

**SEA-ABT: SOUTH EAST ASIA ACADEMY FOR BEVERAGE TECHNOLOGY**

Project number: 561515-EPP-1-2015-1-AT-EPPKA2-CBHE-JP

October 2015-September 2018

**Deliverable D6.2**

**Roadmaps for the establishment of LLL at Thai universities**

**Prepared by:** Marion Ramusch (BOKU)

**Contributors:** All partners

**Delivery date:** M40 - 2019

<b>Dissemination Level</b>		
<b>PU</b>	Public	<b>X</b>
<b>PP</b>	Restricted to other programme participants (including Commission services and projects reviewers)	
<b>CO</b>	Confidential, only for members of the consortium (including EACEA and Commission services and projects reviewers)	

**Summary:**

With the main aim of sharing best practice examples of existing LLL structures already available at the universities in Thailand and in Europe, this deliverable lists road maps, flow sheets and quality assurance structures for establishing LLL structures. As such, the deliverable provides for an elaborate overview of LLL in Europe and the classification of learning activities to provide an overview and understanding of where LLL fits into the overall learning environment; followed by a detailed roadmap for developing a LLL programme; and finally case studies of LLL modules at BOKU, KMITL and CU provided as best practice examples.

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### **Project Coordinator:**

GERHARD SCHLEINING | BOKU – Universitaet fuer Bodenkultur Wien |  
[gerhard.schleining@boku.ac.at](mailto:gerhard.schleining@boku.ac.at)

# 1 Lifelong Learning

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In the European context higher education plays an important role in the development of individuals and the society as a whole by providing highly skilled human capital and citizens which Europe needs in term of job creation, economic growth and prosperity. Higher Education Institutions (HEI) are the crucial partner for the implementation of the EU education strategy (European Scientific Journal, April 2013, edition vol.9, No.10 ISSN: 1857 – 7881).

The EU document “European higher education in the world (COM (2013) 499 final) links this to international development cooperation: international strategic partnerships with a balanced involvement of business and higher education are essential for cross-border innovation to address global challenges. Partnerships which aim to foster entrepreneurship and innovation, triggering innovative approaches, entrepreneurial skills and attitudes in learners will bring benefits both to European competitiveness and to partner countries. A particular potential lies in promoting affordable and inclusive innovation which could help the emerging economies to tackle their societal challenges as well as promote market access, trade and investment for European companies.

Within the SEA-ABT project links between higher education and business are established, aiming at encouraging the transfer and sharing of knowledge, the creation of long-term partnerships and opportunities as well as to drive innovation and creativity.

Lifelong learning (LLL) is defined as encompassing ‘all learning activities undertaken throughout life, with the aim of improving knowledge, skills and competences, within a personal, civic, social and/or employment-related perspective’ (*COMMUNICATION FROM THE COMMISSION Making a Europe an Area of Lifelong Learning a Reality, 2001*) and is classified into four categories.

**Classification of Learning Activities** (*Classification of learning activities, Manual, EC/Eurostat, 2006; updated 2016*)

- **Formal education**  
“taught learning” (face to face or distance learning) provided in an institutional framework and location, such as schools, colleges, universities etc.  
A programme is only formal if the programme itself is recognised by the relevant national education or equivalent authorities. It has to have a duration of at least 1 semester (30 ECTS)  
Registration and Admission requirements have to be defined and fulfilled. According to the ISCED definition, formal education can be seen as a complex ladder of education where recognised completion of one level gives access to another higher level of complexity.  
Examples: elementary and secondary school, full study programmes, university modules with a duration of at least 1 semester and 30 ECTS
- **Non formal education**  
Any organized and sustained learning activities, that do not fit in the definition of formal learning. It may take place in or outside of educational institutions.  
Formal and non-formal education look very similar at first sight. If it is not recognised by the relevant national education or equivalent authorities, it is non-formal.  
Examples: Courses, seminars, workshops that are job-related, Courses, seminars, workshops that include practical training, or include distance learning, private lessons given by teachers, etc.

- Informal learning  
Informal learning activities are not institutionalised. They include a less structured set of single learning activities, that occur in the work place and in the daily life of every person, on a self directed, family directed or socially directed basis.  
Examples: instructions from a colleague at work on how to use a new tool, private lessons given by a relative or neighbour, guided or unguided visits of museums, exhibitions, botanical gardens, EU institutions, self-studying or learning groups, etc.
- Random/incidental learning

A learning activity is always intentional and organised in some way, including by the learner himself.

