

Name: Carmella Shahab

Date: 9 – 11 – 25

CURRICULUM VITAE

1. Personal Details

Permanent Home Address: 11 Ha-Karkom St., Zichron Ya'akov, 3093193

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2. Higher Education

A. Undergraduate and Graduate Studies

Period of Study	Name of Institution and Department	Degree	Year of Approval of Degree
2021 - 2025	Technion – Israel Institute of Technology, The Faculty of Education in Science and Technology	Doctor of Philosophy	2025
2006 - 2009	Oranim Academic College of Education	Masters of Education, Teaching English as a Foreign Language	2009 <u>Graduated with highest honors – summa cum laude</u>
1991 - 1995	University of Tel Aviv, Department of English Literature and Department of History	Bachelor of Arts Majors: General history and English literature	1995

B. Certification Studies

Period of Study	Name of Institution and Department	Degree	Year of Approval of Degree
2002 - 2004	Oranim Academic College of Education	Certificate in Teaching English to Learning Disabled Students	2004
1998 - 2000	University of Haifa, Department of Education	Teaching Certificate	2000

3. Academic Ranks and Tenure in Institutes of Higher Education

Dates	Name of Institution and Department	Rank/Position
2020 to date	Technion Institute of Technology, Israel	Assistant 'B'
2019 to date	English Studies Unit, Max Stern Academic College of Emek Yezreel	Senior teacher with tenure
2012 to date	English Studies Unit, Max Stern Academic College of Emek Yezreel	Teacher with tenure
2009 to 2020	Technion Institute of Technology, Israel	Adjunct teacher

4. Offices in Academic Administration

Supervision of Lecturers

2022 – present Coordinator of the Advanced A Course,
Max Stern Academic College of Emek Yizreel

2014 – 2022	Coordinator of the Besisi Online Course, Max Stern Academic College of Emek Yizreel
2012 – 2014	Coordinator of Intermediate One Academic English, Max Stern Academic College of Emek Yizreel

5. Scholarly Positions and Activities Outside the Institution

Reviewing of Scholarly Articles to be Accepted to Journals

Year	Journal	Manuscript Number and Title of the Article
2025	Thinking Skills & Creativity	TSC-D-25-01299 Investigation of reliability and validity of the Arabic version of the California Critical Thinking Skills Test
2024	Science & Education	SCED-D-23-00442 Epistemic Beliefs of In-Service for Green Activities in Science Lessons
2023	Thinking Skills & Creativity	TSC-D-23-00339 The influencing factors of undergraduate students' critical thinking disposition: Evidence from plausible values
2023	Science & Education	SCED-D-22-00271R1 The value of the philosophy of science in senior high school science education from the perspective of the nature of science
2022	Science & Education	SCED-D-22-00167 Beyond misrepresentations: Situating the utility of the FRA in contemporary science education
2022	Science & Education	SCED-D-22-00122 A Systematic Review of Research on Family Resemblance Approach to Nature of Science in Science Education
2022	Journal of Science Education and Technology	JOST-D-22-00218 Modeling with Real-Time Informative Feedback: Implementing and Evaluating of a New Massive Open Online Course Component
2022	Science & Education	SCED-D-22-00232 Investigating the Development of Preservice Science Teachers' Nature of Science Instructional Views Across Rings of the Family Resemblance Approach Wheel

6. Participation in Scholarly Conferences

Date	Name of Conference	Place of Conference	Subject of Lecture	Role
August 2025	ESERA	Copenhagen, Denmark	Pedagogical guidelines and modes of engagement for promoting critical thinking in science and engineering education	speaker
March 2025	NARST Annual International Conference	Washington, D.C., USA	University students' perceptions of a newly designed instructional framework for promoting critical thinking	speaker
June 2024	Proceedings of the 19th Chais Conference for Learning in the Digital Era	The Open University of Israel, Ra'anana	Promoting critical thinking with a digitally-enhanced instructional framework	speaker
August 2023	ESERA	Cappadocia, Turkey	Perceptions of critical thinking and its prevalence in science and engineering education	speaker
April 2023	NARST Annual International Conference	Chicago, IL, USA	Critical thinking: Perceptions and experiences of science and engineering instructors and students	speaker
February 2023	Proceedings of the 18th Chais Conference for Innovation and Learning Technologies	The Open University of Israel, Ra'anana	Critical thinking learning experiences in the digital era	speaker

