the Internet that allows all the parties to follow the process. Some schools already use similar platforms that include the study guide of the student, information on the courses, course requirements, the progress of the studies and evaluations by using the same platform during regular company training, each student individually updates and adds daily reports on newly learned skills and different experiences at work. The parents also have the possibility to follow this

report. These platforms allow the training coaches to comment on the performance of the student as well.

On the other hand, there are even simpler programmes to follow and document project activities in an easy way. The following are some possible working platforms that are very easy to use and do not require licensing:

Moodle (Internet based) <http://moodle.org><sup>1</sup>

- Microsoft SharePoint (PC-based/Internet based) <http://sharepoint.microsoft.com>
- Dropbox (PC-based/Internet based) <http://www.dropbox.com>
- Website and Blog ...

### — 3.7.3 Equipment

The space or classroom by the company must be equipped with at least the basic necessary teaching gear such as chairs and tables, a whiteboard, a computer(s), a projector, etc. Should the hours of theoretical instruction include other tools and equipment, those must be arranged by the teacher on beforehand.

Based on the agreement, basic and/or additional equipment is provided by the school and/or the company.

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1. For more information on the use of Moodle, we refer to Chapter 6.3 of the inspiration book on "Motivating Teaching and Learning Methods"

### — 3.8 Preparing the target group

- Carry out individual interviews to document the student expectations.
- Know the preferences of students.
- Train students in preparatory classes practice related to the ICC.
- Prepare dynamics to assess the degree of self-confidence and activeness of the students.
- Introduce activating methods to promote cooperative work between students.
- Prepare a meeting between the students and the company coach.
- Explain the aims of the ICC to the group.
- Discuss the logistics provided for the period.
- Identify students with special needs.

Task	Responsible	Success Factor
Explain the contents of the contract to the students	Teacher/Coach	Bring a copy of the contract, insurance, emergency protocol, rights and obligations. Confirm if the students understand their rights and obligations
Explain the target of each session and general targets	Teacher/Coach	Confirm the understanding of what the students have to do
Define the protocol for students with special needs	Teacher/Coach Parents/Student	Students can perform the targets without problems.
Give information to the students about: <ul style="list-style-type: none"> <li>▪ Company address;</li> <li>▪ Mobility;</li> <li>▪ Timetable;</li> <li>▪ Practical arrangements;</li> <li>▪ Tasks;</li> <li>▪ Personal safety equipment;</li> <li>▪ Periodic task report;</li> <li>▪ Others</li> </ul>	Teacher/ Student	Student knows the protocol of ICC



## ■ Chapter 4

# Procedures during ICC

### — 4.1 Monitoring and guidance

Matching the student with the correct work place

- Make time for a good reception of the student
- Discuss the initial competences of each student during the intake interview and determine a learning trajectory on this basis
- Give advice for improvement

Support the student

- Make sure that the student always has the possibility to refer to the coach or teacher
- Encourage the student constantly to ask questions
- Give the student space for self-study
- Make sure the comments made by the coach and teacher are consistent.
- Give advice for improvement

### — 4.2 Evaluation

#### — 4.2.1 Evaluate the student<sup>1</sup> (See checklist 6.6)

- Make an evaluation as coach and mentor based on the mutually agreed objectives.  
The final responsibility lies with the school.
- Let the student do a self-evaluation:
  - Do I have the natural reflex to see a learning situation in a new task?
  - Does the workplace stimulate learning or disturb it?
  - Am I aware of my own way of learning?
  - Am I aware of the different techniques to be acquired?
  - Am I aware of my own way of explaining things?
  - Can I perform efficiently up to the requirements of the educational material?
  - Can I perform a complex task in a structured model?
  - Do I value the practice that will achieve good results?
  - Can I formulate opinions and remarks as stimulants to learn more and not only as criticism?

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1. For more information on the method of evaluation, we refer to the inspiration book on "Quality development at school"

— 4.2.2 **Evaluating and feedback as a continuous part of the ICC-activities**

- Evaluate during and after ICC
- Practising interviews between teacher, coach and student
- Task results
- Written examinations
- Products and processes
- Attitude
- Daily task report

— 4.2.3 **Evaluation of the content**

- Are the proposed objectives achieved?
- In what quantity are the predefined objectives achieved?
- Do the students know which parts are being evaluated?
- Do students help define the evaluation criteria?
- Can students help determine the evaluation itself?
- Are the students prepared for self-evaluation?
- In case of group work, do students assess each other?
- What elements are important for evaluation done in the company?
- Should the initial learning goals be adjusted?



