BANU KARYAGDI
Ph.D. Student in Education
School of Education
University of California, Irvine
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EDUCATION

Ph.D. in Education (Teaching, Learning, and Educational Improvement)
University of California, Irvine
Graduation: June 2029 (Expected)

Master of Science (M.S.) in Mathematics and Science Education
Boğaziçi University, İstanbul, Turkey
Graduation: September 2022

- Master's Thesis: *Investigating Preservice Students' Content Knowledge on Multiplication and Division*

Bachelor of Science (B.S.) in Undergraduate Program in Mathematics Education
Boğaziçi University, İstanbul, Turkey
Graduation: June 2019

- Honors Certificate
- Qualified as a middle school mathematics teacher upon graduation
- Middle School Mathematics Teacher's Certificate, Ministry of National Education, Turkey | 2019 – Present

FELLOWSHIPS

Graduate Student Fellowship, University of California, Irvine
Awarded 2024 | $2500

RESEARCH EXPERIENCE

Graduate Student Researcher | March 2025 – Present
Science of Learning Lab, University of California, Irvine
HOT5 Project, funded by IES
PI: Dr. Lindsey Richland

- Contribute to the development of data collection materials.
- Support the training and development of an AI-based math chatbot (Botsonic).

Graduate Researcher | September 2021 – June 2023
Boğaziçi University Adaptive Test Laboratory (BounAdaptiveTestLab), Boğaziçi University
PI: Dr. Serkan Arikan

- Wrote routine and non-routine 4th-grade math problems regarding the objectives in the Turkish curriculum.
- Entered the problems into the R-based software Concerto platform.
- Implemented the problems to the students in both state and private schools.
- Collected, read, and scored the data.
- Wrote a blog about Computerized Adaptive Testing on the website of the lab.
- Managed social media accounts of the lab.
- Assisted with the events within the scope of the lab.

TEACHING EXPERIENCE

Teaching Assistant | Winter 2025
EDUC 107 – Child Development in Education

- Attended lectures.
- Graded and provided feedback on weekly students' assignments.
- Graded and provided feedback on midterm and final exams.
- Delivered guest lecture on *"Quantity, Multiplication, and Division"*.
- Conducted final exam review session.

Teaching Assistant | Fall 2024
EDUC 173 – Cognition and Learning in Educational Settings

- Attended lectures.
- Graded and provided feedback on weekly students' assignments.
- Graded and provided feedback on the midterm exam and final project.
- Provided feedback on instruction, course activities, and assignments.

Mathematics Teacher | September 2019 – August 2020
Gültekin Education and Consultancy, İstanbul, Turkey

- Taught mathematics to 7th and 8th-grade students.
- Wrote non-routine math problems.

Intern Mathematics Teacher | February 2019 – May 2019
Hisar School, İstanbul, Turkey

- Observed middle school mathematics lessons.
- Prepared lesson plans and mathematical activities.
- Taught specific mathematical concepts.

Intern Mathematics Teacher | October 2018 – December 2019
Açı Schools, İstanbul, Turkey
- Observed middle school mathematics lessons.

WORK EXPERIENCE

LMS Coordinator | July 2023 – September 2024
Kangaroo Math TR, İstanbul, Turkey
- Created online math courses, including lesson videos, problems, and activities for grades 1-8.
- Developed online interactive learning materials.
- Prepared quizzes, tests, and exams related to the courses.
- Added and managed users (students and teachers) within the system.
- Assigned the resources they need to users.

Content Creator | February 2022 – July 2023
Kangaroo Math TR, İstanbul, Turkey
- Translated math competition questions from English to Turkish.
- Created content for grades K-4 by considering the objectives of the Turkish mathematics curriculum.
- Designed hands-on mathematical activities/games.
- Wrote logic and reasoning math problems.
- Reviewed national and international educational resources.
- Prepared and recorded the content of the lesson videos and problems for each objective of 5th-grade mathematics in the Turkish curriculum.

SCHOLARLY WRITING

Karyagdi, B. (2022, January 5). *What is computerized adaptive testing? Boğaziçi University Adaptive Test Laboratory.* https://bounadaptivetestlab.bogazici.edu.tr/what-computerized-adaptive-testing

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

TÜBİTAK 2237-A "How to Develop Computerized Adaptive Tests (CAT)? Computerized Adaptive Testing: Theory to Practice"
Boğaziçi University | September 2022

TÜBİTAK 2237-A "The Process of Scale Development from All Aspects"
Trakya University | November 2021

Online Summer School on Mathematics Education
Utrecht University | September 2020

Workshop on Writing Questions for Higher-Order Thinking Skills
MATBEG | December 2018

PROFESSIONAL SERVICE

Conference Proposal Reviewer, *North American Chapter of the International Group for the Psychology of Mathematics Education* **(*PME-NA)*** | 2024 – Present

Organizing Committee Member, *TÜBİTAK 2237-A Workshop: "How to Develop Computerized Adaptive Tests (CAT)? Computerized Adaptive Testing: Theory to Practice"*, **Boğaziçi University** | September 2022
- Assisted in the planning and organization of a nationally funded scientific education event, supported by the TÜBİTAK 2237-A program.
- Contributed to the design and implementation of hands-on workshops on adaptive testing using R and the Concerto platform.
- Supported the facilitation of instructional sessions for M.S. and Ph.D. students from six universities focused on achievement and scale development in CAT format.

COMMUNITY SERVICE

Student Volunteer, *Future of Education Conference, Boğaziçi University* | November 2019
- Assisted with conference operations and supported participant coordination during an education-focused academic event.

Community Volunteer, *Assistive Technology and Education Laboratory for Individuals with Visual Disabilities (GETEM), Boğaziçi University* | Fall 2016 and Spring 2018
- Recorded math test content, including practice questions and answers, to enhance accessibility for visually impaired students preparing for the university entrance exam.

SKILLS AND QUALIFICATIONS

Statistical Software: SPSS and STATA
Languages: Turkish (native), English (professional working proficiency)