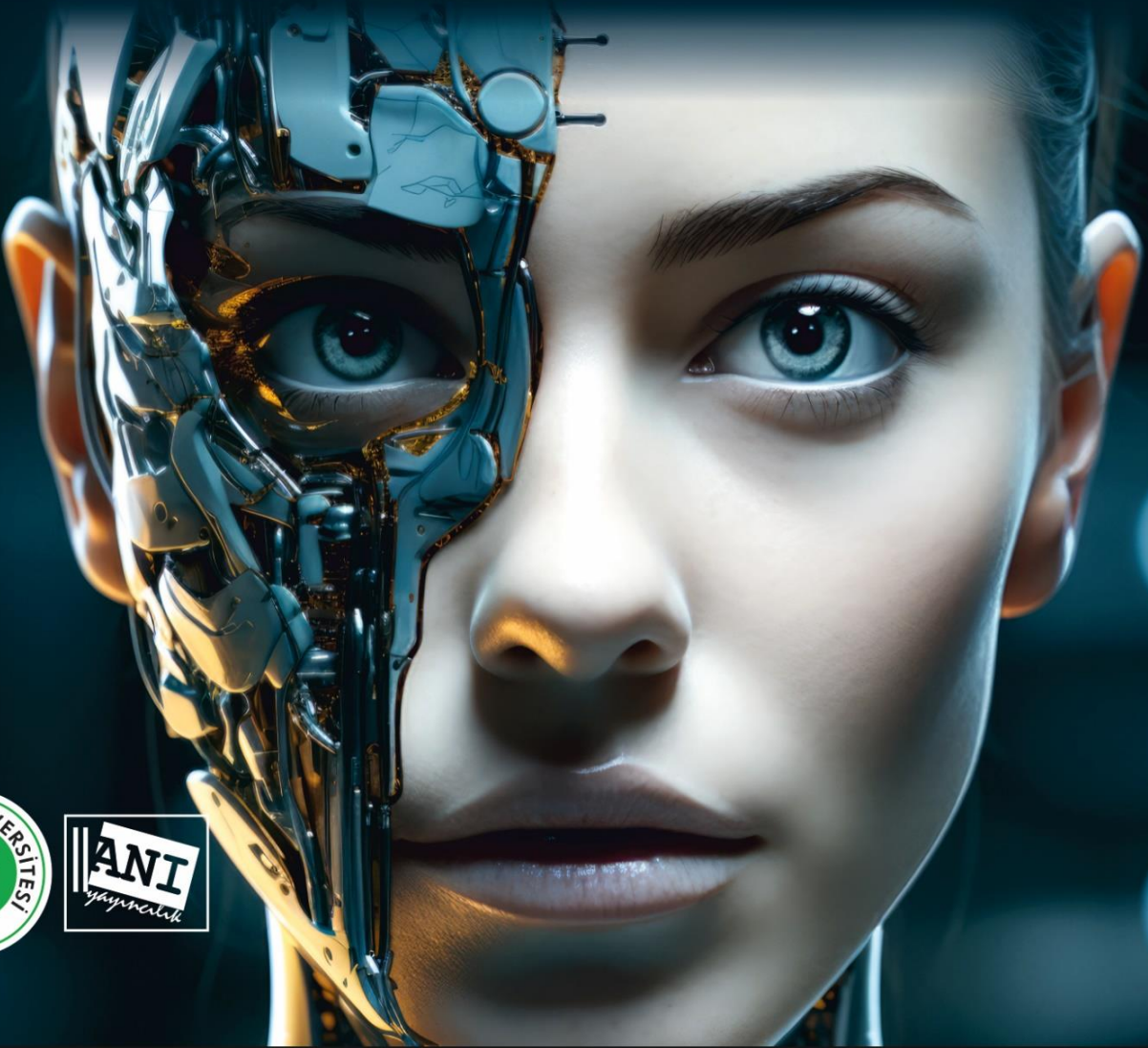# INTERNATIONAL EJER CONGRESS

ejercongress.org

XI International Eurasian Educational Research Congress

CONFERENCE PROCEEDINGS

XI INTERNATIONAL EURASIAN

EDUCATIONAL RESEARCH CONGRESS

EJERCONGRESS 2024
CONFERENCE
PROCEEDINGS

May 21-24, 2024/ Kocaeli University - Türkiye

INTERNATIONAL
EJER
CONGRESS

XI. INTERNATIONAL EURASIAN EDUCATIONAL RESEARCH CONGRESS

Congress Committees

Honorary Members of Congress

Prof. Nuh Zafer CANTÜRK, Kocaeli University Rector, TURKIYE

Prof. Veysel SÖNMEZ, EJER Founding Editor, TURKIYE

Congress Presidents

Ord. Prof. Şenel POYRAZLI, Penn State University, USA

Prof. Elif ÇELEBİ ÖNCÜ, Dean of Kocaeli University Faculty of Education, TURKIYE

Organizing Committee Chair

Prof. Esma BULUŞ KIRIKKAYA, Kocaeli University Faculty of Education, TURKIYE

Congress Vice-President and Network Coordinator

Prof. Funda NAYIR, Ağrı İbrahim Çeçen University, TURKIYE

Congress Secretaries

Aleyna PİŞİREN

Murat KARA

Media Manager

Hilal DOĞRUKARTAL AKÇAKAYA

Members of the Organizing Committee

Prof. Dr. Abdulkadir MASKAN, Dicle University, TURKIYE

Prof. Dr. Ekber TOMUL, Mehmet Akif Ersoy University, TURKIYE

Prof. Dr. Esma BULUŞ KIRIKKAYA, Kocaeli University, TURKIYE

