LearnSTEM

Innovative Model of learning STEM in secondary schools

Agenda for the second LearnSTEM transnational partner meeting in Germany, Paderborn

The LearnSTEM – Development-Conference!

29th - 31th of August 2023

Project Title: Innovative Model of learning STEM in secondary schools

Acronym: LearnSTEM

Reference number: 2022-1-TR01-KA220-SCH-000087583

Project partners:

P1 Necmettin Erbakan Üniversitesi, Türkiye
P2 Universität Paderborn, Lehrstuhl Wirtschaftspädagogik II, Germany
P3 Ingenious Knowledge GmbH, Germany
P4 IEK Kavalas, Greece
P5 EURO-NET, Italy
P5 Liceul Tehnologic "Haralamb Vasiliu", Romania
P6 Yusuf Demir Bilim ve Sanat Merkezi, Türkiye
P7 AHI Evran Anadolou Lisesi

Host: *University Paderborn*

Venue: *Warburger Str. 100, 33098 Paderborn, Q-Building, Germany*

Co-funded by the
Erasmus+ Programme
of the European Union

Tuesday, 29th of August 2023 – Arrivial day

APPROX. TIME	TOPIC	CHAIR
AS YOU LIKE	*Travel and arrival at the hotels in Paderborn*	

Wednesday, 30th of August 2023 – Meeting day

APPROX. TIME	TOPIC	CHAIR
09:30 – 09:45	**Registration and Gathering** ▪ Arrival ▪ Coffee, Tea, ect.	*All partners*
09:45 – 10:00	**Welcoming the LearnSTEM partners** *(Marc Beutner)* ▪ Warm welcome ▪ Schedule of the meeting	*UPB/* *All partners*
09:45 – 10:30	**Current status of the project LearnSTEM** *(Coordinator)* ▪ General overview ▪ Discussion	*NEU*
10:30 – 12:00	**Current status of the project LearnSTEM** *(Marc Beutner / Jennifer Every partner presents the own* ▪ Presentation by each *institution (max. 10 minutes Power-Point presentation)*	*All partners*
12:00 – 13:00	*Lunch*	
13:00 – 15:00	**Insight into the Video Design and WP2 -** ***The LEARN STEM Pedagogical Model*** *(Marc Beutner)* ▪ O1 - A1 - Overview on existing practices in teaching STEM through innovative pedagogical approaches O1 - A2 - Mapping of key stakeholders to be involved in	*UPB/ All partners*

	innovative STEM teaching activities	
	O1 - A3 - Define the LEARN STEM Pedagogical Model	
	O1 - A4 - Develop the inquiry learning package	
	O1 - A5 - Evaluate the LEARN STEM Pedagogical Model	
	and inquiry learning packageDiscussion, and Q&A	
15:00 – 15.30	**Insight into WP3:**	*NEU*
	LEARN STEM Teacher Training Programme	
	(NEU)	
	▪ O2 - A1 Identify concrete training needs	
	and opportunities for STEM Teachers	
	O2 - A2 Define training curriculum	
15:30 – 16.00	**Ideas for *WP4: LEARN STEM online learning environment***	*All partners*
	▪ O3 - 1 Design of the LEARN STEM learning environment	
	architecture	
	O3 - 2 Development of the technical functionalities	
	of the LEARN STEM online learning environment	
	O3 - 3 Integrate the training contents, delivery and	
	assessment tools, and inquiry learning package in the	
	LEARN STEM online learning environment	
16:00 – 16.30	**WP1 and WP5 – Project Management and Meetings**	*NEU*
	▪ Dates for the next TPM	
	▪ Information on Reporting and the next official report to	
	the NA	
	▪ Project management structure	
	▪ Documentary evidence required	
	▪ Administrative and Financial Information	
16:30 – 16.45	**Dissemination and Exploitation**	*NEU*
	▪ The LearnSTEM project website, social media	
	▪ Publications, Newspapers, etc.	
16:45 – 17:15	**Next- Steps - Wrap-up and Discussion on tasks to do**	*NEU/UPB*
17:15 – 17.30	**Meeting and Project Evaluation**	*UPB*
	(Jennifer Schneider)	
	▪ Quantitative indicators, evaluation approach, and	
	evaluation framework	
	▪ Workshop evaluation	

**Wednesday, 31st of August 2023 –
Departure day**

APPROX. TIME	TOPIC	CHAIR
AS YOU LIKE	*Have a safe trip home*	

GOODBYE,

AND LET´S START INTO A GREAT

LEARNSTEM PROJECT!

NECMETTIN ERBAKAN
UNIVERSITY

"INNOVATIVE MODEL OF LEARNING STEM IN SECONDARY SCHOOLS"
2022-1-TR01-KA220-SCH-000087583
Meeting Minutes for the 2nd LearnSTEM TPM
The LearnSTEM Development Conference!

