

EDU-SMEs deliverable 2.1.5:

***Pedagogical model for cross-border cooperation between education and business***

EDU-SMEs aims to develop a better matching of graduates' competencies and companies' needs in the Central-Baltic region. This aim is reached through joint curriculum development among the partners and through a pedagogical method where educational institutions and SMEs closely cooperate.

The project's main pedagogical approach is the cross-border assignment (CBA) where students, faculty and SMEs work closely together across national borders. The CBAs directly link SMEs with faculty and students abroad; i.e. with their target markets.

Due to the geographical distance between the SMEs and the students, information- and communication technologies (ICTs) also play a vital role. Cross-border communication between students, faculty, and companies in the Central-Baltic region is facilitated by well-chosen ICT tools that correspond to the needs and resources available in the specific organisations.

**What is a cross-border assignment (CBA)?**

The EDU-SMEs partners define a CBA in the following way:

*A cross-border assignment (CBA) links education and business over national borders in a learning environment supported by information and communication technologies (ICTs). In this environment, effective communications are created between students, faculty and company representatives, in order to carry out a specific and meaningful real-world assignment. The assignment supports the internationalisation of the company and also forms an integrated part of the student's educational curriculum.*

The CBAs reflect concrete needs that the SMEs have in order to boost their internationalisation. SMEs provide real-life assignments to students and faculty abroad in the target markets of the companies. The partner UAS again will engage in a new form of interactive business learning, where they extend their reach beyond the campus to organizations and workplaces.



In the CBAs, the students can undertake several different types of assignments. Among these are e.g. to

- develop market entry plans
- participate in business fairs
- test products and services
- gather information about financing and business support
- other activities for successful internationalisation of SMEs

By solving the assignments, the students will develop a more practice-oriented and entrepreneurial attitude towards international business. That also reduces the risk for mismatch of competencies and enhances the employability of the graduates.

### **Who are the main players of a CBA?**

There are 3 main players to a CBA:

1. A team of teachers in each partner UAS. The teachers are the key persons that decide what cross-border assignments to accept into their courses. The assignments should be possible to accomplish in the time frame of the course (or other study module) and they should lead to learning outcomes in line with the overall aim of the course. The teachers also provide guidance to the students during the CBA.
2. The students that conduct the CBA. They form teams where necessary competencies are available. They are also in close contact with their teacher and the SME abroad at least 3 times during the assignment: before the start to make sure goals are clear to both parties, mid-term to report status and to agree on the next step, in the end to present their final result to the company and to get feed-back on their result.
3. The SMEs that provide the CBAs. They will also assign a business tutor to closely guide the students through the process and to answer the company-related questions that will arise. The business tutors will be available either in the EDU-SMEs e-learning environment or on-campus.

Valuable knowledge will be provided to the SMEs, and no fees for the CBA implementation are charged. However, the SME will need to allocate sufficient time to mentoring and support throughout the CBA.

## The CBA pedagogical model

The main pedagogical approach in EDU-SMEs is outlined in the CBA model. The model has its roots especially in e-learning pedagogy and knowledge management theory, and it builds on extensive use of ICTs. The CBA model is a further development of model called INTERN, that focuses on cross-border cooperation between educational institutions and enterprises in virtual learning environments. The INTERN model has been developed and further validated in a series of international projects (e.g. Källström, 2014, Kristensen et.al, 2007, Intern management group, 2002). In EDU-SMEs, the INTERN model has been further augmented to correspond to the internationalisation needs of SMEs and to the rapid development of ICTs.

The CBA model (see figure 1) shows how different learning processes operate through the interplay between theory and practice, and between tacit and explicit knowledge. Explicit knowledge is here defined as knowledge that is documented and can be transmitted in formal, systematic language. Tacit knowledge again is the component of knowledge that is normally not easy to verbally transmit. It is deeply rooted in action and involvement in a specific context, and often resides in the knowledge and skills of experienced individuals (see e.g. Nonaka et.al 1995, 1998 and Raelin, 1997).

The CBA model has 5 different layers that show the following:

1. The students learning described in the sequence: conceptualisation – experimentation – experience – reflection - conceptualisation -> (learning spiral)
2. The interplay between tacit and explicit knowledge
3. The interplay between theory and practice
4. Suggested ICT-tools to be applied for cross-border learning activities
5. Concrete steps to be taken in the CBA at each stage of the learning spiral

The activities in each stage of the learning spiral are briefly described below, and thereafter further outlined in figure 1.

### A. Conceptualisation

The student's learning process in the CBA starts by theoretical lectures in the specific academic field studied. Theoretical conceptualizations, provided by the faculty, give the students the means to tackle the forthcoming assignments in different organizational contexts. The lectures/theoretical studies thereby provide the students with a solid contextual frame for the forthcoming CBA. Of special



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importance are the learning materials available in the EDU-SMEs course and the additional materials provided by the teacher. Different ICT-tools can be utilized, as suggested in the model.

