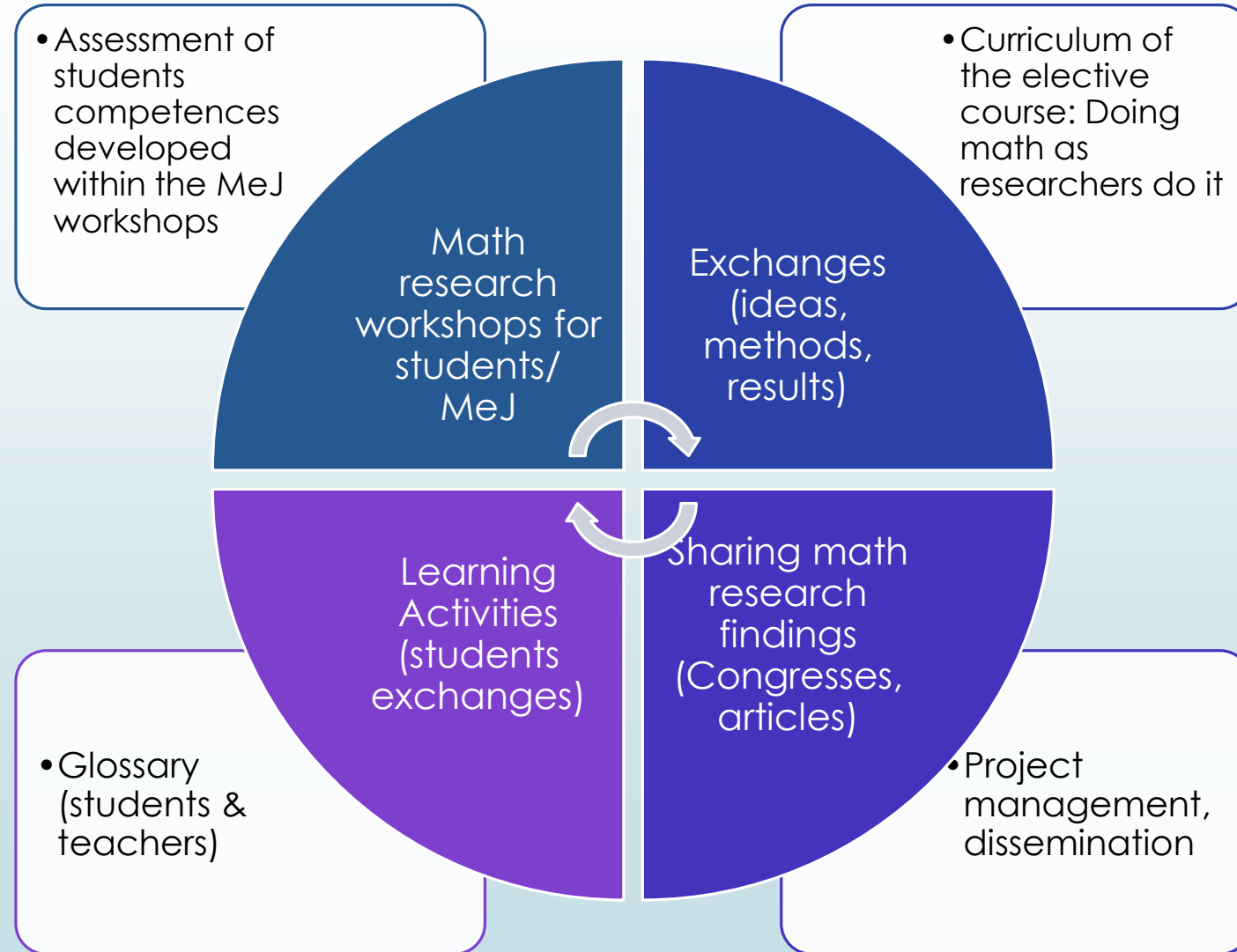


Learning math and languages through research and cooperation - MatLan

Ariana-Stanca Vacaretu

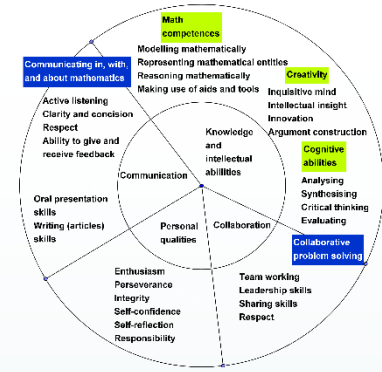
Colegiul National Emil Racovita Cluj-Napoca, Romania

Learning math and languages through research and cooperation – MatLan Erasmus+ project supported by the European Commission



Erasmus+

MatLan project – 2 interconnected dimensions



Students – Math research

- Registration
- Forming groups & choosing research topics
- Weekly meetings (professional researcher) & monthly video conferences
- Oral presentations (forums, congress)
- Written presentation (research article)

Teachers – assessment/ curriculum

- Identify competences developed through the MeJ workshops
- Develop assessment tools and identify assessment methods
- Pilot the assessment tools (action research approach) & revise assessment tools
- Elaborate the curriculum for the optional course on math research



Evaluation within the MatLan project

- Outputs and activities indicators: qualitative and quantitative indicators; they were discussed and agreed during the elaboration of the proposal;
- M&E strategy – elaborated at the beginning of the project:

Activity	Indicators	Level of attainment	Evidence to collect and sources for documenting the M&E	When	Method/ strategy/ tool	Person in charge
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- Students' involvement in the M&E process;
- Stakeholders involvement for the (external) evaluation of the project results: the students' oral presentations on the results and/ or process of their math researches, the students' written presentation on the results of their math researches, the intellectual outputs of the project.



An example (1)

Activity	Indicators	Level of attainment	Evidence to collect and sources for documenting the M&E	When	Method/ strategy/ tool	Person in charge
A2 – math research workshop (MeJ)	- number of high-school students involved in the math research workshop (MeJ workshop) during 2014 - 2015;	72	- students' lists 2014 – 2015	May 2015	A2 report	X, Y – coordinators of the MeJ workshops



An example (2)

Activity	Indicators	Level of attainment	Evidence to collect and sources for documenting the M&E	When	Method/ strategy/ tool	Person in charge
A2 – math research workshop (MeJ)	- quality of the students' articles on the results of the research;	4 – on a scale from 1 (poor) to 5 (excellent) All articles accepted for online publication	- students' research articles; - Researchers' feedback	Sept. 2015	Check-list – evaluation of the students' articles	X, Y, Z - Professional researchers from BBU Cluj-Napoca, Université de Fribourg, INRIA-Sophia Antipolis

An example (3)

Activity	Indicators	Level of attainment	Evidence to collect and sources for documenting the M&E	When	Method/ strategy/ tool	Person in charge
A2 – math research workshop (MeJ)	- Level of the students' competences developed within the MeJ;		Facilitators' logbooks Reporting sheets/ student/ assessed competence	June 2016	Observation, analysis of the information and reflections in the students' logbooks; Self-assessment External evaluation (public)	X, Y, Z, T ... - MeJ facilitators, MeJ coordinators

MatLan project webpage: <http://matlanproject.weebly.com/>



French and Romanian students, teachers and professional researchers at the University of Avignon

MeJ Avignon Congress – March 2015