

## Prof. FATMA ALKAN

### Personal Information

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### International Researcher IDs

ORCID: 0000-0003-2784-875X

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### Education Information

Doctorate, Hacettepe University, Eğitim Fakültesi, Turkey 2007 - 2012

### Dissertations

Doctorate, Kendi kendine öğrenmenin kimya laboratuvarında öğrenci başarısına, öğrenme hazırbulunuşluğuna, laboratuvar becerilerine yönelik tutumuna ve endişesine etkisi, Hacettepe Üniversitesi, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, 2012

### Research Areas

Social Sciences and Humanities, Education, Teacher Training in Science and Math. at Second. Sch. Lev.

### Academic Titles / Tasks

Associate Professor, Hacettepe University, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, 2017 - Continues

Lecturer PhD, Hacettepe University, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, 2012 - 2017

Research Assistant, Hacettepe University, Eğitim Fakültesi, Matematik ve Fen Bilimleri Eğitimi Bölümü, 2007 - 2012

### Published journal articles indexed by SCI, SSCI, and AHCI

- I. **An analysis of preservice teachers' scientific attitude in analytical chemistry laboratory with experiential learning**  
ALKAN F.  
Main Group Chemistry, vol.22, no.1, pp.13-29, 2023 (SCI-Expanded)
- II. **DEVELOPMENT OF CHEMISTRY LABORATORY SELF-EFFICACY BELIEFS SCALE**  
ALKAN F.  
JOURNAL OF BALTIC SCIENCE EDUCATION, vol.15, no.3, pp.350-359, 2016 (SSCI)
- III. **The Effect of Inquiry-Based Laboratory Application on Thinking Styles of Students**  
ERDEM E., ALKAN F.  
ANTHROPOLOGIST, vol.20, pp.369-376, 2015 (SCI-Expanded)

- IV. **THE EFFECT OF ALTERNATIVE ASSESSMENT TECHNIQUES ON CHEMISTRY COMPETENCY PERCEPTIONS AND CHEMISTRY SUCCESS OF PROSPECTIVE SCIENCE TEACHERS**  
Alkan F.  
JOURNAL OF BALTIC SCIENCE EDUCATION, vol.12, no.6, pp.774-783, 2013 (SSCI)
- V. **THE EFFECT OF SELF-DIRECTED LEARNING ON THE SUCCESS, READINESS, ATTITUDES TOWARDS LABORATORY SKILLS AND ANXIETY IN LABORATORY**  
ALKAN F., ERDEM E.  
HACETTEPE UNIVERSITESI EGITIM FAKULTESI DERGISI-HACETTEPE UNIVERSITY JOURNAL OF EDUCATION, no.44, pp.15-26, 2013 (SSCI)
- VI. **A STUDY ON DEVELOPING ATTITUDE SCALE TOWARDS LABORATORY SKILLS**  
ALKAN F., ERDEM E.  
HACETTEPE UNIVERSITESI EGITIM FAKULTESI DERGISI-HACETTEPE UNIVERSITY JOURNAL OF EDUCATION, pp.22-31, 2012 (SSCI)