Host: Paderborn University
Date: 29-31 August 2023
Venue: Warburger Str. 100, 33098 Paderborn, Q-Building, Germany
Participants:

Institution	Its representatives
Necmettin Erbakan University	Mustafa Kocaoğlu Hayriye Ulaş Taraf Şemseddin Gündüz Yakup Yılmaz
Universität Paderborn (Germany)	Marc Beutner Helene Lindenthal
Ingenious Knowledge GmbH (Germany)	Rasmus Pechuel Tim Kreuzberg
EURO-NET (Italy)	Luca Ritrovato Alessandro Rugilo
Colegiul Tehnic "Haralamb Vasiliu" (Romania)	Gabriel Signeanu
IEK Kavalas (Greece)	Kalliopi Ntolou
Ahi Evran Anadolu Lisesi (Türkiye)	Ali Erdem Fatih Erdoğan Fatih Yavuz Leyla İlhan Hasan Yıldız Şakir Çınar
Yusuf Demir Bilim ve Sanat Merkezi (Türkiye)	Musa Sargın Hayriye Torunoğlu Ramazan İlhan Siyami Tufan Mehmet Aydın

Minutes of the meeting:

1. The meeting started with the greeting and welcoming speech of the host partner- Prof. Dr. Marc Beutner.
2. As the representative of the coordinating institution, NEU, Dr. Hayriye Ulaş Taraf described the current status of the project LearnSTEM and summarized what had been done so far. Each partner institution also gave a brief presentation to inform what they had done regarding the project activities. It was concluded that all the due project activities that were planned in the Kick-off meeting (regarding Output 1-Learn STEM Pedagogical Model) were accomplished on time, as indicated below.

Table 1: Project Activities for Output 1 (WP2)

Main activities:	Activity title:	Leading Organization:	Period:
O1 - 1	Overview of existing practices in teaching STEM through innovative pedagogical approaches ✓	UNIVERSITAET PADERBORN	31.12.2022 30.06.2023
O1 - 2	Mapping of key stakeholders to be involved in innovative STEM teaching activities ✓	Ingenious Knowledge GmbH	31.12.2022 30.11.2023
O1 - 3	Define the LEARN STEM Pedagogical Model ✓	UNIVERSITAET PADERBORN	01.08.2023 31.12.2023
O1 - 4	Develop the inquiry learning package	EURO-NET	01.09.2023 31.01.2024
O1 - 5	Evaluate the LEARN STEM Pedagogical Model and inquiry learning package	AHI EVRAN ANADOLU LISESI	31.12.2023- 31.03.2024

3. Prof. Dr. Marc Beutner, on behalf of the leading Output 1 (WP2) team, informed all the participants about the LearnSTEM Pedagogical Model. He demonstrated how the Paderborn team defined the LearnSTEM Pedagogical Model and provided an example for the schools to develop their learning units. He explained to the partners how the content of the Pedagogical Model and the learning units should be prepared. The Paderborn team set the following tasks and deadlines for developing the learning units (See Table 3).

Remember: Each school partner is responsible for a topic assigned to them in the kick-off meeting, and now they should create four activities in line with the four themes for each topic (See Table 2 below). A total of 16 learning units will be developed within the LearnSTEM Pedagogical Model under four topics- Recycling, Pollution, Nature, and Climate.

- You can also find the themes with further explanation in the drive folder created for the Paderborn meeting.

- Please find the relevant PPT presentation for further explanation regarding the structure of learning units (titled WP5-P5-LearnSTEM_TPM1 Konya_WP2 - 25-04-2023-EN, https://docs.google.com/presentation/d/1iWG5Anp2NSoFmZ0DRM2rcnjpt2R5_4xp/edit ?usp=drive_link&ouid=116942279446022265067&rtpof=true&sd=true

- and prototype skyscraper video and its preparation https://drive.google.com/open?id=1QchBEn-wVwOiM0XYDVRUMN3Ti-ti9-DE&usp=drive_fs

Table 2: List of topics and learning units

Topic 1 Recycling by Haralamb Vasiliu	Collect and sort garbage.
	Build a Balance Scale
	Composting in a bottle and creation of a composter - reuse of biodegradable waste
	Upcycling – Reuse of plastic
Topic 2 Pollution by IEK Kavalas	The tanker spills oil
	Acid Rain – Control acidity and PH value of lakes and puddles liquids in the kitchen and tab water
	Sulfur dioxide destroys plants and buildings
	Fertilizer, Acid rain and algae growth
Topic 3 Nature by Yusuf Demir Bilim ve Sanat Merkezi	Leaves transport and evaporate water
	How much bioorganisms are there? Yeast
	Growth of plants and salinity - Irrigation and fertilization increases the salt concentration.
	The sun – energy – growth and danger
Topic 4 Climate by Ahi Evran Anadolu Lisesi	Smog and temperature inversions
	Storms and temperature – the fan and the cress
	Design a Skyscraper resisting the Wind
	Seasons and Ecliptic Simulator https://www.climate.gov/teaching/resources/seasons-and-ecliptic-simulator

