

SEA-ABT: SOUTH EAST ASIA ACADEMY FOR BEVERAGE TECHNOLOGY

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Full Report on Newly Integrated Tools

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

Summary:

Deliverable 4.4 will give an overview of all the newly integrated teaching tools in the frame of the SEA-ABT project and their applicability as well as limitations.

Contents

1	Introduction	3
2	Tools	3
2.1	Database and virtual training tools	3
2.1.1	Digital library	3
2.1.2	SEA-ABT e-learning platform	4
2.1.3	Webinars	4
2.2	Online networking and interactive platform.....	5
2.2.1	Needs information collection system	5
2.2.2	Brokerage System	5
2.3	Innovative virtual training methods	6
2.3.1	Garage concept	6
2.4	Equipment	6
2.4.1	KMITL equipment.....	6
2.4.2	KU equipment	7
2.4.3	CU equipment	8

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1 Introduction

Aim of WP4 was to

- Modernise and extend the inventory of the Universities in the partner countries regarding state of the art teaching technologies and tools for innovative education programmes
- Provide a broad and sustainable spectrum of modern teaching tools for University staff to choose from and integrate into their daily work
- Development, adaptation and integration of specific tools and methods for modules in beverage technology and soft skills
- Train the teachers and staff on new and updated tools and teaching techniques
- Exchange of best practise experiences between universities
- Integrate inventory and approaches into academy and thus provide it to a broad audience within the participating Universities (cross departments and institutes)

A series of tools were, thus, partly designed and implemented and partly developed. New equipment and apparatus were also bought by Thai university partners.

In this report the summary of the tools and equipment bought was made, complemented by description of their application within the Higher Education programmes of the SEA-ABT partners.

2 Tools

New tools developed during the project were classified as following:

1. Databases and virtual training tools
2. Online networking and interactive platform
3. Innovative virtual training methods
4. Equipment

2.1 Database and virtual training tools

2.1.1 Digital library

The ISEKI-Food Digital Library was initially developed in the frame of the FooD-STA project and then integrated with inputs from the ISEKI-Food Network, the TRAF00N Project and SEA-ABT Project. It offers a collection of documents, references, teaching material for Higher Education and Professional training. During the SEA-ABT Project all the material available in the digital library have been used in support to training sessions addressed to people involved in the food industry and business as well as to high educated people (i.e. researchers and scientist) and students.

Link: <https://db.iseki-food.net/digital-library/output>

2.1.2 SEA-ABT e-learning platform

A dedicated e-learning platform section has been implemented within the larger E-learning platform of the ISEKI-Food Association that contains the two e-learning courses newly developed within the SEA-ABT project:

1) HE module Beverage Technology II - Brewing technology (Direct link: <https://moodle.iseki-food.net/enrol/index.php?id=53>)

The module, held by Dr. Ulaiwan Withayagiat from Kasetsart University, was run in December 2018. 44 people were enrolled in the module, most part of them from the food industry, others from the academia and public institution

2) HE module "Hazard in Hygienic processing" (Direct link: <https://moodle.iseki-food.net/enrol/index.php?id=55>)

The module, held by Assoc. Prof. Dr. Taweeapol Suesut from King Monkut's Institute of Technology Ladkrabang, was run in January 2018 attended by both food factory professionals and students.

SEA-ABT e-learning platform: <https://moodle.iseki-food.net/course/index.php?categoryid=7>

Feedbacks from the experts that held the modules were collected. Main limitations highlighted by teachers were related to the fact that sometimes real-time feedback from students would be preferred, especially when a topic needs to be clarified and that is no possible when an e-learning tool is applied. Nevertheless, the application of this tool resulted in a less time-consuming method compared to a face-to-face method but with the same level of learning outcomes by the students.

2.1.3 Webinars

Web-based seminars were delivered within the SEA-ABT project for the following purposes:

- Trainings for the Curriculum Professional Development;
- Trainings for SEA-ABT BEVERAGE-4-Us students' competition.
- E-Workshop (final workshop SEA-ABT BEVERAGE-4-Us students' competition)

The "GoToMeeting" tool was used and the access was provided for free by the ISEKI-Food Association.