Prof. Dr. Funda NAYIR, Ağrı İbrahim Çeçen University, TURKIYE

Prof. Dr. İbrahim Soner YILDIRIM, Middle East Technical University, TURKIYE

Prof. Dr. Kazım ÇELİK, Pamukkale University, TURKIYE

Prof. Dr. Mehmet GÜVEN, Gazi University, TURKIYE

Prof. Dr. Necdet KONAN, İnönü University, TURKIYE

Prof. Dr. Selahattin GELBAL, Hacettepe University, TURKIYE

Prof. Dr. Tuncay AKÇADAĞ, Fatih Sultan Mehmet University, TURKIYE

Prof. Dr. Turan Akman ERKILIÇ, Anadolu University, TURKIYE

Assoc. Prof. Dr. Aslı EŞME, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Belgin ÖZAYDINLI, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Coşkun KÜÇÜKTEPE, Istanbul University – Cerrahpaşa, TURKIYE

Assoc. Prof. Dr. Derya KALTAKÇI GÜREL, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Dilek FİDAN, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Fatih KEZER, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Fırat Kıyas BİREL, Dicle University, TURKIYE

Assoc. Prof. Dr. Funda DAĞ, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Gülşah TURA, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Mehmet ALTAY, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Yıldız ÖZTAN ULUSOY, Kocaeli University, TURKIYE

