

Abed, CV_December_2013

Curriculum Vitae

Abed Abir

ACADEMIC DEGREES

2008	D. Sc.	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel
2002	M. Sc.	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel
1997	Teaching License	Ministry of Education
1994	Teaching Certificate	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel
1991	B. Sc.	Department of Chemical Engineering, Technion, IIT, Haifa, Israel

RESEARCH INTERESTS

Bilingual learning and teaching of science
Higher order thinking skills in science classroom
Integrating inquiry approach in science
Integrating computerized laboratory in science classroom
Case-studies as a mean of instruction and assessment
21st century skills

PROFESSIONAL AND TEACHING EXPERIENCE

2013-	Al-Qasemi College: department of science education	M.Ed courses: <ul style="list-style-type: none">• Developing scientific thinking• Teaching and learning in multi-technology environment
2013	Al-Qasemi College: department of science education	B.Ed courses: <ul style="list-style-type: none">• Seminar in environmental sciences• Dilemmas in science teaching
2010-	Al-Qasemi College: department of science	<ul style="list-style-type: none">• Didactics and methodology of teaching science

	education	<ul style="list-style-type: none"> • Practical training • Fostering scientific literacy • ICT pedagogical models in the teaching • Big ideas in science • Implementation of ICT in the teaching learning and assessment • Pedagogical consultant for pre-service Arab science teachers • Environmental quality- Ideological and educational aspects • Scientific and technological thinking and related issues • Promoting higher order thinking skills
2009-2011	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel	Research associate- developing implementing and assessing a teaching unit in the field of environmental sciences
2009-2011	The Academic Institute for Arab Teacher Training- Beit Berl College	<ul style="list-style-type: none"> • Pedagogical consultant for pre-service Arab science teachers • Lecturer in the Department of Special Education instruction and in the Department of science instruction
2009-2011	Ministry of Education	State-wise chemistry consultant, specializing in implementing higher-order thinking skills and acquiring the scientific method skills
1999-2011	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel	Pedagogical consultant for pre-service Arab teachers majoring in both Chemistry and Environmental sciences in secondary grades
1997-	El-Galil high school	Department coordinator of environmental sciences
1991-	El-Galil high school	Chemistry and Environmental sciences

1998-2009	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel	teacher qualifying students for secondary school matriculation test in both domains Mentoring teacher for pre-service in both subjects: Chemistry and Environmental sciences
2006-2008	Ministry of Education	State-wise chemistry consultant for implementing alternative assessment and evaluation methods
2002-2008	Na'amat- Movement of working women volunteers	Lecturer for: <ul style="list-style-type: none"> • Introduction to Chemistry for Dental Assistants • Dental Chemical Materials • Cosmetic Chemistry
2006-2007	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel	Teaching Associate of the course: Philosophy of Education
2003-2007	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel	Experimental teacher for: <ul style="list-style-type: none"> • Nano-chemistry • Case-based Computerized Chemistry Laboratory
2005-2006	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel	Teaching Associate of the course: Teaching skills
1999-2000	El-Galil high school	Teacher for gifted students
1997-2000	El-Galil high school	Teacher for STES approach
1996-1998	Department of Education in Technology and Science, Technion, IIT, Haifa, Israel	Experimental teacher for: <ul style="list-style-type: none"> • The Air Quality Around Us • Biotechnology, Environment and Related Issues

AI-QASEMI ACTIVITIES

2013	Proposing and coordinating an educational initiative: developing website which includes scientific experiments appropriate for elementary school students
2013	Proposing and coordinating an educational initiative: developing scientific E-

- learning units which emphasize higher order thinking skills for elementary school students.
- 2013 Proposing an educational initiative: “Developing higher order thinking skills among six graders in E-Learning environment”.
- 2013 Partner in Developing joint program for teaching science and mathematics for MALAG approval.
- 2013 Implementing an educational initiative: “developing online learning units by pedagogical consultants through practical experience”.
- 2011- Developing and implementing ICT workshops for lecturers and pedagogical consultants (56 hours each).
- 2011- Member of ICT staff, coordinator of lecturers professional development regarding ICT skills
- 2011- Member of ICT steering committee for assimilation the 21st century skills
- 2011- Member of NASS steering committee for Gender issues in Arab societies
- 2010-2011 Developing 10 syllabuses regarding science department for MALAG approval