The webinars that have been delivered during the SEA-ABT project is listed in the table below:

Purpose	Webinar	Responsible	Link	Date
CPD modules	Sugars in Food	Paola Pittia (Unite)	https://www.sea-abt.eu/node/298	22 nd August 2018
	Hygienic Design	Taweepol Suesut (KMITL)	https://www.sea-abt.eu/Hygienicdesign	8 th March 2018
Training for SEA-ABT Beverage-4-US	Design and development of innovative beverages	Paola Pittia (Unite)	https://www.sea-abt.eu/innovativebeverages	10 th April 2018
	Design Thinking for Beverage Entrepreneurs	Porramate Chumyim (National Science Technology Policy Office)	https://www.sea-abt.eu/designthinking	25 th April 2018
Final workshop SEA-ABT Beverage-4-US	E-workshop, award and presentation of the Beverage-4-us		https://www.sea-abt.eu/finalworkshop	8 th June 2018

22 participants, 11 industry 7 academic 3 others 1 government sector

2.2 Online networking and interactive platform

2.2.1 Needs information collection system

The main aim of SEA-ABT project was to increase the capacities of Thai universities for delivering modern high quality curricula and CPD training in the area of beverage technology. To enable and support sustainable national and international maintenance and further development of educational services and products, SEA-ABT focused on developing demand-driven modules and related educational products for use in CPD and academic education in the area of beverage technology.

A questionnaire about competences and skills needed in the beverage industry was developed and submitted mainly to staff who work in the food industry, especially in the beverage industry.

A detailed summary of the SEA-ABT surveys collecting information on available teaching capacities and identified needs of courses and modules within the High Education (HE) and Continual Professional Development (CPD) can be found at the following link:

https://www.sea-abt.eu/sites/sea-abt.eu/files/download/129/Short_summary_D1.2_-_Inventory_of_available_capacities_and_identified_gaps.pdf

The needs information collection system tool has been mainly conceived for industrial/business and educational institutions in the food sector.

2.2.2 Brokerage System

The SEA-ABT Brokerage System is a platform that supports the collaboration between Thailand and Europe where available graduates can offer their expertise by submitting their job applications, on the one side, and the beverage sector can provide information about offered job opportunities, on the other side.

The brokerage system includes two databases:

1. a job offer database with all types of jobs in the beverage sector (industry, academia, etc.)
2. a job application database where skilled graduates can present their expertise and their availability

The brokerage system is a basis for graduates and companies about offered job opportunities and available graduates or short term scientific missions for researchers and professionals from the academia.

Direct link: <https://www.sea-abt.eu/brokerage-select>

2.3 Innovative virtual training methods

2.3.1 Garage concept

Garage concept approach is a new teaching method aimed to enhance professional and entrepreneurial skills of the HE students and graduates. This multi-disciplinary training is developed with the contribution of experts of food technologists, business, marketing, economics that allow trainees to learn about the methods and instruments for development, assessment and realization of business ideas. Trainees can also practice the “garage concept” with the development of a project based on a specific “business idea” (e.g. new product, innovative process, packaging etc.) including the business plan.

The SEA-ABT project consortium agreed to implement the garage concept via an international students’ competition dedicated to projects on beverages. Taking as reference the already developed “FoodFactory-4-Us” developed in other projects with the support of the ISEKI-Food project, the “Beverage-4-Us competition was thus designed and developed.

A specific sub-page of the SEA-ABT project was set: <https://www.sea-abt.eu/beverage-4-us>

2.4 Equipment

Different equipment and apparatus have been bought and (or will be) integrated in courses and CPD in order to improve the teaching quality

2.4.1 KMITL equipment

Equipment: Cleaning test rig (pic below)



The cleaning test rig could be applicable in:

- SEA-ABT HE course: Hygenic engineering and design
- SEA-ABT CPD course: Hygenic design
- Hygenic design workshops e.g. EHEDGE Advanced course in Hygenic Design

2.4.2 KU equipment

Equipment: Micro brewery system



Automatic filling



Liquor distillation



This equipment will be applied:

- in the in alcoholic and no-alcoholic beverages university course next semester
- CPD training: Fruit juices

2.4.3 CU equipment

Equipment: Spray dryer



UHT unit



Vacuum evaporator



Vacuum frying unit (no pic available)

The equipment will be implemented in the following courses:

- Food processing II (*UHT unit has already been implemented in the course during last semester*)
- Beverage technologies
- Drying technologies in food processing
- Training on milk powders