

Name: Irit Sasson

Date: 12.2017

CURRICULUM VITAE

1. **Personal Details**

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2. **Higher Education**

a. **Undergraduate and Graduate Studies**

Period of Study	Name of Institution and Department	Degree
1994	Technion – Israel Institute of Technology, Department of Education in Technology and Science	B.Sc., Cum laude.
2003	Technion – Israel Institute of Technology, Department of Education in Technology and Science	M.Sc. as part of doctoral studies (direct track)
2007	Technion – Israel Institute of Technology, Department of Education in Technology and Science	Ph.D., Direct doctoral track

b. **Post-Doctoral Studies**

None

3. **Academic Ranks and Tenure in Institutes of Higher Education**

Years	Name of Institution and Department	Rank/Position
2007-2010	Technion – Israel Institute of	Adjutant lecturer

Years	Name of Institution and Department	Rank/Position
	Technology, Department of Education in Technology and Science	
2007-2008	Tel-Hai College, Department of Education	Adjutant lecturer
2009-2014	Tel-Hai College, Department of Education	Lecturer
2015-present	Tel-Hai College, Department of Education	Senior lecturer
2013-present	Shamir Research Institute	Researcher

4. Offices in Academic Administration

Years	Name of Institution and Department	Role
2007-2008	Technion – Israel Institute of Technology, Department of Education in Technology and Science	Founder and Director of the National MUTAV (Science for All) Teachers Center
2007-2013	Tel-Hai College, Department of Education	Founder and Director of the Science Education Center for Youth
2012-2014	Tel-Hai College, Department of Education	Founder and Director of the regional science initiative - Galilium, Eastern Galilee Regional Cluster
2013-2017	Tel-Hai College, Department of Education	Founder and Director of the Evaluation Unit
2016-present	Shamir Research Institute	Founder and Director of the Educational Research and Development Center

5. Scholarly Positions and Activities outside the University

Years	Memberships in Academic Professional Associations
2014-2016	Member of the steering committee for developing scientific excellence in the periphery, managed by "Shitufim" Foundation.
2014-present	Member of the steering committee for promoting education in the educational systems, managed by the Golan Regional Council

Years	Editorial Assignments
None	

Years	Reviewing for Refereed Journal
2015	Chemistry Education Research and Practice
Years	Reviewing for Fund Agencies
None	

6. Active Participation in Scholarly Conferences

a1. International Conferences - Held Abroad

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2002, August	The 224 th American Chemical Society (ACS) National Meeting	Boston, MA, USA.	Integrating computerized experiments into chemistry teaching.	Lecturer
2003, March	The 2003 NARST Annual Meeting – the National Association for Research in Science Teaching Conference	Philadelphia, PA, USA.	Assessing the effect of integrating case-based computerized laboratories into chemistry teaching.	Lecturer
2003, August	Junior Researchers (JURE), preconference of the European Association for Research on Learning and Instruction (EARLI)	Padova, Italy.	Case-based computerized experiments and their effect on visualization skills and chemistry understanding of high-school students.	Lecturer
2005, April	The 2005 NARST Annual Meeting – the National Association for Research	Dallas, USA.	Chemistry students' comprehension of text and graphics in a case-based computerized laboratory learning environment.	Lecturer

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
	in Science Teaching Conference			
2005, August	The European Association for Research on Learning and Instruction (EARLI)	Nicosia, Cyprus.	Integrating assessment and instruction in effective learning environment.	Lecturer
2006, June	The European Association for Research on Learning and Instruction (EARLI)	Leuven, Belgium.	Fostering near and far transfer in the chemistry case-based laboratory environment.	Lecturer
2008, September	The XIII. IOSTE - International Organization for Science and Technology Education conference	Izmir, Turkey.	Technology in education: The application of pedagogical knowledge in higher education course	Lecturer
2009, April	The 2009 NARST Annual Meeting – the National Association for Research in Science Teaching Conference	California, USA.	The three dimensions of transfer.	Lecturer
2009, August	The European Association for Research on Learning and Instruction (EARLI)	Amsterdam, Netherlands.	Increasing access to higher education: Evaluation of an educational project	Lecturer
2010, June	The XIV. IOSTE - International Organization for Science	Bled, Slovenia.	Increasing access to higher education: Multicultural evaluation.	Lecturer

