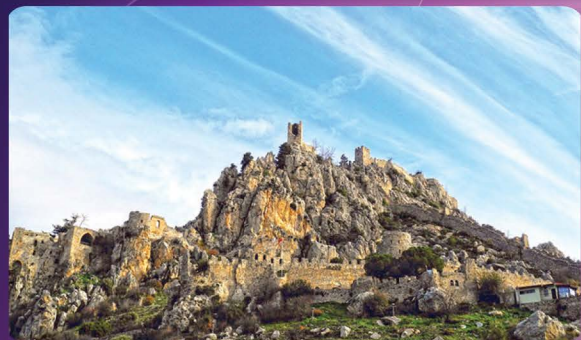
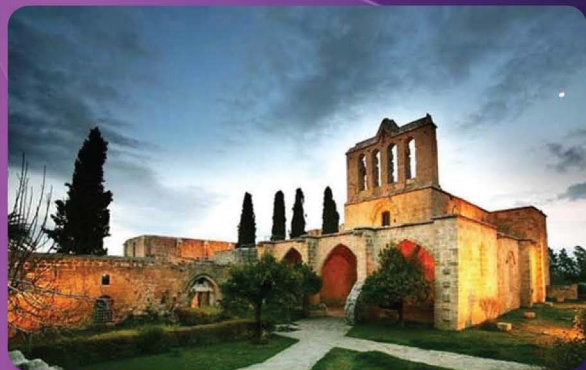




Globets

Globets 2019 Conference

2nd International Conference on
Education, Technology and Science
11-14 April 2019, Kyrenia, Northern Cyprus



11-14 April 2019, Kyrenia, Northern Cyprus



Iveta Kovalcikova
Presov University, Slovakia

Zehra Altınay Gazi
Near East University
Northern Cyprus



Ilze Ivanova
University of Latvia,
Latvia



Mehmet Kucuk
Recep Tayyip Erdogan University
Turkey

*Our
Keynote Speakers*

* All selected papers will be published by International Online Journal of Education and Teaching-IOJET (<http://iojet.org>), International Journal of Curriculum and Instruction-(IJCI) (<http://ijci.wcci-international.org/index.php/IJCI>), Turkish Journal of Teacher Education-TUJTED (<http://tujted.com>), and The International Journal of Social Sciences and Humanities Invention (<http://valleyinternational.net/index.php/theijsshi>). All of the journals are indexed by international indices.



AMERICAN NATIONAL ELT



HACETTEPE
ÜNİVERSİTESİ



GAZİ ÜNİVERSİTESİ



NEAR EAST UNIVERSITY



PEGEM
AKADEMİ



ROCKFORD
UNIVERSITY
1847



For more information please visit our website...

www.globets.org





Globets

**2nd INTERNATIONAL CONFERENCE ON
EDUCATION, TECHNOLOGY AND SCIENCE**
April 11-14, 2019, Merit Park Hotel, Kyrenia – Northern Cyprus

Copyright 2019 ©



Table of Contents

Welcome message from the conference president	1
Organising Committee	2-5
Keynote Speakers	6-9
Conference Programme	10-16
Day 1 - Concurrent Session I	17-19
Day 1 - Concurrent Session II	20-22
Day 2 - Concurrent Session I	23-25
Day 2 - Concurrent Session II	26-29
Day 2 - Concurrent Session III	30-32
Day 2 - Concurrent Session IV	33-35
Day 2 - Concurrent Session V	36-39
Day 3 - Concurrent Session I	40-42
Day 3 - Concurrent Session II	43-46
Day 3 – Poster Presentations	47
Day 3 - Concurrent Session III	48-50
Day 3 - Concurrent Session IV	51-53
Day 4 - Concurrent Session I	54-56



From the President of the Conference

Greetings to all GLOBETS friends!

It is a great pleasure for me to welcome you to the GLOBETS 2019 conference, organized with great success for the second time, collaboratively with private sector and academics in the fields of Education, Technology and Science.

I am very proud to announce that the GLOBETS 2019 conference has succeeded to attract diverse participant profiles of academics from different parts of the world. I also feel honored to mention that, as is always done, our distinguished keynote speakers are invited among the most productive academics in their context. Zehra Altınay Gazi from Near East University in Northern Cyprus, Mehmet Küçük from Recep Tayyip Erdoğan University in Turkey, Ilze Ivanova from University of Latvia in Latvia, and Iveta Kovalcikova from Presov Univeršity in Slovakia are the tastes of this year's conference with their remarkable and outstanding speeches.

The main focus of GLOBETS conferences is upon ***“the best practices in teaching Education, Technology and Science”***. The sub-themes to discuss during the work of the conference cover but not limited to such topics as *Teacher Training, Current Trends in Education, Learning- Teaching-Assessment; STEM Education, Teaching 21st Century Skills, Multicultural and Plurilingual Education, and Interdisciplinary Practices in All Fields of Education.*

As has been the case in the past two years, the GLOBETS 2019 brings together researchers and practitioners from different countries to share their ideas, researches and experiences. In this way, we hope very much to be able to contribute to bridging the gap between research, practice and dissemination.

On behalf of the Organization Committee, I wish you an enjoyable stay in Kyrenia, and achieve new ideas, new perspectives, and enthusiasm to carry into your teaching practice and research settings.

With very best wishes,

Prof. Dr. Semra Mirici
President of the Conference



Organising Committee

President	
Semra Mirici	Gazi University, Turkey & Near East University, Northern Cyprus
Organisation Committee	
Ali Gül	Gazi University, Turkey
Aleksandra Wach	Adam Mickiewicz University, Poland
Annemie Desoete	Ghent University, Belgium
Beril Akin	Gazi University, Turkey
Çiğdem Yavuz Güler	Üsküdar University, Turkey
Dusan Mitic	University of Belgrade, Serbia
Erdal Zorba	Gazi University, Turkey
Estella Matriano	Alliant International University, USA
Fusun İnci Eyidoğan	Başkent University, Turkey
Iveta Kovalcikova	Presov University, Slovakia
Ilze Ivanova	University of Latvia, Latvia
İpek Pırpiroğlu Gencer	Gazi University, Turkey
İsmail Hakkı Mirici	Near East University, Northern Cyprus
Maria Titz Pedrajas	Marikina University-Philippines
Mehmet Dik	Rockford University, USA
Mehmet Güçlü	Bartın University, Turkey
Mehmet Küçük	Recep Tayyip Erdoğan University, Turkey
Mehmet Metin Arslan	Kırıkkale University, Turkey
Mustafa Kurt	Near East University, Turkish Republic of Northern Cyprus
Rebecca Galeano	Florida State University, USA
Vincent Shieh	Kaohsiung University, Taiwan
Yavuz Erişen	Yıldız Technical University, Turkey
Conference Secretariat	
Nurcan Uzel	Gazi University, Turkey



Sezen Arslan	Van Yüzüncü Yıl University, Turkey
Gülşah Tikiz	İzmir Democracy University, Turkey
Scientific Committee	
Alev Doğan	Gazi University, Turkey
Ali Eryılmaz	Yıldız Technical University, Turkey
Ali Gül	Gazi University, Turkey
Aleksandra Wach	Adam Mickiewicz University, Poland
Annemie Desoete	Ghent University, Belgium
Asuman Seda Saracaloğlu	Adnan Menderes University, Turkey
Ayşegül Nasırcılar	Akdeniz University, Turkey
Bengü Aksu Ataç	Nevşehir Hacı Bektaş Veli University, Turkey
Beril Akın	Gazi University, Turkey
Bradley T. Erford	Vanderbilt University, USA
Coşkun Arslan	Necmettin Erbakan University, Turkey
Çiğdem Yavuz Güler	Üsküdar University, Turkey
Çiğdem Alev Özel	Gazi University, Turkey
Diğdem Müge Siyez	Dokuz Eylül University, Turkey
Diñçay Köksal	Çanakkale 18 Mart University, Turkey
Dolly Browner	Marikina University, Philippines
Dusan Mitic	University of Belgrade, Serbia
Ebru İkiz	Dokuz Eylül University, Turkey
Eleonora Salvadori	Pavia University, Italy
Emel Ültanır	Near East University, Turkish Republic of Northern Cyprus
Erdal Hamarta	Necmettin Erbakan University, Turkey
Erdal Zorba	Gazi University, Turkey
Ergin Hamzaoğlu	Gazi University, Turkey
Estella Matriano	Alliant International University, USA
Fahriye Altınay Aksay	Near East University, Turkish Republic of Northern Cyprus
Fitnat Köseoğlu	Gazi University, Turkey



Gökmen Dağlı	Near East University, Turkish Republic of Northern Cyprus
Güçlü Şekerocioğlu	Akdeniz University, Turkey
Gülcan Ültanır	Near East University, Turkish Republic of Northern Cyprus
Güler Ekmekçi	Gazi University, Turkey
Gülsüm Aşkınsoy	Near East University, Turkish Republic of Northern Cyprus
Gürhan Can	Hasan Kalyoncu University, Turkey
Hakan Sari	Necmettin Erbakan University, Turkey
Hikmet Katircioğlu	Gazi University, Turkey
Iveta Kovalcikova	Presov University, Slovakia
Ilze Ivanova	University of Latvia, Latvia
İsmail Haki Mirici	Near East University, Turkish Republic of Northern Cyprus
Maria Titz Pedrajas	Marikina University-Philippines
Mehmet Arslan	Girne American University, Northern Cyprus
Mehmet Metin Aslan	Kırıkkale University, Turkey
Mehmet Şahin	Necmettin Erbakan University, Turkey
Mehmet Dik	Rockford University, USA
Mehmet Yılmaz	Gazi University, Turkey
Melike Özer Keskin	Gazi University, Turkey
Metin Yaman	Gazi University, Turkey
Mustafa Kurt	Near East University, Turkish Republic of Northern Cyprus
Mustafa Uslu	Selçuk University, Turkey
Mustafa Yel	Gazi University, Turkey
Musa Sarı	Gazi University, Turkey
Nezahat Güçlü	Bartın University, Turkey
Nilgün Yenice	Adnan Menderes University, Turkey
Noorjehan Ganitar	Karnatak University, India
Ömer Faruk Şimşek	Istanbul Arel University, Turkey
Paul Prabhaker	Northern Illinois University, USA
Ramazan Arı	Selçuk University



Rana Varol	Ege University, Turkey
Rebecca Galeano	Florida State University, USA
Salih Çepni	Uludağ University, Turkey
Samuel Bandy	Rockford University, USA
Selahattin Avşaroğlu	Necmettin Erbakan University, Turkey
Seydi Ahmet Satıcı	Artvin Çoruh University
Sinan Olkun	TED University, Turkey
Songül Tümkaya	Çukurova University, Turkey
Sönmez Girgin	Gazi University, Turkey
Sühendan Er	TED University, Turkey
Şemsettin Civelek	Fırat University, Turkey
Şerife Gündüz	Near East University, Turkish Republic of Northern Cyprus
Tahir Atıcı	Gazi University, Turkey
Tayfun Doğan	Üsküdar University, Turkey
Tonya Huber	Texas A&M International University, USA
Vincent Shieh	Kaohsiung University, Taiwan
Yaşar Özbay	Hasan Kalyoncu University, Turkey
Yavuz Erişen	Yıldız Technical University, Turkey
Yüksel Altun	Gazi University, Turkey
Yüksel Tufan	Gazi University, Turkey
Zehra Altınay Gazi	Near East University, Turkish Republic of Northern Cyprus
Ziya Argün	Gazi University, Turkey



Cognition and Metacognition as a Target for Intervention

Iveta KOVALCIKOVA

Presov University, ivetakovalcikova17@gmail.com

The presentation will be focused on:

- a cognitive mediation model designed for the specific educational needs of low-performing pupils.
- the partial results of experimental study, financially supported by ISPA (Proposals to the International School Psychology Research Initiative) and APVV (Slovak Research Agency of Ministry of Education, under the contract APVV-15-0273). Within the project, a domain-specific programs aimed at stimulation of cognitive functions and metacognitive skills of underperforming children was created and, subsequently, experimentally verified. The domain-specific basis for the experimental study of the given variables was the cognitive potential of 1. *Math* and 2. *text comprehension*. The research question was formulated as follows: To what extent does a domain-specific cognitive stimulation program improve the quality of executive functioning in underperforming pupils? The subjects of the research were sampled from the population of primary school underperforming pupils attending public schools who fulfilled the following criteria: socio-economic background was marked by signs of poverty. The research was structured as a pre-test – post-test experimental - vs. control-group design. The partial results of the programme’s experimental verification will be presented.

Globets

Keywords: metacognition, cognitive stimulation program, cognitive mediation model



Research and Projects on Disability: The Role of Technology for Social Welfare and Sustainability

Prof. Dr. Zehra ALTINAY GAZI

Near East University, zehra.altinaygazi@neu.edu.tr

Transformation shapes the politics, strategies and quality frameworks of the higher education institutions within innovative practices for the future. In this respect, partnership and collaboration between universities and professionals are crucial to set international politics, strategies and quality frameworks to support research based on development and sustainability regarding on issue of disability. This shift also poses a potential dilemma among universities on how to proceed with pedagogy and internalization of organizational aspects in open education regarding to educational opportunities for disabled learners. This means that there is technological transformation of universities with significant changes to traditional practices, values and structures as to how and to what extent technology takes the place of active dialogue, social interaction and participation in open education process to set a model for practice. When the term 'equality' comes across in learning and teaching for all individuals, there is an intensified need to create frameworks and practice-based studies on the opening up of online education and practice of MOOCs for learners with disabilities. It is questionable how transition to digital literacy and learning arenas can become an innovation and a business model for higher education in order to serve learners with disabilities. As social responsibility and research projects are fundamental elements of quality enhancement of higher education, the opening up of education, incorporating the facilities of MOOCs, OER and online education can become a critical basis. New transition movement for learners with disabilities upon access, inclusion, and equality may shape social responsibility and high technology advancement of the universities for reputation and competitive advantage.