Assoc. Prof. Dr. Yusuf KOÇ, Kocaeli University, TURKIYE

Assist. Prof. Dr. Ayşe Arzu ARI, Kocaeli University, TURKIYE

Assist. Prof. Dr. Cüneyt YAZICI, Kocaeli University, TURKIYE

Assist. Prof. Dr. Çiğdem YAĞCI, Kocaeli University, TURKIYE

Assist. Prof. Dr. Doğan GÜLLÜ, Kocaeli University, TURKIYE

Assist. Prof. Dr. Esra ÖZBAY ÜNLÜER, Kocaeli University, TURKIYE

Assist. Prof. Dr. Hakan TURAN, Kocaeli University, TURKIYE

Assist. Prof. Dr. Özlem TEZCAN, Kocaeli University, TURKIYE

Assist. Prof. Dr. Serkan GÜRKAN, Kocaeli University, TURKIYE

Assist. Prof. Dr. Yaser ARSLAN, Kocaeli University, TURKIYE

Lect. PhD Barış DEMİR, Kocaeli University, TURKIYE

Lect. PhD Gürkan YAVAŞ, Kocaeli University, TURKIYE

Lect. Ayşe Hicret GÜDÜK, Kocaeli University, TURKIYE

International Organizing Committee

Ord. Prof. Senel Poyrazli, Penn State University, Pennsylvania, USA

Prof. Christian Faltis, University of California, Davis, USA

Prof. Gerry McNamara, Dublin City University, Dublin, Ireland

Prof. James Banks, University of Washington, Seattle, USA

Prof. Jennifer Mahon, University of Nevada, Reno, USA

Prof. Joe O'Hara, Dublin City University, Dublin, Ireland

Prof. Lynn Burlbaw, University of Texas A&M, USA

Prof. Mokter Hossain, University of Alabama, USA

Prof. Stephen Lafer, University of Nevada, Reno, USA

Prof. Ayse Çiftçi, Arizona State University, Phoenix, USA

Prof. Mustafa Gündüz, Başkent University, Ankara, TURKIYE

Assoc. Prof. Tao Wang, University of Washington, Bothell, USA

Executive Board

Assoc. Prof. Dr. Yasemin Katrancı, Kocaeli University, TURKIYE

Assist. Prof. Dr. Ayşegül Bakar Çörez, Kocaeli University, TURKIYE

Assist. Prof. Dr. Duygu Nazire Kaşıkçı, Kocaeli University, TURKIYE

Assist. Prof. Dr. Özlem TOKGÖZ, Kocaeli University, TURKIYE

Assist. Prof. Dr. Fevziye DOLUNAY CUĞ, Kocaeli University, TURKIYE

Res. Asst. PhD Neslihan Tuğçe ÖZYETER, Kocaeli University, TURKIYE

Res. Asst. PhD Duygu ÖREN VURAL, Kocaeli University, TURKIYE

Res. Asst. İlayda KILIÇ, Kocaeli University, TURKIYE

Res. Asst. Rahime ÇİÇEK, Kocaeli University, TURKIYE

Res. Asst. Duygu DEMİRTAŞ, Kocaeli University, TURKIYE

Res. Asst. Cansu AYKUT KOLAY, Kocaeli University, TURKIYE

Res. Asst. Eylül Balâ ALTUNAY, Kocaeli University, TURKIYE

Res. Asst. Samet GÖÇ, Kocaeli University, TURKIYE

Res. Asst. Saffet ARSLAN, Kocaeli University, TURKIYE

Res. Asst. Özge OKUL, Kocaeli University, TURKIYE

Res. Asst. Sevda Nur AÇIKGÖZ, Kocaeli University, TURKIYE

Res. Asst. Büşra TOMRUKCU, Kocaeli University, TURKIYE

Res. Asst. Ufuk SARIDEDE, Kocaeli University, TURKIYE

Res. Asst. PhD Birsen Berfu AKAYDIN, Kocaeli University, TURKIYE

Res. Asst. Dilara YILMAZ CAN, Kocaeli University, TURKIYE

Science Committee

Prof. Abdulkadir MASKAN	Prof. Neşe TERTEMİZ	Assoc. Prof. Hüseyin ERGEN
Prof. Abdurrahman TANRIÖĞEN	Prof. Nilgün METİN	Assoc. Prof. İlke Önal ÇALIŞKAN
Prof. Adnan KAN	Prof. Nilüfer Havva VOLTAN ACAR	Assoc. Prof. İlker CIRIK