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
	and Technology Education conference			
2013, July	The 3rd International Symposium on Integrating Research, Education, and Problem Solving: Summer IREPS	Orlando, Florida, USA.	Research-based teaching in science education: A regional innovative program.	Lecturer
2014, May	FISER'14, Frontiers in Mathematics and Science Education Research Conference	Famagusta, Cyprus	Designing formative assessment in physics course in higher education.	Lecturer
2014, August	The European Association for Research on Learning and Instruction (EARLI)	Leuven, Belgium.	Designing formative assessment in physics course in higher education.	Lecturer
2014, August	The European Association for Research on Learning and Instruction (EARLI)	Leuven, Belgium	The role of informal science centers in science education: Attitudes, skills, and self-efficacy	Lecturer
2015, August	The European Association for Research on Learning and Instruction (EARLI)	Limassol, Cyprus	Promoting science education: The question of the effectiveness of the preparatory program in higher education studies	Lecturer
2015, August	The European Association for Research on Learning and Instruction	Limassol, Cyprus	Promoting science education: Developing life-long learning: The design of learning assignments in transfer skills	Lecturer

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
	(EARLI)			
2016, August	The European Association for Research on Learning and Instruction (EARLI) – SIG1	Munich, Germany	The assessment of best pedagogical practices: The use of direct systematic class observations	Lecturer
2016, August	The European Association for Research on Learning and Instruction (EARLI) – SIG1	Munich, Germany	The question of the effectiveness of the pre-academic program: Evaluation study	Lecturer
2016, September	The European Association for Research on Learning and Instruction (EARLI) – SIG18 & 23	Oslo, Norway	School success in the field of science and technology education	Lecturer
2017, November	The European Association for Research on Learning and Instruction (EARLI)	Hämeenlinna, Finland	Fostering critical thinking and question-posing skill in an innovative learning environment	Lecturer

a2. International Conferences - Held in Israel

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2002, June	The Fourth International Conference on Teacher Education	Achva College	Teacher education toward teaching in technology-enriched environment and developing higher order thinking skills.	Lecturer
2004, December	The International Conference on Learning and Assessment	Samuel Neaman Institute, Technion, Haifa	Assessment model in pre-service science teachers training program.	Lecturer

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
	in Science, Engineering & Management in Higher Education			
2013, July	The 6 th International Conference on Teacher Education: Changing Reality through Education	David Yellin Academic College of Education in Jerusalem	Informal science academic programs: A multi-dimensional assessment model Informal science academic programs: A multi-dimensional assessment model	Lecturer
2015, September	International conference on Math and Science teacher education: Academic and practical aspects of school-based teacher education	Oranim College, Tivon	University-Community Partnership (UCP) as a Model for Professional Development Among In-service Science Teachers	Lecturer
2017, May	The Second International Conference for Innovation in Education	Ohalo College, Katzrin	Developing research methodology for evaluating innovative learning environments	Lecturer

a3. Local Conferences

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2001, February	The 66 th Conference of the Israel Chemistry Society	Tel Aviv	Teachers' perceptions regarding the integration of experiments in chemistry teaching	Lecturer
2001, December	Chemistry Teachers' Conference	Rehovot	Computerized research experiments in teaching chemistry	Lecturer
2002, October	Ayala Conference	Tel-Aviv	Case study as a tool for evaluating high-order	Lecturer