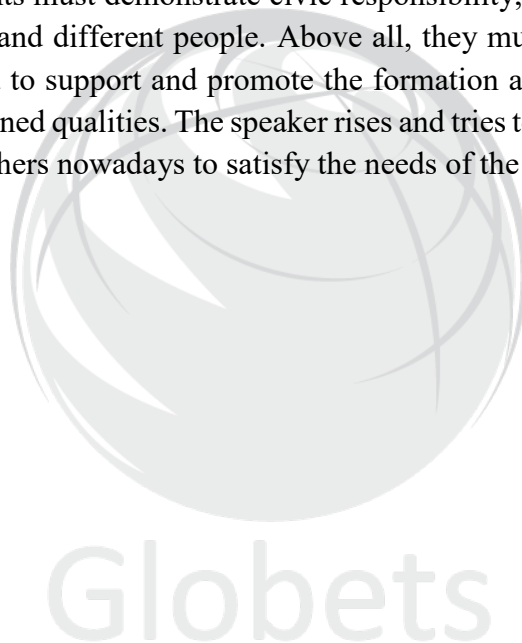


Need for a New Type of the Teacher in the Education Process of 21st Century

Ilze IVANOVA

University of Latvia, ilze.ivanova@lu.lv

Today's world is rapidly changing; it is becoming increasingly complex and diverse. It is no longer enough for students to acquire knowledge or to master reading, writing and arithmetic; they must also master creativity, critical thinking, communication and collaboration. They must develop core competencies in languages, digital literacy and problem solving. They must learn to master content while producing, synthesising and evaluating large amounts of information from a variety of subjects and sources. Students must demonstrate civic responsibility, tolerance, understanding and respect for diverse cultures and different people. Above all, they must learn how to learn. A new type of a teacher is required to support and promote the formation and development of the future citizen with all above mentioned qualities. The speaker rises and tries to answer an essential question "What is required from teachers nowadays to satisfy the needs of the learners?"



Keywords: needs, knowledge, skills, professional development.



The Views of the Science Teaching Staff on the Nature and Teaching of Science

Mehmet KÜÇÜK

Recep Tayyip Erdoğan University, mehmetkucuk@gmail.com

Research on nature of science has mostly focused on the teacher candidates and the opinions of the teachers are investigated. It has been found that individuals, regardless of their learning level and academic position, have serious misconceptions about the nature of science and science. The researchers working on this subject are primarily focused on how to eliminate these misconceptions about the nature of science and science in the individual through short-long term research. Furthermore, written instructional materials, teachers and curricula are identified as the main sources for this situation. On the other hand, it was not understood why the teachers at the beginning of their service and in particular the teacher candidates insisted on these misconceptions. With the knowledge that teacher educators' understanding of a topic can be transferred to teacher candidates, the current project has focused on a new and difficult target group, faculty who work in universities. In this presentation I will introduce the findings and results of a research project. The aim of this project is to investigate the views that the teaching staff working in the field of science education in the education faculties of the universities in our country have about the nature and teaching of science. Science education faculty members who serve in different academic positions in the education faculties of all state universities in Turkey constitute the target population of the project. Participants' views about the nature of science and science were determined by, a questionnaire that was awarded by the literature and known as "Opinions on Science and Teaching" or the original name (VOSE) by Chen (2006). This questionnaire consists of 15 questions reflecting the understanding of the nature of science and 5 reflecting the understanding of the teaching of science. Each question in the survey used to collect data in this project study begins with a statement or question that reflects an understanding of the nature or teaching of science. Many of these statements reflect a certain radical attitude towards science. Each statement follows a number of responses. Participants was requested to circle one of the boxes on the right side (I do not Agree, No Idea, Agree, I Agree strictly) according to the information they have about science events or science and what they should be taught in science subjects After this survey form was translated to Turkish by the researcher who is also the project manager, the readability was checked by a Turkish language expert. After receiving official permission from the Higher Education Council, surveys were duplicated and mailed to the deans of the education faculties of all universities across the country, or to the department heads of elementary and secondary school science and mathematics education departments. In addition, an electronic version of the questionnaire has been prepared and invitation letters have been sent to the e-mail addresses of the instructors informed by the relevant units to be implemented in electronic environment. In this way, research data were gathered from 251 participants in total / with all the questions answered. The collected data were analyzed using descriptive analysis, in which the percentage and frequency values were calculated separately according to the degree of participation in each option of the measurement. Based on these data, it has been revealed that faculty members have many shared misconceptions that also exist in student and teacher candidates regarding the nature of science and science in the literature. I will also introduce some practical ways to reveal this problem.



1 st Day – 11 th April 2019 (Thursday)	
Hours	Event / Venues
09:00-10:00	Registration
10:00-10:30	Opening Speeches / Room A
Chair	Ilze IVANOVA
10:30-11:30	Opening Plenary / Room C Iveta KOVALCIKOVA / Presov University, Slovakia <i>Cognition and metacognition as a target for intervention</i>
11:30-11:50	Coffee Break
Concurrent Session I (11:50-12:50)	
Room	Room C
Chair	Esen SUCUOĞLU
11:50-12:50	Esen SUCUOĞLU, Altan SARIKAYA An Investigation of Pre-School Candidate Teachers' Views About the Benefits of Teaching Practice Courses
	Arif SARIÇOBAN, Özkan KIRMIZI, İrfan TOSUNCUOĞLU Functional Adequacy in Writing in Foreign Language Studies: A Top-down Evaluation Approach
	Nataša JANKOVIĆ, Miroslava RISTIĆ Digital English Language Module (Delm) As An Integrated Educational Framework
13:00-14:00	Lunch
Chair	Esen SUCUOĞLU
14:00-15:00	Plenary / Room C Zehra ALTINAY GAZİ / Near East University, Northern Cyprus <i>Research and projects on disability: the role of technology for social welfare and sustainability</i>
15:00-15:20	Coffee Break



Concurrent Session II (15:20-16:20)	
Room	Room C
Chair	Zehra ALTINAY GAZI
15:20-16:20	Yusuf Murat ÖZDEMİR, Ömer DELIALIOĞLU Mobile Learning Application for Troubleshooting Technical Problems in the Classroom: A Case Study
	M. Fatih AKAY, Merve KARAKOCA, Bahar ATEŞ Support Vector Machines for Predicting Y-Balance Test Performance of Children
	M. Fatih AKAY, Mustafa AL-ASADI, Fatma MANSOUR, Mohamed BALLOUCH, Suat SARI Development of a Machine Learning Based Software for Forecasting Exchange Rate
16:20-19:00	Free time
19:00-21:30	Dinner

2 nd Day – 12 th April 2019 (Friday)	
Hours	Event / Venues
08:30-09:00	Registration
Chair	Iveta KOVALCIKOVA
09:00-10:00	Plenary / Room C Ilze IVANOVA / University of Latvia, Latvia <i>Need for a new type of the teacher in the education process of 21st century</i>
10:00-10:20	Coffee Break
Concurrent Session I (10:20-11:20)	
Room	Room C
Chair	Iveta KOVALCIKOVA
10:20-11:20	Yan LU Metaphorical Conceptualization of Teachers' Identity in the Less Commonly Taught European Languages Teaching in China



	<p align="center">Emel ÜLTANIR, Gürcan ÜLTANIR</p> <p align="center">The comparison of mission definitions of school counselors in Turkey and its equivalent in Austria, school psychologists</p>
	<p align="center">Şerife GÜNDÜZ, Amirabbas AMIRI</p> <p align="center">Environmental Awareness and Green Behavior of Bayrak Radio and Television Corporation Employees: Assessment and the Way Forward</p>
Concurrent Session II (11:25-13:00)	
Room	Room C
Chair	Ilze IVANOVA
11:25-13:00	<p align="center">İpek PİRPIROĞLU GENCER, Semra MİRİCİ, Fitnat KÖSEOĞLU</p> <p align="center">A Sample Biology Based STEM Workshop Development Process for Science Centers</p>
	<p align="center">Tülin GÜNVER, Tahir ATICI, Beril SALMAN AKIN</p> <p align="center">Assessment of Natural Turkish Filbert (<i>Corylus colurna</i> L.) Shells as a Heat Insulation Material</p>
	<p align="center">Bayram KÜÇÜKOĞLU</p> <p align="center">Strategies to Create Peace Language in History Classes in Order to Build Global Citizenship</p>
	<p align="center">Bayram KÜÇÜKOĞLU</p> <p align="center">Strengths and Weaknesses of Using Films in Teaching: A Sample of History Teaching</p>
13:00-14:00	Lunch
Concurrent Session III (14:00-15:00)	
Room	Room C
Chair	Esen SUCUOĞLU
14:00-15:00	<p align="center">Şerife GÜNDÜZ, Fidan ASLANOVA, Aşkın KİRAZ, Toma Maina ANTIP</p> <p align="center">An Assessment Of The Biology Curriculum Of The Senior Secondary Two (SS II) In Relation To Piagetian Levels Of Cognitive Development In Plateau State, Nigeria</p>



	<p align="center">Esen SUCUOĞLU, Nesrin M. BAHÇELERLİ Effects of Active Learning on Life Long Learning in Tourism Industry</p>
	<p align="center">Mocanu BOGDAN-ANDREI Personality Factors and Their Influence on Parental Religious Attitude in the Religious Education of the Child</p>
Concurrent Session IV (15:05-16:00)	
Room	Room C
Chair	Ali GÜL
15:05-16:00	<p align="center">Aybüke Sultan KOCA YILMAZ, Hikmet KATIRCIOĞLU, Ali Akın AKYOL The Role of Science in Cultural Heritage Education</p>
	<p align="center">Ahmet GÖKMEN, Burak GÜRKAN, Hikmet KATIRCIOĞLU Biyoloji Öğretmen Adaylarının Laboratuvar Cihaz ve Malzemeleri ile İlgili Bilgi ve Kullanma Düzeylerinin İncelenmesi</p>
	<p align="center">Tuğçe GÜLEŞİR, Nurcan UZEL, Ali GÜL The Effect of Dissection on Teaching of Vertebrate Animal Anatomy</p>
16:00-16:20	Coffee Break
Concurrent Session V (16:20-18:00)	
Room	Room C
Chair	Ali GÜL
16:20-18:00	<p align="center">Ferhat KARAKAYA, Nurcan UZEL, Mehmet YILMAZ, Ali GÜL Views of Biology Teacher Candidates on Project-Based Learning Methodology</p>
	<p align="center">Özlem TÜRKOLUK, Tahir ATICI, Beril SALMAN AKIN Attitudes and Access Levels of Students towards Environment Topics Targeted Outcomes about STSE in Science Curricula</p>
	<p align="center">Faruk AKBULUT, Yüksel ALTUN A Holistic Approach to Entropy in Science Education</p>



	Faruk AKBULUT, Yüksel ALTUN
	The Effect of the Argumentation Focused Education Model Developed for the Entropy Concept of Chemistry upon the Conception Level of 11th Year Students
19:00-20:30	Dinner
20:30-22:30	Conference Party

3 rd Day – 13 th April 2019 (Saturday)	
Hours	Event / Venues
08:30-09:00	Registration
Chair	Semra MİRİCİ
09:00-10:00	Plenary / Room: Room C Mehmet KÜÇÜK / Recep Tayyip Erdoğan University, Turkey <i>The views of science teaching staff on the nature and teaching of science</i>
10:00-10:20	Coffee Break
Concurrent Session I (10:20-11:20)	
Room	Room C
Chair	Semra MİRİCİ
10:20-11:20	Kübra KARAAĞAÇ, Gamze ERDOĞAN, Semra MİRİCİ, Selçuk TUNALI, Ali GÜL Biyoloji Eğitiminde Kullanılan Bazı Omurgalı Hayvan Örneklerinin Plastine Edilmesi
	Şahin İDİN The Role of Science Centers in Science Communication
	Hakan Şevki AYVACI, Mehmet KÜÇÜK, Gürhan BEBEK Üstün Yetenekli Öğrencilerin “Alternatif Enerji Kaynakları” Kavramına Yönelik Zihinsel Modelleri