### Articles Published in Other Journals

- I. **AN ANALYSIS OF HIGH SCHOOL STUDENTS' LABORATORY SELF-EFFICACY BELIEFS AND PERCEPTIONS OF LABORATORY APPLICATIONS**  
MUSTAFAOĞLU F. M., ALKAN F.  
PERIODICO TCHE QUIMICA, no.48, 2024 (ESCI)
- II. **Examining High School Students' Cognitive Structures on the Concept of Cleaning Agent through Word Association Test**  
ALKAN F., Dincdemir D., YÜCEL A. S.  
JURNAL PENELITIAN DAN PEMBELAJARAN IPA, vol.7, no.2, pp.134-151, 2021 (ESCI)
- III. **Examining the High School Students' Chemistry Motivation, Chemistry Laboratory Anxiety and Chemistry Laboratory Self-Efficacy Beliefs towards Different Variables**  
ALKAN F.  
JOURNAL FOR EDUCATORS TEACHERS AND TRAINERS, vol.12, no.3, pp.30-40, 2021 (ESCI)
- IV. **INVESTIGATING THE RELATIONSHIPS AMONG STUDENTS' CHEMISTRY MOTIVATIONS, ACHIEVEMENT GOAL ORIENTATION, CLASSROOM ENGAGEMENT, GENDER, CLASS AND POSITIVE TEACHER BEHAVIOURS THROUGH STRUCTURAL EQUATION MODELING**  
Alkan F.  
MIER-JOURNAL OF EDUCATIONAL STUDIES TRENDS AND PRACTICES, vol.10, no.2, pp.188-205, 2020 (ESCI)
- V. **INVESTIGATION OF EPISTEMOLOGICAL BELIEFS AND CREATIVITY FOSTERING BEHAVIOURS OF PROSPECTIVE TEACHERS' IN TERMS OF VARIOUS VARIABLES**  
ALKAN F., YÜCEL A. S.  
MIER-JOURNAL OF EDUCATIONAL STUDIES TRENDS AND PRACTICES, vol.9, no.2, pp.212-226, 2019 (ESCI)
- VI. **Experimental Learning Model in Chemistry Laboratory and Its Effects on Metacognitive Learning Strategies**  
ALKAN F.  
Cumhuriyet International Journal of Education, vol.6, pp.382-399, 2017 (Peer-Reviewed Journal)
- VII. **Teachers' Opinions towards Private Courses and Their Efficacy Levels**  
ALKAN F., ACARLI D. S., ALTUNDAĞ C.  
CUKUROVA UNIVERSITY FACULTY OF EDUCATION JOURNAL, vol.46, no.2, pp.517-540, 2017 (ESCI)
- VIII. **Experiential Learning Its Effects on Achievement and Scientific Process Skills**  
ALKAN F.  
Journal of Turkish Science Education, vol.13, pp.15-26, 2016 (Peer-Reviewed Journal)
- IX. **The Role of Technology in Science Teaching Activities: Web Based Teaching Applications**  
ALKAN F., ALTUNDAĞ C.  
Journal for the Education of Gifted Young, vol.3, no.2, pp.1-7, 2015 (Peer-Reviewed Journal)

- X. **STUDENTS REASONS FOR ATTENDING PRIVATE COURSESAND THEIR VIEWS ON THEM THE CASE OF TURKEY**  
ACARLI D. S., ALTUNDAĞ C., ALKAN F.  
JOURNAL OF EDUCATIONAL AND INSTRUCTIONAL STUDIESIN THE WORLD, vol.5, pp.44-49, 2015 (Peer-Reviewed Journal)
- XI. **Ortaöğretim öğrencilerinin dershanedeki fen öğretimine yönelik tutum ve görüşleri**  
ACARLI D. S., ALKAN F., ALTUNDAĞ C.  
Elektronik Sosyal Bilimler Dergisi, vol.14, pp.54-67, 2015 (Peer-Reviewed Journal)

### **Papers Published in Refereed Scientific Meetings**

- I. **The Opinion Scale towards Interdisciplinary Teaching: A Study of Validity and Reliability**  
ALTUNDAĞ C., ACARLI D. S., ALKAN F.  
7 th INTERNATIONAL CONFERENCE ON LIFELONG EDUCATION AND LEADERSHIP FOR ALL ICLEL 2021, Bosnia And Herzegovina, 24 - 26 August 2021
- II. **Analysis of The Opinions of Prospective Teachers on Interdisciplinary Teaching in Terms of Different Variables**  
ALTUNDAĞ C., ALKAN F., ACARLI D. S.  
7 th INTERNATIONAL CONFERENCE ON LIFELONG EDUCATION AND LEADERSHIP FOR ALL ICLEL 2021, Bosnia And Herzegovina, 24 August 2021
- III. **Examining the instructional materials motivation of prospective chemistry teachers' in laboratory**  
ALKAN F.  
ERPA International Congresses on Education (ERPA), Sakarya, Turkey, 19 - 22 June 2019, vol.66
- IV. **How should be the laboratory application? Prospective teachers' perspective**  
ALKAN F.  
ERPA International Congresses on Education (ERPA), Sakarya, Turkey, 19 - 22 June 2019, vol.66
- V. **INTERRELATIONS BETWEEN HIGH SCHOOL STUDENTS ACADEMIC MOTIVATION AND METACOGNITIVE AWARENESS**  
ALKAN F.  
International Journal of Arts & Sciences Academic Conferences 2016, Boston, United States Of America, 23 - 27 May 2016, vol.9, pp.129-136
- VI. **AN EXAMINATION OF HIGH SCHOOL STUDENTS ACADEMICMOTIVATION AND THEIR ATTITUDE TOWARDS CHEMISTRYLESSONS**  
ALTUNDAĞ C., ALKAN F.  
International Conference on Research in Education and Science (ICRES) 2016, Muğla, Turkey, 19 - 22 May 2016, pp.442-446
- VII. **OPINIONS AND ATTITUDES OF PROSPECTIVE TEACHERS FOR THE USE OF TECHNOLOGY IN EDUCATION**  
ALKAN F., ALTUNDAĞ C.  
International Conference on Education in Mathematics, Science & Technology (ICEMST) 2016, Muğla, Turkey, 19 - 22 May 2016, pp.881-884
- VIII. **Chemistry laboratory applications supported with simulation**  
ALKAN F., ALTUNDAĞ C.  
International Educational Technology Conference, Chicago, United States Of America, 3 - 05 September 2014, vol.176, pp.970-976
- IX. **Technology based instruction of precipitation titrations**  
Kocak C., ALKAN F.  
International Educational Technology Conference IETC, Illinois, United States Of America, 3 - 05 September 2014, vol.176, pp.531-537
- X. **Technology Supported Teaching of Volumetric Analysis**

ALTUNDAĞ C., ALKAN F.