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
			thinking skills: Findings and applications in instruction and learning	
2003, January	The 68 th Conference of the Israeli Chemical Society,	Tel Aviv	The effect of case-based computerized experiments on visualization skills and chemistry understanding of chemistry students	Lecturer
2003, June	The Second Conference of the Israeli Association of Chemistry Teachers	Jerusalem	Case study and thinking skills in computerized laboratories for chemistry teaching	Lecturer
2003, December	Conference of Chemistry Teachers	Rehovot	Computerized laboratories and molecular imagery in chemistry teaching: Development of an diligent independent learner	Lecturer
2004, February	The 69 th Conference of the Israel Chemistry Society	Tel-Aviv	Levels of understanding chemistry as a tool for evaluating student performance in the computerized laboratory program	Lecturer
2005, December	Conference of Chemistry Teachers	Rehovot	Electrons-configurations in atom, molecule and solid using fireworks, pigments and conductors	Lecturer
2008, February	The 73th Conference of the Israel Chemistry Society	Jerusalem	Teaching chemistry using a learning unit: From nanochemistry to microelectronics	Lecturer
2012, April	The Galilee Research Conference	Tel-Hai College	Success of an educational project: A question of evaluation and measurement	Lecturer
2012, October	The 40 th Conference of the Israel Society of Ecology and Environmental Science	Tel Aviv	Development of thinking skills using case study in environmental science	Lecturer
2013, April	EILAT Conference, Towards an	Weizmann Institute, Rehovot	Social responsibility and science education: A multidimensional model	Lecturer

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
	Era of Social Responsibility: Evaluators, Evaluated, and the Public		for evaluation of programs to reduce educational disparity in the periphery	
2014, May	The Galilee Research Conference	Tel-Hai College	Construction of an innovative model for educational leadership in the Eastern Galilee	Lecturer
2014, June	The 30 th Annual Meeting of the Association for Israel Studies (AIS)	Sede Boqer Campus, Ben-Gurion University	Building educational leadership in science and technology: An innovative model in the Eastern Galilee	Lecturer
2014, December	The 55th Annual Conference of the Israeli Geographical Society: "Between Theory and Application"	University of Haifa	From dependent to leading region: A case study in education	Lecturer
2015, February	The Israeli Sociological Association Conference	Kinneret College	From periphery to frontier: Empowerment processes in the East Galilee	Lecturer
2015, March	The 2 nd conference of Kadar Center for Inquiry Learning	Technion – Israel Institute of Technology,	Promoting inquiry and thinking skills	Lecturer
2015, April	The Galilee Research Conference	Tel-Hai College	Israel rising grade: Promoting meaningful learning	Lecturer
2016, February	Research and development conference – Ministry of Science	Sdot Negev Regional Council	Evaluation of the effectiveness of 'GVANIM' program	Lecturer
2016, October	The Ohalo Conference	Ohalo College	What affect school success in the field of science and technology: Case studies in the Galilee	Lecturer
2017, April	The Galilee Research Conference	Tel-Hai College	Building regional educational leadership as a means of developing	Lecturer & organizing a session

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
			human capital	
2017, April	The 4 nd conference of Kadar Center: The evaluation is being tested	Kibbutz Kabri	A model for pedagogical evaluation as a tool to enhance the quality of teaching and learning	Lecturer
2017, May	A conference of teachers in the Golan, led by the Golan Regional Council and the Katzrin Local Council	Hispin	How is best pedagogical quality determined?	Lecturer

b. Organization of Conferences or Sessions

Year	Name of Conference	Place of Conference	Subject of Conference	Role
2018, March	International conference - Successful Pathways from School to Work	University of Haifa & Tel-Hai College	Career development; transition intervention programs; populations at risk; research tools and methods used in order to evaluate programs' effectiveness	Member of the organizing team in collaboration with a team from the University of Haifa

7. Invited Lectures (Others than in Scholarly Conferences)

Abroad

NA

In Israel

Only selected lectures in 2017 -

Year	Name of Forum	Place of Lecture	Subject of Lecture	Role
2017, April	The 4 nd conference of Kadar Center: The evaluation is being tested	Kibbutz Kabri	A model for pedagogical evaluation as a tool to enhance the quality of teaching and learning	Lecturer
2017, May	A conference of teachers in the Golan, led by the Golan Regional Council and the Katzrin Local Council	Hispin	How is best pedagogical quality determined?	Lecturer