Concurrent Session II (11:25-12:45)	
Room	Room C
Chair	Mehmet ARSLAN
11:25-12:45	Hakan Şevki AYVACI, Mehmet KÜÇÜK, Gürhan BEBEK Üstün Yetenekli Öğrencilerin Fen-Teknoloji-Mühendislik-Matematik (STEM) Mesleklerine Yönelik İlgileri
	Engin BAYSEN, Magdaline Agbu Abe HIKO, Stella Mseer SHIMAVE, Monday Uijiakhien OKOJIE Content Analysis of Faculty Integrity
	Duygu MAVİ Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümlerindeki Excel Dersinin Değerlendirilmesine İlişkin Öneriler
	Anıl GÖKTAŞ, Semra MİRİCİ Biyoloji Öğretmen Adaylarının STEM Uygulamaları Üzerine Görüşleri
12:45-13:00	Poster Presentations / Main Hall
	Engin BAYSEN, Jeyran SHIRVAN, Reyhaneh MAHMOUDABADI Research Problems in Interpersonal Psychology
13:00-14:00	Lunch
Concurrent Session III (14:00-15:00)	
Room	Room C
Chair	Mehmet ARSLAN
14:00-15:00	Mehmet Metin ARSLAN High School Students' Metaphoric Perceptions Related School Safety Concept
	Ece IŞIK, Çetin SEMERCİ Türkiye'de Uygulanmakta Olan 5. Sınıf İngilizce Öğretim Programının Değerlendirilmesi (Bir Durum Çalışması)
	Mehmet ARSLAN Pursuit of Quality in Higher Education from Madrassas to Modern Times
15:00-15:20	Coffee Break



Concurrent Session IV (15:20-16:20)	
Room	Room C
Chair	Mehmet Metin ARSLAN
15:20-16:20	Serap ÖZBAŞ, Yağmur ÇERKEZ, Silay BAĞLAMA Lise Öğrencilerinin Yaşam Alanlarındaki Doyumu
	Özlem ÇAKIR, Filiz METE, Sami ACAR Anaokulu Öğrencilerinin Bilişim Teknolojilerine Yaklaşımı
	Gülsün ATANUR BASKAN, Eylem BAYRAM TUNCAY, Hamiyet ÇAMUR Türkiye’de Öğretmen Yetiştirme Modelleri ve Tarihsel Gelişim
16:20-19:00	Free time
19:00-21:30	Dinner

4 th Day – 14 th April 2019 (Sunday)	
Hours	Event / Venues
08:30-09:00	Registration
Concurrent Session I (10:00-11:00)	
Room	Room C
Chair	Mehmet KÜÇÜK
10:00-11:00	Mehmet KÜÇÜK, Arzu KÜÇÜK, Nagihan YILDIRIM, Lütfullah TÜRKMEN Evaluation of a Summer Science School For 7th Grade Students’ Nature of Science Views
	Fatma Eda VURAN, Semra MİRİCİ Biyoteknoji ve Genetik Mühendisliği Temelli Etkinliklerin Lise 2. Sınıf Öğrencilerinin Biyoteknolojiye Yönelik Tutumlarına Etkisi
	Yusuph Adebayo BELLO, Aşkın KIRAZ The Use of Information and Communication Technology (ICT) in Environmental Education: A Case Study of Ibadan in Nigeria
11:20-12:00	Closing Session / Room A



An Investigation of Pre-School Candidate Teachers' Views About the Benefits of Teaching Practice Courses

Esen SUCUOĞLU^{1*}, Altan SARIKAYA²

¹Near East University, esen.sucuoglu@neu.edu.tr

²Kibris Final Schools Primary School Teacher, srky95altn@gmail.com

The aim of this research is to specify candidate teachers' expectations in Teaching Practice courses and the outcomes during practice. The participants are pre-school candidate teachers studying at Near East University, Lefkoşa, TRNC (Turkish Republic of North Cyprus). The 31 candidates were selected through random sampling method. The "phenomenology" method was used in the research. The data were collected through semi-structured interviews for which "interview forms" were used to specify the benefits and outcomes of Teaching Practice courses. The data were analyzed through "content analysis method". In the light of the findings, three categories; professional development, self-development, and attitudes towards the learners were formed. The findings revealed the outcomes in experience, recognizing learners' development, skills in communicating with learners, attitudes and roles towards learners, and how to put these into practice.

Keywords: Teaching practice, pre-school, candidate teachers



Functional Adequacy in Writing in Foreign Language Studies: A Top-down Evaluation Approach

Arif SARIÇOBAN¹, Özkan KIRMIZI^{2*}, İrfan TOSUNCUOĞLU³

¹Prof. Dr., Selçuk University, saricobanarif@gmail.com

^{2}Assoc. Prof. Dr., Karabük University, ozkankirmizi@gmail.com*

³Assist. Prof. Dr., Karabük University, irtosun@yahoo.com

The traditional evaluation process is two-dimensional in practice: top-down and bottom-up. In this research, the former is the focus of attention in the sense that in foreign language education the overall message is most often harmed by EFL learners simply because they try to attach much importance to details such as grammar, structures, namely accuracy. However, it does not necessarily mean that we should not ignore the bottom-up approach. In that sense, this paper focuses on the importance of functional adequacy as an essential component of L2 proficiency from a top-down approach point of view. This approach contains four basic dimensions: (1) content, (2) task requirements, (3) comprehensibility, and (4) coherence and cohesion. A questionnaire has been developed by adapting the principles of the global rating scale of functional adequacy by Kuiken, Vedder, & Gilabert, 2010; Kuiken & Vedder (2014). To that end, two raters, one is the writing teacher (internal reliability) and the others are researchers (external reliability) will evaluate the essay writings of the participants in terms of the above-mentioned criteria. At the end of the study, some recommendations will be made for language educators.

Keywords: Writing, foreign language studies, functional adequacy, top-down approach



Digital English Language Module (Delm) As An Integrated Educational Framework

Nataša JANKOVIĆ*, Miroslava RISTIĆ

*University of Belgrade, natasa.jankovic@uf.bg.ac.rs

This aim of this paper is to present an effective innovative model of teaching at Teacher Education Faculty of University of Belgrade. Based on firm interdisciplinary theoretical grounds and supported by in-house empirical research, this new model of education has been officially approved by the educational authorities and the faculty's teaching staff. In this paper, we provide a self-evaluative and self-critical conceptual analysis of the integrative educational framework DELM (Digital English Language Module), which is based on the development of the following core teaching models: ELT (English Language Teaching), DLF (Digital Learning Environment) and IELM (Integrated English Language Module). The outcomes and research findings indicate that DELM significantly contributes to the development of future primary and preschool teachers' linguistic, digital and other cross-curricular competences. Through their cooperation, teachers also strongly benefit from DELM and evolve as pedagogues by bridging professional knowledge gaps, and improving their teaching, linguistic and research skills.

Globets

Keywords: Digital English Language Module, educational framework, teacher training, cross-curricular integration, digital learning environment



Mobile Learning Application for Troubleshooting Technical Problems in the Classroom: A Case Study

Yusuf Murat ÖZDEMİR¹, Ömer DELİALIOĞLU^{2*}

¹Texas Tech University, USA, y.m.ozdemir@ttu.edu

^{2*}Middle East Technical University, Turkey, omerd@metu.edu.tr

When technical problems occur in classrooms and are not solved timely, motivation and satisfaction of students and instructors are affected significantly. Technical problems demotivate instructors and make them reluctant to integrate technology into their course design. These problems make students isolated and disconnected from the learning environment, and affect their learning. This study investigates the effects of technical problems in classrooms on motivation, satisfaction and concern levels and attitudes toward technology use of faculty and research assistants at a public university in Turkey. An Android-based Mobile Learning Application (MLA) was designed and developed to provide quick solutions for technical problems and a hands-on learning opportunity to the participants when they encounter a problem. The application changed the technical problems to a hands-on learning chance for users by providing them with easy-to-apply solutions. As a result, the problem evolved into a learning task and the app became a learning material. An instrumental case study design was adopted. Pre and post interviews were conducted with ten faculty and research assistants. After a six-week data collection, results showed that the application helped the participants to solve problems, prevented motivation and satisfaction loss, and decreased their concern levels. The participants indicated that the application had a positive effect on their technology literacy, it was easy to use and they would use the application again in the future.

Globets

Keywords: Technical support, mobile learning, instrumental case study, mobile application, technical problems, technology literacy, action learning, hands-on learning



Support Vector Machines for Predicting Y-Balance Test Performance of Children

M. Fatih AKAY^{1*}, Merve KARAKOCA², Bahar ATEŞ³

^{1*}*Çukurova University, mfakay@cu.edu.tr*

²*Çukurova University*

³*Uşak University*

In sports science education and research, the use of artificial intelligence methods can be of great help for developing prediction models where experimental studies based on measurements are not feasible. In this paper, we present a case study in regard to how sports science can benefit from the use of artificial intelligence methods. More specifically, the purpose of our study is to develop new models for predicting Y-Balance test performance of children aged between 6 and 13 years by using Support Vector Machines (SVM). The Y-Balance test requires single-leg balance on one leg while reaching as far as possible with the contralateral leg in three different directions. The three movement directions are anterior (ANT: the percent of the distance that the person can reach forward with one leg), posteromedial (PM: the percent of the distance that the person can reach sideways with one leg) and posterolateral (PL: the percent of the distance that the person can reach backwards with one leg) performed on each leg. The dataset includes data of 132 subjects. Gender, age, weight, height, years of training, length of leg and sport branch have been used to predict composite (COMP: the arithmetic average of ANT, PM and PL). Seven different Y-Balance test prediction models have been developed in total. The performance of the prediction models has been evaluated by calculating the Root Mean Square Error (RMSE). The RMSE's prediction models vary between 9.99 and 15.79. In conclusion, SVM is a viable method to be used for prediction in this field.

Keywords: Y-balance performance, root mean square error, support vector machines



Development of a Machine Learning Based Software for Forecasting Exchange Rate

M. Fatih AKAY*, Mustafa AL-ASADI, Fatma MANSOUR, Mohamed BALLOUCH, Suat SARI

**Çukurova University, mfakay@cu.edu.tr*

Exchange rate among different currencies in a certain time period is one of the fundamentals in the economics of a country. Being able to forecast exchange rate accurately can be very important in both academics and also in the industry. The purpose of this paper is to develop a machine learning based software that can forecast exchange rate change among Turkish, American and European currencies. The software has been developed using Keras library in Python. Feed-forward neural network has been utilized as a machine learning method. Two different data sets have been used, containing the exchange rate data of Turkish Lira-American Dollar and European Euro-American Dollar, being named as TRY-USD and EUR-USD, respectively. The neural network parameters including number of hidden layers, number of neurons in each hidden layer and time delays can be adjusted using the software. Several forecast models have been built for each data set. Mean Absolute Percentage Error (MAPE) has been used as the main error rate metric. The results show that the developed software is an effective tool for forecasting exchange rates, especially within short time periods.

Globets

Keywords: Exchange rate, currency, machine learning based software



Metaphorical Conceptualization of Teachers' Identity in the Less Commonly Taught European Languages Teaching in China

Yan LU

University of Latvia, lryan@bfsu.edu.cn

Professional identity reflects the teachers' individual understanding of their profession and plays an important role to construct teacher-student relationship. It is also an important indicator for language programs administrators to perceive the teaching and learning process. Metaphor analysis is an effective method to raise awareness and reflection of professional identity among teachers. This research employs the open-ended questionnaire to investigate the professional identity of 52 teachers in the Less Commonly Taught European Languages (LCTELs) programs in China. The framework of De Guerrero & Villamil (2002) is adapted to design and conduct the questionnaire. The elicited metaphors are collected, categorized and analyzed to answer the research questions: (1) How do the participants metaphorically conceptualize themselves as LCTELs teachers? (2) What are the views of the LCTELs learner, teaching and learning entailed in the metaphors? (3) Are teachers' actual and expected professional identities identical?

Keywords: Teachers' identity, metaphor analysis, less commonly taught European languages



The Comparison of Mission Definitions of School Counselors in Turkey and Its Equivalent in Austria, School Psychologists

Emel ÜLTANIR*, Y. Gürcan ÜLTANIR

**Prof.Dr., Near East University, Northern Cyprus, emultanir@yahoo.de*

The outputs in the Turkish education system in recent years are interpreted (based on numerical analysis of the competencies taken from international and national exams) as insufficient products. On the other hand, it is discussed in the media that university graduates are not able to manage the enterprises they are involved in as human capital well - or rather they cannot manage them according to the world conjuncture -/ or make these more efficient. Depending on these, gradually increasing socio-economic stresses and the necessity of researching new educational models are constantly mentioned. However, these reasons point to the problems of shaping / directing many people / students in the process. While the contents of the courses given in all levels of the Turkish education system are arranged in accordance with the world scientific literature, student selection and placement studies are done in equal or similar environments through questions from a single center based on knowledge / competences, for the outcomes obtained at the end of education being incompatible with the world community, it made it necessary to consider different analyzes in terms of educational science or pedagogy: One of the important ones of these is the quality of the school advisory service received by the student during the education process. Determining how guiding teachers' environment and even themselves perceive (output, outcome evaluation) vocational guidance services they implement in schools and what kind of effects they were under when they chose Psychology Counseling and Guidance department indicates these: When selecting the school counselor as a profession, data on attitudes such as interests, skills, and values indicate success in the educational process in the undergraduate program of their choice, and even some resistive dimensions in attitudes point to their predisposition to their profession. The aim of this study is; comparing task analyzes carried out by school counselors / graduates of Psychology Counseling and Guidance department in Turkey with Task analyzes of school counselors in EU countries/Austria and as a result of this comparing the tasks regarding students in the schools. This study is based on Comparative Education Science and structurally similar to "predisposition and comparison style table" according to Schriewer (1990) in methodological criteria. According to him, the focus on the operation of the comparison shifts to thinking behaviors through perception and thinking modes, and the data obtained through the attitude scale are directed towards social impulses towards experiences, behaviors and activities. Thus, the data was carried out according to Schriewer's Explanations and left for interpretation. The methodology of this research consists of a literature analysis and a content analysis of the opinions obtained from oral interviews regarding the attitude with the graduate students at several universities in Ankara.