TECHNION ACTIVITIES

- 2011 Head of translation project of high school Mutav (science for non majors) instruction materials and science advisor:
Thinking Mutav- Activities for developing higher order thinking skills
- 2010-2011 Head of translation project of high school chemistry instruction materials and science advisor:
Every Thing is Chemistry
- 2010-2011 Head of translation project of environmental sciences project and science advisor:
Workshops in Environmental Sciences
- 2010 Member of judgment committee concerning Middle school students’ competition in planning and presenting game in Mutav
- 2009-2011 Head of translation project of high school chemistry instruction materials and science advisor of:
- i. Taste of chemistry
 - ii. Energy and rate of chemistry

PUBLIC PROFESSIONAL ACTIVITIES

- 2013- Member, updating environmental sciences curriculum committee, the ministry of education
- 2012- Member, advisory council, the trump foundation, which aims to improve cultivating high quality teaching in secondary educational achievement in Israel schools
- 2011- Member, ADAM TEVA V'DIN, Israel union for environmental defense
- 2011- Member, environmental sciences curriculum committee, the ministry of education

AWARDS AND SCHOLARSHIPS

- 2012 Trump master teacher award high quality teaching
- 2011 Grinshpoon award in memory Excellence in teaching chemistry of Naama Grinshpoon
- 2005 Kaplan couple- Technion Excellence in PhD studies Contributors
- 1999 Graduate School- Technion, Master Degree Outstanding academic Israel Institute of Technology achievements

CERTIFICATES OF EXCELLENCE

- 2013 Al-Qasemi College, Outstanding Science Department lecturer
- 2012 Weizmann, institute, Outstanding teacher who submitted the largest number of projects of students who Reached the final stage of the competition” We have chemistry”.
- 2011 Al-Qasemi College, Outstanding Science Department lecturer

GRADUATE STUDENTS

Completed Theses

M. Sc.

Ahmad, Matar, Explicit teaching of higher order thinking skills among high school Arab students. Graduated, July 2013. Currently, a biology teacher, Tamra, high school.

Areen Khamaisie, Assessing the learning environment of inquiry laboratory of high school biology students. Graduated, July 2012. Currently, a biology teacher, El-Galil high school, Nazareth.

PUBLIC PROFESSIONAL ACTIVITIES

2010-2012 Member, Publication Committee, Galilee Research Center, Beit-Berl College

2011- Reviewer, Jameaa, Al-Qasemi college College

PARTICIPATION IN COMMITTEES

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|-----------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 2012- | National Center for Environmental sciences Teachers | Committee member for judging the best research in environmental sciences for high school students |
| 2010 | National Center for Mutav Teachers | Committee member for judging the best educational game |
| 2003-2005 | The Israel Chemical Society | Committee member for judging the yearly grant competition for excellent teacher |

PUBLICATIONS

Theses

- 2007 Bilingual Learning Culture in a Computerized Chemistry Laboratory Environment and Its Effect on Developing Higher Order Thinking Skills. Advisor: prof. Y. J. Dori.
- 2002 Cognitive and Affective Aspects of Bilingual Teaching/Learning of Science By using Case Studies Among High School Arab Students. Advisors: Prof. Y. J. Dori and Prof. R. T. Tal.

Papers in peer review journals

Abed, A., Dori, Y. J. (2013). Inquiry, Chemistry Understanding Levels, and Bilingual Learning, Educ. quím., 24(1), 37-43.

Professional Journals (peer review, in Hebrew)

Abed, A., Dori, Y. J. (2013). Cognitive and affective aspects of bilingual teaching and learning of science using case studies among high school Arab students, Gamea'a17(2), 181-218.