Year	Name of Forum	Place of Lecture	Subject of Lecture	Role
June, 2017	A lecture for the school staff	Mitzpe Golan school	Evaluation of an educational innovation	Lecturer
July, 2017	A lecture for the school staff	Golan school	Innovations in education	Lecturer
July, 2017	A lecture for the instructional staff of the Intelligence Division	Glilot military base	Designing effective learning environments	Lecturer
July, 2017	A lecture for the instructional staff of the "Village Way - Yemin Orde education initiatives"	Kibutz Dalia	Pedagogy that promotes transfer skills	Lecturer

8. Colloquium Talks

Year	Name of Forum	Place of Lecture	Presentation
2014, March	Departmental Seminar	Technion – Israel Institute of Technology Department of Education in Technology and Science	An academic model for evaluating the effectiveness of educational programs

9. Research Grants

a. Grants Awarded

Role in Research	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Amount	Years
PI		Evaluation of the contribution of the computerized laboratory program in chemistry to the development of	Myers' Fellowship (David and Inez Myer) - C	\$3,000	2008-2010

Role in Research	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Amount	Years
		graphic and transfer skills			
CI	Dr. Donita Cohen (PI), Dr. Tamar Zemach (Co-PI), Dr. Eyal Shifroni (CI)	The effect of age on recursive perception as high-order thinking	Tel-Hai College - C	NIS 50,000	2011-2012
PI	Keren Kopietz (CI)	Examination of the relationship between allocation of pedagogical resources in post-elementary schools and reducing educational disparities in the sciences in the Eastern Galilee	Chief Scientist, Ministry of Education - C	NIS 187,000	2012-2014
PI	Keren Kopietz (CI)	Development, implementation and research-based evaluation of a program for physics and mathematics teachers	Trump Foundation and JCA Foundation - C	NIS 622,000	2013-2015
PI	Keren Kopietz (CI)	Successful pathways from school to work: Academic research in science education	Milgrom Foundation, University of Chicago - C	\$190,000	2014-2017
PI	Keren Kopietz (CI)	The Implementation Processes of "Village Way" Educational Approach	Yemin Orde Education Initiatives" - C	NIS 1,034,000	2014-2018
PI	Dr. Itamar Yehuda (CI)	Evaluation of the pedagogical reforms in	The Golan Regional Council	NIS 695,000	2014-2018

Role in Research	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Amount	Years
		schools			
PI	Dr. Itamar Yehuda (CI)	Evaluation of the program to extend the school day	Gamla School, Katzrin	NIS 53,500	2016-2018

b. Submission of Research Proposals – Pending

Role in Research	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Years
PI	Prof. Shmuel Shamai (Co-PI), Dr. Ayala Cohen (CI), Dr. Orly Ganany (CI), Dr. Adi Vitman (CI), Dr. Itamar Yehuda (CI)	From practice to policy - Promoting gender equality in Israel	Ministry of Science - C	2017
PI	Dr. Itamar Yehuda (CI), Dr. Naama Bar-On (Co-PI)	The question of measurement and evaluation in science centers – Designing a logic model	Ministry of Science - C	2017
Co-PI	Prof. Shmuel Shamai (PI), Dr. Iris Ben-David-Hadar (Co-PI), Dr. Emanuel Tamir (CI)	The relationship between resource management practices and educational outcomes	Ministry of Science - C	2017

c. Submission of Research Proposals – Not Funded

Only in 2017

Role in Research	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Years
Co-PI	Prof. Itzhak Gilat (PI), Dr. Yishai Mor (CI), Dr. Tali Nachlieli (CI), Dr. Sima Zach (CI)	Teachers and researchers communities: a multidimensional meaningful learning model	ISF - C	2017
CI	Dr. Vered Holzmann (PI), Dr. Aviv Gibali, Dr. Dvora-Toledano-Kitai, Dr. David Pundak, Prof. Daniel Berend, Prof. Mikhail	PRIME: Promoting Innovation in Mathematics Education	Erasmus Plus program - The European Union - C	2017

