



**RbtsInMath: Developing Mathematics Achievement
through Using Robotics Applications in Flipped Learning**

Project number: 2022-1-PL01-KA220-HED-000086524

Pilot Study of Modular Curriculum REPORT

University of Social Sciences

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CONTEXT

Grant agreement	2022-1-PL01-KA220-HED-000086524
Programme	Erasmus+
Action	Cooperation partnerships in higher education
Project acronym	RbtsInMath
Project title	Developing Mathematics Achievement through Using Robotics Applications in Flipped Learning
Project starting date	01/11/2022
Project duration	28 months
Project end date	28/02/2025

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Modular Course Curriculum Pilot Study Report

Partner's Name: University of Social Sciences

Date: 22.10.2023

Place: ul. Łucka 11, 00-842 Warszawa University branch in Warsaw

Aim

The aim of the piloting was to familiarize participants with the main principles of the RbtsInMath project and to introduce them the Modular Curriculum.

Introduction to the Piloting

The Modular Curriculum pilot study of the project, numbered 2022-1-PL01-KA220-HED-000086524 and titled 'Developing Mathematics Achievement through Using Robotics Applications in Flipped Learning' was held on 22.10.2013 at University of Social Sciences in Warsaw, Poland. It was held as 8 lesson hours. The pilot study was designed to give opportunity for participants get to know the main principles of the RbtsInMath project and to introduce them the Modular Curriculum.

Profile of Participants

A total of 20 pre-service teachers (17 female and 3 man) students at University of Social Sciences, participated in the Modular Curriculum Pilot Application. The participants studied in the field of pedagogy. The participants was between 20 and 27 years old.

Overview of the Piloting

The participants were notified in advance and agreed to participate in the pilot study. Firstly, students were introduced to the project- it's aim, objectives, results, target groups. Then, the literature review was presented, as the theoretical basis for the piloting. Then, each module of Modular Curriculum was shortly introduced and the students were discussing on it. The following modules were explained:

MODULE 1: LEARNING THEORIES

MODULE 2 : MATHS ANXIETY

MODULE 3: THE HISTORY OF ROBOTICS APPLICATIONS IN EDUCATION

MODULE 4: LEARNING MATH AS A GAME

MODULE 5: THE USE OF ROBOTICS IN MATHEMATICS EDUCATION IN PRIMARY SCHOOLS

MODULE 6: FLIPPED LEARNING AND ITS PRACTICES IN PRIMARY SCHOOLS 10

MODULE 7: TEACHING FLIPPED LEARNING AND ITS PRACTICES IN HIGHER EDUCATION INSTITUTIONS

MODULE 8: HOW TO USE ROBOTICS TO TEACH MATHEMATICS IN PRIMARY SCHOOLS

MODULE 9: DEVELOPMENT OF COMPUTATIONAL THINKING

MODULE 10: CODING AND ROBOTICS TO IMPROVE MATH LEARNING

The students were interested in provided information and participated with interest in the proposed activities. They have a chance also to practice. In the end, questions were answered and the session was summarized.

Feedback and Evaluation

In overall, the initiative and the modular curriculum during the pilot research piqued the curiosity of the participants. Participants in the pilot study requested comprehensive information regarding using robotic applications to raise math achievement. There was discussion of robotic application examples.

In general, the information provided on the pilot study's planning was well received by the participants.

Appendices

Appendix 1 – Signed and stamped list of participants

Appendix 2 – Signed and stamped Certificates

Appendix 3 - Photographs or Screenshots



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