

International Conference of Interdisciplinary STEM Studies

28 August, 2018, Nitra, Slovakia

- Conference offers **lectures and workshops** on intercultural learning in mathematics and science disciplines, culture-related contexts and different perspectives on current ecological problems.
 - Participants will **share ideas how to implement intercultural ideas** to initial teacher education.
 - Conference opens opportunities for exchange of **intercultural experience** as well as reasons why and how to implement innovative intercultural contexts to subject-related curricula.
 - Innovative **pedagogies** and implementation of **intercultural and inclusive learning** in the initial training of teachers in STEM disciplines will evoke new ideas in STEM research fields.
- **Date:** 28 August, 2018
 - **Application deadline:** 30 June, 2018
 - **Venue:** Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Tr. A. Hlinku 1, Nitra, Slovakia
 - **Main target group:** teachers, researchers, PhD students in STEM studies, representatives of environmental institutions, policy makers
 - **Language:** English, Slovak, Czech, Hungarian
- **No conference fee.** The conference is a multiplier event of the IncluSMe project.
 - Limited number of participants gets financial support.

Application forms

- Slovak language: <https://goo.gl/forms/X0BrsvSSBH0yUdur2>
- English language: <https://goo.gl/forms/MNrHolvsyBlz7WMI1>

Organizer: IncluSMe Project – Constantine the Philosopher University in Nitra, Slovakia in cooperation with University of Hradec Kralove, Czech Republic

Contact for information: sceratkova@ukf.sk, ijakab@ukf.sk

Web: <http://inclusme-project.eu>

Preliminary Program

28 August 2018

Constantine the Philosopher University,

Tr. A. Hlinku 1, Nitra, Slovakia

8:00 – 9:00 arrival of participants

9:00 – 9:05 welcome, opening

9:05 – 10:35 plenary lectures

10:35 – 10:50 coffee break, poster session

10:50 – 12:20 plenary lectures

12:20 – 13:30 lunch break, poster session

13:30 – 15:00 workshops

15:00 – 15:20 coffee break, poster session

15:20 – 16:00 workshops feedback, closing



Plenary Lectures

Inclusive education as a multi-paradigm discourse of educational experts

STEM: education and competencies of teachers of natural sciences and mathematics with regard to the inclusion of cultural differences.

Ladislav Zilcher, Department of Education, Faculty of Education, J. E. Purkyne University in Usti nad Labem, Czech Republic

The lecture deals with an issue of inclusive education which is conceived by wider view than is usual. Articles related to inclusive education are commonly orientated to the support for students with special needs. We would like to point out the disunity of understanding this topic by educational experts and hidden dependence on other educational disciplines. Main objective of the lecture is to introduce inclusive education as a creating „school for all“ not just make diverse school or classrooms. For building „school for all“ is important to use all of educational disciplines to make an effective and good school. There is probably no way to create one field which would be „inclusive education“ but we should set up effective synergy of all fields in education.

What does the inclusive school need?

Miroslava Ceresnikova, Institute of Roma Studies, Faculty of Social Sciences and Health Care, Constantine the Philosopher University in Nitra, Slovakia

The contribution brings the view on the conditions of the inclusive setting of the school environment, especially the relation to the ethnically different or socially excluded pupils. It focuses on the cultural and social sensitivity as the key competence of the teacher.

Inclusive education from practicing teacher's point of view

Zuzana Kijacova, Elementary School Výčapy-Opatovce, Slovakia

Since the school year 2015/2016, the children from Christian families from Iraq have attended the school, in which the lecturer teaches mathematics and biology. The presentation will address the issue of inclusive education from a practicing teacher's point of view. The most important aspects of the teacher's work on mathematics lessons will be presented, as well as the examples with a description of the experience: how to approach to a pupil from a different cultural environment, how to gradually overcome not only the language barrier in the communication with the pupil and his parents and reveal other barriers, how to assess a pupil from a different cultural environment and how to guide a pupil regarding the perspectives of his further study at secondary school. The contribution will also deal with the experience with working with integrated pupils and with pupils with special educational needs. It will also mention whether and how the education of pupils from a different cultural environment influences the overall culture of a particular elementary school.

The project 'Intercultural learning in mathematics and science education' (IncluSMe) (2016-2019, **grant no. 2016-1-DE01-KA203-002910**)

has received co-funding

by the Erasmus+ programme of the European Union.

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



CONSTANTINE
THE PHILOSOPHER
UNIVERSITY
IN NITRA



“Good” questions in mathematics and biology teaching

Jarmila Novotna, Katerina Jancarikova, Faculty of Education, Charles University, Prague, Czech Republic

The discussion with the teacher as well as the discussion among pupils are important elements of constructivist-led teaching. The discussion is organized in such a way that the pupils discover something new, formulate a hypothesis, discuss different solutions of the assigned task, etc. To give pupils a sufficient space is often very difficult for teachers because they cannot prepare such communication in advance and have to respond quickly to the situation which emerges in the classroom. During the lesson, the teacher asks a number of questions, most of which are not prepared in advance. The questions we are interested in are related to mathematics and biology. We are dealing with „good“ questions. We are focusing on the following questions: What does a "good" question consist of? How to create "good" questions? How to use "good" questions in the classroom?

Methods of detecting the metacognitive development of pupils and "metacognitively designed teaching"

STEM: education and competencies of teachers of natural sciences and mathematics with regard to the inclusion of cultural differences.

Vlastimil Chytrý, Department of Pre-primary and Primary Education,
Jaroslav Rican, Department of Education, Faculty of Education, J. E. Purkyne University in Usti nad Labem, Czech Republic

The lecture deals with the concept of metacognition, focusing on the significance of this construct in practice - how the metacognition can be developed in pupils in a heterogeneous collective. The first part deals with the theoretical background. The central part of this contribution deals with question: which educational activities support pupils' metacognitive thinking development? The issue of metacognitive monitoring, which has a direct impact on pupils' learning process across many educational areas, will be highlighted.

What you (don't) know about Asperger Syndrome and inclusion

Viera Hincova, psychologist, project manager and trainer, Banská Bystrica, Slovak Republic

The lecture is aimed to show the real functioning of young people with this difference at high school and university. It will deal with key factors in the successful inclusion effort and the right for inclusive education from the perspective of the Convention on the Rights of Persons with Disabilities. It will provide the participants with practical information and tips that help young people with Asperger Syndrome to succeed in their study and to apply their sometimes exceptional talents.

Workshops topics

- Culture-related contexts for mathematics and science
- Different perspectives on current ecological problems
- Intercultural mathematics learning outside of school
- Intercultural science learning outside of school

Poster section will provide participants with the project IncluSMe activities, preliminary results of the project intellectual outputs and selected intellectual outputs description and materials.



**Join a unique intercultural experience
in intercultural and inclusive
educational practice and research!**

The project 'Intercultural learning in mathematics and science education' (IncluSMe) (2016-2019, **grant no. 2016-1-DE01-KA203-002910**) has received co-funding by the Erasmus+ programme of the European Union.

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



CONSTANTINE
THE PHILOSOPHER
UNIVERSITY
IN NITRA



International Centre for STEM Education