Keywords: Human capital, definition of mission of school psychologist and psychology counseling and guidance personnel, predisposition, modus (= style), attitude components



Environmental Awareness and Green Behavior of Bayrak Radio and Television Corporation Employees: Assessment and the Way Forward

Şerife GÜNDÜZ, Amirabbas AMIRI*

**Near East University, Northern Cyprus, amirabbas.amiri@live.com*

This study measures the environmental knowledge and green consumption of employees of Bayrak Radio and Television Corporation in the Turkish Republic of Northern Cyprus (TRNC). For the purpose of this study, questionnaires were handed to employees. 105 employees filled the questionnaires designed to assess their environmental knowledge, green consumption, and their knowledge regarding recycling, plastic and plastic waste. Furthermore, the participants were asked to determine general and environmental problems of the TRNC. While in some areas the environmental awareness of the participants was insufficient, overall, they showed acceptable environmental awareness and knowledge of recycling, plastic and plastic waste. Participants were more familiar with recyclable sign compared to recycled sign. 80.7% of participants defined the population coming from other countries into the TRNC as the biggest problem while transportation (48.2%) and insufficient Health Services (44.6%) were chosen as second and third problems respectively. Irregular urbanization, pesticides and quarries were ranked as the biggest environmental problems. This paper further suggests environmental education as a means to raise awareness and enhance ecological behavior.

Globets

Keywords: Environmental awareness, environmental education, employees, green consumption, recyclable sign, plastic waste



A Sample Biology Based STEM Workshop Development Process for Science Centers

İpek PİRPIROĞLU GENCER^{1*}, Semra MİRİCİ², Fitnat KÖSEOĞLU³

^{1*}*Gazi University, Institute of Educational Sciences, ipekpirpiroglugencer@gmail.com*

²*Gazi University, Gazi Faculty of Education, Department of Biology Education; Near East University*

³*Gazi University, Gazi Faculty of Education, Department of Chemistry Education*

Science centers are enjoyable environments where students can experience and observe science, science history and scientific processes through exhibitions and activities and find time and rich opportunities in which they cannot find them in school. Science centers in Turkey include exhibitions and workshops which are mostly related to physics as in the world. However, number of exhibitions and workshops in the field of biology and chemistry are very limited. Therefore, it is important to carry out activities related to biology in science centers. This research was carried out under the scope of “BILMER MeGep Project “(Project No: 114K646) supported by TUBITAK 1001. In this research, implementation of a biology based STEM workshop named as “Detection of Genetically Modified Organisms (GMOs) with DNA Analysis” which was developed within TUBITAK project and views of science center teachers and physics, chemistry and biology teachers on this workshop are evaluated. The workshop was implemented with three separate workshops with participation of science center teachers and and physics, chemistry and biology teachers. The data of the research were collected in the related workshops. Field notes, interviews, video recordings and evaluation forms were used as data collection tools. Qualitative research method was used in the research and content analysis was used in data analysis. According to the results, teachers stated positive views on subjects such as pedagogical suitability, experiencing scientific processes, affective achievements, gaining scientific concepts, skills on using materials appropriate for experiment, effectiveness of desktop version and suitability of worksheets related with the workshops. It was determined that the workshop, which was finalized with the obtained feedbacks, can be applied both in science centers and in schools integrated with the program.

Keywords: Science centers, biology based STEM workshop, informal learning environments, electrophoresis, GMO



Assessment of Natural Turkish Filbert (*Corylus colurna* L.) Shells as a Heat Insulation Material

Tülin GÜNVER¹, Tahir ATICI², Beril Salman AKIN^{3*}

¹Ministry of National Education, Bolu Science High School, Bolu, Turkey

²Gazi University, Gazi Faculty of Education, Department of Biology Teaching, Ankara, Turkey

^{3*}Gazi University, Gazi Faculty of Education, Department of Biology Teaching; Near East University, Atatürk Education Faculty, Department of Environment Education and Management, Northern Cyprus, berilakin@gmail.com

As a result of the increase in population today, the amount of waste also increases. To prevent these wastes from disrupting the ecological balance and achieve their recycling, composites with polymer matrices are produced by including organic wastes (fruit peels, seed shells, etc.) as additional material. Such composites may be utilized especially as insulation material for heat, sound, water, etc. This study produced three different composites. The first one was pure polypropylene, the second was a mixture of 30% natural Turkish hazel shell flour with a mesh size of 40 and polypropylene, and the third was a mixture of 30% commercial (normal) hazelnut shell flour with a mesh size of 40 and polypropylene. The thermal conductivity characteristics of the composites that were produced were examined. The thermal conductivity values of the composites prepared with the hazelnut shell flour matrices were lower than that of the pure polymer composite. In contrast to what was expected, it was determined that the thermal conductivity value of the composite prepared with natural Turkish filbert shell flour was not lower than that of the composite prepared with commercial (normal) hazelnut shell, but the values were very close. Nevertheless, the composites prepared with both types of hazelnut shell flour were seen to have a potential to be better heat insulation materials than the pure plastic composite. It was also observed that, by utilizing polypropylene which is the raw material of plastic wastes and hazelnut shells which are agricultural wastes together, contributions could be made on both saving energy and reducing environmental pollution.

Keywords: Natural Turkish Filbert, *Corylus colurna*, polymer composite, thermal conductivity



Strategies to Create Peace Language in History Classes in Order to Build Global Citizenship

Bayram KÜÇÜKOĞLU

Girne American University, baykucukoglu@gmail.com

While globalisation and its positive arguments seem to be getting higher, in fact nationalism is on the rise in many parts of the world. Starting from the old times till to the present, all the states create a national history for their new generation, especially in the formal school environment. For this reason, for example, the events of the World War I, which is known by every citizen in the world, is described differently depending on the point of view of the contry who describes it. On such descriptions, while the defeats do not appear, the victories of the certain country is described in detail in history books. As a result of such kind of teaching policy at schools, the citizens of the past hostile countries, are still considered as enemy in the contemporary world. However, ordinary people of the states, most usually have no effects on the reason of the wars and international conflicts. In truth, they are victims.

In the light of this fact, the main point of the strategy of history teaching should be directing the students to be active global citizens. In order to do this, creating peace language is a vital point to be used. Not only in our environment but also in every other teaching environment in the world, the main point to be given in history classes should be designed under the idea of equality, peace and collaboration between and among nations. It is important to underline the fact that the conflict is not between the citizens of a nation, but it is between the strategic interests of the nations.

The best tool to be used in order to create global citizenship could be education, specifically history education. Trying to build stronger coalitions to establish lasting positive impact on global citizenship, education lies under the idea of empowering the education community and empowering young people. Designing history classes with peace language education strategies can be considered as one of the most effective ways. This paper aims to study the strategies that can be used in history classes in order to build global citizenship by moving from theoretical and ideological debates to finding common grounds to work together and integrate global competence.

Keywords: History education, global citizenship



Strengths and Weaknesses of Using Films in Teaching: A Sample of History Teaching

Bayram KÜÇÜKOĞLU

Girne American University, baykucukoglu@gmail.com

Research in history has had distinctive ways to deal with film and pictures. Film and pictures have been considered as profitable and explicit sources about the past, as recorded operators, as vulgarization of history and as a critical supporter of the development of individual and aggregate recollections.

Historical feature film was seen as an advantaged and prominent method for training of the majority. Also, these films can establish a connection with and inspire the present outwardly orientated understudies and give a scaffold between the school and life universe of a young culture habituated to correspondence by means of various electronic gateways. Film has been found to be an effective tool for enhancing social studies curriculum when used effectively.

However, the use of historical filmic narratives is not without its difficulties for the history teacher. These films are made with no obligation to adhere to evidentiary records and the limitations of the art form and commercial imperatives can lead to compression and manipulation of the narrative and the inclusion of fictionalized elements. History educators are faced with this dilemma: How well does the film engage and test the historical representation? The purpose of this study is to put forth advantages and disadvantages of using films in teaching history.

Globets

Keywords: History education, history and feature film, practitioner understandings, disciplinary perceptions



An Assessment Of The Biology Curriculum Of The Senior Secondary Two (SS II) In Relation To Piagetian Levels Of Cognitive Development In Plateau State, Nigeria

Şerife GÜNDÜZ, Fidan ASLANOVA, Aşkın KİRAZ, Toma Maina ANTIP*

**Near East University, tomamaina@yahoo.com*

This study assesses the cognitive development levels of senior secondary school two (SSII) in Plateau State in relation to Piaget's level of cognitive development. It also estimated the conceptual demands of new SS II Biology Curriculum. Two hundred and fifty students were selected by stratified proportional random sampling procedure from different Senior Secondary Schools. Two instruments were used to collect data and these included Curriculum Analysis Taxonomy (CAT) and Biology Assessment Test (BAT). Three major hypotheses were tested, and the findings were as follows: (i) There was a general match between students' cognitive development level and the conceptual demand of their Biology Curriculum based on the rating and the classification levels of the students on Piagetian Stages. (ii) There was a clear significant difference between students' intelligence/performance and their achievement in Biology with $t = -12.05$ and as categorize in line to formal operational stages of Piaget. (iii) There was a clear significant difference between students' achievement in their Biology and their respective Biological age as calculated $t = -12.46$. Recommendation was made on the need for similar work be carried out on the curriculum of senior secondary I and III in other states and region of the federation before lasting conclusion be drawn about the issues of hypotheses raised in this study. Further work is recommended on students' practical ability and understanding in relation to work requirements of the Biology Curriculum and hereditary factors among students in relation to understanding learning.

Globets

Keywords: Biology, curriculum, achievement, cognitive



Effects of Active Learning on Life Long Learning in Tourism Industry

Esen SUCUOĞLU*, Nesrin M. BAHÇELERLİ

**Near East University, esen.sucuoglu@neu.edu.tr*

Practical-based learning processes of students are defined as active learning. Active learning is to learn the real environment of the situations that students will encounter in their future professional life. Practical training is important in the field of tourism. As the sector is labor intensive based on due to its structure, it requires employees to adopt lifelong learning. Therefore, active learning enables students to learn the profession through actual scenarios throughout their education. In addition, by adopting the principle of active learning, one can gain lifelong learning skills. The aim of this study is to reveal the active learning methods in tourism and its effects on lifelong learning. The study was based on the literature review, and the research and publications which were done by document analysis method were examined. With an increasing growth of technology and tourism market day by day, it is important that individuals working in the tourism industry actively learn and maintain their profession.

Keywords: Active learning, lifelong learning, tourism, education



Personality Factors and Their Influence on Parental Religious Attitude in the Religious Education of the Child

Mocanu BOGDAN-ANDREI

Alexandru Ioan Cuza University, andreimocanu28@gmail.com

The process of attitude formation and learning of religious values is a complex and lengthy endeavour. The dynamic is determined by the specifics of emotional acquisition which does not allow for stand-alone units to be observed and expressed. Usually, an emotional activity cannot be defined by a single element to be observed unlike cognitive activity; but rather by its indirect, potential, distant effect. Based on parental attitudes and the correlation with religious education, we have a new profile of the student who benefits today from formal education, requiring the need for change or refining some methodological and curricular aspects regarding religious education. The present study compiles previous results, in which we identified the main parental attitudes regarding religious education, with a theoretical view on personality from a psychological and education sciences perspective, showing the subjects' interest for religious education in schools but also the influence of personality aspects in expressing religious attitudes. Besides, it is a result of a series of questions which arise from the fact that parents are the main decision makers of their children's education, a system in which Romania has a favourable feedback from the educational community, especially from religious educators. What is the parents' attitude towards religious education? Do they find religious education necessary in today's day and age? How can school deal with parents' attitudes regarding religious education?

Globets

Keywords: Religion, personality, attitude, education, parents



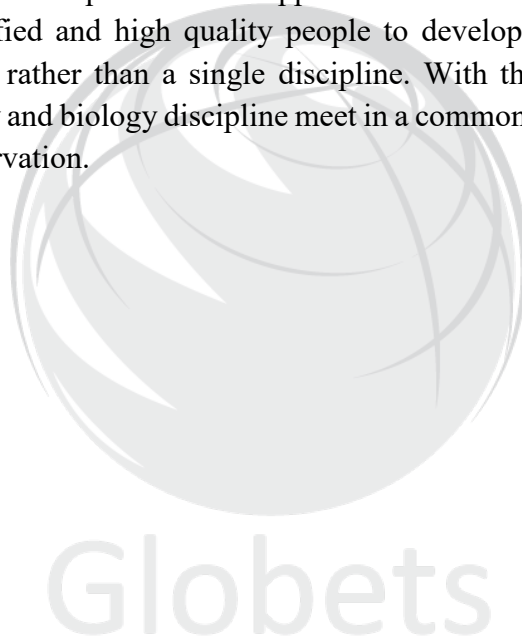
The Role of Science in Cultural Heritage Education

Aybüke Sultan KOCA YILMAZ¹, Hikmet KATIRCIOĞLU^{2*}, Ali Akın AKYOL¹

¹Ankara Hacı Bayram Veli University, Faculty of Fine Arts, Department of Conservation and Restoration of Cultural Property

^{2}Gazi University, Faculty of Education, Department of Mathematics and Science Education, Department of Biology Education, hturk@gazi.edu.tr*

In our age of globalization, developments in science and technology every day reveal new research and approaches. The results of these researches and approaches are no longer one-way thinking and evaluations, but also other disciplines that support these ideas and evaluations. All these developments require qualified and high quality people to develop and act multidisciplinary or sometimes interdisciplinary rather than a single discipline. With this study, it is aimed to raise awareness about how history and biology discipline meet in a common denominator around Cultural and Natural Heritage Conservation.



