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BESTSDI – Western Balkans Academic Education
Evolution and Professional's Sustainable Training for
Spatial Data Infrastructures

With the support of the Erasmus+ program:

*Higher Education – International Capacity Building
N° 574150-EPP-1-2016-1-HR-EPPKA2-CBHE-JP*

BESTSDI Task Report

Task T2.4: Training of teachers

Version 1.0

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Work Package / Task:

WP2 – Development / Task 2.4 – Training of teachers

References:

Project Management Plan / Work Package 2a Work Plan / Task Group 2.4 Training of teachers

Short Description:

This report is a deliverable of Task Group 2.4 – Training of teachers. It presents a development of the learning material to be included in the project curriculum as specified in D1.4-5 and to prepare the partner universities in providing courses according to their needs.

Keywords:

Report, SDI, Summer School, Learning materials, Project curriculum

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Contents

1. Introduction	4
2. Indicators and deliverables	6
3. Communication within the work package	6
4. Methodology	7
5. Results	10
6. Conclusion	10



1. Introduction

The specific BESTSDI project objectives are to develop, test and adapt new curricula, courses, learning material and tools within the field of SDI. By the incorporation of SDI and other modern concepts based on spatial data and information, students of the new courses will provide efficiently spatial data and services to SDI users when entering the job market. In parallel, the project also introduces SDI and related concepts in undergraduate and graduate study programs of academic institutions which professional profiles are well recognized as SDI users, raising awareness among the students and professionals about the relevance of SDI and advantages of well-organized, harmonized and accessible spatial data.

In this context, the specific objective of the project is to develop appropriate curricula, courses and their content for both target groups (SDI providers and SDI users) of academic institutions, as well as for vocational LLL training initiatives. This includes the development of:

- SDI compulsory course for undergraduate study programs in geodesy;
- SDI modules for graduate study programs in geodesy and geo-informatics;
- SDI user course components (not necessary full courses) for undergraduate study programs of partner faculties;
- SDI elective courses for graduate study program of partner faculties (SDI users);
- Development of sustainable training courses (life-long education) of broad scope of professionals.

The goal of the first part of **WP2 “Development of curriculum”** is to develop the learning material to be included in the project curriculum as specified in D1.4-5 and to prepare the partner universities in providing courses according to their needs. This work will address both the data management students/faculties and the SDI user students/faculties.

The WP2 is subdivided into five tasks:

Task 2.1 - Development of project curriculum

Task 2.2 - Development of LLL courses

Task 2.3 - Equipment purchase/installation

Task 2.4 - Training of teachers

Task 2.5 - Localisation of project curriculum



Organized in several sub groups project partner representatives worked on learning materials, both for the theoretical and practical part of lectures resulting in documents ready to be adopted as internal teaching material of respective partner faculty/university, which procedure will also be conducted. Developed curricula/courses and learning materials will additionally be localised to the needs of the respective study programs and the profile of professionals educated at the respective universities. For example, it is obvious, besides the fundamentals of SDI and SDI related content, that emphasis of curricula/courses/part of courses on mining and geology studies will not be identical with the emphasis at the computer science studies.

Special responsibility of partners from program countries is to ensure a modern and innovative approach in the creation of learning materials and teaching methodology.

The goal of Work Package 2a (WP2a): Development is to train teachers from the partner universities in the English versions of the courses included in the project curriculum. For this purpose the appointed task group will prepare summer schools program, materials, lecturers and technical details important for their successful execution.

The persons dealing with the execution of this task T2.4 are the task leader, the task deputy leader and all partners contributing to the deliverable. The contact information of these persons are as follows:

Role	Name	Organization	e-mail
Task leader	Ivana Racetin	UNIST (P03)	ivana.racetin@gradst.hr
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2. Indicators and deliverables

The task produced the following deliverables:

Number	Title	Date
R1.1-1	Transfer of theoretical and practical knowledge on SDI from program countries to partner countries. Transfer of teaching methods and approaches in teaching and implementing of SDI and exchange of information and ideas.	07.07.2017.
R1.1-2	Trained teachers at partner universities.	30.06.2018.
R1.1-3	Final report on Training of teachers at partner universities.	15.10.2018.

