CURRICULUM VITAE

Ornit Spektor-Levy

Contact Information

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Education

1988 B.Sc. in biology, Faculty of Life Sciences,
Tel-Aviv University, Tel –Aviv.

1990 M.Sc., Faculty of Life Sciences, Tel-Aviv University, Tel-Aviv.
Thesis: Induction of Class I MHC genes following spontaneous and induced in-vitro transformation by E1A+E1B oncogenes: In-vitro and in-vivo growth of transformed cell lines.
Supervisor: Prof. Rachel Ehrlich

2004 Ph.D., Department of Science Teaching, Weizmann Institute of Science, Rehovot.
Thesis: High Order Learning Skills in Science Studies: Development of an Instructional Model, and Research on Implementation and Students' Learning.
Supervisors: Prof. Bat Sheva Eylon & Dr. Zahava Scherz

Academic Affiliations/Appointments

1988-1990	Instructional assistant in the laboratories for B.Sc. students, Faculty of Life Sciences, Tel-Aviv University, Tel-Aviv, Israel
1991-1994	Research assistant, Department of Environmental Hydrology and Microbiology, Jacob Blaustein Institute for Desert Research, Ben-Gurion University of the Negev, Beer Sheva, Israel
1996-1998	Curriculum development, Department of Science Teaching, The Weizmann Institute of Science, Rehovot, Israel
2004-2005	Post-Doctoral research, *Science 2000* - science education project, Faculty of Exact Sciences, Department of Physics, Bar-Ilan University, Ramat-Gan, Israel Main activity: Research on learning technologies, innovative scientific ideas and teachers' instructional decisions Supervisors: Prof. Shlomo Havlin and Dr. Michal Zion
2004-2006	Scientific consultant: Department of Science Education, Weizmann Institute of Science, Rehovot, Israel A joint project with the Gatsbi Foundation, UK; Prof. Bat Sheva Eylon, Dr. Zahava Scherz, The Weizmann Institute: Implementation of the program *Learning Skills for Science* in the UK's high schools' science curriculum. Conducting professional development courses, workshops and lectures in the UK
2005-2011	Instructor Doctor, School of Education, Science Education, Bar Ilan University
2011-present	Lecturer, School of Education, Science Education, Bar Ilan University, Israel
2014	Sabbatical: Psychology & Education group, Faculty of Education (Autumn term), Cambridge University, Cambridge, UK.

Professional Functions

1980 - 1983	Field trips guide at Eilat Field Study Center. The Society for the Protection of Nature in Israel.
1998 - 2004	Teacher and coordinator of the Science & Technology instruction in Middle School: "The School for Nature, Environment and Society", Tel-Aviv, Israel
2005 - 2015	Member of the 'Committee for Science and Technology Education in Elementary School', Ministry of Education, Israel
2006-2007	Member of the Dean's (Prof. Wolf) Committee for improving the teaching in the Social Sciences Faculty, Bar Ilan University, Israel
2007 - present	Director of *Da-Gan Center* - The National Teacher Center for STEM (Science, Technology, Engineering, Mathematic) Education in Pre-School. The Ministry of Education & Bar Ilan University, Israel
2007 - present	Organizer of the Annual National Conference: *Math, Science & Technology in Pre-School: Values and Challenges*. The Wohl Centre, Convention Center, Bar-Ilan University

International Invited Workshops and Lectures

1. "Scientific Communication, Phase I" (July, 2004). Lectures and workshops, Kings' College. London, UK
2. "Scientific Communication, Phase II" (January & July, 2005). Lectures and workshops, Kings' College. London, UK
3. "Learning Skills for Science" – Training teacher's trainers (January, 2006). Lectures and workshops, Science Learning Center, London, UK
4. "Learning Skills for Science" (June, 2006). Lectures and workshops, Science Learning Center, Manchester, UK
5. "Learning Skills for Science" (March & June, 2006). Lectures and workshops, Science Learning Center, London, UK
6. "Learning Skills for Science" (February, 2009). Lectures and workshops, The Raffeles Institute, Singapore

Academic Affiliations

- ESERA - European Science Education Research Association
- EARLI - European Association for Research on Learning and Instruction
- EARLI SIG5 – Early Childhood Education and Development

Journal Manuscript Reviewer

- International Journal of Science Education
- Instructional Science
- International Journal of Science and Mathematics Education
- Journal of Research in Science Teaching

Internal and External Reviewer for Doctoral Proposals and Dissertations

- Bar-Ilan University
- The Hebrew University
- Weizmann Institute of Science

Awards

1990 **The Dean's award of Excellence**, for outstanding achievements in M.Sc studies, The Faculty of Life Sciences, Tel-Aviv University, Israel

2004 **Award of Excellence**, for outstanding achievements in PhD studies, The Department of Science Teaching, Weizmann Institute of Science, Rehovot, Israel

2004 **Guastalla Fellowship, Sacta-Rashi Foundation, Israel.** Three-year scholarship for promising researcher in mathematics and science education (Peer-reviewed external funding)

Grants & Projects

2006	**'Designing Learning Environments for the Development of Scientific Literacy in Pre-school'** The Ministry of Education, Israel. 33,600 NIS (~ 9,000 $)
2006 - 2008	**'Girls into Physics and Science'** Project, The Ministry of Education, Israel. 141,500 NIS (~ 37,000 $)
2007-2009	**Students' development of scientific and ecological literacy** through participation in long term climate, geographic and ecological monitoring in The Makhteshim region. The Ministry of Science and Technology, Israel**.** Collaboration with MOP Ramon Center. 199,985 NIS (~ 53,000 $)
2007 - present	**National Teacher Center for STEM Education in Pre-School,** The Ministry of Education, Israel. 7,629,634 NIS (~1,985,333 $)