Keywords: Cultural heritage education, biology, science and social studies education



An Investigation of Biology Preservice Teachers' Knowledge and Usage Level of Laboratory Equipment and Materials

Ahmet GÖKMEN¹, Burak GÜRKAN², Hikmet KATIRCIOĞLU^{3*}

¹*Gazi University, Gazi Education of Faculty, Biology Education Department, ahmetgokmenii@gmail.com*

²*Gazi University, Gazi Education of Faculty, Biology Education Department, gurkanburak59@gmail.com*

^{3*}*Gazi University, Gazi Education of Faculty, Biology Education Department, hturk@gazi.edu.tr*

Laboratories are an indispensable part of basic sciences and important learning environments which enables the practice of the theoretical knowledge, provide students to relate scientific events to daily lives and support their scientific process knowledge. The use of laboratories in biology education plays a key role in attaining the target objectives in the curriculum and making them permanent. The related literature, however, put forward that laboratories are not sufficiently used in science courses, notably in biology courses. The studies conducted have reported that teachers' level of recognition with equipment and materials used in laboratories substantially affects their preferences of the laboratory use. Revealing preservice teachers' knowledge of laboratory equipment and materials and their level of using them and determining their deficiencies in this regard is therefore of critical importance.

This study investigated biology preservice teachers' knowledge of equipment and materials used in laboratories and their level of using them and designed as a descriptive survey study. The Recognition and Use of Laboratory Equipment and Materials form developed by the researchers was used to collect the data. In the development process of the form, the ninth–12th–grade curriculum was primarily analyzed and a list of equipment and materials which are frequently used in biology laboratories was determined based on the opinions of the field experts consulted. The form, which includes 40 equipment and materials, poses questions investigating students' recognition of this equipment and materials, their ability to indicate their functions, and their level of use.

Students' responses to the questions in the form were graded with respect to these categories: incorrect questions with "0" points, partially correct questions with "1" point, and correct questions with "2" points. The participants of the study were 55 biology preservice teachers from the Biology Education department of a public university. The convenience sampling technique was used for the selection of the participants, considering the time and financial barriers. The data were analyzed using descriptive statistics, independent samples t-test, one-way analysis of variance, and correlation coefficient.

The results obtained revealed that the students generally recognized the equipment and materials used in laboratories; however, they were unable to sufficiently state their functions. It was also found that as the grade level increased, the level of the students' knowledge level on this issue improved and that there is a positive and high relationship between the scores of the preservice teachers who individually used this equipment and materials and their level of indicating their functions accurately.

In the last part of the study, some recommendations regarding the issue were presented.

Keywords: Laboratory, laboratory equipment and materials, biology preservice teachers



The Effect of Dissection on Teaching of Vertebrate Animal Anatomy

Tuğçe GÜLEŞİR¹, Nurcan UZEL², Ali GÜL^{3*}

¹Gazi University, Institute of Educational Sciences, tugce.gulesir@windowslive.com

²Gazi University, Gazi Education of Faculty, Biology Education Department,
nrcnuzel@gmail.com

^{3*}Gazi University, Gazi Education of Faculty, Biology Education Department,
aligul0211@gmail.com

In this study, the effects of dissection applications on teaching organ structure and functions of vertebrate animals for biology teacher candidates were investigated. It is revealed that dissection studies in teaching activities are not conducted sufficiently while they should be used frequently; therefore, it is understood that embodying the theoretical knowledge by teacher candidates is not sufficient in the context of learning activities hands-on experiences. It is an important goal of education to fill this gap through dissection studies in which teacher candidates participate personally in lab atmosphere. The research was carried out on the students who are studying in the 3rd grade of the Department of Biology Education and taking the elective *Ichthyology* course. Dissection study was performed using fish samples (*Oncorhynchus mykiss* and *Cyprinus carpio*) to teach organ structure and the function of vertebrate animals. Following the study performed by the researcher by the demonstration method, fish dissection was conducted to the teacher candidates individually. The open ended question form and the evaluation form were used as data collection tools. The interview form consisting of open-ended questions was completed by the students before and after the application. In addition, after the dissection application, teacher candidates' achievements about the teaching profession and the positive effects of the application, together with their opinions on the limitations were taken with the evaluation form. For the analysis, content analysis method was used. It was determined on teacher candidates' pre-opinion results that the effect of dissection application on the persistence and consolidation of information was 44.4%. In the results of the last-sight, while the consolidation of the information was 50%, it was found to be 40% that it was beneficial to see the anatomical structure of the fish organs in the last-sight, but not in the preliminary opinion. While the result of the preliminary results of the qualifications to perform dissection applications in the teaching profession was 50%, it was 66.6% in the last opinion. Based on the data of the teacher candidate assessment form after dissection it was determined that the effect of learning on persistence on knowledge dimension was 87.5% and its effect on professional development was 75%. Teacher candidates stated that dissection application within the laboratory studies made the lesson fun, they could learn more easily, they increased their interest in biology and they increased their desire to do research. They also stated that the manual skills related to the limitations of the practice were not developed sufficiently, more applications were needed since they had difficulties in locating and removing the organs as a whole. According to the results of this study, it was understood that it would be appropriate for teacher candidates to have dissection applications among lab studies and to continue these applications related to different organisms in terms of the persistence of dissecting applications, the persistence of the information and the formation of positive tendencies towards biology.

Keywords: Dissection, laboratory practice, biology education, demonstration



Views of Biology Teacher Candidates on Project-Based Learning Methodology

Ferhat KARAKAYA¹, Nurcan UZEL^{2*}, Mehmet YILMAZ³, Ali GÜL⁴

¹*Gazi University, Institute of Educational Sciences, tugce.gulesir@windowslive.com*

^{2*}*Gazi University, Gazi Education of Faculty, Biology Education Department, nrcnuzel@gmail.com*

³*Gazi University, Gazi Education of Faculty, Biology Education Department, myilmaz@gazi.edu.tr*

⁴*Gazi University, Gazi Education of Faculty, Biology Education Department, aligul0211@gmail.com*

In this study, the aim is to determine the opinions of biology teacher candidates about the use of project-based learning method in biology courses, readiness for teaching profession, contribution to field knowledge, and application problems related to learning and teaching. The study, in which qualitative research method was used, was carried out with 18 teacher candidates at a state university biology teacher program during 2017-2018 academic year. Within the scope of *Special Teaching Methods* course, 14-week project-based learning method procedures were applied to the students. In order to obtain data, the required literature was searched by the researchers and the open-ended question form prepared by achieving expert opinions was used. The opinion form consists of 6 (six) different questions appropriate for the purpose of the study. The data obtained were evaluated by descriptive analysis method and it was presented as the frequency-percentage and sample opinions of prospective teachers. Biology teacher candidates stated that project-based learning method contributed to learning by experience (44.5%), multidimensional thinking (33.3%), and development of problem solving skills (22.3%). It has been determined that teacher candidates have the opinion that mentioned significantly contributes to the teaching profession (61.1%), questioning-curiosity and research (38.9%). In addition, it has been stated that this method makes a significant contribution to the field knowledge. However, in relation to the application limitations of the project-based learning method, it is stated that there may be difficulties in implementation in crowded classrooms on determining the project subject, project budget and material supply. All of the teacher candidates who participated in the research stated that project-based learning method should be applied. As a result, it has been determined that project-based learning method has a positive contribution to biology teacher candidates' field knowledge and proficiency in teaching profession.

Keywords: Biology education, project based learning, teacher candidates



Attitudes and Access Levels of Students towards Environment Topics Targeted Outcomes about STSE in Science Curricula

Özlem TÜRKOLUK¹, Tahir ATICI², Beril Salman AKIN^{3*}

¹*Ministry of National Education, Maltepe Secondary School, Ankara, Turkey*

²*Gazi University, Gazi Faculty of Education, Department of Biology Teaching, Ankara, Turkey*

^{3*}*Gazi University, Gazi Faculty of Education, Department of Biology Teaching Near East University, Atatürk Education Faculty, Department of Environment Education and Management, Northern Cyprus, berilakin@gmail.com*

This study was carried out with the purpose of determining the access levels and attitudes of students in the 4th, 5th, 6th, 7th and 8th grades towards environment-related topics' targeted outcomes about STSE in Science Curricula and the differences in the levels of their knowledge on the environment. This is important in terms of understanding how effective the environment education that is given to students at primary and secondary schools in raising awareness in students about the environment and developing their positive attitudes and values regarding environmental issues. This study used the cross-sectional screening model as the research method. The screening model is a research approach which aims to describe a phenomenon that previously existed or currently exists as it is. Development in the cross-sectional screening model is aimed to be determined on independent groups that are assumed to represent various developmental stages and with observations made at one point. The population of this study consisted of the students of the 4th, 5th, 6th, 7th and 8th grades studying at the primary and secondary schools of the Ministry of National Education (MEB) in the province of Antalya, Turkey. The sample consisted of 633 students of the 4th, 5th, 6th, 7th and 8th grades at 4 primary and secondary school in the district of Elmalı in the academic year of 2011-2012. The pre-test and post-test results of each grade were analyzed by t-test, and there was a significant difference between the pretest and posttest values. As a result of the pre-test, no significant difference was found among the grades in terms of their environmental attitude levels, while there was a significant difference in their levels as a result of the post-test. It may be concluded that the reason for this difference was the different levels of STSE targeted outcomes aimed at each grade.

Keywords: Science curriculum, environment, STSE, student attitudes



A Holistic Approach to Entropy in Science Education

Faruk AKBULUT^{1*}, Yüksel ALTUN²

^{1*}*Gazi University, f.akbulut38@gmail.com*

²*Gazi University, Gazi Faculty of Education, yukalt@gmail.com*

Thermodynamics is an important branch in engineering, chemistry, physics, biochemistry and pharmacy. Thermodynamics is of great importance due to its wide range of application and being the key of all life sciences. The meaning of entropy, an important concept of thermodynamics, remained vague at the end of the 19th century. However, the paper published by Boltzman (1898) aggravated the situation (Lambert, 2011). Boltzman, explained entropy as a probable order of the particles, which caused grave misconceptions among the students. In fact, it is the metaphor which cause the highest number of misconceptions among the students. There were so many books and papers published about this issue to bring a cogent explanation related to this mysterious concept. Although majority of the publications did not use the disorder concept, the sizeable proportion opted with it (Haglund, 2017). This derives from the fact that the concept of order chosen to explain this mysterious phenomenon has so many examples in everyday life. In this study after the analyses of many studies related to the teaching thermodynamic concepts a new system named as “trivet model” was developed. This method, which considers the entropy as an integrated manner, is based upon qualitative and quantitative approaches in the framework of qualitative metaphoric and probability approaches. The corners of the three-legged model correspond entropy, energy and probability and the legs represent other thermodynamic concepts provided that we start with a qualitative approach. This model is thought to be a good solution to end the existing turmoil in the description and teaching of entropy.

Globets

Keywords: Thermodynamic, entropy, energy, misconception, trivet model, metaphoric approaches, qualitative approach



The Effect of the Argumentation Focused Education Model Developed for the Entropy Concept of Chemistry upon the Conception Level of 11th Year Students

Faruk AKBULUT^{1*}, Yüksel ALTUN²

^{1}Gazi University, f.akbulut38@gmail.com*

²Gazi University, Gazi Faculty of Education, yukalt@gmail.com

Many of the thermodynamic concepts, particularly heat and entropy, are very hard to perceive. Due to the fact that the scientists have refrained from giving acceptable descriptions of these concepts (Lambert, 2011), the perception of them by both the teachers and learners has emerged as an important issue. In addition, there is an urgent need for the development of a method to overcome the prejudice that thermodynamics is a very tough topic and almost impossible to understand.

The goal of this study is to investigate the effect of the argumentation focused three legged method upon the perception level of the heat and entropy concepts. In this context, an educational tool named prediction-observation-explanation (POE) method was developed by being supported by concept caricatures, sample case and concept finding (Socrates) activities. The students were subjected to the argumentation based activities focused on the thermodynamic concepts particularly entropy and the relations among them. The quantitative data obtained as a result of these activities and the products developed by the students throughout the study were analyzed to see whether the argumentation based activities support the meaningful learning or not and to explore their effect upon the attitude of the students towards chemistry.

The experimental and the control groups employed in the study consisted of 15 and 19 participants. The study was carried out by the use of qualitative and quantitative experimental models of 11th year students. The quantitative analysis was carried out using pretest – posttest Conceptual Achievement Test (CAT). The qualitative dimension of the study was constituted by the semi constructed interview forms and activity papers related to POE method. There is a significant difference between posts –test CAT results in favor of the experimental group.

