RESEARCHER PROFILE

Dr. Tova Michalsky

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HORIZON EUROPE TOPIC(S) OF INTEREST:

HORIZON-CL2-2022-DEMOCRACY-01-04: Education for democracy (RIA)

CONTRIBUTIONS TOWARD CALL TOPIC

Recent years have seen an increase in the application of virtual reality (VR) in education, allowing students to explore places and situations they would otherwise not have access to. Dr. Michalsky and her lab team have developed a unified interdisciplinary research agenda focused on the ways in which immersive systems such as virtual reality (VR), augmented reality (AR), and mixed reality (MR) can be used in a number of innovative ways to study, measure, understand, teach, train, and learn about self-regulation (and metacognition) across both (human and artificial) teachers and learners during STEM learning.

For the targeted topic Dr. Michalsky can contribute by creating a global curriculum that fits the democratic concept in Europe and enables democratic globalization, including the use of VR technology as a tool to teach empathy – how to see the world from the perspective of others.

The curriculum will include lessons on important social issues such as, gender / minority / immigration/. It is suggested to carry out pilot studies in several locations, in which high school students and their teachers will use VR glasses to observe various scenarios, each one from a different perspective. The aim would be to assess the effectiveness of the curriculum program using student questionnaires, interviews with students and teachers and videotaped lessons and discussion groups.

The VR/AR learning environments should be developed in close collaboration with teachers, students and stakeholders, to strengthen awareness of diversity in the classroom. Important facets to be considered during the project include gender, linguistic, ethnic, cultural and religious diversity.

Bar-Ilan University
אוניברסיטת בר־אילן

BRIEF PROFILE

Tova Michalsky (https://education.biu.ac.il/en/node/372) is a senior lecturer in the field of learning and educational technology and a head of the Learning and Educational Technology Research Unit (LET) in the Department of Educational Sciences, University of Bar-Ilan, Israel. Her main research interests deal with self-regulated learning, computer supported collaborative learning and on-line learning processes. Michalsky and her research group is internationally well known from theoretical advancement of motivation as a contextual phenomena and of social aspects of self-regulated learning. Her research work has strong contribution to the methodological development of process oriented research methods in the field of learning and collaboration and recently applying of multimodal methods in self-regulated learning research. Michalsky has been an invited expert in different national and international expert commissions (e.g. OECD and scientific organizations) as well keynote speaker in international conferences (e.g. EARLI and CSCL). She has been an associate editor of Frontiers in Psychology (2010-2021) and is currently is the associate editor of Metacognition and Learning Journal. In 2018 Michalsky was invited to the member of the Israeli Academy of Science and Letters and she was the Berlin Chair holder at the Technische Universitate Berlin, Germany for the years 20119 - 2020. Michalsky has published more than 60 scientific papers in international refereed journals and about 30 book chapters and three edited books.

Dr. Michalsky and her lab team developed the innovative “PfS” method for evolving pedagogical frameworks, to develop preservice and inservice teachers’ “professional vision” (PV) for self-regulated learning (SRL) while analyzing SRL-teaching events from video cases of expert teachers. The “PfS” method allows with computer observer analyzing and coding quantitative and qualitative class room pedagogics scenarios.
The possibilities are endless for integrating educational, psychological, learning, instructional, engineering, and computing sciences into research agenda which can be used to systematically address current educational, instructional, and training issues facing our nations. Our lab researches lead to a new innovative and agenda for advancing the science of learning, teaching, and instruction related to make significant and measurable advances related to 21st Century educational challenges.

Bar-Ilan University

RELEVANT PUBLICATIONS

1. **Michalsky, T**. (2017). What teachers know and do about assessing students' self-regulated learning. *Teachers College Record*, *119* (13), 20-33.
2. **Michalsky, T.,** & Schechter, C. (2018). Teachers' self-regulated learning lesson design: Integrating learning from problems and successes. *Teacher Educator, 53,* 101-123.
3. Shaked, H., Schechter, C., & **Michalsky, T.** (2018). Collaborative learning from personal cases in a principal preparation programme. *International Journal of Leadership in Education, 4,* 479-490.
4. **Michalsky, T.** (2020). Preservice teachers' professional vision for and capacity to teach self-regulated learning: Effects of scaffolding level. *Teachers College Record*, 122(3), 1-48.
5. Sason, H., **Michalsky, T**., & Mevarech, Z**.** R. (2020). Promoting science text comprehension via two self-questioning methods*. Frontiers in Psychology.* doi.org/10.3389/fpsyg.2020.595745
6. **Michalsky, T**. (2020). Integrating video analysis of teacher and student behaviors to promote preservice teachers' teaching of meta-strategic knowledge. *Metacognition & Learning.* doi:10.1007/s11409-020-09251-7
7. Michalsky T (2021) Preservice and Inservice Teachers' Noticing of Explicit Instruction for Self-Regulated Learning Strategies. *. Frontiers in Psychology*. 12:630197. doi: 10.3389/fpsyg.2021.630197

