

2.9. Report on the Third Round of Interventions

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Prof. Dr. Ralf Romeike, Viktoriya Olari, Till Zoppke | Freie Universität Berlin

Summary

This report details the implementation and evaluation of the third round of interventions (CS and STEAM teachers) that was conducted from August 2023 until January 2024. Also included are the results of a weekly seminar for CS teacher students that took place from April - July 2023 that we count as intervention for the third round. In total, 9 interventions with 74 participating CS teachers (including 15 pre-service) and 95 STEAM teachers were conducted across Germany, Austria, and Lithuania.

This round was based on a modular workshop concept so that each intervention could be adapted to the learning objectives, the target group and the time frame available. As for the previous rounds, we introduce newly developed activities and outline the workshop concepts. Among other things, ethical aspects (algorithmic bias), computer vision, linear regression, AI agents and knowledge bases were newly addressed. In addition, there are activities for exchanging information on dealing with AI chatbots and developing teaching ideas for their use.

In principle, the workshops were evaluated by the University of Potsdam (WP4) with a survey and interviews were conducted with individual participants. Focus group interviews were conducted with all participants at the weekend workshops. The evaluations can be found in the respective deliverables of WP4. Individual workshops and the seminar were evaluated by WP2. The results can be found in this report.

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Table of Contents

Summary	2
Introduction	4
Design of the Training Sessions	5
Training Formats	5
CS Teacher Training Format	5
STEAM Teacher Training Format	5
Format of the Seminar for pre-service teachers	5
Format of the weekend workshops	5
Activities and Learning materials	5
Grimm's new Tales (Language Models Unplugged)	5
Abalone (Linear Regression with Orange3)	5
SuperCodingBall (AI Agents)	5
Malaria (Image Classification)	5
Generative Cocktail Producer (Knowledge base)	5
AI Chatbots	5
AI and Music	6
Expert sessions	6
AI Quiz cards	6
Evaluation of the effectiveness of the training sessions	6
EACEA Feedback	6
Implementation of the Training Sessions	6
Challenges	7
Conclusion and Future Work	7
List of Abbreviations	8
Appendix	9

Introduction

Design of the Training Sessions

Training Formats

CS Teacher Training Format

STEAM Teacher Training Format

Format of the Seminar for pre-service teachers

Format of the weekend workshops

Activities and Learning materials

Grimm's new Tales (Language Models Unplugged)

- Further development of the material (Word guessing game, re-plugged version, cloze-test)
- Poster INFOS
- Evaluation with students
- Feedback from other teachers

Abalone (Linear Regression with Orange3)

- Challenges in designing materials for STEAM teachers
- Linear functions and linear regression as concepts from math

SuperCodingBall (AI Agents)

Malaria (Image Classification)

Generative Cocktail Producer (Knowledge base)

AI Chatbots

- Exchange on experiences (prompts)

- Overview on chatbots
- Teaching ideas

AI and Music

- AI Duett
- Bach Doodle
- Blob Opera

Expert sessions

- Creative AI
- AI in archaeology
- Vesuvio challenge Resurrection of ancient

AI Quiz cards

Evaluation of the effectiveness of the training sessions

- In general, please refer to WP4
- For individual interventions evaluations by WP2 have been conducted. We will present the results in the respective paragraphs (see below).

EACEA Feedback

(include Summary of weak points, from the 1-pager document)

Implementation of the Training Sessions

According to the TrainDL project plan, three national workshops were conducted between March and June 2023, one in each project country. As noted above, unlike in the first round of interventions, no additional training sessions were conducted. This is due to the tight schedule and the overlap in time with the third round of interventions that already did start in April 2023, with training sessions for in-service STEAM and primary teachers as well as a session for pre-service CS teachers.

In total, 24 in-service CS teachers and 20 STEAM teachers participated in the second round of interventions.

Table XY. Overview of the training sessions during the second intervention round.

Date	City	Country	Format	Participants
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25.4.2023 18.7.2023	-	Berlin	Germany	University Seminar (14 Sessions, 2:15 hrs each)	15 CS student teachers
23.08.2023		Düsseldorf	Germany	4:00 hrs	12 STEAM Teacher-Trainers
05.09.2023		Berlin (MNU)	Germany	1:30 hrs	31 STEAM teachers
18.09.2023		Berlin	Germany	4:00 hrs	27 CS teachers
18.10.2023		Berlin	Germany	1:15 hrs	5 STEAM teachers
23.10.2023			Austria	3:00 hrs	12 teachers
24.11.2023 26.11.2023	-	Zeitz	Germany	2.5 days	24 CS teachers
09.01.2024			Lithuania	3:00 hrs	15 teachers
26.01.2024 28.01.2024	-	Meißen	Germany	2.5 days	23 STEAM teachers

In the following section, we present the details of the implementation of the training sessions, along with a report from the lecturers.

Challenges

Conclusion and Future Work

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List of Abbreviations

AI	Artificial intelligence
CS	Computer science
DL	Data Literacy
FU	Freie Universität Berlin
OCG	Austrian Computer Society
STEAM	Science, Technology, Engineering, the Arts, and Math
TrainDL	Train Data Literacy
UP	University of Potsdam
WP2	Work package 2
WP4	Work package 4

Appendix