Keywords: Heat; antropy, prediction-observation-explanation (POE), thermodynamic



Biyoloji Eğitiminde Kullanılan Bazı Omurgalı Hayvan Örneklerinin Plastine Edilmesi

Kübra KARAAĞAÇ¹, Gamze ERDOĞAN¹, Semra MİRİCİ^{2*}, Selçuk TUNALI³, Ali GÜL⁴

¹Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü

²Gazi Üniversitesi, Gazi Eğitim Fakültesi, Biyoloji Eğitimi Ana Bilim Dalı;

Yakın Doğu Üniversitesi, semramirici@gmail.com

³TOBB ETÜ, Tıp Fakültesi

⁴Gazi Üniversitesi, Gazi Eğitim Fakültesi, Biyoloji Eğitimi Ana Bilim Dalı

Plastinasyon, anatomik örneklerin işlemlerden geçirilerek morfolojik yapısından hiçbir şey kaybetmeden uzun yıllar boyunca saklanabilmesini sağlayan bir yöntemdir. Silikon plastinasyonu diğer plastinasyon yöntemlerine kıyasla kolay, materyal rengini kaybettirmeyen ve örneklerin bütün halinde plastine edilmesine imkan sağlayan bir yöntemdir. Biyoloji eğitimi laboratuvarlarında örneklerin saklanması için en sık kullanılan kimyasal formaldehittir. Formaldehit oda sıcaklığında gaz haline geçen, yanıcı, suda iyi çözünen, renksiz, tahriş edici ve zehirli bir gazdır. Formaldehitin bu özelliklerinden dolayı öğrenciler ve öğretmenler eldiven, maske kullanmadan inceleyebilecekleri kokusuz, kuru, zehirsiz ve dayanıklı bir eğitim materyaline ihtiyaç duymaktadır. Bu çalışma laboratuvar derslerinde kullanılan örneklerin daha dayanıklı olmasını ve öğrencilerin sağlığa zararlı olmayan materyallerle çalışmasını sağlamak için yapılmıştır. Çalışmada kullanılacak örnekler Gazi Eğitim Fakültesi Biyoloji Eğitimi Ana Bilim Dalı Omurgalı Hayvanlar Sistematigi Laboratuvarında uzun yıllardır formaldehitte saklanan balık türlerinden farklı taksonları ayırt edebilecek şekilde seçilerek silikon plastinasyonu yöntemiyle plastine edilmiştir. Örnekler silikon plastinasyonu basamaklarını oluşturan fiksasyon, dehidrasyon, emdirme ve sertleştirme basamaklarından geçirilmiştir. Plastinasyon basamaklarının tamamlanma süresi kullanılan örneklerin büyüklüğüne bağlı olarak 1 hafta ile 1 ay arasında değişmiştir. Elde edilen plastinatlar alan uzmanları tarafından incelenmiş ve plastinat örneklerin sistematiğe kullanılan tüm morfolojik özellikleri koruduğu belirlenmiştir. Ayrıca plastinatları kullanan öğrenci ve öğretim elemanlarının materyal hakkındaki görüşleri nitel veri toplama araçlarından yarı yapılandırılmış görüşme soruları ile değerlendirilmiştir. Alan uzmanları plastinat örnekleri ile çalışmanın; çalışma süresini uzattığını ayrıca örneklerin yıpranmadan uzun yıllar kullanılabilmesini bildirmişlerdir.

Anahtar Kelimeler: Biyoloji eğitimi, plastinasyon, omurgalı hayvan, uzman görüşü



The Role of Science Centers in Science Communication

Şahin İDİN

*The Scientific and Technological Research Council of Turkey (TÜBİTAK),
sahinidin23@gmail.com*

The aim of this study is to investigate the role of science centers within some criteria to the head of science centers in science communication. To do this, two head of science centers were chosen to conduct interviews. One of them worked as a head of science centers for a long time in Denmark and another has been working as a head of science center in Turkey. Qualitative research was utilized as the method in the study and within this context the research can be thought as a case study. A semi-structured interview form was used for data collection. Semi-structured interview form was used to determine the opinions of the head of science centers about the role of science centers in science communication. Content analysis and descriptive analysis techniques were used for the analysis of the data. Participants of the study emphasized that science centers have an important effect on successful science communication.

Keywords: Experiments, science centers, science communication, qualitative



Üstün Yetenekli Öğrencilerin “Alternatif Enerji Kaynakları” Kavramına Yönelik Zihinsel Modelleri

Hakan Şevki AYWACI¹, Mehmet KÜÇÜK^{2*}, Gürhan BEBEK³

¹Prof. Dr., Trabzon Üniversitesi Fatih Eğitim Fakültesi Ortaöğretim Fen ve Matematik Alanları Eğitimi, hsayvaci@gmail.com

^{2*}Prof. Dr., Recep Tayyip Erdoğan Üniversitesi Eğitim Fakültesi Matematik ve Fen Bilimleri Eğitimi, mehmetkucuk@gmail.com

³Doktora Öğrencisi, Trabzon Üniversitesi Eğitim Bilimleri Enstitüsü, gurhan.bebek@gmail.com

Bilim, teknoloji, ürün ve maddiyat döngüsünün bir sirkülasyon şeklinde ilerlemesi enerjiye olan ihtiyacı tetiklemiş ve ilgili ihtiyacın karşılanabilmesi için çeşitli kaynakların kullanılması gerekliliğini ortaya çıkarmıştır. Bu gereklilik durumuna bağlı olarak insanlar öncelikli olarak birincil enerji kaynakları adı verilen fosil yakıtlara yönelmiş ancak ilgili kaynaklarının tükenebilir olması, çevreye verdiği zararlar ve iklimle olan etkisi insanların alternatif enerji kaynaklarına yönelimini sağlamıştır. Bu yönelim doğrultusunda da toplumsal olarak kalkınma ve sürdürülebilirlik için ilköğretim seviyesinden yükseköğretim seviyesine kadar konu alanında bilinçlendirme işlemlerinin yapılması ve özellikle de toplumların bilimsel ve teknolojik açıdan değişimi ve gelişiminde liderlik, üretkenlik ve verimlilik gibi özelliklere sahip olan üstün yetenekli bireylerin hayalleri ve yaratıcılıkları önem kazanmıştır. Araştırma kapsamında da ilgili durum göz önüne alınarak üstün yetenekli öğrencilerin alternatif enerji kaynakları kavramına yönelik zihinsel modellerini belirlemek amaçlanmıştır. Zihinsel modelleri belirlemeye yönelik betimsel bir amaç güdüldüğü için araştırmada nitel araştırma yaklaşımlarından birisi olan özel durum çalışması yöntemi kullanılmıştır. Araştırmanın katılımcılarını Trabzon Faruk Başaran Bilim ve Sanat Merkezi'nde eğitim görmekte olan ve bireysel yetenekleri fark ettirme eğitim programında (BYF) yer alan toplam 14 öğrenci oluşturmuş ve araştırmada etik kuralları gereğince öğrenciler K01, K02, ... K14 şeklinde kodlandırılmışlardır. Katılımcıların “alternatif enerji kaynakları” kavramına yönelik zihinsel modellerini belirlemek için katılımcılarla klinik mülakatlar yürütülmüş ve elde edilen veriler nitel yapıya sahip olduğu için verilerin analiz sürecinde nitel veri analiz tekniklerinden birisi olan içerik analizi ile veriler analiz edilmiştir. Analiz sonuçlarına göre, katılımcıların alternatif enerji kaynakları kavramı ile yenilenebilir enerji kaynakları kavramını birlikte kullandıkları ortaya çıkarılmıştır. Alternatif enerji kaynaklarının türleri konusunda yapılmış olan sınıflamada ise daha çok rüzgâr enerjisi, güneş enerjisi ve dalga enerjisinden bahsetmişlerdir. Ayrıca üstün yetenekli bireylerin enerji ihtiyacı konusunda bilinçli oldukları, bu ihtiyacın giderilmesi adına toplumsal ve evrensel alanlarda çalışmaların yapılması gerektiği ve özellikle de ülkemiz adına coğrafi koşulların ve bölgesel farklılıkların göz önüne alınarak alternatif enerji kaynakları ya da diğer bir deyişle yenilenebilir enerji kaynaklarına yönelimin sağlanması gerektiği belirtilmiştir.

Anahtar Kelimeler: Üstün yetenekli, alternatif enerji kaynakları, zihinsel model



Üstün Yetenekli Öğrencilerin Fen-Teknoloji-Mühendislik-Matematik (STEM) Mesleklerine Yönelik İlgileri

Hakan Şevki AYWACI¹, Mehmet KÜÇÜK^{2*}, Gürhan BEBEK³

¹*Prof. Dr., Trabzon Üniversitesi Fatih Eğitim Fakültesi Ortaöğretim Fen ve Matematik Alanları Eğitimi, hsayvaci@gmail.com*

^{2*}*Prof. Dr., Recep Tayyip Erdoğan Üniversitesi Eğitim Fakültesi Matematik ve Fen Bilimleri Eğitimi, mehmetkucuk@gmail.com*

³*Doktora Öğrencisi, Trabzon Üniversitesi Eğitim Bilimleri Enstitüsü Fen Bilgisi Eğitimi, gurhan.bebek@gmail.com*

Teknolojik gelişmelerin ve değişmelerin oldukça hızlı bir şekilde ilerlemesi, insanların yaşamlarının merkezine teknoloji ve bilimi alarak hayatlarını sürdürmek istemeleri ve küreselleşen ve gelişen dünya görüşü fenne, teknolojiye, mühendisliğe ve matematiğe olan ilgiyi arttırmaktadır. Kendi kendine yetebilen toplum olabilme anlayışına sahip olan kesimler ise bu dörtlüyü bir bütün olarak ele almakta ve ilgili kavramların multidisipliner bir çerçeve içerisinde incelenmesi gerektiğini vurgulayarak geleceğin meslek alanlarına ve seçimlerine direkt olarak etki edeceğini belirtmektedir. Dolayısıyla da teknolojinin ve bilimin sadece insanların hayatların giren bir araç olarak kalmayacağını meslek seçimi konusunda da etkileyici faktör olacağını söylemek pek de yanlış olmayacaktır. Araştırma kapsamında da ifade edilen durum göz önüne alınarak, üstün yetenekli öğrencilerin fen-teknoloji-mühendislik-matematik (STEM) mesleklerine yönelik ilgilerini belirlemek amaçlanmıştır. Mesleki ilgilerini belirlemeye yönelik betimsel amaç benimsendiği için araştırmada nicel araştırma yaklaşımlarından alan taraması yöntemi kullanılmıştır. Araştırma grubunu Trabzon Faruk Başaran Bilim ve Sanat Merkezi'nde destek eğitim programından 16, bireysel yetenekleri fark ettirme programından 14, bireysel yetenekleri fark ettirme programından 14, özel yetenekleri geliştirme programından 12 ve proje programından 16 öğrenci olmak üzere toplam 72 öğrenci oluşturmuştur. Üstün yetenekli öğrencilerin fen-teknoloji-mühendislik- matematik (STEM) mesleklerine yönelik ilgilerini belirlemek için Kier, Blanchard, Osborne ve Albert (2013) tarafından geliştirilen Koyunlu Ünlü, Dökme ve Ünlü (2016) tarafından Türkçeye uyarlanan “Fen, Teknoloji, Mühendislik ve Matematik Mesleklerine Yönelik İlgi Ölçeği” kullanılmıştır. Araştırma grubundan elde edilen veriler nicel yapıya sahip olduğu için verilerin analiz sürecinde SPSS paket programı kullanılmıştır. Elde edilen verilere göre, üstün yetenekli öğrencilerin fen alanına yönelik meslek ilgisinde cinsiyet ve sınıf düzeyi; teknoloji alanına yönelik meslek ilgisinde cinsiyet, sınıf düzeyi, anne eğitim durumu ve baba eğitim durumu; mühendislik alanına yönelik meslek ilgisinde cinsiyet, baba eğitim durumu ve okul memnuniyeti; matematik alanına yönelik meslek ilgisinde ise cinsiyet, sınıf düzeyi ve okul memnuniyeti faktörlerine bağlı olarak farklılaşmaların meydana geldiği görülmüştür. Ayrıca araştırma grubunda yer alan özel yetenekleri geliştirme programı ve proje grubu öğrencilerinin diğer gruplarından daha fazla fen-teknoloji-mühendislik-matematik mesleklerine yönelik ilgilerinin olduğu belirlenmiştir.