Within the non formal and informal learning borders several tailor made courses and modules were developed within the framework of the SEA-ABT project<sup>1</sup>:

- Shelf-life of Beverages
- Not only Sweeteners: Technological Functionality of Sugars in Foods and Beverages
- Regulations and Standards for Beverages
- Hygienic Design
- New Product Development for Brewing Technology
- Innovative Processing Technologies for the Beverage Industry
- Research Project Management
- Fruit Juice and Fruit-based Beverages
- Food Safety Management: Practical Practices for the Beverage Industry
- Lean Business Plan Development
- Selected Topics of Food Safety for Less Educated Food Professionals

Based on the existing plan, certain steps to develop LLL programmes, such as courses and modules were evolved with assistance of BOKU. The following flowchart shows the different steps for development and implementation of a new LLL programme. Based on this Flowchart LLL programmes are developed at the 2 Thai Universities King Mongkut University Ladkrabang and Chulalongkorn University, Bangkok, Thailand.

Roadmap/Flowchart: Steps in developing a programme

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<sup>1</sup> In D3.1 - *Report on developed CPD products* each developed CPD module is described with regard to learning outcomes, content, teaching and learning methods, language, available teaching materials, assessment method and evaluation, qualification and skill requirements for teachers, previous knowledge expected and workload for students. All this data is made available in a web database maintained by the Academy at <https://www.sea-abt.eu/training-modules-for-continuing-professional-development>

1. Idea
  - Everything stems from an initial idea. The person who has this idea must know, which department or person is responsible to develop it further.
2. Concept
  - An overall concept (appr. 1 page) should be written and approved by the authority.
3. Set up a working group
  - To develop the programme further on, a working group of appr. 4 people should be defined.
4. Analysis of requirement
  - What are the needs of the participants and the market?
  - What is required at your institution to implement the programme?
  - To meet the needs a market analysis must be made. This can be in form of expert interviews, surveys by questionnaires, telephone or in person, or similar approaches.
5. Decision of continue to develop the programme
  - The analysis of requirements should be approved be authorities
6. Finalising curriculum
  - The working groups (sometimes with more experts for special contents) finalise the curriculum
7. Cost calculation and fixation of participation fee
  - How much does the programme cost? Think about all expenses you have. For example: Teaching Assignments, Administration, Teaching Material, Catering, Field trips, Closing ceremonies, Marketing etc.
8. Agreement on curriculum and cost calculation
9. Authorities have to approve the final curriculum and the cost calculation
10. Announcement of the programme
11. Public relation/Marketing
12. Homepage, announcements in journals and newspapers, mails to selected target groups, social media, etc.

13. Authorities such as for example rectorate, head of department or similar

## 2 Designing Lifelong Learning Programmes/Learning Activities

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To ensure success of a Lifelong Learning Programme it is important to define:

- Target group

Define your target group and find out who is most likely to attend your Lifelong Learning programme: Age, Location, Education Level, Gender, Income Level, Occupation

- Needs

Analyse the needs of your target group and the needs of the market. What knowledge, skills and abilities are needed?

- Methods for data collections for example can be: questionnaires, direct or telephone interviews, literature review, consultation of experts, etc.

- Content of the programme

What will be the content of the programme? Can the university impart the knowledge by her own or are external experts/companies needed?

- Aims and objectives

What do the participants will achieve during the programme/in the end of the programme? The overall purpose should be clearly defined. Measureable outcomes should be defined as well (objectives)

- Learning outcomes

Articulate what students should know or be able to do as a result of taking the course

Learning outcomes must be student-focused and measurable statements.

- Learning methods to achieve the learning outcomes

Choose which Learning and teaching method will fit best to achieve the learning outcomes

- Accreditation

What do you need to accreditate the programme?

- Methods of Assessment

To determine the extent to which the participants have met the learning outcomes you have to choose a method of Assessment.

- Evaluation

Evaluation during the programme and in the end of the programme is useful for further adaption, that is possibly needed.

## 3 Case studies

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### 3.1 University of Natural Resources and Life Sciences Vienna, BOKU

#### **Basic**

Title: Rural land management

Duration: 2 years, 60 ECTS

Repetition: cycle of 2 years

Aims: Competence for sustainable land management, ability optimize land cultivation and land use, knowledge of land related administration and valuation, knowledge on land development, understanding of market mechanisms of land

Target group: Landowners, employees of public institutions, lawyers, people who are interested in expanding their professional field

University entrance qualification and/or at least 3 years of professional experience is required for accreditation.

Certificate: “Academic Rural Land Manager”

Amount of ECTS: 60

Short description:

Rural Land management is a continuing education programme developed at University of Natural Resources and Life Sciences Vienna (BOKU). The two year programme is part time. The course is given in German language. The programme “Rural Land Management” provides basic skills and deep knowledge about the administration and documentation of land, the use and cultivation of land as well as the valuation and development of properties in the rural space.