Role in Research	Other Researchers (Name & Role)	Title	Funded by (C= Competitive Fund)	Years
	Klin, Dr. Arkady Leiderman, Prof. Arie Lev, Dr. Lea Dorel, Dr. Tali Yaakobi, Dr. Donita Cohen, Dr. Adam Chapman			

10. Scholarships, Awards and Prizes

- 2017 Award for Excellence in Teaching – Tel-Hai College.
2015 Award for Excellence in Teaching – Tel-Hai College.
2008 Meyer Scholarship, Tel-Hai College.

11. Teaching

a. Courses Taught in Recent Years

Years	Name of Course	Type of Course Lecture/Seminar/ Workshop/ Online Course/ Introduction Course (Mandatory)	Level	Number of Students
2005-present	Technology in education	Lecture - workshop	Bachelors and Master's degree	About 25
2005-present	Evaluation of education projects	Lecture - workshop	Bachelors and Master's degree	About 25
2007-present	Research seminar in education	Lecture - workshop	Bachelors degree	About 25
2010-2013	Academic thinking skills	Lecture - workshop	Bachelors degree	About 25
2013-present	Principles of designing educational learning environments	Lecture - workshop	Bachelors and Master's degree	About 25
2017-present	Mediated Learning	Lecture - workshop	Bachelors degree	About 70

b. **Supervision of Graduate Students**

Name of Student /	Name of Other Mentors	Title of Thesis	Degree	Year of Completion/ In Progress	Students' Achievements
M.A. Students	-	-	-	-	-
Ph.D. Students					
Merchi Edry-Malul	Prof. Judy Dori	High School Students' Scientific Research and its Effect on STEM Career Choice	Ph.D.	In progress	
Post Doctorate Students	-	-	-	-	-

PUBLICATIONS

1) The order of the listed authors is according to their relative contribution (unless otherwise specified).

Index:

I.F. = Impact Factor (Source & Year)

V = Vatat List (The Council for Higher Education)

R = Ranking (Source & Year)

= Student

A. Ph.D. Dissertation

Title: Case-based computerized experiments and their effect on the visualization skills and chemistry understanding of high-school students

Date of submission: 2007

Number of Pages: 172

Language: English

Name of Supervisor: Professor Yehudit Judy Dori

University: Technion – Israel Institute of Technology

Publications: (B3, D15, B16)

B. Scientific Books (Refereed)

NA

C. Monographs

NA

D. Articles in Refereed Journals

Published

1. Herscovitz, O., Kaberman, Z., Sasson, I., & Dori, Y. (2003). Computerized laboratories and molecular models in chemistry. *Alon Morei Hachemia Al Chemiya*, 4, 30-37. (In Hebrew)
2. Dori, Y. J., Sasson, I., Kaberman, Z. & Herscovitz, O. (2004). Integrating case-based computerized laboratories into high school chemistry. *The Chemical Educator*, 9, 4-8.
3. Dori, Y. J., & Sasson, I. (2008). Chemical understanding and graphing skills in an honors case-based computerized chemistry laboratory environment: The value of bidirectional visual and textual representations. *Journal of Research in Science Teaching*, 45, 219-250. (I.F.=3.179, 2016; R=10/235 – ISI, 2016 Education & Educational Research)

