

**MINI CONFERENCE/ROUND TABLE** of the HRZZ JOBSTEM project *STEM career aspirations during primary schooling: A cohort-sequential longitudinal study of relations between achievement, self-competence beliefs, and career interests*

## STEM SCHOOL INTERESTS, ACHIEVEMENT AND CAREERS

June 10th, 2019 / Multimedial hall, Ivo Pilar Institute, Marulićev trg 19/1, Zagreb

### PROGRAM

- 09:00 – 09:30 Registration, warm-up
- 09:30 – 10:00 General overview of the JOBSTEM project
- 10:00 – 10:45 Development and Structure of Students' interests toward STEM School Domain and STEM Careers During Primary Schooling (prof. dr. sc. Josip Burušić, izv. prof. dr. sc. Toni Babarović, JOBSTEM team)
- 10:45 – 11:15 Promoting Youth Scientific Career Awareness and its Attractiveness through Multi-stakeholder Cooperation (HORIZON2020 MultiCO project) (professor Tuula Keinonen, Head of the School of Applied Educational Science and Teacher Education, University of Eastern Finland)
- 11:15 – 11:45 Enhancing Students' Interests in Science- and Technology-Related Careers Through an Activity in Class Courses (professor Prof Miia Rannikmäe, Head of the Center of Science Education, University of Tartu)
- 12:00 – 12:20 Family and Parental Influences in the Context of STEM School Achievement, Interests and Careers (doc. dr. sc. Marija Šakić Velić, izv. prof. dr. sc. Ina Reić Ercegovac, JOBSTEM team)
- 12:20 – 12:40 Gender-Stereotyped Beliefs Endorsement and Gender Identification: Development of STEM Interests among Girls and Boys (Mia Karabegović, Mirta Blažev, JOBSTEM team)
- 12:40 – 13:10 Assessment of Student STEM Achievement in Primary School (doc. dr. sc. Dubravka Glasnović Gracin, JOBSTEM team)
- 13:10 – 13:20 Implications of the JOBSTEM Project for Educational Policy and Practice (prof. dr. sc. Josip Burušić, doc. dr. sc. Predrag Pale, JOBSTEM team)
- 13:30 – 14:30 Networking and Lunch



### ABOUT

The JOBSTEM Project is Ivo Pilar Institute's four-year longitudinal project, supported by the Croatian Science Foundation under the grant "IP-09-2014-9250 – STEM career aspirations during primary schooling: A cohort-sequential longitudinal study of relations between achievement, self-competence beliefs, and career interests (JOBSTEM)".

The project aims to address the formation and dynamics of interests for STEM-related fields (Science, Technology, Engineering, Mathematics) during primary schooling by using insights from contemporary theories of academic achievement, self-competence beliefs and vocational interests. The study is based on the theoretical and empirical expectation that a shift of focus towards younger students and earlier educational periods is needed to understand the STEM problem. The central point of the study is the development of students' self-competence beliefs, their relationship with school achievement, and the effect of self-competence beliefs on vocational interests and choices in the STEM area.

The JOBSTEM project uses longitudinal, experimental and qualitative methodological approaches and is based on a cohort-sequential longitudinal research design. A total of 1920 primary school students and one of their parents/guardians from 16 schools in Croatia participated in the longitudinal study. The participants were grouped in three age cohorts, attending fourth, fifth and sixth grade of primary school at the beginning of the study. These three cohorts were followed longitudinally through three measurement waves during three consecutive years. A STEM intervention program was also applied in half of the schools and its effects were evaluated using two-group pre- and post-test randomized experimental design. In each of the measurement waves, students completed comprehensive questionnaires assessing research constructs related to STEM school achievement, self-competence beliefs, attitudes, interests, activities and family characteristics and behaviors. Student abilities and traits were also assessed in one measurement wave, as well as parental characteristics, behaviors, attitudes and opinions using questionnaires for parents.

JOBSTEM brings together researchers from Croatia (Institute of Social Sciences Ivo Pilar; University of Split, Faculty of Philosophy; University of Zagreb, Faculty of Electrical Engineering and Computing; University of Zagreb, Faculty of Teacher Education), France (Université de Poitiers), Hungary (Central European University) and USA (University of California Irvine), with Professor Jacquelynne Eccles from the University of California Irvine, one of the leading researchers in contemporary educational research, being the consultant on the project.