

Educational Research in the 2nd Century of the Republic of Türkiye

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**EDUCATIONAL RESEARCH IN THE
2nd CENTURY OF THE REPUBLIC OF TÜRKİYE**

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PREFACE

Today, when scientific and technological developments in the world are changing at a dizzying pace, education and training processes are directly affected by these developments. In this period when productive artificial intelligence technologies have developed and diversified rapidly, it has become a necessity to adapt these technologies to education and training processes rapidly. To better integrate the changes in education and training processes into formal education processes, important updates have been made regarding the changing world and developing fields of science with the Turkish Century Education Model, which was gradually implemented in the second century of the Republic of Turkey. With the curricula and textbooks prepared per this model, a successful education and training process is aimed at raising the individuals of the future based on today's changes. This book consists of 21 chapters, which includes studies such as researches on skills, the effects of different theories on the education and training process, evaluations on the education process of individuals with special needs, and examples of applications and projects on the use of artificial intelligence applications in the education and training process with the Turkish Century Education Model curricula and textbooks of different branches. This book, which includes researches on current issues in the field of education, is a work that can guide researchers working in the field. This book has been written with the contributions of academicians from different branches working in different universities in Turkey, independent researchers and graduate students. We would like to thank all the chapter authors who contributed to the production of this work with their devoted work. We would also like to thank the Pegem Akademi Publishing family for their diligent work during the printing process of the book. We hope that this work, which includes current research in the field of educational sciences in the second century of the Republic of Turkey, will contribute to the researchers who work or will work in the field.

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Chapter 11.: The Ethics in Scientific Research: A Critical Issue

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CONTENTS

Preface.....	iii
Chapters and Authors.....	v

CHAPTER 1. THE IMPACT OF ARTIFICIAL INTELLIGENCE ON EDUCATION

Introduction.....	1
Professional Readiness Concern in Artificial Intelligence Integration in Education.....	11
Artificial Intelligence and Ethical Principles in Education.....	12
References.....	13

CHAPTER 2. THE EFFECT OF MATHEMATICS TEACHING BASED ON THE VARIATION THEORY BIANSHI MODEL ON THE ACADEMIC ACHIEVEMENT AND COGNITIVE ROTATION SKILLS OF PRIMARY SCHOOL STUDENTS

Introduction.....	15
Methodology.....	20
Results.....	23
Discussion, Conclusion and Recommendations.....	27
References.....	29

CHAPTER 3. REFLECTIONS OF CULTURAL LITERACY SKILLS IN PRIMARY EDUCATION CURRICULA OF THE MAARIF MODEL

Introduction.....	31
Method.....	34
Findings.....	36
Conclusion and Recommendations.....	55
References.....	56

CHAPTER 4.**EXAMINATION OF SECONDARY SCHOOL PSYCHOLOGY
TEXTBOOK IN TERMS OF SUITABILITY TO THE CURRICULUM**

Introduction.....	59
Method.....	60
Findings.....	61
Conclusion.....	64
References.....	66

CHAPTER 5.**USE OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES
IN EDUCATION**

Introduction.....	67
Artificial Intelligence.....	68
Artificial Intelligence in Education.....	75
Educational Artificial Intelligence Technologies.....	83
Future of Artificial Intelligence Technology in Education.....	85
References.....	87

CHAPTER 6.**INVESTIGATION OF LIFE SCIENCE COURSE CURRICULUM IN
THE CONTEXT OF LIFE SKILLS**

Introduction.....	93
Method.....	95
Findings.....	96
Discussion, Conclusion, and Recommendations.....	99
References.....	102

CHAPTER 7.**STRATEGIES AND PROCEDURES FOR ASSESSING ELEMENTARY
SCHOOL STUDENTS' READING SKILLS**

Introduction.....	105
Conclusion.....	114
References.....	115

CHAPTER 8.
**A REVIEW OF POSTGRADUATE THESES ON AUTONOMOUS
 LEARNING AND STUDENT AUTONOMY**

Introduction.....	117
Methodology.....	119
Findings.....	121
Results and Discussion.....	137
References.....	141

CHAPTER 9.
**THE EFFECT OF ROBOTIC CODING EDUCATION ON MENTAL
 IMAGERY AND ROBOT PERCEPTION**

Introduction.....	143
Method.....	145
Findings.....	148
Discussion, Conclusion and Recommendations.....	156
References.....	158

CHAPTER 10.
**EDUCATIONAL OUTCOMES OF ARTIFICIAL
 INTELLIGENCE TRAININGS FOR SECONDARY SCHOOL
 STUDENTS: AN EXAMPLE OF TÜBİTAK 4004 PROJECT**

Introduction.....	161
Findings.....	164
Conclusion and Discussion.....	170
References.....	173

CHAPTER 11.
THE ETHICS IN SCIENTIFIC RESEARCH: A CRITICAL ISSUE

Introduction.....	175
The Definitions of Ethics.....	176
Professional Ethics.....	178
Ethics in The Field of Education.....	179
Miscellaneous Concepts.....	182
Professional Ethics vs Research Ethics.....	183
Ethics in Social Science Research.....	184

Scientific Ethical Values.....	184
Some Unethical Behaviors That Can Be Encountered in Scientific Research	186
The Causes of Unethical Behavior	189
Prevention of Unethical Behaviors	190
Acquisition of Ethical Behaviors	191
Conclusion	192
References.....	193

CHAPTER 12.

