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List of Publications

Refereed Publications

Chapters in Books

Scherz Z., Spektor-Levy, O., & Eylon, B. (2005). "Scientific Communication": An instructional program for high-order learning skills and its impact on students' performance. In: K. Boersma, M. Goedhart, O. de-Jong & H. Eijkelhof (Eds.), *Research and the Quality of Science Education* (pp. 231-243). Netherlands: Springer.

Avargil, S., Spektor-Levy, O., & Zion, M. (2017). Developing Science Education Research Literacy among Secondary in-Service Teachers: An Approach at Bar-Ilan University in Israel. In: A. J. Sickel & S. B. Witzig (Eds.). *Designing and Teaching the Secondary Science Methods Course: An International Perspective*, p. 53-70. Sense Publishers.

Spektor-Levy, O., Basilio, M., Zachariou, A., & Whitebread, D. (In press). Young children's spontaneous manifestation of self-regulatory abilities and metacognitive knowledge during a play-like task: 'Model Building from Plan'. In: T. Michalski, & C. Shechter, (Eds.). *Self-Regulated Learning: Conceptualization, Contribution, and Empirically Based Models for Teaching and Learning*. NSSE Yearbook, TC Columbia University.

Spektor-Levy, O., Plutov, I., Israeli, N., & Perri, N. (In press). Integrating Technology in Preschool Science and Inquiry. In: I. Levin, & D. Tsybulsky (Eds.). *Digital Tools and Solutions for Inquiry-Based STEM Learning*. IGI Global.

Articles in periodicals

- Nejidat, A., Spektor, O., & Abeliovich, A. (1996). Isolation and characterization of a functional promoter from *Nitrosomonas europae*. *FEMS Microbiology Letters* 137, 9-12.
- Spektor-Levy, O., Sonnenschein, M., & Zion, M. (2005). Technology integration in science studies: Obstacles and incentives. *Science Education International*, 18, 211-224.
- Spektor-Levy, O., Eylon, B., & Scherz, Z. (2008). Teaching communication skills in science: Tracing teacher change. *Teaching and Teacher Education*, 24, 462-477.
- Shamir, A., Zion, M., & Spektor-Levy, O. (2008). Peer tutoring, metacognitive processes and multimedia problem-based learning: The effect of mediation training on critical thinking. *Journal of Science Education and Technology*, 17 (4), 384-398.
- Spektor-Levy, O., Scherz, Z., & Eylon, B. (2009). Teaching scientific communication skills in science studies: Does it make a difference? *International Journal of Science and Mathematics Education*, 7 (5), 875-903.
- Avriel-Avni, N., Spektor-Levy, O., Zion, M., & Levy, N. R. (2010). Children's sense of place in desert towns: A phenomenographic enquiry. *Research in Geographical and Environmental Education*, 19, (3), 241–259.
- Avriel-Avni, N., Zion, M., & Spektor-Levy, O. (2010). Developing a perception of a place as home among children in an isolated desert town. *Children, Youth and Environments*, 20 (2), 116-149.
- Zion, M., Spektor-Levy, O., Orchan Y., Shwartz A., Sadeh I., & Kark, S. (2011). Tracking invasive birds: a programme for implementing dynamic open inquiry learning and conservation education. *Journal of Biological Education*, 45 (1), 3-12

Spektor-Levy, O., & Granot-Gilat, Y. (2012). The impact of learning with laptops in 1:1 classes on the development of learning skills and information literacy among middle school students. *Interdisciplinary Journal of E-Learning and Learning Objects*, 8, 83 - 96.

Spektor-Levy, O., Kesner-Baruch, Y. & Mevarech, Z. (2013). Science and scientific curiosity in pre-school – The teacher's point of view. *International Journal of Science Education*, 35 (13), 2226-2253.

Kesner Baruch, Y., Spektor-Levy, O., & Mashal, N. (2014). Pre-schoolers' verbal and behavioral responses as indicators of attitudes and scientific curiosity. *International Journal of Science and Mathematics Education*, 1-24. DOI: 10.1007/s10763-014-9573-6

Yifrach, M., Glaubman, R., & Spektor-Levy, O. (2015). Holistic model for the instruction and learning of science and technology for students with learning disabilities in the heterogeneous classroom: Development, design and implementation. *Megamot*, N(2), 315-354 (Hebrew).