4. Sasson, I., Greenbaum, E., & Govrin, A. (2012). Aging and information technology and communication (ICT): What affects attitudes towards computers? *Gerontology*, 39(3), 57-75. (In Hebrew, V)
5. Sasson, I., & Cohen, D. (2013). Assessment for effective intervention: Enrichment science academic program. *Journal of Science Education and Technology*, 22(5), 718-728. (I.F.=1.08, 2016; R=161/933 Scopus, 2017 Education)
6. Hen, M., & Sasson, I. (2013). Towards mutual understanding (TMU) – Religious and secular students in higher education. *Journal of Educational and Social Research*, 3(1), 151-162. (I.F.=0.93, 2016)
7. Dori, Y.J., & Sasson, I. (2013). A three-attribute transfer skills framework – Part I: Establishing the model and its relation to chemical education. *Chemistry Education Research and Practice – CERP*, 14, 363-375. (I.F.=1.94, 2016)
8. Sasson, I., & Versano, C. (2013). Evaluation of the democratic school: The perspective of the graduates. *Maof Uma'aseh*, 15, 146-172. (In Hebrew, V)
9. Sasson, I. (2014). The role of informal science centers in science education: attitudes, skills, and self-efficacy. *Journal of Technology and Science Education*, 4(3), 167-180. (SPIN=0.264, 2016, Scopus; R=813/933 Scopus, 2017 Computer Science: Computer Science Applications, Social Science: Education, Q4)
10. Sasson, I., & Dori, Y. (2015). A three-attribute transfer skills framework – Part II: Applying and assessing the model in science education. *Chemistry Education Research and Practice – CERP*, 16, 154-167. (I.F.=1.94, 2016)
11. Cohen, D. & Sasson, I. (2016). Online quizzes in a virtual learning environment as a tool for formative assessment. *Journal of Technology and Science Education*, 6(3), 188-208. (SPIN=0.264, 2016, Scopus; R=813/933 Scopus, 2017 Computer Science: Computer Science Applications, Social Science: Education, Q4)
12. Sasson, I. (2017). What determines a school's success in science and technology education? Learning from success in the periphery. *'Mifgash' - For educational and social work*, 44, 11-36. (In Hebrew, V)

Accepted for Publication

13. Sasson, I. Participation in research apprenticeship program: Issues related to career choice in STEM. *Accepted to International Journal of Science and Mathematics Education*. (I.F.=1.474, 2016; R=41/317 Scopus, 2017 Mathematics; R=220/933 Education)

14. Sasson, I. & Kopietz, K. Implementation of an educational change in the organization – An evaluation model. *Accepted to the Journal 'Eunim Beminhah Irgun Hahinuch'*. (In Hebrew, V)

E. Articles or Chapters in Scientific Books (Refereed)

Published

15. Sasson, I., & Dori, Y.J. (2012). Transfer skills and their case-based assessment. In B. J. Fraser, K. G. Tobin, and C. J. McRobbie (Eds.), *The Second International Handbook of Science Education* (pp. 691-710). Dordrecht, The Netherlands: Springer-Verlag.
16. Sasson, I., & Dori, Y. (2006). Fostering near and far transfer in the chemistry case-based laboratory environment. In G. Clarebout, & J. Elen (Eds.), *Avoiding simplicity, confronting complexity: Advance in studying and designing powerful (computer-based) learning environments* (pp. 275-286). Rotterdam, The Netherlands: Sense Publication.

Accepted for Publication

None

F. Articles in Conference Proceedings

Published

17. Sasson, I. (2013). Research-based teaching in science education: A regional innovative program. In N. Callaos, J. Horne, N. Lace, W. Lesso, & M. Siddique (Eds.), *The 17th World Multi-Conference on Systemics, Cybernetics and Informatics – Proceedings book* (pp. 253-256). Orlando, Florida, USA: International Institute of Informatics and Systemics.
18. Sasson, I., & Kopietz, K. (2013). Social responsibility in science education: A multidimensional model for evaluating programs to reduce educational disparity in the periphery. In R. Lustig (Ed.), *Towards an era of social responsibility: The evaluators, evaluatees, and the public* (pp. 185-200). Israel Association for Program Evaluation.

G. Entries in Encyclopedias

NA

H. Other Scientific Publications

Published

Textbooks for the Ministry of Education (In Hebrew)

Herscovitz, O., Kaberman, Z., Sasson, I., & Dori, Y. (2002). *Computerized laboratories and molecular imagery in chemistry*. Holon, Israel: Yesod.

Sasson, I., Stenger, R., Paskin, A., & Dori, Y. (2005). *From nanochemistry to microelectronics*. Holon, Israel: Yesod.