Table 3: Deadlines for further tasks for O1

Tasks	Deadlines
Preparation of a script for the videos	By the end of September
Having an online partner meeting to show Videoscribe	In October
Having an online partner meeting to show H5P	In November
Creation of all units for the learning platform	By the end of November
The whole model with didactical materials	By the end of the year

4. After each school completes the first video script by the end of September, there will be an online meeting to show Videoscribe in October. Paderborn team suggested two online meetings (one in October and one in November) until the end of this year to demonstrate how Videoscribe can be used and how H5P tasks can be created. Please vote the times you are available on behalf of your institution. Only the contact person can vote for the meeting.

   - The October online meeting dates and times are suggested on Doodle as such https://doodle.com/meeting/participate/id/dN0zwvNa
   - The November online meeting dates are suggested on Doodle as such https://doodle.com/meeting/participate/id/er9jkoKd

5. The project coordinator NEU shared a brief description of the 2nd output requirements. The 2nd output involved a LearnSTEM Teacher Training Programme. They shared the draft LOM, Learning Outcome Matrix, to conduct the relevant activities. You will be informed later about how to act for this output.

6. Rasmus, the leading member of Ingenious Knowledge GmBH, presented his ideas for WP4-Output 3: LearnSTEM online learning environment. He asked for the opinions and suggestions of the participants regarding the learning platform. Most participants agreed on an open learning environment without the requirement of opening an account and signing up. The learning platform prototype will be ready by Rasmus by the end of November so that we can look at the platform during the next TPM.

7. The coordinator team continued the meeting with project management issues, informing the partners about the interim report requirements. All the partners were asked to complete the timesheets. The timesheets will be completed by the end of **September**. Important notes are shared in the Excel sheet attached to the email to be sent to you along with these meeting minutes, also shared in the drive folder in the file of Project Management https://docs.google.com/spreadsheets/d/1JovqWT2s2VZcA4iMmXcitJHfIyBvPj_8?rtpof=true&usp=drive_fs

8. Some issues of dissemination of the project were also handled. Some further suggestions for the website were shared. Euronet, responsible for the website content, will add the news and photos regarding the project activities and meetings. The OER logo is still missing on the website. Euronet should include it on the website to avoid any copyright issues. All partners were asked to avoid copyright infringement of the materials used for the project outputs. It was recommended to use OER (Open educational resources). All partners will also publish project-related posts/online articles/newsletters for further dissemination in the following weeks.

9. Based on the project application form, there is a TPM as the 3rd meeting to be held in Greece. During the Kick-off meeting, it was stated that the 3rd meeting could be two months later after Paderborn meeting, however, it was discussed in the meeting, and it was concluded that it could not be possible to do the meeting within two months. Also, Paderborn and Ingenious stated that they did not have time to join that meeting and there might be a possibility to meet online instead. The meeting will be in Kavalas, Greece in January 2024. It will be held to analyze the state of the art of activities of WP2 and the development of WP3. The suggested dates for the January meeting, are suggested on Doodle as such https://doodle.com/meeting/participate/id/dwrojp1b
Only the contact person can vote on behalf of their institution.

10. Documents supporting the Justification of costs and expenses for TPM1 and TPM2 were handled. The link for travel documents in the drive folder is
https://drive.google.com/drive/folders/1K4-4KadOe0qYnpk6Hy50XpPMxpyr4Eei
All partners will complete Justification of costs and keep those documents in the drive and will also send them to the project email stemeuproject@gmail.com

11. All presentations of TPM2 will be added into folder https://drive.google.com/drive/folders/1oT04DJP3yrknvyOwzdPYbUUl9vA4x0dz

12. All the project meeting photos will be shared in the drive folder https://drive.google.com/drive/folders/1xCV6h4gZx2CaF1V9GSXHXIqSmFMAiW-o

13. The closure of the meeting was done by distributing the certificates. The participants will scan and store their certificates in the drive https://drive.google.com/drive/folders/1VYBjRQj3fR2mLjYGji09pddF68Gx44GD

14. All partners take part in the evaluation until 20th of September 2023 https://umfragen.uni-paderborn.de/index.php/617445?newtest=Y&lang=en