Teaching Experience

Undergraduate, B.A.:

- The Development of Cognition in Early Childhood

Graduate, M.A.:

- Technological and Scientific Paradigms
- Inquiry Based Learning
- Scientific Education – Values and Challenges
- From Research to Implementation – Innovations in Science and Mathematic Education
- Scientific and Mathematical Literacy
- Environmental Education in Modern Society

Main Research Interests

1. Early science education: Professional development programs for pre-school teachers; Development of scientific literacy and scientific curiosity among young children; Children's Metacognitive and cognitive development
2. Professional development and teaching strategies of science teachers
3. Science teaching in the inclusive classroom; Scaffolding students with learning disabilities in science lessons
4. The impact of Information and Communication Technologies (ICT) in science classes; Teaching and learning science in 1to1 classes (Ubiquitous Computing)

Supervision of Graduate Students

M.A. Students

In the past:

Menashe Keren	Learning with Laptops and Virtual Campus as a Routine: Development of Learning Capabilities, Information Literacy and Affective Aspects Among 6th and 7th Grade School Students.	2009
Gazit Mina	Teaching with Laptops and Virtual Campus as a Routine: Characteristics of Teaching Practices in Regards to Teaching Strategies, Lessons' Planning, Teacher-Student Interaction, and School Vision.	2009
Aloni Oshra	Science and Technology Mini-Museum at High School: An Authentic Learning Environment for the Development of Scientific Knowledge, Self-efficacy and Positive Attitudes Towards Science among Students.	2010
Katz Luba	The Influence of Informal Learning Activity - a Competitive Inquiry About Marie Curie and Other Female Scientists, on Students and Female Students' Attitudes about Science, Scientific Carrier and Women in Science.	2011

Sarusi Ravit	Intervention Program for the Explicit Instruction of the Skill 'Reading Complex Visual Representations', and Its Impact on Scientific Content Understanding, Implementation and Transfer of the Skill, Among High School Girls.	2011
Granot Gilat Yael	The Impact of Learning with Laptops in 1:1 classes on the Development of Learning skills and Information Literacy among Middle School Students.	2013
Peretz Tal	Tracking professional development processes among kindergarten teachers following the course: the design of learning environments aimed to promote mathematical, scientific and technological Literacy.	2013
Trachtman Galit	What constitutes a good ICT rich lesson in 1to1 classes? Evidences from teachers, students and best practices.	2015
Ufan Aanat	What can be learned from teachers, students, and analysis of best practices about the factors that determine the quality of ICT rich lessons in 1to1 elementary classes	2015
Azar Rinat	Scaffolding Pre-school Children With and Without Learning Disabilities and its' Impact on Understanding Scientific Phenomena and Developing Inquiry Skills	2016

Being supervised today:

Anuar Badir	Science & Technology in Alternating Environments: Traditional and 1:1 ICT - Students Diversity, Attitudes, Motivation, and Self-Efficacy in the Arab Sector
Plutov Inna	Open Inquiry Processes and Scientific Thinking of Preschoolers in Web-based Learning Environment
Gurevich Rivka	Metacognitive Manifestations during Engineering Tasks among Preschool Children from Different Cultural Background and its Relation to Mathematical Problem Solving
Tamari Amalya	Wise Consumerism and Waste Reduction – The Impact of Educational Program on Attitudes and Behaviors of Preschoolers
Zamshman Arthur	The Impact of Robotics-Based Learning Environment and Problem-Based Learning on Geometrical Thinking and Engineering Habits of Mind of Elementary School Students

Ph.D Students

In the past:

Yifrach Merav (Supervision with Dr. Rivka Glaubman)	Science and Technology Teaching in the Inclusive Classroom. Holistic Approach to Teaching and Learning	2009
Doron Esty (Supervision with Prof. Deborah Court)	Teachers' Perceptions of their Role and Professional Identity in Light of Teaching as a Routine in 1:1 Laptop Classes - A Phenomenological Longitudinal Study	2015
Kesner Baruch Yael (Supervision with Prof. Zemira Mevarech)	"Little Scientists" – Emotional and Cognitive Aspects among Teachers and Children towards Engaging in Science in Pre-School Education	2015

Being supervised today:

Tikochinsky Berger Tal (Supervision with Prof. Michal Zion)	Longitudinal Study on Learning with Personal Laptops: Unique Features, Students' Attitudes, Motivation to learn, 21st Century Skills performance, and the Voice of Those Who Graduated the Program
Shechter Tal (Supervision with Dr. Sigal Eden)	The Development of Engineering Thinking, Metacognition and Self-Regulation in Learning Environments that Promote Engineering Activities in Preschool
Perry Netta (Supervision with Dr. Adi-Japha)	What Did You Discover Today in Preschool? The Physical Learning Environment Design that Promotes Inquiry and Discovery – Perceptions and Attitudes of Teachers, Parents and Preschoolers
Fridman Ronit (Supervision with Dr. Sigal Eden)	Manifestations of Metacognition and Self-Regulation among Preschoolers during Scientific Experience and the Role of the Learning Environment