Anahtar Kelimeler: Üstün yetenekli, STEM, meslek ilgisi



Content Analysis of Faculty Integrity

Engin BAYSEN^{1*}, Magdaline Agbu Abe HIKO², Stella Mseer SHIMAVE³
Monday Ujiakhien OKOJIE⁴

^{1*}*Institute of Educational Sciences, Ataturk Education Faculty, Near East University, North Cyprus, Mersin 10, Turkey, engin.baysen@neu.edu.tr*

²*Institute of Educational Sciences, Ataturk Education Faculty, Near East University, North Cyprus, Mersin 10, Turkey, magdalinehiko@gmail.com*

³*Institute of Educational Sciences, Ataturk Education Faculty, Near East University, North Cyprus, Mersin 10, Turkey, Stellashimave1@gmail.com*

⁴*Institute of Educational Sciences, Ataturk Education Faculty, Near East University, North Cyprus, Mersin 10, Turkey, okojiemon@yahoo.com*

This research was conducted following a qualitative content analysis of education faculty integrity between 2014-2018, with limitations to education educational research, education scientific disciplines, nursing, ethics, health care science services, medical ethics, psychology multidisciplinary, social science interdisciplinary, psychology applied, philosophy, management, engineering multidisciplinary, medicine general internal and business. The Web of Science data base was searched to collect data, and documents were scanned to reach 97 studies. This study focused on education faculty integrity and answers were sought for distribution of studies by year of publication, subject area, country/territory, method, techniques, source, authors, document type and affiliation. In the findings, the highest publication was made in 2017 with 31 publications and least was in 2015 with 9 publications, among the subject areas, education educational research had the highest with 38 publications while psychology applied and philosophy had the least with 2 publications each, in the document type, articles took the lead with 75 publications while editorial materials had 1 as the least, the university system of Florida topped the list with 4 publications while other organizations had 3 publications each, as regards the authors, all the 5 had two publications each to their credit and last but not the least, in sources, the inted proceedings had 5 publications while other 4 had 3 each. Based on the findings, the following recommendations were made: researchers should be encouraged to publish on this studies, other subject areas should scale-up publications, publications should be spread evenly across subject areas and affiliation, authors should be encouraged to publish more documents on the area of study while more sources should be involed.

Keywords: Faculty integrity, plagiarism, attitudes towards cheating, academic dishonesty, honor codes



Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümlerindeki Excel Dersinin Değerlendirilmesine İlişkin Öneriler

Duygu MAVİ

Uzm., Yakındoğu Üniversitesi, KKTC, duygumavi-88@hotmail.com

Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü (BÖTE) öğretim programında yer alan Excel dersi uygulama boyutu fazla olan bir derstir. Ancak, öğrenci başarısını ölçme ve değerlendirme aşamasında tek yönlü bir uygulama benimsenmektedir. Bu çalışmada, Yakın Doğu Üniversitesi Atatürk Eğitim Fakültesi BÖTE Bölümündeki Excel dersi örnek olarak ele alınmış; Metfessel-Micheal program değerlendirme modeli uygulanarak değerlendirme yapılmıştır. Bu değerlendirme, zaman çizelgesinde de olduğu gibi belirli bir süreç içinde yapılmıştır. Çalışmada karma araştırma yöntemi kullanılmış, öğrencilerin, bu iş alanında çalışan elemanların, öğretim elemanlarının ve çeşitli yöneticilerin görüşleri anket, gözlem formları, ve yüzyüze görüşme yoluyla toplanmıştır. Nicel olarak özellikle iki sınıf arasında aynı değişkenlere göre farklılıklar incelenerek bağıntısal teknik kullanılmıştır. Araştırmada, Excel dersi, uygulama ağırlıklı bir ders olduğu için, uygulama sınavları ve ders içinde bilgisayar basında hazırlanan ödevler, çok yönlü değerlendirme öğrencilerin başarılarını daha iyi ölçebildiği sonucuna varılmış ve Excel dersi ile ilgili uygulamalı sınavların, sınav notu olarak kullanılabilmesine ilişkin bazı düzenlemelerin gerektiği anlaşılmıştır.

Globets

Anahtar Kelimeler: Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü (BÖTE), excel dersi, ölçme-değerlendirme, öğrenci başarısı



Prospective Biology Teachers Views on STEM Applications

Anıl GÖKTAŞ^{1*}, Semra MİRİCİ²

^{1*}*Gazi University, Institute of Educational Sciences, goktasani16@gmail.com*

²*Gazi University, Gazi Faculty of Education, Department of Biology Education; Near East University*

STEM (Science, technology, engineering, mathematics) is a synthesis formed by the use of different disciplines. This synthesis, which improves the permanence of knowledge and provides learning by doing-living, maintains its popularity in the field of education as a consistent learning approach based on real-world applications. This study was conducted to evaluate prospective teachers' views on STEM applications. In the study, GMO analysis by gel electrophoresis, self-microscope and nano-drug activities were performed. The study group is comprised of the 4th year students of the Biology Education Department of the Faculty of Education of a state university. The study was consisted of 18 students (9 experimental and 9 control groups). Semi-structured interview questions were used as data collection tools. The voice recordings were analyzed by transcript. As a result of the analysis, it was determined that prospective teachers' awareness about STEM education increased and that they would experience learning process without being bored and that these practices would increase motivation. In addition, some of the prospective teachers stated that they could apply any STEM application with students and some stated that they were not sufficient to design STEM applications. It was understood that prospective teachers who made STEM practices increased their competence against STEM applications, but that the prospective teachers had to practice more in the process.

Globets

Keywords: STEM applications, biology teacher candidates

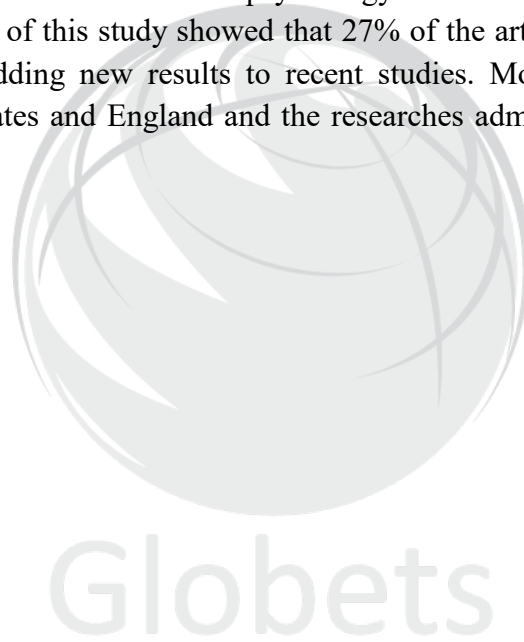


Research Problems in Interpersonal Psychology

Engin BAYSEN*, Jeyran SHIRVAN, Reyhaneh MAHMOUDABADI

**Near East University, engin.baysen@neu.edu.tr*

Identifying research problem as the heart of any research is one of the most important research areas for researchers. With the help of research problem, researchers identify the necessary variables and find a scientific framework for their areas of interest. It also helps the readers to understand the importance of the researchers' research goal. Given the importance of the social sciences in responding to the causes of problems, the present study reviewed 408 articles on interpersonal psychology as one of the most effective psychology sections in the field of individual communication. The results of this study showed that 27% of the articles with no identified goals and 98% were aimed at adding new results to recent studies. Most of the research has been conducted in the United States and England and the researches administered in South Africa are limited.



Keywords: Interpersonal psychology, research, research problems



High School Students' Metaphoric Perceptions Related School Safety Concept

Mehmet Metin ARSLAN

Kırıkkale University, mehmetmetinarslan1@gmail.com

School safety has gained a feature that can be influenced by the transformations experienced in socio-economic structure, maturing with social and intellectual development process. Today, the dimensions of school safety and the strategic goals of the schools in this regard evoke the safe school. Based on the idea that a safe environment in schools is a prerequisite for effective teaching and learning, "safe school" has always been one of the themes of interest and concern for the education society. In Turkey, this issue is often discussed in the framework of the organizational and managerial concepts of physical security and public order. The aim of this study is to reveal the perceptions of high school students related to the concept of "school safety" by means of metaphors. The study group consists of high school students. Within the sample selection, based on a voluntary basis, easy-to-reach case sampling method has been used. Within the scope of the research, it has been tried to determine which conceptual categories are gathered considering the common characteristics of the metaphors they developed in relation to the school safety concept. In the study, the form has been given with incomplete sentences of "I think school safety is similar to ... and because ...". The participants have been asked to write the metaphor that comes first to their mind and the rationale of the developed metaphor. The data collected by analyzing the data in accordance with the content analysis have been interpreted with descriptive analysis approach.

Keywords: Metaphor, high school students, school safety, safe school



Türkiye’de Uygulanmakta Olan 5. Sınıf İngilizce Öğretim Programının Değerlendirilmesi (Bir Durum Çalışması)

Ece IŞIK^{1*}, Çetin SEMERCİ²

^{1*}Fırat Üniversitesi, Eğitim Bilimleri Enstitüsü, ecemeral@yahoo.com

²Bartın Üniversitesi, Eğitim Fakültesi, csemerci@bartin.edu.tr

Türkiye’de İngilizce dersi öğretim programları güncellenmiş ve 2017-2018 eğitim- öğretim yılından itibaren 1., 5. ve 9. sınıflarda kademeli olarak uygulamaya koyulmuştur. Bu çalışmanın amacı güncellenen 5. sınıf İngilizce öğretim programını değerlendirmektir. Bu amacı gerçekleştirmek için durum çalışması ile desenlenmiş bir nitel araştırma yürütülmüştür. Çalışmada 2017- 2018 eğitim öğretim yılının bahar dönemi boyunca, Hatay ili İskenderun ilçesinde amaçlı örneklem yoluyla seçilen bir ortaokulun 5. sınıf İngilizce dersinde 16 hafta boyunca haftada 3 ders saati olmak üzere gözlem yapılmıştır. Çalışmada sınıf içi gözlem yaklaşımlarından doğal gözlem yaklaşımı kullanılmıştır. Gözlemden elde edilen veriler kayda geçirilmiş ve içerik analizi yapılmıştır. Çalışmadan elde edilen bulgulara göre sınıfın teknolojik imkanlardan yoksun olması sebebiyle 5. Sınıf İngilizce öğretim programında kazandırılması gereken en önemli becerilerden olan dinleme becerisi ile ilgili aktiviteler yapılamamakta ve bu beceriye ilişkin kazanımlara ulaşılamamaktadır. Ayrıca programda belirtilen dilin iletişimsel kullanımına sınıf içinde yer verilmediği görülmüştür. Bununla birlikte programda vurgulanan işbirlikli öğrenme yaklaşımına uygun tekniklerin sınıf içerisinde kullanıldığı ve öğrencilerin bu teknikleri içeren aktivitelere daha istekli katıldıkları gözlenmiştir.

Globets

Anahtar Kelimeler: İngilizce öğretim programı, ortaokul eğitimi, nitel araştırma



Pursuit of Quality in Higher Education from Madrasahs to Modern Times

Mehmet ARSLAN

Prof. Dr., Girne American Univ. Faculty of Education, mehmetarслан@gau.edu.tr

It is indisputably accepted that one of the important factors in the decline and dissolution of the Ottoman Empire was the deterioration of the madrasahs. It can be said that the Ottoman madrasahs in the empire's era of growth had quite contemporary and progressive views for their time. The only university that the Republic took over from the Ottoman Empire was then named Istanbul Darülfünunu. At the end of the 19th Century, this institution was named as İstanbul Madrasah and later it was renamed as Darülfünun. Despite being referred to as 'the house of science', the institution did not adopt its time's science and techniques, or instructional approaches and methods in the slightest degree. Although several attempts were made to renew the madrasahs, there was no positive result and not much of a change. Professor Albert Malsch from Switzerland was invited to Turkey upon directives from Ataturk himself for improving Darülfünun. Following his investigations, Albert Malsch wrote his renowned report and presented it to Ataturk. In this study, the Malschen reports and the reports by John Dewey, Parker and the American Delegation prepared in the first years of the Republic will be taken as reference. Since then, much quantitative progress has been made in higher education, but the study will reveal and discuss the extent of achievement regarding the issues raised in the selected reports.

Keywords: Higher Education, quality, foreigners' reports on education



Lise Öğrencilerin Yaşam Alanlarındaki Doyumu

Serap ÖZBAŞ^{1*}, Yağmur ÇERKEZ², Sılay BAĞLAMA³

^{1*}Doç. Dr., Yakın Doğu Üniversitesi, serap.ozbas@neu.edu.tr

²Doç. Dr., Yakın Doğu Üniversitesi, yagmur.cerkez@neu.edu.tr

³Uz., Yakın Doğu Üniversitesi

Bu araştırmada amaç, Kuzey Kıbrıs Türk Cumhuriyeti'nde (KKTC) yaşayan lise öğrencilerinin yaşam alanlarındaki doyum incelenmiştir. Araştırma örneklemine, rastgele yonteme göre Lefkoşa'da üç farklı lise türü dâhil edilmiştir. Gönüllük ilkesine dayalı olarak 171 on birinci ve on ikinci sınıf öğrenci katılmıştır. Araştırma 2013 yılının Ekim - Aralık ayları arasında gerçekleşmiştir. Araştırmada veriler, Uluslararası İyi Olma Grubu (International Wellbeing Group, 2006) tarafından geliştirilen ve Şimşek (2011) tarafından Türkçe diline adapte edilen Yaşam alanlarındaki Doyum (Kişisel İyi Olma - Personal Wellbeing Index-A, KİO) ölçeği aracılığıyla toplanmıştır. Orijinal ölçek, 11'li Likert tipinde derecelendirilmiş ve 8 maddeden oluşmaktadır. Bu araştırmada ölçekte, "kutsallık anlayışınız ve dininizden ne kadar memnunsunuz?" maddesi hariç 7 madde yer almıştır. Ölçeklerin güvenilirliklerini ve madde toplam korelasyon değerlerini saptamak amacı ile Cronbach alfa ve madde test korelasyon değerlerine bakılmıştır. Kıbrıslı Türk lise öğrencileri için, Cronbach alfa değeri .823 ve madde toplam korelasyon değerleri, .623 ile .458 arasında değişmektedir. Araştırma sonuçlarına göre, lise öğrencilerinin yaşam alanlarındaki doyuma ait ortalamaları 8.45 ± 2.30 ile 6.49 ± 2.90 arasında değişmektedir. En yüksek doyum, sağlık iken; en düşük doyum ise, gelecek güvenliğidir. Ayrıca öğrencilerin yaşam alanlarındaki doyumları cinsiyete göre değişmez iken; gelecek güvenliği doyumunu, okul türüne göre anlamlı bir farklılık göstermektedir.