#### **Specific**

##### 1. Background

- Idea / need of the BOKU and /or stakeholders
- Demand
- Approval by board of university

##### 2. Administrative issues

- accreditation process: flowchart of the university for continuing education (*appendix 1*):
  - phase I -> concept (strategic decision)
  - phase II -> set up a working group for the development of the curriculum
  - phase III -> development of the study and structure / needs analysis - decision on further processing and finalization of the Curriculum
  - phase IV -> finalization of the Curriculum / (completion of the cooperation agreement if necessary) / study-related examination, determination of the financial requirements, space and the teaching resources / decision on the financial cover / resolution of the curriculum / (signing of cooperation agreement if necessary) /

Decision YES/NO of the Senate and the rectorate / publication in the official newsletter of BOKU

- B)
  - educational-content: scientific head of programme – scientific advisory board – lecturer
  - administrative staff: administrative head of programme – administrative manager (secretary) – accountant – controlling

### 3. Teaching / professional issues

- Learning and teaching frame defined by learning outcomes – responsibility about contents by teachers – module heads – scientific head of programme
- Teaching is preferably covered by BOKU-lecturers
- External lecturers for specific contents and practical knowledge
- Motivation for students: interest to gain the special knowledge of the university (extra money? Additional business)
- Lecturers are recruited by recommendation
- The continuing education programme is evaluated continuously - teaching staff will be substituted in case of weak evaluation or due to of personal reasons – currently no personnel change

### 4. Implementation

- Participants:
  - Maximum number of participants 25 – 17 participants in current programme
  - payment: costs of the programme: 13.000 €; Costs mainly covered by participants themselves (rare exception: employers bear costs of programme)
- Schedule:
  - Programme modules are provided in blocks on weekends and/or holidays
- Venue:
  - Programme modules were mainly held at the university, 2 blocks are delivered abroad; 5 days of excursion (visiting various private enterprises and public authorities)

### 5. Promotion

The promotion of the programme started one year before the official launch of the programme

- Announcements in professional journals and newspapers
- Poster, folder and flyer dissemination
- Information evening with heads of programme and involved teaching staff
- Homepage
- Telemarketing



- e-mails and conventional mails to selected target groups (e.g. chamber of agriculture, professional associations)
  - Recommendations
  - Word of mouth
6. Concluding remarks and recommendations
- Improved job opportunities after completion
  - Extensive amount of time for programme development
  - Study programme is an enabler of an increased professional network
  - Communication between teachers and students has to be promoted
  - Handouts of lectures have to be delivered in advance
  - Students expect addressability of course management 7/24 (7 days per week and 24 hours per day)
  - High variation of learning and teaching methods is favoured by students
  - Promotion has to be started as early as possible
  - Participants has to be informed about the workload
  - Offer partial payment options (funding)
  - Co-sponsorship opportunities has to be checked

## 3.2 KMITL

### **Basic**

**Title:** Hygienic Design

**Duration:** 4 days and self practice

**Repetition:** 2 times per year

**Aims:** Competence for Hygienic in Food Manufacturing, understanding of mechanism

As such, participants will learn about relevant national and international legislation and standards; get insight into the hygienic design of equipment and processes for the food, feed and pharmaceutical industry, to better fulfil the wishes of purchasers and retailers.

**Target group:** Open for anybody with basic knowledge and experience in Food Manufacturing

**Certificate:** are provided from EHEDG

Amount of hours including self study: 21 hours (3 days+5 h self study)

Short description:

### **Specific**

The LLL course Hygienic Design was developed within the SEA-ABT project following the developed flowchart (see above). The process to develop the LLL course took 2 years and different non-academic stakeholders like EHEDG and PATKOL were involved.

Before the LLL course was set up, a needs analysis was performed.

Basic costs for participants are 4000 baht per person. Discounts for students and members of EHEDG are provided. Due to high demand, it is held 2 times a year and is with 40 participants fully booked.

Hygienic design is implemented and supported by the great commitment of EHEDG and PATKOL. EHEDG provides training materials and trainers. PATKOL provides engineering knowledge and practical trainers within the course.

### 3.3 Chulalongkorn University

#### 3.3.1 CU MOOC

CU MOOC is one of example of Life Long Learning (LLL) tools that is developed for anyone who would like to gain new knowledge, develop their skill and competency in a particular subjects or area. Anyone can learn means open for students, staff and public. The participant need to register in <https://mooc.chula.ac.th/how-to> which is easy web based guild direction to get the courses download. The participants will obtained “certificate of completion” when they achieved a requirement in each course that is specified for that. The courses available in CU MOOC is free.