Abed, A. (2013). Developing 21 st century skills among students-is it achievable? The journal of biology and environmental sciences teachers, available:

<http://www.bioteach.org.il.186-עלון-מורי-הביולוגיה/עלון-186/html>

Abed, A., Dori, Y. J. (2007). Arab chemistry teachers perceptions of bilingual learning,

Textbooks for Secondary Schools (in Hebrew)

Abramovitz, A; Abed, A., Sadeh, I. (2011). Environmental Workshop-**Industry**.

Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2011). Environmental Workshop- **Mediterranean sea and its shores**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2011). Environmental Workshop-**Sands**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2011). Environmental Workshop- **Grove**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2011). Environmental Workshop- **Urban environment**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2011). Environmental Workshop- **Rivers**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2011). Environmental Workshops **teacher's guide**. Department of Education in Technology and Science, YESSOD, publishing house.

Textbooks for Secondary Schools (complete translation from Hebrew to Arabic)

Abramovitz, A; Abed, A., Sadeh, I. (2012). Environmental Workshop-**Industry**. Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2012). Environmental Workshop- **Mediterranean sea and its shores**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2012). Environmental Workshop-**Sands**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2012). Environmental Workshop- **Grove**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2012). Environmental Workshop- **Urban environment**, Department of Education in Technology and Science, YESSOD, publishing house.

Abramovitz, A; Abed, A., Sadeh, I. (2012). Environmental Workshop- **Rivers**,

Department of Education in Technology and Science, YESSOD, publishing house
Abed, A., Margiah, K. (2004). The Air Quality Around Us. Department of Education in
Technology and Science, Technion publication.

Abed, A., Margiah, K. (2003). Biotechnology Environment and Related Issues.
Department of Education in Technology and Science, Technion publication.

Textbooks for Secondary Schools (partial translation from Hebrew to Arabic)

Abed, A. (2005). Case-based Computerized Chemistry Laboratory. Department of
Education in Technology and Science, Technion publication.

Abed, A. (2003). The Air Quality Around Us. Department of Education in Technology
and Science, Technion publication.

ORGANIZING TEACHERS WORKSHOPS FOR PROFESSIONAL DEVELOPMENT

Abed. A. Developing inquiry methods workshop, PISGA Nazareth, December-March,
2012.

Abed. A. Exposure to the assessment procedure of the environmental workshop
learning unit for environmental sciences majors- emphasis on urban workshop, El-Galil
high school Nazareth, September-October, 2011.

Abed. A. Integrating lab activities in science teaching, Eshkol pais, Nazareth,
December-February, 2010.

Abed. A. Exposure to the environmental workshop learning unit for environmental
sciences majors- emphasis on forest workshop, Beit Natufa Basin, Sachnin, March-
June, 2010.

Abed. A. Sustainable development of the environment, Technion, Haifa, November-
May, 2010.

Abed. A. biodiversity and adapting a scientific article in the inquiry method, Technion,
Haifa, November-may, 2009

Abed. A. Exposure to new chemistry curriculum, El-Galil high school Nazareth,
December-May, 2009.

Abed. A. Higher order thinking skills- Posing questions and Formulating a good
research question, El-Galil high school Nazareth, November-may, 2008.

Abed. A. Integrating inquiry method in chemistry laboratory, PISGA Nazareth,
October-April, 2007.

INVITED LECTURES AS A PART OF A WORK SHOP

Abed. A. Fostering 21st century skills workshop, Al-Galil high school Nazareth, March, 2013

Abed. A. Basic principles for integrating HOTS in teaching/learning activities , Al-Qasemi college, Baka Al-Garbia, January, 2012.

Abed. A. Criteria for assessing distance teaching/learning , Al-Qasemi college, Baka Al-Garbia, April, 2012.

Abed. A. evaluating the inquiry process, Pisga, Baka Al-Garbia, November-March, 2012.