Globets

Anahtar Kelimeler: Lise öğrencileri, Kıbrıslı Türk, yaşam alanlarındaki doyum



Anaokulu Öğrencilerinin Bilişim Teknolojilerine Yaklaşımı

Özlem ÇAKIR^{1*}, Filiz METE², Sami ACAR³

^{1*}Ankara Üniversitesi, Eğitim Bilimleri Fakültesi, Bilgisayar ve Öğretim Teknolojileri Eğitimi,
ocakir@ankara.edu.tr

²Hacettepe Üniversitesi, Eğitim Fakültesi, Türkçe ve Sosyal Bilimler Eğitimi,
filizmete@hacettepe.edu.tr

³Gazi Üniversitesi, Gazi Eğitim Fakültesi, Bilgisayar ve Öğretim Teknolojileri Eğitimi,
samiacar@gazi.edu.tr

Eğitim, doğumdan ölüme hayat boyu devam eden bir süreçtir. Okul öncesi eğitim dönemi ise, bir çocuğun doğumundan yaklaşık 72 aylık (0-6 yaş) olana kadarki zaman dilimini kapsamaktadır. Bu süreç; dönem özelliklerine göre bilişsel, dilsel, duygusal, fiziksel, psiko-motor, sosyal, kişisel alanlarda çocukları geliştirmeye yönelik ilköğretime hazırlık dönemidir. Yapılan araştırmalara göre 17 yaşına kadar olan zihinsel gelişimin % 50'si 4 yaşına, % 30'u ise 4 yaşından 8 yaşına kadar oluşmaktadır. Bu bağlamda okul öncesi eğitim, sistemli ve planlı oldukça önemli bir eğitim sürecidir. Bu araştırma, 5 yaşında, henüz okuma yazma bilmeyen çocuğun emoji kullanarak bilişim teknolojilerine yaklaşımlarını belirleme çalışmasıdır. Bu amaçla araştırmacılar; masa üstü eski model bir bilgisayar, eski model bir cep telefonu, yeni model bir masa üstü bilgisayar ve yeni model bir diz üstü bilgisayar ile yeni model bir akıllı cep telefonu fotoğrafından oluşan bir form hazırlamış ve her fotoğrafın altına çocukta uyandırdığı duyguyu ifade edebileceği 6 farklı emoji ifadesi ekleyerek fotoğrafı gördüğünde en uygun bulduğu bir tanesini işaretlemeleri istenmiştir. Form, 250 kadar çocuğa öğretmenler ve gözlemciler eşliğinde uygulamıştır. Sonuçlar karşılaştırılarak hangi fotoğraflarda hangi görsel simgenin kullanıldığı ve çocuklar için bu emojiğin neyi ifade ettiği belirlenmiştir.

Anahtar Kelimeler: Okulöncesi dönem, teknolojiye yaklaşım, duyguların görsel ifadesi, emojiğin



Türkiye’de Öğretmen Yetiştirme Modelleri ve Tarihsel Gelişim

Gülsün ATANUR BASKAN¹, Eylem BAYRAM TUNCAY^{2*}, Hamiyet ÇAMUR³,

¹*Okan Üniversitesi Eğitim Fakültesi, Türkiye, gulsun.baskan@okan.edu.tr*

^{2*}*Kültür Üniversitesi, Türkiye, e.tuncay@iku.edu.tr*

³*60. Yıl Sarıgazi Ortaokulu, Türkiye, hamiyetcamur.36@gmail.com*

Öğretmenlerin mesleki gelişimleri ve öğretmen yetiştirme konusu Türk Eğitim tarihinde 1848 tarihinde açılan Darülmualimin’le birlikte, Cumhuriyet tarihinden günümüze çözüm bekleyen en temel alanlardan biri olmuştur (Aydın,1998). Cumhuriyetin ilk yıllarında öğretmen yetiştirme konusunda birçok önemli ve örnek model oluşturulmuş fakat devamlılığı sağlanamamıştır. 1980’li yıllara kadar ülkenin eğitim sistemi ve öğretmen yetiştirme modelleri toplumsal değişimlerden kaynaklanan hareketlilik ve siyasi oluşumların politik tutumlarından olumsuz yönde etkilenmiştir. 1926’da köy öğretmen okulları kurulmuş ve yalnızca 6 yıl faaliyet gösterebilmiş, 1932 yılına geldiğinde ise verimli olmaması sebebiyle kapatılmıştır. 1936’da Eğitim Kursu adı altında başka bir uygulama oluşturulmuş, 1937 itibarıyla Köy Eğitim Yurtları açılmıştır. Hemen ardından 1940 tarihinde Köy Enstitüleri kurulmuştur. Türk Eğitim tarihinde önemli bir model olan Köy Enstitüleri 1954’e kadar varlık gösterebilmiş ve diğerleri gibi o da kapatılmıştır (Baskan, 2001). Öğretmen yetiştirme çabaları 1970’li yıllarda da önemli sorunlarla baş etmek zorunda kalmış ve siyasi müdahaleler sonrasında ‘mektupla öğretmen yetiştirme’ gibi uygulamalar hayata geçirilmiş, fakat bu uygulamalar yetiştirilen öğretmen niteliğine olumsuz olarak yansımıştır (YÖK, 2007). Öğretmen yetiştiren kurumların, 1982’de 41 Sayılı Kanun Hükmünde kararname ile Milli Eğitim Bakanlığında alınarak üniversiteye devredilmesi tarihte bir dönüm noktası olarak görülmüştür. Üniversite çatısı altında yapılan ‘Eğitim Fakülteleri’, programlardaki eksiklikler sebebiyle öğretmen yetiştirme konusunda birçok sıkıntı yaşamış, bununla birlikte nitelik ve nicelik bakımından birçok değişikliğe uğramıştır. 1994’te başlayıp 1998’de biten YÖK/Dünya Bankası Hizmet Öncesi Öğretmen Eğitimi Projesi kapsamında eğitim fakültelerinin tekrar yapılandırılması konusu gündeme gelmiştir. Bu yapılandırmanın sebebi olarak önceki dönemlerde öğretmen yetiştirme programlarındaki eksiklikler ve sıkıntılar, problemler gösterilmiş ve bu yapılandırmanın dönemin ihtiyaçlarını karşılamak için zorunlu olduğu vurgulanmıştır. Günümüze yaklaştığımızda 18 başlık altında sıralanan hedeflerden oluşan 2023 eğitim vizyon belgesinde insan kaynaklarının geliştirilmesi ve yönetimine dair hedefler konulmuş ve iyileştirme çabalarından bahsedilmiştir (2023vizyonu.meb.gov.tr).

Bu çalışma ile Türkiye’de öğretmen yetiştirme modellerinin tarihsel süreci konusunda doküman incelemesi yapılarak geçmişten günümüze öğretmen yetiştirme, bu bağlamda ortaya çıkan sorunlar ve çözüm önerine bütünsel bir bakış açısı oluşturmasına katkı sağlayacağı düşünülmektedir.

Anahtar Kelimeler: Öğretmen yetiştirme, öğretmen yetiştirme modelleri, tarihsel bakış



Evaluation of a Summer Science School For 7th Grade Students' Nature of Science Views

Mehmet KÜÇÜK*, Arzu KÜÇÜK, Nagihan YILDIRIM, Lütfullah TÜRKMEN

**Prof. Dr., Recep Tayyip Erdoğan University, mehmetkucuk@gmail.com*

In this study the nature of science perceptions of the middle school students who attended a project called “Boarding Regional Middle School Students Learning the Nature of Science” were investigated. It is a nature education and science schools projects supported by The Scientific and Technological Research Council of Turkey. The project aimed to teach the nature of science to middle school students by using explicit-reflective nature of science activities. The sample included 30 students of 7th graders from third cities - Artvin, Trabzon, Rize - of the Eastern Blacksea Region. The students were recruited for a science camp in accordance with the project schedule at Recep Tayyip Erdogan University (RTEU) Faculty of Education during 2015-2016 term. The camp lasted eight days. The activities carried out under the project were designed to understand the basic scientific facts about physics, chemistry, biology and environmental science fields. Explicit-reflective nature of science activities were incorporated into the camp program to teach the nature of science to all the participants. Modern teaching methods and techniques were used to encourage active participation of the students. Each of the activities followed by how they represented science and scientific debate. It is planned to show the students socio-scientific issues, such as hydroelectric power plants, make discussions similar to that of scientists' debate (debate work), make observations both the internal and external environments. In this way it is also aimed to enhance the students' images of scientists. In order to investigate participants' understanding of the nature of science, a nature of science questionnaire including six open-ended questions, administered as pre-and post-tests. Each participants' pre-post nature of science profiles were determined and compared. Based on the research results, we argue that science summer schools can be used as a context to teach the nature of science to middle school students.

Keywords: Science school, middle school students, nature of science, explicit-reflective teaching



Biyoteknoloji ve Genetik Mühendisliği Temelli Etkinliklerin Lise 2. Sınıf Öğrencilerinin Biyoteknolojiye Yönelik Tutumlarına Etkisi

Fatma Eda VURAN^{1*}, Semra MİRİCİ²

^{1*}*Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü*

²*Gazi Üniversitesi, Gazi Eğitim Fakültesi; Yakın Doğu Üniversitesi*

MEB biyoloji ders kitabında biyoteknoloji ve genetik mühendisliği konularında soyut olan kavramların somutlaştırılması ile ilgili deneylerin olmadığı gözlemlenmiştir. Bu çalışmada lise 2. sınıf öğrencilerinin biyoteknoloji konusuna yönelik tutum ve uygulamaya ilişkin görüşleri incelenmiştir. Araştırmanın verileri 2016-2017 bahar dönemi ‘*biyoteknoloji ve genetik mühendisliği*’ konusunun işlenmesi sırasında toplanmıştır. Araştırmada deneme öncesi modellerden tek grup öntest-sontest modeli kullanılmıştır. Araştırma katılımcıları 7’si kız ve 6’sı erkek olmak üzere 13 öğrenciden oluşmaktadır. Katılımcılara “Öğrenci Tutum Anketi” ön test ve son test olarak uygulanmıştır. Uygulamaların sonunda ise öğrencilere “Geliştirilen Etkinliklerle İlgili Görüş Anketi” uygulanmıştır. Nicel verilerin analizinde ilişkili örneklem T-testi kullanılmıştır. Araştırma sonunda biyoteknoloji ve genetik mühendisliğine yönelik uygulama yapan öğrencilerin biyoteknolojiye yönelik tutumlarında öncesine göre olumlu değişiklikler gözlemlenmiştir. Tutum anketi ortalamalarında sontest lehine elde edilen bu anlamlı fark $t(13)= 2.460$, $p<.05$ olarak bulunmuştur. Katılımcılara uygulanan Görüş Anketi sonucunda; etkinlikleri başarılı bulduklarını, etkinlik sırasında önceden dağıtılan bilgilendirici formlar ile birlikte etkinliğin daha kolay ve anlaşılabilir olduğunu, konunun eğlenceli geldiğini, uygulamayı bir kez daha yapacak olsalar kendi başlarına yapabileceklerini, etkinliklerden edindikleri bilgi ve deneyimlerin yaşamlarında kullanılabilir olduğunu ve gelecekte meslek seçimlerine olan etkilerinden bahsetmişlerdir. Araştırmadan elde edilen sonuçlara göre; biyoteknoloji ile ilgili uygulamaların, öğrencilerin biyoteknolojiye yönelik tutumlarına olumlu yönde etkisi olduğu bulunmuştur. Bu nedenle bu tür uygulamaların ders kitaplarında yer alması gereklidir.

Anahtar Kelimeler: Biyoteknoloji, genetik mühendisliği, tutum, ortaöğretim öğrencileri



The Use of Information and Communication Technology (ICT) in Environmental Education: A Case Study of Ibadan in Nigeria

Yusuph Adebayo BELLO, Aşkın KIRAZ

Near East University, Northern Cyprus

Information and communication Technology (ICT) has become a general entity in every aspect of human life. It had been recorded that over the past 20 years, the use of ICT has increasingly changed the procedures of almost all form of endeavor within business and governance. This study is specifically set out to critically appraise the role of information, communication technology as a change agent in Environmental Education in Northern Cyprus and in Nigeria. The participants of this quantitative non-experimental research are 100 teachers and lecturers from Northern Cyprus and Nigeria in the faculty of Science. While gathering the data, Mann-whitney U test was used to determining the attitude of teachers and lecturers towards Environmental education and the data obtained were evaluated by using SPSS version 20. According to the findings obtained from the research, it has been found that, teachers and lecturers in Northern Cyprus have more attitude towards Environmental Education and also teachers and lectures in Northern Cyprus have more ICT skills and knowledge than those in Nigeria.

Keywords: Attitude, environment, environmental education, ICT skills, Nigeria, Northern Cyprus



Globets

Globets 2019 **Conference**

**2nd International Conference on
Education, Technology and Science**

11-14 April 2019, Kyrenia, Northern Cyprus



www.globets.org