Berger-Tikochinski, T., Zion, M., & Spektor-Levy, O. (2016). Up and down: Trends in students' perceptions about learning in a 1:1 laptop model - A longitudinal study. *Interdisciplinary Journal of e-Skills and Life Long Learning*, 12, 169-191.

Spektor-Levy, O., Aloni, O. & Zion, M. (2016). "A place where nobody makes fun of me because I love science" – an in-school Mini Science Museum as a meaningful learning environment to its student trustees. *International Journal of Environmental and Science Education*, 11(18), 11033-11059.

Spektor-Levy, O., & Abramovich, A. (2017). From “Hesitant” to “Environmental Leader”: The Influence of a Professional Development Program on The Environmental Citizenship of Preschool Teachers. *EURASIA Journal of*

Mathematics, Science and Technology Education, 13 (3), 649-671.
DOI: 10.12973/eurasia.2017.00637a

Spektor-Levy, O., & Yifrach, M. If Science Teachers are Positively Inclined Towards Inclusive Education, Why is it So Difficult? *Research in Science Education* (Accepted).

Non-Refereed Publications

Instructional materials

Spektor-Levy, O. & Scherz, Z. (1999). "*Scientific Communication*". MATMON, The Department of Science Teaching, The Weizmann Institute of Science, Rehovot, Israel. 108 p. (Hebrew).

Spektor-Levy, O. & Scherz, Z. (2001). "*Scientific Communication*" – *Teachers' Guide*. MATMON, The Department of Science Teaching, The Weizmann Institute of Science, Rehovot, Israel. 189 p. (Hebrew).

Spektor-Levy, O., Scherz, Z., & Eylon, B. (2002). The "Scientific Communication" program: How do science teachers implement a modular program of learning skills acquisition? *Proceedings of the 2nd International Conference on Science Education* (pp. 497-503). Nicosia, Cyprus: The Cyprus Pedagogical Institute.

Scherz, Z. & Spektor-Levy, O. (2005). *Learning skills for science*. London: Institute of Education, Nuffield foundation, Gatsbi Foundation: Science Enhancement Programme (87p.).

Scherz, Z. & Spektor-Levy, O. (2005). *Learning skills for science - Activity book*. London: Institute of Education, Nuffield Foundation, Gatsbi Foundation: Science Enhancement Programme (152p.).

Spektor-Levy, O., Yifrach, M., & Gonda-Keren, Y. (2013). *WOST - The World of Science and Technology*. Instructional Environment and a Unique Website to Support science & Technology studies in middle school heterogeneous

inclusive classrooms. Ramat Gan: Bar Ilan University & Yavne:Bonus publishers. Series of 4 books (268p., 271p., 363p., 311p.); 4 teachers' guides (507p., 507p., 637p., 509p.); website; teaching aids.

Articles in periodicals

Sade, I., Zion, M., & Spektor-Levy, O. (2005). Invasive Species – opponents or contributors? – A challenge for learning inquiry and biodiversity. *The Journal for the Biology Teachers*, 172, 20-30 (Hebrew).

Spektor-Levy, O., Scherz Z., & Eylon, B. (2006). Learning how to learn: How the explicit instruction of learning skills in science studies impact students' achievements. *Kriat Beinaim*, 9, 15-21 (Hebrew).

Peretz, T. & Spektor-Levy, O. (2009). Designing learning environments that promote Mathematic, Scientific, and Technological literacy. *Alon Da-Ga*, 3, 22-29 (Hebrew).

Kesner-Baruch, Y., & Spektor-Levy, O. (2011). Pre-school science and scientific curiosity: The teachers' point of view. *Alon Da-Ga*, 4, 10-19 (Hebrew).

Kesner-Baruch, Y., & Spektor-Levy, O., & Mevarech, Z. (2015). Science and Scientific Curiosity in Preschool: The children's point of view. *Alon Da-Ga*, 8, 16-25 (Hebrew).

Papers Presented at Scientific Conferences

Scherz, Z. & Spektor-Levy, O. (1999). *An integrated model for teaching learning skills in science and technology*. 8th European Conference for Research on learning and instruction. 24-28 August. Goteborg, Sweden.