#### — 4.2.4 Evaluation by the students

- Give three positive aspects of ICC
- Give some aspects that could be improved
- Has ICC changed your point of view about the profession?
- Would you do the project work again?
- Rate your ICC experience on a scale of 1-10

#### — 4.2.5 Evaluation of the organization by students, coaches and teachers

- Did you notice any problems?
- What are the issues that require more attention or further action?
- How do other partners interpret or conduct the current procedure?
- To what extent does the school differ from the enterprise?

#### — 4.2.6 Evaluation of the safety

- The teacher, coach and health and safety advisor assess whether students respected the company's policy concerning health and safety.

#### — 4.3 Safety (checklist 6.7)

The ICC should also include labour regulations and laws, safety instructions from the school, and from the company as well.

In some cases students need training or certificates before performing some tasks.



#### 4.4 Quality

##### Checking quality

- Make sure to have a list of the contact persons involved in the ICC.
- Question constantly your own actions and correct yourself in time.
- Take good care that the team has a clear understanding of the ICC process and its quality measures.
- Use an evaluation instrument and correct on conclusion basis:
  - Appearance
  - Attitude
  - Interest
  - Verbal contact with the personnel
  - Courtesy
  - Loyalty (students, personnel)
  - Punctuality
  - Order
  - Responsibility
  - Autonomy
  - Organisation of own work

##### Controlling the content

- Determine the aims (minimal start competence ) of ICC
- Work out the aims as concretely as possible

##### Amending and adjusting the process

- Regularly ask the students and the coaches for feedback.
- Evaluate the used procedures regularly and keep them up-to-date
- Correct the competences of the student in time.

##### Measuring produced work and progress

- Be flexible and measure aspects of the work the students achieve
- Provide different ways and moments to teach the competences



## ■ Chapter 5

# Procedures after ICC

Even though the ICC involves many players, at the end of the project the teacher is accountable for the achieved results. During the ICC process the teacher maintains the aims of the course curriculum to ensure quality outcomes that exceed the expectations of the traditional teaching method. This is of course achieved by using indicators featured by the teacher. Constant follow-up, feedback and dissemination are phases of the ICC cycle, during which the quality indicators are observed.

### — 5.1 Follow-up

The ICC teachers, the head of the department of the school and the human resource manager run periodic follow-ups on the ICC process from start to end. The following are the main issues for the follow-up:

- The responsibilities are clear
- There are enough resources to achieve the goals
- The schedule is up-to-date
- The results of the feedback sessions are documented

### — 5.2 Feedback

- Every individual taking part in the ICC is allowed to give feedback in any phase of the process.
- At the end of the period the ICC teacher collects individual feedback from every student. This is done during the self-evaluation session of the student, during which the teacher in charge of the group will be present. The ICC teacher is not necessarily the teacher in charge of the group of students.
- The ICC should include at least one element of general feedback at the end of the cycle session from teacher to students. In these sessions they discuss the process and exchange ideas. For longer ICC periods the feedback sessions must be held more often. Other teachers or other groups of students can also attend the feedback sessions.
- The coaching person in the company will attend the above-mentioned feedback sessions only upon request.
- The ICC should include periodic meetings between the school and the company teams. During the meetings both parties should give their feedback, review the processes and evaluate the outcomes. The feedback is documented for future use.

Note: The school team consist of the ICC teacher, the head of the department and the teacher in charge of the group of students. The company team consists of the coach, the production or division manager and the human resources manager.

### — 5.3 Dissemination of results

The ICC teacher, the teacher in charge of the group and the head of the department will organize the dissemination of the results.

The aim of the dissemination is mainly:

- to spread the use of the ICC teaching method in the other departments
- to share the pedagogical and technical experience with the other teachers
- to introduce ICC to new companies and partner institutions
- to establish new relations with other educational organisations and company representatives

The following are some methods of dissemination:

- Spreading the ICC inspiration book for review.
- Organising study or training sessions for own teachers where the ICC inspiration book and the collected information is presented.
- Organising study or training sessions for other schools, acting as in-service training organisation.
- Providing full information on the website of the school.
- Introduce the ICC process to the other teachers during the yearly planning of each department in the school.
- Taking advantage of international project or international networks the school is having, to create a broad dissemination.



