

Monitoring Report

Project Title: SEN Power

Expert Report on Educational Resource Development (WP3 – D2.3) – AECE and IPSantarem (Portugal)

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1. Introduction

This report presents a summary of the monitoring, evaluation, and expert support provided for the development of inclusive lesson plans and accompanying materials in Mathematics and Nature Studies at the primary school level as part of the SEN Power project. In September 2023 35 teachers from Bulgaria, Turkey, and Portugal participated in a training event held in Entroncamento, Portugal. The focus of the training was to empower teachers to use the training resources from the first editions of the toolkits “Mathematics for all” and “Nature Studies for all”, but also to design and adapt lesson plans for students with Special Educational Needs (SEN) while improving overall student engagement and learning outcomes.

As appointed experts, our responsibility included reviewing and providing constructive feedback on the educational materials created by teachers from Bulgaria and Turkey, ensuring alignment with inclusive pedagogical principles, curriculum requirements, and best practices in differentiated instruction.

2. Overview of the Process

After completing the training in Entroncamento, Portugal, participating teachers:

- Identified challenging topics within their national Mathematics and Nature Studies curricula.
- Designed original lesson plans targeting these topics.
- Developed supplementary materials, including worksheets, games, visual aids, and presentations.
- Focused on inclusive strategies aimed at supporting SEN students while maintaining appeal for the entire classroom.

Teachers were encouraged to implement the principles introduced during the training, such as:

- Universal Design for Learning (UDL),
 - Multi-sensory and experiential learning,
 - Use of ICT tools for visualization and interaction,
 - Collaborative and game-based learning activities.
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3. Review and Evaluation of Bulgarian and Turkish Contributions

The materials submitted by Bulgarian and Turkish teachers were reviewed against the following criteria:

- **Clarity and Structure of Lesson Plans:** Objectives, steps, timing, differentiation strategies, and assessment methods.
- **Inclusion of SEN Strategies:** Adjustments for different learning needs, use of supportive tools, alternative tasks, and flexible grouping.
- **Creativity and Engagement:** Use of real-life examples, hands-on tasks, visual resources, and educational games.
- **Curricular Relevance:** Alignment with national and European learning standards.

Findings:

What do I have to write in this section?

Strengths:

- Most lesson plans demonstrated a clear structure and alignment with curriculum goals.
- Teachers showed good understanding of differentiation, offering adaptations for students with mild to moderate learning difficulties.
- The plans were created according to UDL principles, some of the differentiation work was smooth, sometimes it is not clearly mentioned, with the objective of including all students (each and every student - SEN students and the rest of the class) trying to establish equality.
- Use of visual aids and interactive elements (e.g., matching cards, role-play, and group work) was consistent and pedagogically sound.
- All the materials were originally created by teachers who were careful not to use any previously published materials / pictures.
- Some materials were innovative—particularly in integrating storytelling, gamification, and nature-based activities in STEM contexts.

Areas for Improvement:

- In some cases, learning objectives were too general or lacked measurable outcomes.
- Not all materials included a specific section outlining adjustments for SEN students.
- Some worksheets required simplification or visual enhancement for better accessibility (e.g., font size, use of colour coding, image-text balance).
- Presentation slides sometimes included excessive text or lacked structure to support scaffolding for weaker learners.

4. Feedback and Editing Support

Following the review, we provided tailored feedback to each teacher. The support included:

- **Editing lesson plans** for clarity, consistency, and readability.

- **Rewriting learning objectives** to follow the SMART criteria (Specific, Measurable, Achievable, Relevant, Time-bound).
- **Suggesting layout and design improvements** for worksheets and presentations, including accessibility tips (e.g., dyslexia-friendly fonts, visual cues).
- **Recommending alternative or additional SEN support strategies**, such as:
 - Pre-teaching of key vocabulary.
 - Use of tangible manipulatives in math.
 - Peer-assisted learning structures.
 - Learning-by-doing activities.
 - Meaningful activities: real-life based activities.
- **Encouraging cross-curricular links** to make lessons more context-rich and relevant.

Feedback and recommendation:

Grade 1 (Lesson plan no. 5) / DATA - Statistical questions, data collection and organisation (M4ALL)

- At first the plan had to be redesigned. It had some conceptual problems.
- It was suggested to change the activities to make them more student learning based with active methodologies.
- The language was a bit confusing and sometimes it was difficult to understand specific information about what to do.
- It was suggested to break the big steps into smaller ones in order to make them clear to the reader by transforming longer / complex sentences into simpler ones with meaningful information.

• **Grade 2 (Lesson plan no. 8) / Spatial Location (M4ALL)**

- Some steps of the lesson were too generic or too teacher-centred.
- It was suggested to change the activities to make them student learning based.
- The language was a bit confusing and sometimes it was difficult to understand specific information about what to do.
- It was suggested to break the big steps into smaller ones in order to make them clear to the reader by transforming longer / complex sentences into simpler ones with meaningful information.
- It was highlighted to keep the focus on the students' actions and what they are capable to do.

• **Grade 4 (Lesson plan no. 4) / Mathematical reasoning (M4ALL)**

- The language was too elaborated and sometimes it was difficult to understand specific scientific information.
- It was suggested to edit the plan in order to make them clear and simpler to the reader.

• **Grade 2 (Lesson plan no. 5) / Means of transport. Pollution. (NS4ALL)**

- The language was a bit confusing and sometimes it was difficult to understand specific information about what to do.
- It was suggested to rewrite the steps of the lesson in order to make them clear to the reader by transforming longer / complex sentences into simpler ones with meaningful information.
- Some materials had to be redone (e.g. the powerpoint in order to transform it into an interactive activity). A new appendix (Appendix 2A) had to be done, so that

the students could apply individually what they have just learnt. A new step in the lesson was also created.

- It was highlighted to keep the focus on the students' actions and what they are capable to do.
 - **Grade 4 (Lesson plan no. 6) / Orientation: the basics to find your way (NS4ALL)**
 - In this plan particularly the step 3 had to be redone. The language was a bit confusing and sometimes it was difficult to understand specific information about what to do.
 - The appendixes 4 and 5 had to be done all over again because the original picture and the instructions were not coherent and clear.
 - In both cases it was suggested to simplify the language, to make it clear, and change the picture and the whole structure of the exercises.
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5. Conclusion

The review process confirmed the strong engagement and professional growth of participating teachers. Their efforts reflect a genuine commitment to inclusive education and innovative pedagogy. The training event clearly succeeded in equipping them with practical tools and motivation to design accessible and engaging lessons.

From 34 lesson plans and supplementary materials, minor edits were needed in 16 lesson plans (47%) and 22 supplementary materials (18%). 3 lesson plans (8.8%) needed more significant changes and the monitoring experts worked on them within the period July - September 2024, so that all lesson plans created by the representatives of AECE and IPSantarem were ready and included in the 3rd editions of the M4ALL and NS4ALL tool kits.

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