Spektor-Levy, O., Eylon, B., & Scherz, Z. (2000). *Teaching “Scientific Communication” skills – Models of Instruction*. Paper presented at the annual meeting of the Israeli society for educational research (AYALA). 25-26 October. Tel-Aviv University, Tel-Aviv Israel.

Spektor-Levy, O., Simon, D., & Rozen, G. (2001). *Acquisition and development of inquiry skills and learning skills integrated into the subject "Science and Technology" throughout the three years of Junior High School*. Paper presented at the annual meeting of the national teachers' center for "Science and Technology in Junior High School", 17 December. The Weizmann Institute, Rehovot, Israel.

Bueno, G. & Spektor-Levy, O. (2001). *A Multidimensional conflict – An invitation to inquiry*. Paper presented at the annual meeting of the national teachers' center for "Science and Technology in Junior High School", 17 of December. The Weizmann Institute, Rehovot, Israel.

Spektor-Levy, O., Scherz, Z., & Eylon, B. (2002). *The "Scientific Communication" program: How do science teachers implement a modular program of learning skills acquisition?* Paper presented at the 2nd International Conference on Science Education, 11-13 November, Nicosia, Cyprus.

Spektor-Levy, O., Eylon, B., & Scherz, Z. (2003). *Teaching higher order learning skills – Does it make a difference?* Paper presented at the 10th EARLI Conference, 26-30 August, Padova, Italy.

Spektor-Levy, O., Scherz, Z., & Eylon, B. (2003). *"Scientific Communication": A program for explicit instruction of high order learning skills*. Paper presented at the 5th ESERA Conference. 19-23 August, Noordwijkerhout, The Netherlands.

Spektor-Levy, O., Interator, R., & Sharir, T. (2005). *Mediated learning and CAL in pre-school*. Paper presented at the Annual Conference of the Israel Association for Computers and Education. 28-29 March, Tel-Aviv.

Zion, M., Spektor-Levy, O., Kark, S, Orchan, Y., & Swartz, A. (2005). *Invasive species: Authentic and challenging topic for open inquiry in high school*. Paper presented at the conference: Invasive species in ecological environments. 31st January, Ben-Gurion University of the Negev, Beer Sheva, Israel.

- Spektor-Levy, O., Scherz, Z., Eylon, B., & Johnson, S. (2005). *High order learning skills for scientific communication*. Workshop at the ASE Annual Meeting, University of Leeds, Leeds, UK.
- Spektor-Levy, O., Zion, M. (2006). *What happens when science teachers consider integration of innovative technology?* Paper presented at the NARST Annual Conference, 3-6 April, San Fransisco, USA.
- Spektor-Levy, O., Scherz, Z., Eylon, B., & Johnson, S. (2006). *Learning skills for Science*. Workshop at the ASE Annual Meeting, University of Reading, Reading, UK.
- Spektor-Levy, O., Scherz, Z., Eylon, B., & Johnson, S. (2007). *Learning skills for Science – Learning Tasks*. LSS 1st Conference, 3, January. School of Education University of Birmingham, UK.
- Yifrach, M., Spektor-Levy, O. & Glaubman, R. (2007). *Science teaching in the Inclusive Classroom: A Research-Based Holistic Multi-Faceted Teaching Model*. Paper presented at the 7th ESERA Conference. 21-25 August, Malmö University, Malmö, Sweden.
- Scherz, Z., Spektor-Levy, O., Maning, A., Johnson, S., Eylon, B., & Osborne, J. (2007). *The Learning Skills for Science (LSS) Programme - a Research-Based Model for Professional Development and Scaling-up Dissemination*. Paper presented at the 7th ESERA Conference. 21-25 August, Malmö University, Malmö, Sweden.
- Spektor-Levy, O., Raviv, D., Gazit, M. & Menashe, K. (2008). *1 to 1 Computing and Virtual Campus as a Routine Learning Environment*. Paper presented at the 3rd Chais Conference on Instructional Technologies Research: Learning in the Technological Era. Open University, Raanana, Israel.
- Spektor-Levy, O., Raviv, D., Menashe, K. & Gazit, M. (2008). *Systemic approach for the integration of laptop computers in instructional and learning routin – Evaluation research*. Paper presented at the 6th Annual MEITAL National

Conference: New Directions in E-Learning in Higher Education. University of Haifa, Israel.