## ■ Chapter 6

# Other checklists and tables

### — 6.1 Preparatory phase

Check if ...	✓
Does everyone have a positive attitude?	
Are students prepared?	
Do they have the required competencies?	
Are the agreements in a contract?	
Are the conditions satisfactory?	
Is the administration in order?	
Are all the instructions clear?	
Do all parties have the instructions and conditions?	
Has there been enough communication between company/school?	
Has there been enough communication between school/teacher	
Has there been enough communication between company-student?	
Are there enough resources <ul style="list-style-type: none"> <li>▪ Timing</li> <li>▪ Material</li> <li>▪ Preparatory training</li> </ul>	
Have there been tasks in other subjects that link up to the ICC project?	

— 6.2 **Providing information**

<b>ICC Industrial partner /Company /Enterprise</b>	
Company name	
Address	
Department	
ICC period (date)	Hours per week
Human resource manager	
Tel/mobile	E-mail
Production manager	
Tel/mobile	E-mail
Supervisor	
Tel/mobile	E-mail

<b>ICC School /School department</b>	
Department	ICC class
Head of division/department	
Tel/mobile	E-mail
ICC Teacher	
Tel/mobile	E-mail
Teacher in charge of the ICC group	
Tel/mobile	E-mail
Course subject included in ICC	

<b>ICC Students</b>				
	Full name	Student ID	Tel/mobile	E-mail
1				
2				
3				
4				
5				
6				
...				

Additional or specific information on the ICC period and the students.  
(Fill in if necessary)

### — 6.3 Introductory phase

<b>Check if ...</b>	✓
Is the student familiar with a comparable situation - workplace?	
What is the welcome policy for the student on the workplace?	
How are students informed about the machines, the material, the result, the work procedure?	
Is ICC planned not only in the factory buildings but also at places outside the factory, such as remote installations or construction sites?	
Has the company coach been informed about the arrival of the student?	
Has the company coach received enough information on the student?	
Has the personnel of the workplace been informed about the arrival of the student?	
Is the student well informed about: <ul style="list-style-type: none"> <li>▪ the training plan</li> <li>▪ the mentoring opportunities</li> <li>▪ the aims and process of the ICC project</li> </ul>	
Are the company coach and the personnel of the workplace sufficiently aware of: <ul style="list-style-type: none"> <li>▪ the objectives of the ICC project</li> <li>▪ the process of ICC</li> <li>▪ appointments with third parties</li> </ul>	
Is the student in the end of the introduction ready to start?	



#### — 6.4 E-learning and e-learning platform<sup>1</sup>

Task	Responsible	Success Factor
Prepare the content of e-learning tools.	Teacher	<ul style="list-style-type: none"> <li>▪ Give access to all participants (Teacher, Coach, Students). For example Moodle<sup>2</sup>.</li> </ul>
Put all the content on the platform.	Teacher	<ul style="list-style-type: none"> <li>▪ Targets of ICC</li> <li>▪ Schedule of ICC sessions</li> <li>▪ Activities to perform according to the coach.</li> </ul>
Upload self-evaluation activities with a feedback to the students.	Teacher-Coach	<ul style="list-style-type: none"> <li>▪ All the students do the self-evaluation activities.</li> </ul>
Control the job sheet of the students.	Teacher	<ul style="list-style-type: none"> <li>▪ All the students fill in the job sheet every session.</li> </ul>
Use Motivating, Teaching and Learning activities.	Teacher	<ul style="list-style-type: none"> <li>▪ Class activity to develop with students.</li> </ul>
Schedule when to give theoretical and practical information about the activity at ICC.	Teacher-Coach	<ul style="list-style-type: none"> <li>▪ Timetable with a brief explanation about the session.</li> </ul>
Use class activities for the students to develop social skills like punctuality, autonomy, capability to receive orders, team work, problem resolution and responsibility.	Teacher-Coach	<ul style="list-style-type: none"> <li>▪ Activity session for each social skill.</li> </ul>
Didactic support: Interview the students to receive feedback. Decide what channels to use in communication with students. (Forums, E-mail, interview, chat, social networks)	Teacher	<ul style="list-style-type: none"> <li>▪ Notes and comments to use for future experience.</li> <li>▪ E-mail addresses of all students.</li> <li>▪ Discussion on forums.</li> </ul>

1. For more information on the use e-learning platforms, we refer to the inspiration book on "Motivating Teaching and Learning Methods"

2. For more information on the use of Moodle, we refer to the inspiration book on "Motivating Teaching and Learning Methods"

### — 6.5 Follow up

Control of the flow of the operations according to the objectives and goals.  
Mark who takes the decisions or is responsible.