I. Other Works and Publications

NA

J. Submitted Publications - Articles in Refereed Journals

- Sasson, I. Systematic classroom observations as a tool for assessing pedagogical practices. Submitted to the Journal – *Teacher Development*.
- Sasson, I. The quality of learning tasks: A three-dimension pedagogical framework. Submitted to the Journal – *Journal of Teacher Education*.
- Sasson, I. Building a sustainable university-community partnership: Case study in science education. Submitted to the *Journal of Higher Education Outreach and Engagement*.
- Sasson, I. Being a Scientist - What influences the career choice? Submitted to the Journal – *International Journal of Science Education*.
- Sasson, I. A pedagogical framework for characterization of learning tasks as a tool for professional development of teachers. Submitted to the Journal – '*Dapim*'. (In Hebrew)

K. Summary of my Activities and Future Plans

My doctoral research in the Department of Education in Technology and Science at the Technion (currently called the Faculty of Education in Science and Technology) dealt with the development and assessment of a new curriculum in chemistry for 11th and 12th-grade students in the field of computerized laboratories. Since then I have dealt extensively in assessment research of different educational programs.

Over the past few years, I have specialized in the field of educational effectiveness research (EER) which deals with the factors which might affect educational (academic, social and emotional) outcomes of students in the classroom, school or educational system.

The scientific contribution of my work is expressed in three main areas:

A. Development of methodological tools for pedagogical quality assessment

Educators worldwide on all levels, classroom, school, regional, and national, have been developing active learning models and other initiatives in an effort to improve pedagogical practices and results. These models can be challenging to implement and there is often a gap between the educational goals and design principles and features. Moreover, measuring their effectiveness is complex yet critical to the success of new educational models.

The knowledge and experience gained in the framework of my doctoral thesis were adapted to assess the development of thinking skills in formal and informal programs. Several studies of mine integrated pre and post-case based questionnaires to assess the students' higher order thinking skills – inquiry, graphing, and argumentation as well as students' attitudes and self-efficacy.

Studies in the field of effective educational practices ascribe great value to the behavior of teachers in the classroom and teacher-student interaction. Yet, there is a significant lack of studies that are focused on the effectiveness of learning tasks and classroom practices. I developed a new research methodology, based on systematic class observations and structured content analysis of learning tasks. The knowledge gained from this research has been published in papers no. 1, 2, 3, 7, 9, 10, 15, and 16 (from publication list).

B. Evaluation of programs and processes of change (reforms) in education

Evaluation of educational programs includes the use of methods to promote changes and improvements during the clarification of program goals, to develop of a program theory that includes program logic and performance measures, to document stakeholder awareness, understanding, and interest in the program, and to evaluate the effectiveness in achieving the goals. The knowledge gained from this research has been published in papers no. 4, 5, 6, 8, 11, 12, 14, 17, and 18 (from publication list).

C. Educational differences - Gender and place of residence gaps in STEM studies

STEM (Science, Technology, Engineering, and Mathematics) factors relating to learning experiences have been associated with gender and place of residence differences. These subjects interest me and I study them in different settings. The knowledge gained from this research has been published in papers no. 5, 10, and 13 (from publication list).

Community Activity

As part of my academic work, in addition to teaching and research I volunteer to promote educational issues in the community. Interaction with the educational field is very important to me and I aspire to promote University-Community Partnerships (UCP). I serve as an academic consultant in several schools in the Eastern Galilee and the Golan and I participate in several steering committees. In this capacity, I supervise processes of professional development of teaching staff in developing high-order thinking skills and evaluation processes.

Papers In Preparation

1. Sasson, I., Yehuda, I., & Malkinson, N. Fostering critical thinking and questioning skill in an innovative learning environment.
2. Sasson, I. & Medjinski, S. Fostering transfer skills in training programs for in-service teachers: The case in the education of youth at risk.
3. Medjinski, S. & Sasson, I. An evaluation model for implementation of an educational philosophy by the organization.