Spektor-Levy, O., Menashe, K., Gazit, M. & Raviv, D. (2009). *Science Classes with 1:1 Laptops and Virtual Learning Campus as a Routine: Diverse Methods of Instruction and Development of Scientific and Information Literacy among Students*. Paper presented at the 8th ESERA Conference. 31 August-4 September, Istanbul, Turkey.

Spektor-Levy, O., Menashe, K., Doron E. & Raviv, D. (2010). *Learning with Personal Laptops in School: Benefits & Gains, Obstacles & Constraints – Following a Longitudinal Study*. Paper presented at the 4th Chais Conference on Instructional Technologies Research: Learning in the Technological Era. Open University, Raanana, Israel.

Doron, E. & Spektor-Levy, O. (2010). *Why should I have a Blog?* Paper presented at the 7th Annual MEITAL National Conference: New Directions in E-Learning in Higher Education. Open University, Israel.

Spektor-Levy, O., Yifrach, M., & Gonda-Keren, Y. (2010). *The World of Science and Technology: Instructional environment and a unique website to support the development of scientific literacy in the heterogeneous classroom*. Paper presented at the Israeli SCRIPT conference, 4-5 July, Haifa University, Israel.

Yifrach, M., Spektor-Levy, O., Glaubman, R., & Glaubman, H. (2010). *In-Service training for science and technology instruction in inclusive classrooms: workshop combined with computer communication*. A poster presented at the 1st International Conference on Education and New Learning Technologies. 6-8 July, Barcelona, Spain.

Spektor-Levy, O., Yifrach, M., & Gonda-Keren, Y. (2010). *The World of Science and Technology: Instructional Environment and a Unique Website to Support Students with Learning Disabilities and Special Needs*. Paper presented at the

- international workshop: Technology as a Support for Literacy Achievements for Children at Risk. 1-3 November, Bar-Ilan University, Israel.
- Doron, E. & Spektor-Levy, O. (2011). *Web2 Tools and Updated Pedagogy*. Paper presented at the 8th Annual MEITAL National Conference: Achievements and Challenges in E-learning in Higher Education and Future Development Avenues. Tel-Aviv University, Israel.
- Spektor- Levy, O., Menashe K., Berger Tikochinski, T. & Doron, E. (2011). *The Feasibility of Ubiquitous Computing in School. Longitudinal Study in 1:1 Classes Suggests—Time Matters*. 3rd International Conference on Computer Supported Education. 6-8 May, Noordwijkerhout, Netherlands.
- Yifrach, M., Gonda-Keren, Y. & Spektor-Levy, O. (2011). *Science in the Inclusive Classroom - A Multifaceted Approach*. Paper presented at the 9th ESERA Conference. 5-9 September, Lion, France.
- Spektor-Levy, O., & Doron, Esty (2011). *Learning with Personal Laptops in School - the Science Teacher's Point of View*. Paper presented at the 9th ESERA Conference. 5-9 September, Lion, France.
- Spektor-Levy, O., Yifrach, M., & Gonda-Keren, Y. (2012). *Science in the Inclusive Classroom: Addressing Students' Needs through a Multi-Dimensional Instructional Environment*. Paper presented at the NARST Annual Conference, 24-28 March, Indianapolis, Indiana, USA.
- Doron, E., & Spektor-Levy, O. (2012). *The old automats don't work – Changes in the professional identity of teachers in 1to1 laptop classes*. Paper presented at the Levinsky College of Education, International conference - A 100 years of Teacher Education, 10-12 December, Tel-Aviv.
- Kesner Baruch, Y. & Spektor-Levy, O. (2012). *Science and scientific curiosity in pre-school: The teachers' perspective*. Paper presented at the Levinsky College of Education, International conference - A 100 years of Teacher Education, 10-12 December, Tel-Aviv.

Yifrach, M., Glaubman, R., & Spektor-Levy, O. (2012). *Holistuc model of science & technology learning and instruction in the inclusive classroom*. Poster presented at the Levinsky College of Education, International conference - A 100 years of Teacher Education, 10-12 December, Tel-Aviv.