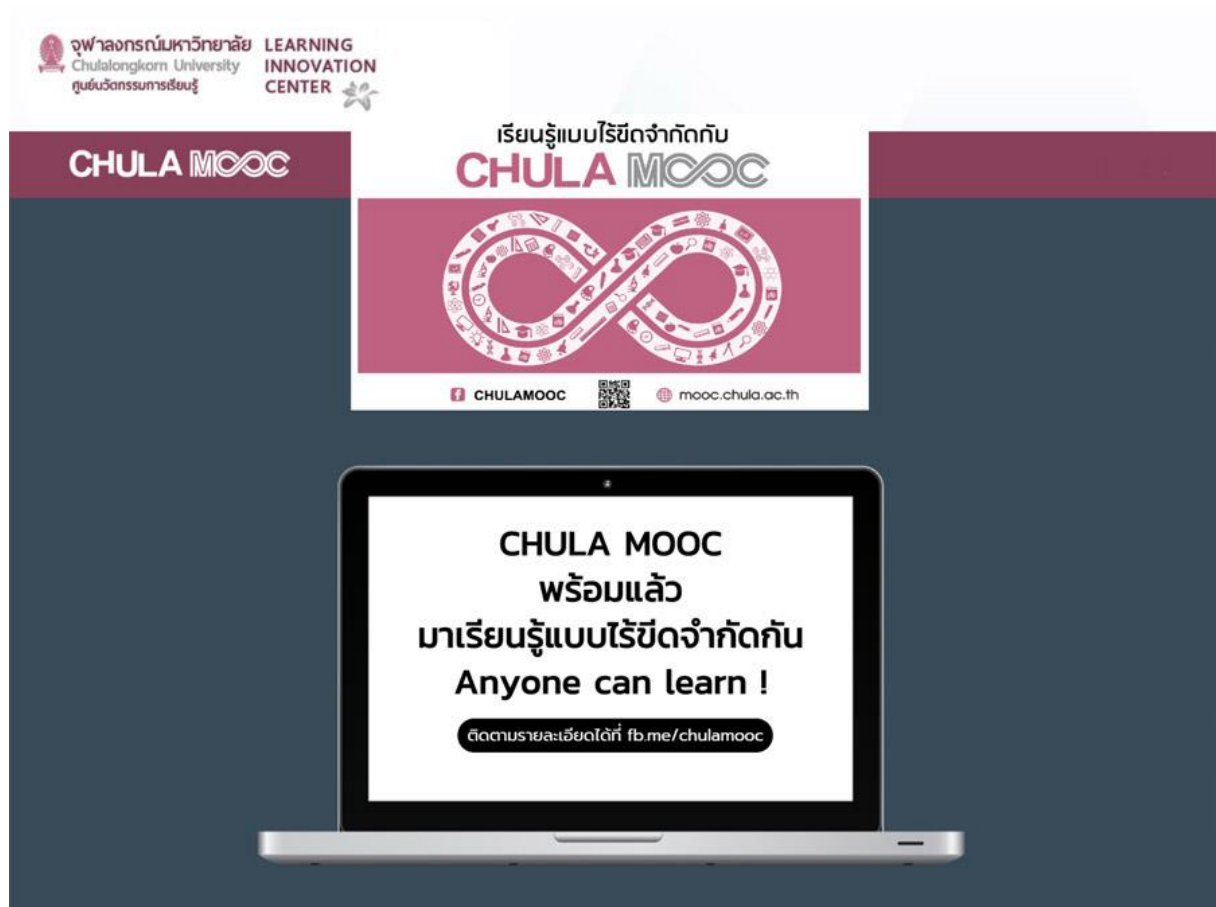


Figure 1: <https://mooc.chula.ac.th/>



Figure 2: Example of certificate of completion

The setup of requirement of subjects in MOOC is usually see from society trend and updated issue for example general knowledge to use in everyday life or technical knowledge that can be used for career development or skill. CU MOOC is just launched in year 2017 in the university. At the beginning there is no questionnaire to send out to alumni or public but the university set the working group to invite contributions from individual academia or faculty to volunteer to create this LLL tools by supporting budget and human resource to each lecturer or team to develop MOOC. The step of development is (1) the university calls for proposal and (2) they will screen the topic. (3) Any topic that is passed will be contacted by MOOC staff and start to develop the lessons by (4) discussion with the lecturer (5) develop story board and content (6) shooting and create animation (7) editing and proving (8) uploaded on line. The duration of development is 6-12 months.

However, in the future the questionnaire would be develop to ask the alumni association, students, company or public for any topic that they are interested to learn for LLL.

Example of CU MOOC courses



Figure 3: Examples of courses

The course is designed for short program to long program, it is depend on the content. It could be 1 day to months. The challenges of CU MOOC is a competition of similar LLL tools that may be opened from other university or the courses are out of date or too complicated to study. That is why the course is free and university is paid for the development team to help simplify the content for public. Practically, University would earn recognition from public or more students would come to study at CU but the direct income from MOOC.

Teaching personnel in one course can be 1 – 5 lecturers. The partners involve in the course could be company, government or farmers.

For participants can be up to 4000 persons at each time the course is opened.

The assessment and evaluation will be the end of each course which is depend on each course.