V. European Conference on Social and Behavioral Sciences, St. Petersburg, Russia, 11 - 13 September 2014

- XI. **The Relationship Between Metacognitive Awareness, Teacher Self-Efficacy and Chemistry Competency Perceptions**  
ALKAN F., ERDEM E.  
3rd Cyprus International Conference on Educational Research (CY-ICER), Nicosia, CYPRUS, 30 January - 01 February 2014, vol.143, pp.778-783
- XII. **The Effect of Educational Technologie on Pre Service Teachers Self Efficacy**  
ALKAN F., ERDEM E.  
3rd World Conference on Information Technology, Barcelona, Spain, 14 - 16 November 2012, vol.3, pp.873-878
- XIII. **The relationship between teacher self-efficacy and competency perceptions of chemistry teacher candidates**  
ALKAN F., ERDEM E.  
Cyprus International Conference on Educational Research (CY-ICER), CYPRUS, 8 - 11 February 2012, vol.47, pp.1927-1932
- XIV. **Phänomenographie Eine qualitative Studie über die Wahrnehmung der Nanotechnologie**  
ALKAN F., ERDEM E.  
GDCh-Wissenschaftsforum Chemie 2011, Bremen, Germany, 4 - 07 September 2011
- XV. **The effect of elective courses on candidate teachers' level of social skills**  
ALKAN F., ERDEM E.  
3rd World Conference on Educational Sciences (WCES), İstanbul, Turkey, 3 - 07 February 2011, vol.15, pp.3451-3455
- XVI. **A study on developing candidate teachers' spatial visualization and graphing abilities**  
ALKAN F., ERDEM E.  
3rd World Conference on Educational Sciences (WCES), İstanbul, Turkey, 3 - 07 February 2011, vol.15, pp.3446-3450
- XVII. **The attitudes of student teachers towards educational technologies according to their status of receiving teaching application lessons**  
ALKAN F., ERDEM E.  
2nd World Conference on Educational Sciences (WCES-2010), İstanbul, Turkey, 4 - 08 February 2010, vol.2, pp.2523-2527
- XVIII. **Kimya Öğretmen Adaylarının Eğitim Teknolojilerine Yönelik Tutumlarının ncelenmesi**  
ALKAN F., ERDEM E.  
3. Uluslararası Bilgisayar ve Öğretim Teknolojileri Sempozyumu, Trabzon, Turkey, 7 - 09 October 2009, pp.306-310

## Supported Projects

YÜCEL A. S., Özsoy S., Karadeniz A., ALTUNDAĞ C., MUSTAFAOĞLU F. M., ALKAN F., Project Supported by Higher Education Institutions, Tahmin Et Gözle Açıkla Yöntemi İle Desteklenmiş Organik Kimya Laboratuvar Uygulamalarının Kimya Öğretmen Adaylarının Laboratuvar Kullanımına Yönelik Tutumları Üzerine Etkisi, 2016 - 2018

ALKAN F., Project Supported by Higher Education Institutions, Lise Öğrencilerinin Akademik Motivasyonlarının Üstbilişsel Farkındalık Açısından İncelenmesi, 2016 - 2016

ALTUNDAĞ C., ALKAN F., Project Supported by Higher Education Institutions, Lise Öğrencilerinin Akademik Motivasyonlarının ve Kimya Dersine Yönelik Tutumlarının İncelenmesi, 2016 - 2016

ALKAN F., Project Supported by Higher Education Institutions, 3. Uluslararası Eğitim ve e-Öğrenme Konferansı, 2015 - 2016

ALKAN F., Project Supported by Higher Education Institutions, Öğretmenlerin Dershanelere Yönelik Görüşleri ve Mesleki Yetkinlikleri, 2014 - 2015

## **Metrics**

Publication: 35

Citation (WoS): 22

Citation (Scopus): 18

H-Index (WoS): 3

H-Index (Scopus): 3

## **Non Academic Experience**

Pädagogische Hochschule Heidelberg, Arařtırmacı