Prof. Agnaldo ARROIO	Prof. Nurettin ŞAHİN	Assoc. Prof. Jacqueline GUSTAFSON
Prof. Ahmet IŞIK	Prof. Nurgül AKMANOĞLU	Assoc. Prof. Kamil YILDIRIM
Prof. Ali TAŞ	Prof. Oktay ASLAN	Assoc. Prof. Laura M. Reid MARKS
Prof. Alper ÇİLTAŞ	Prof. Orhan KARAMUSTAFAOĞLU	Assoc. Prof. M. Cem BABADOĞAN
Prof. Andrey A. KISELNIKOV	Prof. Oya YERİN GÜNERİ	Assoc. Prof. Martha LASH
Prof. Anita PIPERE	Prof. Özgül YILMAZ TÜZÜN	Assoc. Prof. Mehmet SAĞLAM
Prof. Antonio E. PUENTE	Prof. Özgür Erdur BAKER	Assoc. Prof. Mehmet TEYFUR
Prof. Arda ARIKAN	Prof. Özlem KORAY	Assoc. Prof. Mehmet ULAŞ
Prof. Arif SARIÇOBAN	Prof. Paul GIBBS	Assoc. Prof. Melek ALTIPARMAK KARAKUŞ
Prof. Armağan ERDOĞAN	Prof. Pınar SARPKAYA	Assoc. Prof. Meral HAKVERDİ CAN
Prof. Asiye İVRENDİ	Prof. Ragıp ÖZYÜREK	Assoc. Prof. Meryem ALTUN EKİZ
Prof. Asuman DUATEPE PAKSU	Prof. Rahime Nükhet ÇIKRIKÇI	Assoc. Prof. Mesut GÜN
Prof. Atılgan ERÖZKAN	Prof. Ramazan SEVER	Assoc. Prof. Murat AKYILDIZ
Prof. Atilla CAVKAYTAR	Prof. Renan SEZER	Assoc. Prof. Mustafa BABADOĞAN
Prof. Ayfer ALPER	Prof. Ruhi SARPKAYA	Assoc. Prof. Mustafa ERGUN
Prof. Aynur BOZKURT BOSTANCI	Prof. Ruken AKAR VURAL	Assoc. Prof. Mustafa KIŞOĞLU
Prof. Aysel KÖKSAL AKYOL	Prof. Sadegül AKBABA ALTUN	Assoc. Prof. Nazan KAYTEZ
Prof. Ayşe BALCI KARABOĞA	Prof. Sadık KARTAL	Assoc. Prof. Necdet AYKAÇ
Prof. Ayşe ÇAKIR İLHAN	Prof. Sait AKBAŞLI	Assoc. Prof. Nedim ÖZDEMİR
Prof. Ayşe Esra ASLAN	Prof. Sait BULUT	Assoc. Prof. Nermin KARABACAK
Prof. Ayşe OĞUZ ÜNVER	Prof. Salih ŞAHİN	Assoc. Prof. Nesrin SÖNMEZ
Prof. Ayşen BAKİOĞLU	Prof. Sedat UÇAR	Assoc. Prof. Nihan DEMİRKASIMIOĞLU
Prof. Ayşenur BÜYÜKGÖZE KAVAS	Prof. Sefa BULUT	Assoc. Prof. Oğuzhan DALKIRAN
Prof. Baki DUY	Prof. Selahattin GELBAL	Assoc. Prof. Okan BULUT
Prof. Bayram AŞILIOĞLU	Prof. Selahattin KAYMAKÇI	Assoc. Prof. Onur ÇALIŞKAN
Prof. Belgin ELMAS	Prof. Semra ERKAN	Assoc. Prof. Osman Tayyar ÇELİK
Prof. Berrin BAYDIK	Prof. Servet ÖZDEMİR	Assoc. Prof. Özden Şahin İZMİRLİ
Prof. Binnur GENÇ İLTER	Prof. Seval ERDEN ÇINAR	Assoc. Prof. Özlem TAGAY
Prof. Buket AKKOYUNLU	Prof. Sevgi ÖZGÜNGÖR	Assoc. Prof. Pınar BAĞÇELİ KAHRAMAN
Prof. Burhanettin DÖNMEZ	Prof. Sezer CİHANER KESER	Assoc. Prof. Pınar FETTAHLIOĞLU
Prof. Bülent AYDOĞDU	Prof. Sibel GÜNEYSU	Assoc. Prof. Pınar ŞAFAK
Prof. C. Ergin EKİNCİ	Prof. Soner YILDIRIM	Assoc. Prof. Ramin Aliyev
Prof. Canan LAÇİN ŞİMŞEK	Prof. Süleyman İNAN	Assoc. Prof. Recep ERCAN
Prof. Celal BAYRAK	Prof. Sven PERSSON	Assoc. Prof. Refik TURAN
Prof. Cem BALÇIKANLI	Ord. Prof. Şenel POYRAZLI	Assoc. Prof. Saadet KURU ÇETİN
Prof. Christian FALTIS	Prof. Şevki KÖMÜR	Assoc. Prof. Sabahat BURAK
Prof. Christoph WULF	Prof. Şükran KILIÇ	Assoc. Prof. Sedat ŞEN
Prof. Çağla GÜR	Prof. Şükran TOK	Assoc. Prof. Sedef CANBAZOĞLU BİLİCİ
Prof. Çağlar ÇAĞLAR	Prof. Şükrü ADA	Assoc. Prof. Sezai KOÇYİĞİT
Prof. Çiğdem HASER	Prof. Taner ALTUN	Assoc. Prof. Seval EMİNOĞLU KÜÇÜKTEPE
Prof. Çiğdem Ünal	Prof. Tao WANG	Assoc. Prof. Sibel AKIN SABUNCU