June 2022	EARLI SIG 1 & 4 Annual International Conference	University of Cadiz, Spain	The conception of critical thinking in higher education from a cultural perspective	speaker
March 2022	The H-INET Higher Education in Israel Network of English Teachers International Spring Conference	Online national conference	The conception and promotion of critical thinking with digital activities	speaker
September 2021	ESERA - 14 th Conference of the European Science Education Research Association	University of Minho - Braga, Portugal, in the virtual format	The conception of critical thinking in science and engineering courses	speaker
May 2021	The 6 th Science of Teaching Conference: Opportunities and Challenges of the Distant Learning Era	Online conference organized by Bar Ilan University	The conceptualization of critical thinking by higher education instructors and students	speaker

7. Scholarships, Awards and Prizes

2021 – 2nd place in the faculty graduate student poster competition, Faculty of Education in Science and Technology, Technion.

8. Teaching Experience

a. Courses Taught in Recent Years

Year	Name of Course	Type of Course	Degree	Number of Students
2017 – to date	Advanced Aleph English	English for Academic Purposes, English Unit - Max Stern Academic College of Emek Yezreel	BA	25 - 35

2016 – to date	Intermediate Blended Course	English for Academic Purposes, combines online and frontal lessons, English Unit - Max Stern Academic College of Emek Yezreel	BA	25 - 35
2009 – to date	Advanced Bet Scientific English	Technical English for Academic Purposes - Technion Institute of Technology	BA	25 - 35
2009 – to 2024	Intermediate / Besisi English for LD Students	English for Academic Purposes, English Unit - Max Stern Academic College of Emek Yezreel - adapted course for the needs of learning disabled students	BA	10 - 15
2020 - 2021 (summers)	Preparatory English	Guangdong Technion-Israel Institute of Technology in China	BA	25 - 35
2009 - 2014	Beginners English	English for Academic Purposes, English Unit - Max Stern Academic College of Emek Yezreel	BA	25 – 35
2009 – 2014	Intermediate 1	English for Academic Purposes, English Unit - Max Stern Academic College of Emek Yezreel	BA	25 - 35
2009 – 2014	Intermediate 2	English for Academic Purposes, English Unit - Max Stern Academic College of Emek Yezreel	BA	25 - 35

b. Additional Teaching Experience

- 1999 – 2009 English Teacher and Homeroom teacher, Megiddo Regional High School, grades 7 – 12
- 1995 – 1996 English Teacher, Alliance High School, Haifa, grades 7 -12
- 1994 – 1995 English Teacher, Makif A High School, Ashdod, grades 7 – 12

c. Teacher Training

- 2008 – 2009 Teacher Trainer, Oranim Academic College of Education, Tivon, Israel. Supervised and trained a student teacher of English at Megiddo Regional High School throughout the school year, name of student is Lena Shoval.

9. Curriculum Development

- 2022 – present Active involvement in the development and writing of course material, the curriculum and syllabi for the Advanced Aleph level course at the English unit, Max Stern Academic College of Emek Yizreel
- 2009 – to present Active involvement in the development of course material and syllabi for various Advanced Bet courses at the Technion Institute of Technology
- 2016 – 2022 Development and writing of an online Intermediate level course and active involvement in writing materials for the course. Worked in coordination with the computer department in order to develop interactive "online tests and quizzes" to be used at the English unit, Max Stern Academic College of Emek Yizreel
- 2012 – 2022 Active involvement in the development and writing of course material, the curriculum and syllabi for the Intermediate level course at the English unit, Max Stern Academic College of Emek Yizreel
- 2014 Development of a new Intermediate course, including the course book for Course B: Language and Vocabulary Acquisition (שיעור המשך) and co-writer for Course A: Reading Comprehension (שיעור)
- 2010 Development of a new Advanced Bet level course and the course book for academic English specifically for students of Computer Science - 'Technical English for Computer Science' at the Technion Institute of Technology, undergraduate course.