COMPETITIVE RESEARCH GRANTS

2020-2022	Michalsky, T. (PI), Azevedo, R., Järvelä, S., Ader, E., & Gröschner, A., STEM teachers' capacity to teach self-regulated learning: Effectiveness of extended reality (XR). European Association for Research on Learning and Instruction (EARLI) – Emerging Field Group (EFG). 520,000 NIS
2017–2022	Michalsky, T. (PI), & Zohar, A. Meaningful learning stage two: Deepening current innovative learning and instruction by adding components of meta-level learning. Israel Science Foundation (ISF) 3,500,000 NIS
2016–2019	Michalsky, T. (PI). Integrating video analysis of teacher and student behaviors to promote pre-service teachers' teaching of self-regulated learning. Israel Science Foundation (ISF) 540,000 NIS
2015	Michalsky, T. (PI), & Schechter, C. Developing self-regulated learning among preservice teachers, inservice teachers, and students: Current knowledge and practices and future directions. Israel Science Foundation (ISF) 90,000 NIS
2012–2014	Michalsky, T. (PI), & Schechter, C. *Teachers' capacity to teach self-regulated learning: Integrating learning from problems and learning from successes.* Israel Science Foundation (ISF) 220,000 NIS

BAR ILAN UNIVERSITY PROFILE

Established in 1955, Bar Ilan University (BIU) is currently one of Israel's largest universities with a total undergraduate and graduate student enrollment of 19,000. With more than 1,600 senior and junior faculty members, BIU has achieved an international reputation for academic and research excellence, especially, but not limited to the fields artificial intelligence, renewable energy, bio-medicine, brain sciences, cancer, cyber security, cognitive sciences, environment, quantum technologies, medicine, archaeology, nanotechnology and advanced materials.

Building on our past and current successes in FP6, FP7, H2020 and ERC projects, BIU is committed to strengthening its research and innovation infrastructure and supporting multidisciplinary innovative research initiatives with its 55 research centers and 60 endowed chairs. In addition, the Bar Ilan Center for Smart Cities is recognized by the EU SMART SPECIALISATION PLATFORM as a Digital Innovation Hub.

The Bar-Ilan University School of Education is the largest of its kind in Israel and is ranked between the 150-200 best departments in the world by the Shanghai Academic Ranking of World Universities.

We believe in preparing thoughtful leaders who bridge the gap between study and practice. Our students have a close mentoring relationship with faculty, staff, advisors, and students of all levels. On-hand training centers' research facilities and engaged academic faculty who are leaders in their fields give students a chance to build their professional portfolio during their studies. With over 2,000 students throughout the undergraduate (B.A.), graduate (M.A.), post-graduate (Ph.D.), and teacher vocational programs, we strive to shape leading educators and researchers as they continue to reform and advance educational practice for diverse communities around the world.

As well as a commitment to quality in research, education, and professional development, we believe in contributing to the world community through the design of research-based educational policy. Our committed faculty members are part of setting the standard of education in Israel. They participate in committees dedicated to the design of national programs in education and evaluation committees created by the Ministry of Education and local Israeli municipalities. They take an active role in professional committees, field committees, and Special Interest Groups (SIG) formed by research groups in Israel and worldwide. Our faculty members have been elected to head numerous national and international committees. They specialize in research and development (R&D) with a basis on qualitative, quantitative, and mixed methodology.

One of the main characteristics of our school is the high quality of publications published in leading academic journals worldwide. Three notable members of our staff were awarded the Israel Prize: Prof' Reuven Feuerstein (1921-2014), Prof' Yaakov Rand (1926-2016), and Prof' Penina Klein (1945-2014). Furthermore, our researchers have been awarded prizes highlighting their contribution to the field of education worldwide.