Abed. A. Hands-on activities: between theory and practice, Pisga, Baka Al-Garbia, December-February, 2011.

Abed. A. higher order thinking skills in science instruction, Pisga, Baka Al-Garbia, December-February, 2010.

Abed. A. Environmental Education workshop, Learning environment on the environment and for the environment, Weizmann Institute, July 2009.

Abed. A. Nano chemistry unit for secondary high school students, Pisga, Baka Al-Garbia, May, 2008.

Abed. A. The case-based computerized laboratory in chemistry, Department of Education in Technology and Science, Technion, IIT , July 2006.

SEMINARS

Integrating experiments in environmental studies, the 4th annual seminar for environmental studies' teachers, Ramat Hanadiv, Zickron Yaakov, June, 2013

Implementing Elluminate platform in pedagogical consulting, ICT annual seminar , Al-Qasemi college, March, 2013

Bilingual learning culture in a computerized chemistry laboratory environment and its effect on developing higher order thinking skills, Department of education in science and technology, Technion, October, 2012

Thinking skills are the basis of effective learning. Joint seminar with the Department of Science teaching and Pedagogical training of Elementary School, Al-Qasemi college, April, 2012

Professional development of lecturers in ICT skills, Seminar of ICT department in Achievements and challenges in implementing the 21st century skills, Al-Qasemi college, January, 2012

Bilingual Learning Culture in a Computerized Chemistry Laboratory Environment and Its

Effect on Developing Higher Order Thinking Skills. Technion, Haifa, June 2006.
Students Achievements in a Bilingual Setting, Seminar for doctoral students, Neer Etzion Haifa, September, 2006
Cognitive and Affective Aspects of Bilingual Teaching/Learning of Science By using Case Studies Among High School Arab Students. Technion, Haifa, June 2001.
Bilingual Learning Culture in Chemistry classroom, Department of Science Education, Weizmann Institute, December, 2000.

INTERNATIONAL CONFERENCES

Papers in Conference Proceedings

Abed, A., Dori, Y. J. (2013). What high school Arab students in Israel reveal about bilingual learning of science using case studies? Proceedings of the Meeting of the 6th international conference of education, research and innovation (ICERI), Seville, Spain.

Abed, A. , Tal, Revial & Dori, Y. J. (2013). Partial Translation of an STS Module for High School Arab Students in Israel, Proceeding of the 6th international conference in teacher education, changing reality through education, The david yellin academic college of education and the mofet institute, Jerusalem, Israel.

Abed, A. & Dori, Y.J. (2007). Fostering question posing and inquiry skills of high school Israeli Arab students in a bilingual chemistry learning environment. Proceedings of the Annual Meeting of the National Association for Research in Science Teaching (NARST) New Orleans, LA, USA.

INTERNATIONAL WORKSHOPS

International Workshop for educators on "leadership to a sustainable future", Ramat Hanadiv, Zichron Yaakov, Israel, May 2012

Contributed Talks

Tal, R. T., Dori, Y. J. & Abed, A. (2001). Teaching scientific case studies in Hebrew with partial translation for Arab students- Outcomes and attitudes. The 9th Conference of the European Association of Research on Learning and Instruction (EARLI). Fribourg, Switzerland.

NATIONAL CONFERENCES

Abed, A. (2011). Developing higher order thinking skills: from theory to reality, The

Annual Conference of the Academic Institute for Arab Teacher Training- Beit Berl College, Kfar-Saba

Abed, A. (2010). Many ways for mentoring, The Annual Conference of the Academic Institute for Arab Teacher Training- Beit Berl College, Kfar-Saba

Abed, A. (2004). Cognitive and Affective Aspects of Bilingual Teaching of Science Among High School Arab Students, Israeli Association for Research in Education (AYALA).

Abed, A. (2002). Students Perceptions of Bilingual Learning of the Unit “The Air Quality Around Us”, The Annual Conference of the Israeli Society for Ecology and Environmental Sciences, Exhibition Center, Tel Aviv.