The task is monitored and evaluated by the following indicators and targets:

Number	Indicator	Assessment method	Target value
1	D2.4	Trained teachers at partner universities	100% of expected number of teachers at partner universities were trained
2	I2.4	Number of teachers trained	Two teachers per partner faculty
3	M2.4	Reports from summer schools	Report contains all information about preparation for courses (developed in frame of project curriculum) execution that will be delivered in the 3rd year of the project.

3. Communication within the work package

For the purpose of internal communication in the project between the workshops a Moodle platform for communication and fulfilment of tasks was established (like information and data transfer/storage, implementation of surveys and working documents exchange).

Timeframe of T2.4 can be described as mid-term task (lasting 2 months). Task leaders and TG members (contributors) communicated in following manner:

- Regular communications – via e-mail messages and through the Moodle platform



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- Skype meetings (when needed)
- Initial discussions were held in workshops previous to Summer schools 2017 and 2018
- Comprehensive discussions at 1st Summer School, July 3-7, 2017, Split and 2nd Summer School, June 26-30, 2018, Split
- Project manager approves Report and close TG activities within one week after the final report submission.

4. Methodology

The methodology for realization of T2.4 - Training for teachers, covered a range of activities that led to realization of that task.

In order to implement new SDI content in educational curricula of the partner universities, in the year 2017 and 2018 Summer schools were held.

First Summer school

A first Summer school was held from 3.07.2017.-7.07.2017. at University of Split, Croatia. In those 5 days 28 presentations were made and participants were obliged to execute two homework activities. There were 42 participants involved.



Figure 1. First Summer School Split



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The goal of the first Summer school was to transfer theoretical and practical knowledge about SDI mostly from program countries to partner countries. The second goal was to transfer teaching methods and approaches in teaching and implementing of the SDI. The third goal was to exchange relevant and valuable information and ideas across teachers.

The emphasis was made on providing mainly theoretical and conceptual knowledge but also practical knowledge on SDI was shared as well as information essential for definition of project curriculum was collected.

With these objectives in mind the appointed task group prepared the Summer school program and materials. Lecturers were appointed prior to Summer school and technical support was made available for the successful Summer school execution.

Second summer school

Second Summer school was held from 26.06.2018.-30.06.2018. at University of Split, Croatia. In those 5 days 50 participants were actively involved. An intensive training of teachers was achieved through:

- 16 theoretical example lectures,
- 5 practical example lectures and
- 11 discussions.



Figure 2. Second Summer School Split



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Internal discussions and evaluations of the developed curriculum and courses, as well as teaching material were made. Simple evaluation forms were prepared for each lecture. Every participant could express his/hers observation. It was used for final discussions on the last day. It consisted of columns: strengths, weaknesses and suggestions for improvement.

The goal of this second Summer School was to prepare teachers for lecturing of SDI courses in next academic year through their presentations on content of SDI curriculum using teaching material. According to lecturers previously expressed plans, all three modules (basic, advanced and LLL courses) were covered by presentations.

The theoretical and practical lectures were organized in two ways:

- through plenary sessions (all the Summer school participants attended),
- through parallel sessions (each partner institution organized itself in a manner to attend both sessions).

Special responsibility of partners from program countries was given to ensure a modern and innovative approach in creating learning materials and teaching methodologies/approaches. The expected outcomes of the second Summer school were to:

- give sample lectures,
- discuss methodology and
- exercise practical parts of courses.

With these objectives in mind the appointed task group prepared the Summer school program and materials. Lecturers were appointed prior to Summer school and technical support was made available for the successful Summer school execution.



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5. Results

One of the goals of the Summer schools, to prepare teachers for lecturing of SDI courses in next academic year (or if not possible later), has been achieved.

Sample lectures were given by all the partners faculty teachers. The presented courses were improved based on discussions and observations written in forms. The methodology of teaching and different approaches were discussed and improved. Practical parts of courses were exercised and discussed. Based on feedback they were also improved.

Transfer of theoretical and practical knowledge from program countries to partner countries was achieved together with an exchange of information and ideas.

6. Conclusion

The Summer schools executions formed an important base for the production of courses, which will be delivered in the 3rd year of the project.

Most Summer schools Training for teachers results will be visible in the third year of the project and after the project is over, when teachers from the partner universities will execute newly developed courses.

Each partner university will train their students according to the new or improved curricula being implemented.

The form of interaction through Summer schools programme turned out to be quite useful in exchange of knowledge, ideas and good practice and we will use it as a positive experience in possible future projects.