AN INVESTIGATION OF THE THOUGHTS AND BEHAVIORS OF INTERNATIONAL UNDERGRADUATE STUDENTS STUDYING IN TÜRKİYE REGARDING UNIVERSITY BELONGING (SOCIAL ACCEPTANCE AND SOCIAL EXCLUSION) ACCORDING TO THEIR ACADEMIC SUCCESS

Introduction.....	195
Method.....	199
Results.....	200
Discussion	213
Conclusion	214
References.....	216

CHAPTER 13.

THE THREAT IN SCHOOLS: SOCIAL EXCLUSION AND COPING WITH SOCIAL EXCLUSION

Social Exclusion.....	219
Coping With Social Exclusion.....	226
Recommendations Against Exclusion in Schools.....	231
Conclusion	232
References.....	233

CHAPTER 14.
TOPICALITY IN TURKISH LANGUAGE AND LITERATURE
TEXTBOOKS

Introduction.....	237
Topicality in Turkish Language and Literature Curriculum and Textbooks.....	239
Method.....	240
Findings and Discussion	241
Discussion and Conclusion.....	245
References	247

CHAPTER 15.
FLEXIBILITY AND ADAPTABILITY IN EDUCATION

Introduction.....	249
Flexibility in Education.....	250
Adaptability in Education	252
Conclusion	253
References.....	255

CHAPTER 16.
EXPLORING THE PIANO COURSE PROGRAM IN PRIVATE
EDUCATION INSTITUTIONS IN TERMS OF ITS GENERAL
CHARACTERISTICS AND CONTENT

Introduction.....	257
Methodology.....	259
Findings	260
Conclusion and Discussion.....	264
References.....	273

CHAPTER 17.
CONCEPT OF COMPUTATIONAL THINKING

Introduction.....	275
What is Computational Thinking?.....	276
Why is Computational Thinking Necessary?	281
Application Examples	284
References.....	296

CHAPTER 18.
ADAPTATION TO SCHOOL

Introduction	299
The Importance of School in a Child’s Life and Adaptation to School	299
Conclusion	303
References.....	304

CHAPTER 19.
FAMILY INVOLVEMENT IN CHILDREN WITH SPECIAL NEEDS

Introduction	307
Family Involvement in Parents of Children With Special Needs.....	307
Related Research.....	310
Conclusion	314
References.....	314

CHAPTER 20.
**THE ROLE OF SIBLINGS IN TERMS OF SPECIFIC LEARNING
DIFFICULTIES**

Introduction	317
Siblings.....	317
Siblings With Specific Learning Disabilities	318
Conclusion	320
References.....	320

CHAPTER 21.
**EVALUATION OF PSYCHOLOGY QUESTIONS IN THE
UNIVERSITY EXAM BETWEEN 2015-2023**

Introduction	323
Method.....	325
Findings	325
Conclusion	328
References.....	330

CHAPTER 1.

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON EDUCATION

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“Man is not born with education, but lives with education.”
Cervantes

As the famous philosopher said, the prejudices, negative attitudes, behaviours and habits of teachers, school administration and parents towards artificial intelligence technology, which has entered our lives with the developing technology today, can harm the education process of students.

After completing this section, the learner will;

- Explains artificial intelligence technologies.
- Understands artificial intelligence technologies that can be used in education.
- Analyze which artificial intelligence technologies can be used and for what purposes.
- Establishes a connection between the concepts of artificial intelligence and ethics.

1. INTRODUCTION

This section aims to provide a comprehensive overview of the impact of artificial intelligence in education, as well as an assessment of research results on integrating artificial intelligence in education for the best development of students in the educational process. It will also provide a perspective by focusing on the preferences for using artificial intelligence in education.

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1.1. ARTIFICIAL INTELLIGENCE

Artificial intelligence can model human intelligence by imitating intelligent beings like humans to reason, make sense, generalize, learn from past experiences, and solve problems; in short, to be able to perform the desired functions and then to provide computers or machines with the abilities that improve themselves as a result of their actions (Hwang & Chien, 2022). According to another definition, Gordon (2011) explains artificial intelligence as an analytical life cluster that aims to imitate life. For example, although a person driving a car cannot decide how close the obstacles and dangers are on a different highway, they can choose the speed and area of driving thanks to their previous experiences, knowledge and information.



Artificial intelligence aims to produce computers or machines that can perform tasks that require human intelligence, that is, to respond to situations that require natural intelligence. The famous computer scientist **Charles Babbage** conducted experiments on machines that exhibited human-like intelligent behaviour in this field 1884.



Additional Information

Charles Babbage was an English mathematician, analytical philosopher, mathematical engineer and computer inventor who came up with the idea of a programmable computer. He was born in London on December 26, 1791. He developed a mechanically working calculator.

Many artificial intelligence researchers, **Alan Turing** was the first to put forward the idea of “Modern Artificial Intelligence”. He is the creator of Artificial Intelligence due to his answers to “**Can machines think?**” in Philosophy (Natale, 2021).



Additional Information

Alan Turing is a British mathematician, computer scientist, cryptologist and founder of computer science. He was born on 23 June 1912 in London.