In-company classes - Succession of the process			
	Comment	Teacher	Coach
<b>Preparation</b>			
Lesson	When to give which lessons in function of the company circumstances?		
Material	What is necessary to teach in optimal circumstances (room, computer, ...)?		
Organisation	Who looks after which material?		
Workplace	What items do you want to teach? Who gives which explanation?		
Team	Who to address and who can agree with the company staff members?		
Documentation	Which company documentation is desirable and possible to use?		
Didactic material	Which didactic material is available and useful?		
Time partitioning theory - shop floor	Which period of time is foreseen for theory and which for the action on the work floor?		
Ranking theory - shop floor	First the theory, afterwards the action and synthesis. The ranking is stipulated by company situations.		
<b>ICC - elements</b>			
Theory in syllabus	Transmit knowledge and insights, comments, instructions.		
Workplace	Demonstration and explanation (contains elements from the theory).		
	Explanation by the employee and adjustment by the teacher by means of <ul style="list-style-type: none"> <li>▪ Questions and answers.</li> <li>▪ Questions to complete the theory (basic)</li> <li>▪ Questions to elaborate basic theory.</li> <li>▪ Absorbing the information.</li> </ul>		
Synthesis	Summary of the theory when observing at the workplace.		
Evaluation	Choice of traditional evaluation options.		
Evaluation ICC course	What went well? What did less? Where can we help?		
	Did the lesson satisfy the expectations of company and/or teacher?		

## — 6.6 Evaluation

ICC Evaluation		
Self-evaluation by students	Evaluation by the students See point 4.2.4	
Product evaluation	Works of the students Processing of the material Acquisition of Knowledge	
Process Evaluation	Attitude of the students Monitoring of remediation Teamwork Initiative Daily task report	
Improvement	Adjustment Remediation	
Follow-up visits by the staff	School staff Company management	
Reflection by all partners	Students Teachers School Within the company Mentor from the company	







## — 6.8 Dissemination

### Dissemination planning phase 1

Who will be the intended audience?

How will the ICC information be used by the target audience(s)?

What are the existing channels of dissemination?

Where and how will dissemination take place?

What dissemination pathways or channels do we plan to use? (training, meetings, etc.)

Which media and location do we plan to use? (print/video/CD, auditorium, meeting room, etc.)

Who will conduct the dissemination for each target group?

How can the ICC solutions be adapted to local needs? (The field of education, available companies, ICC options)

### Dissemination planning phase 2

What are the main aims of dissemination?

Will dissemination raise awareness, provide basic knowledge, influence decision-making, or bring about change to local teaching curricula?

How will you achieve the main aim(s)?

What factors prevent information exchange?

How will you overcome any potential blockages?

Can ICC methods be easily adapted to local and regional conditions?

What facilities, time, money, or resources are available for dissemination?

## ■ Chapter 7

# Acknowledgements

These inspiration books wouldn't have been published without the help and contribution of a lot of people.

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## Rony Dobbelaere

8 september 1958 – 5 december 2011

During the preparation of the ICC manual, the Belgian team lost one of his most valued members. Rony Dobbelaere was a pioneer of the ICC classes. The ideas and principles were in our school first put in practice by him.

He contacted Industrial Gears Watteeuw and succeeded to convince them of the value of this system. It led to an inspiring win-win situation for both the students and the industry ...

He is and will be greatly missed.

*You were always there for everyone:*

*Your family, your close and distant friends, your students ...*

*Always approachable, beloved and inspiring.*

*Even from the remotest corners of this world*

*you were strengthened in your conviction of world citizen.*

*Principles and values were very important to you*

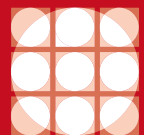
*Rony, thinker and doer, sensitive, thoughtful, honest,*

*always ready to give a helping hand,*

*Playing with words and humor to share joys and sorrows.*

*Whatever you did, wherever you came, you knew how*

*to create a warm and positive atmosphere.*





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