10. Non-Academic Community Services (Volunteer Work)

- 1994 – 1995 Work with handicapped children, Ilan Organization for Handicapped Children, Rishon Le Zion, Israel.
- 1989 – 1990 Counselor and Support Worker, Evergreen Transition House for Abused Women, Surrey, Canada.
- 1988 – 1990 Counselor and Support Worker for the Richmond Royal Canadian Mounted Police Victim/Witness Services.

11. Miscellaneous

Doctoral Thesis

PhD (2025) The Conception and Practice of Critical Thinking in Science and Engineering Education from a Cultural Perspective. The Faculty of Education in Science and Technology, Technion, Israel. Advisor: Prof. Miri Barak.

Master's Thesis

M. Ed. (2009) The Extent to Which Writers of CALL Material for EFL Websites Incorporate Principles Recommended by Experts in the Field of Vocabulary Acquisition, Oranim Academic College of Education, Tivon, Israel, supervised by Dr. Jean Vermel (final grade 97).

12. PUBLICATIONS

A. Articles in Refereed Journals

Shahab, C. & Barak, M. (2026). Critical thinking in higher education: Identifying the pedagogical practices and modes of engagement. *Thinking Skills and Creativity*, 59. <https://doi.org/10.1016/j.tsc.2025.102041>

Barak, M. & Shahab, C. (2023). The Conceptualization of critical thinking: Toward a culturally inclusive framework for technology-enhanced instruction in higher education. *Journal of Science Education and Technology*, 32, 872-883. <https://doi.org/10.1007/s10956-022-09999-4>

B. Articles in Conference Proceedings

Shahab, C. & Barak, M. (2024). Promoting critical thinking with a digitally-enhanced instructional framework. *Proceedings of the 19th Chais Conference for Innovation and Learning Technologies*. The Open University of Israel, Raanana, June.

Shahab, C. & Barak, M. (2023). Critical thinking learning experiences in the digital era. *Proceedings of the 18th Chais Conference for Innovation and Learning Technologies*. The Open University of Israel, Raanana, February.

C. Summary of my Activities and Future Plans

In the past my research focused on the significance of vocabulary development in foreign language programs, in particular the enhancement of vocabulary through computer assisted language learning. While the traditional instruction of vocabulary has been held in the classroom with learning aids such as books, pencils, paper and the whiteboard, today there are alternative options which seem to better suit the technological age we live in. In fact, a

vast number of websites for students of English as a Foreign Language can be found on the Internet that offer interactive games and lessons where learners are provided with many opportunities to practice vocabulary and drill other aspects of language as well.

While I don't believe in computers as a substitute for the teacher and classroom, it is a great tool which can be utilized to facilitate learning and can easily be blended with the regular classroom. In fact, I worked with a colleague and built an online language course which accompanies the regular Intermediate course. Students meet in the classroom 4 hours a week and work independently another 2 hours a week on the online course. Combining regular lessons with the online course seems to be very promising.

Presently my research has turned to the fostering of critical thinking (CT) in higher education. Educating students to be critical thinkers is a nationwide priority for successful competition in the global economy. Nonetheless, a review of the literature indicates that much obscurity still remains regarding CT and its inherent role in education. In fact, there is no accepted educational plan nor guidelines that university instructors can lean on for integrating CT into subject instruction. Moreover, while CT is a social practice and is inherent in Western culture, it is less practiced in cultures that cherish authority-based teaching and passive learning. With the current globalization trends in higher education which include international student mobility, partnerships between universities, and the transition to online learning, the significant role of CT should be studied and guidelines for best practice should be established. Accordingly, the goal of my research is to analyze the way CT is conceptualized and practiced by university instructors and students in Israel and China, and consequently, to design, implement, and evaluate an instructional framework for promoting CT with digital activities in higher education.