### **B. Experimentation**

In the experimentation stage of the learning process, the theoretical concepts in the project area are further elaborated upon. At this stage the students are aware of the topic area of the CBA that they will be solving. Students will be practicing tools and techniques needed for successful implementation of the CBA. Their learning is further enhanced by e.g. studying previous cases (and possibly available CBA reports by fellow students) in their specific discipline. Web-discussions and different exercises allow for further discussions and practising among the project participants.

### **C. Experience**

First-hand knowledge from practical business life is thereafter introduced into the project, when company representatives present the CBA in detail. Experts from the SME share their tacit knowledge with the students also by mentoring them throughout the CBA. A close link between theory and practice is created and the students are developing knowledge, skills and competencies needed by the companies. Students learn both from the mentor in the firm, from the faculty member guiding them, and above all through their own problem-solving activities. They strive towards the final goal of this learning stage – to present a solution to the SME that can support the internationalisation of the firm.

### **D. Reflection**

In the reflection stage, feed-back and evaluations are gathered from all participants of the CBA: company representatives, students, and faculty. Thereby, both the business and academic sector will assess the outcome of the project work and the learning process. A de-briefing session will be arranged where students can reflect also on the theoretical concepts chosen in the beginning of the CBA and their relevance for the practical implementation, as well as compare alternative ways of solving the same practical problems.

The learning process (A - D) thereafter continues in a learning cycle, as the students can utilize the knowledge and experience gained in the CBA also in other courses and assignments. Furthermore, the CBA reports produced will continue to live on, since they form valuable learning materials for other students who will have the opportunity to solve cross-border assignments provided by SMEs abroad.

**Figure 1: The CBA pedagogical model for the student's learning**

	<b>Explicit knowledge</b>	<b>Tacit knowledge</b>
<b>Theory</b>	<p><b>A. CONCEPTUALISATION</b></p> <ul style="list-style-type: none"> <li>* Creating a theoretical basis for the pilot project</li> <li>* Studying relevant parts of the EDU-SMEs course materials</li> <li>* Studying further theoretical materials related to the topic area in question</li> </ul> <p>ICT-tools, e.g.</p> <ul style="list-style-type: none"> <li>- EDU-SMEs e-learning environment (Moodle, Eliademy)</li> <li>- institutions' own e-learning systems</li> <li>- audio conference/video conference among group members</li> <li>- variety of applicable social media (Skype, LindedIn, twitter etc.)</li> </ul>	<p><b>B. EXPERIMENTATION</b></p> <ul style="list-style-type: none"> <li>* Broadening the understanding of theories used in individual pilot project through a learning-by-doing approach</li> <li>* Solving cases related to the project area</li> <li>* Analysing and updating relevant previous CBAs in the field</li> </ul> <p>ICT-tools, e.g.</p> <ul style="list-style-type: none"> <li>- EDU-SMEs e-learning environment (Moodle, Eliademy)</li> <li>- institutions' own e-learning systems</li> <li>- researching Internet for findings in similar projects and analysing their applicability to the present CBA</li> <li>- group discussions using social media</li> </ul>
<b>Practice</b>	<p><b>D. REFLECTION</b></p> <ul style="list-style-type: none"> <li>* Company representatives and the company mentor evaluate working with the students in a CBA</li> <li>* Faculty representative/mentor evaluate working with the students in a CBA</li> <li>* Students evaluate their own learning from working with the CBA</li> <li>* A de-briefing discussion is held at each partner institution to summarize the results of all CBAs undertaken</li> </ul> <p>ICT-tools, e.g.</p> <ul style="list-style-type: none"> <li>- Video (Skype) conference</li> <li>- Web-based questionnaires for analysing results</li> <li>- CBA report uploaded in EDU-SMEs e-learning environment to form learning materials for new students (Moodle, Eliademy)</li> </ul>	<p><b>C. EXPERIENCE</b></p> <ul style="list-style-type: none"> <li>* SMEs provide cross-border assignments to students abroad</li> <li>* Each SME provides a mentor to guide the students during the CBA</li> <li>* The responsible UAS also provides a mentor to guide the students</li> <li>* Students solve the CBA</li> <li>* Students present the CBA result to the SME and to faculty and fellow students</li> </ul> <p>ICT-tools, e.g.</p> <ul style="list-style-type: none"> <li>- Audio/video conference (Skype)</li> <li>- E-mail</li> <li>- Project chat-environment in social media (e.g. WhatsApp)</li> </ul>



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Throughout the EDU-SMEs project, and during the further exploitation of the project results, the CBA model will be further evaluated and adjusted, if needed. The consortium will closely examine the main benefits derived from implementing the CBAs – benefits both to students, faculty and SMEs – in the Central-Baltic region.

Above all, the CBA model aims to secure a better matching of graduates' competencies and companies' needs in the highly important field of internationalisation of Central-Baltic SMEs. The CBA pedagogical approach will foster genuine links between theory and practice to the benefit of both education and businesses.

## References

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