Gilat G. Y. & Spektor-Levy, O. (2012). *The Impact of Learning with Laptops in 1:1 Classes on the Development of Learning Skills and Information Literacy among Middle School Students*. Paper presented at the 6th Chais Conference on Instructional Technologies Research: Learning in the Technological Era. Open University, Raanana, Israel.

Spektor-Levy, O., & Aabramovitch, A. (2013). *From "Hesitant" to "Environmental Leader" –The Influence of a Professional Development Course on Environmental Citizenship of Pre-School Teachers*. Paper presented at the Annual Conference for Science & Environment, 7-9 October, Rehovot, Israel.

Yifrach, M., & Gonda-Keren, Y., & Spektor-Levy, O. (2013). *Unique science learning environment and the impact on students in inclusive middle-school classrooms*. 15th Biennial EARLI Conference for Research on Learning and Instruction, 27-31 August, Munich, Germany.

Kesner Baruch, Y., Spektor-Levy, O., & Mashal, N. (2013). *Preschoolers' metaphors generation during scientific engagement as indicator of curiosity & attitude*. 15th Biennial EARLI Conference for Research on Learning and Instruction, 27-31 August, Munich, Germany.

Spektor-Levy, O., & Abramovitch, A. (2014). *From "Hesitant" to "Environmental Leader" – The Influence of a Professional Development Course on Environmental Citizenship of Pre-School Teachers*. Paper presented at the 10th ERIDOB conference, 1-4 July, Haifa, Israel.

Kesner Baruch, Y., Spektor-Levy, O., & Mevarech, Z. (2014). *What (and How) Can We Learn about Pre-School Children's Attitudes toward Science, Inquiry*

Skills and Scientific Curiosity? Paper presented at the EARLI SIG 5 Conference, 25-27 August, Jyväskylä, Finland.

Spektor-Levy, O., Basilio, M., Zachariou, A., & Whitebread, D. (2015). *Young children's spontaneous manifestation of self-regulatory abilities and metacognitive knowledge during a play-like task: 'Model Building from Plan'*. Paper presented at the 1st SRL International Workshop, Bar-Ilan University, Israel, 16-18 March.

Kesner Baruch, Y., Spektor-Levy, O., & Mevarech, Z. (2015). *Young children's scientific curiosity and cognitive abilities during scientific engagement*. Paper presented at the EARLI - 16th Biennial Conference, 25-29 August, Limassol, Cyprus.

Doron, E. & Spektor-Levy, O. (2015). *The Evolvment of Teachers' Role and Professional Identity in 1:1 Personal Laptop Classrooms*. Paper presented at the EARLI - 16th Biennial Conference, 25-29 August, Limassol, Cyprus.

Kesner Baruch, Y., Spektor-Levy, O., & Mevarech, Z. (2015). *Does a Curious and Science-Oriented Teacher Influence Pre-Schoolers' Scientific Curiosity, Attitudes and Inquiry Skills?* Paper presented at the 11th Conference of the European Science Education Research Association (ESERA). 31.8 – 4.9, Helsinki, Finland.

Spektor-Levy, O. & Abramovich, A. (2015). *Pathway toward Developing Environmental Citizenship and Leadership among Pre-School Teachers*. Paper presented at the 11th Conference of the European Science Education Research Association (ESERA). 31.8 – 4.9, Helsinki, Finland.

Berger Tikochinski, T., Zion, M., & Spektor-Levy, O. (2015). *Do Students Really Like to Learn in 1:1 Laptop Classes? Students' views and retrospective views of graduates*. International Association for Cognitive Education and Psychology (IACEP). 6-8 July. Harokopio University, Athens, Greece.

Berger Tikochinski, T., Zion, M., & Spektor-Levy, O. (2016). *Up and down: Trends in students' perceptions about learning in a 1:1 laptop model- A longitudinal study*. Paper presented at the 11th Chais Conference: Learning in the Technological Era: Study of Innovation and Learning Technologies. 16-17 February, Open University, Raanana, Israel.

Spektor-Levy, O. & Ezer, R. (2016). *The effect of scaffolding on scientific exploration and explanations among preschoolers with Specific Language Impairment*. Paper presented at the EARLI SIG 5 Conference, 29 July - 1 August, Porto, Portugal.