Prof. Danny WYFFELS	Prof. Theo WUBBELS	Assoc. Prof. Sibel KAZAK
Prof. David BRIDGES	Prof. Tohit GÜNEŞ	Assoc. Prof. Simla COURSE
Prof. David GURALNICK	Prof. Tolga ERDOĞAN	Assoc. Prof. Sinan KOÇYİĞİT
Prof. Demet Yaylı	Prof. Tuba ÇENGELCİ KÖSE	Assoc. Prof. Sonnur KÜÇÜK KILIÇ
Prof. Deniz GÜRÇAY	Prof. Tuğba YANPAR YELKEN	Assoc. Prof. Şemseddin GÜNDÜZ
Prof. Derya ARSLAN ÖZER	Prof. Tuncay AKÇADAĞ	Assoc. Prof. Temel TOPAL
Prof. Donna MERTENS	Prof. Tuncay ERGENE	Assoc. Prof. Tezcan KARTAL
Prof. Ender DURUALP	Prof. Turan PAKER	Assoc. Prof. Tuğba HORZUM
Prof. Erdal HAMARTA	Prof. Tülin Güler YILDIZ	Assoc. Prof. Turgut TÜRKDOĞAN
Prof. Ersen YAZICI	Prof. Türkay Nuri TOK	Assoc. Prof. Tülin HAŞLAMAN
Prof. Esen UZUNTİRYAKİ	Prof. Ursula CASANOVA	Assoc. Prof. Tülin Şener KILINÇ
Prof. Esma BULUŞ KIRIKKAYA	Prof. Ümit ŞAHBAZ	Assoc. Prof. Türkan ÇELİK
Prof. Esmahan AĞAOĞLU	Prof. Vesile ALKAN	Assoc. Prof. Veli BATDI
Prof. Esra BUKOVA GÜZEL	Prof. Vesile SOYYİĞİT	Assoc. Prof. Yakup DOĞAN
Prof. Eyüp ARTVİNLİ	Prof. Vivienne BAUMFİELD	Assoc. Prof. Yasemin HACIOĞLU
Prof. F. Çağlayan DİNÇER	Prof. Yahya ALTINKURT	Assoc. Prof. Yasemin Özdem YILMAZ
Prof. Fatma AÇIK	Prof. Yasemin AYDOĞAN	Assoc. Prof. Yılmaz TONBUL
Prof. Fatma BIKMAZ	Prof. Yasemin ERGENEKON	Assoc. Prof. Yusuf DEMİR
Prof. Fatma ÇALIŞANDEMİR	Prof. Yasemin KIRKGÖZ	Assoc. Prof. Yücel FİDAN
Prof. Fatma ÇELİK KAYAPINAR	Prof. Yaşar KONDAKÇI	Assoc. Prof. Zeliha YAZICI
Prof. Fatma MIZIKACI	Prof. Yıldız KIZILABDULLAH	Assoc. Prof. Zeynel HAYRAN
Prof. Fatma SEGGIE	Prof. Yusif MAMMADOV	Assist. Prof. Aslı YILDIRIM
Prof. Fatma SUSAR KIRMIZI	Prof. Yusuf ŞAHİN	Assist. Prof. Atilla ÖZDEMİR
Prof. Feride BACANLI	Prof. Yüksel KAVAK	Assist. Prof. Ayşegül AKINCI COŞGUN
Prof. Feyyat GÖKÇE	Prof. Zeynep KARATAŞ	Assist. Prof. Başak KARATEKE
Prof. Figen ÇOK	Assoc. Prof. Adem PEKER	Assist. Prof. Begüm SERİM YILDIZ
Prof. Gelengül HAKTANIR	Assoc. Prof. Adile SARANLI	Assist. Prof. Berrin GENÇ ERSOY
Prof. Gerry MCNAMARA	Assoc. Prof. Ali KIŞ	Assist. Prof. Çağla ÖNEREN ŞENDİL
Prof. Gıyasettin DEMİRHAN	Assoc. Prof. Ali Korkut ULUDAĞ	Assist. Prof. Çiğdem İŞ GÜZEL
Prof. Gökay YILDIZ	Assoc. Prof. Alper YETKİNER	Assist. Prof. Dilruba KÜRÜM YAPICIOĞLU
Prof. Gökhan ÇETİNKAYA	Assoc. Prof. Arslan BAYRAM	Assist. Prof. Elçin EMRE AKDOĞAN
Prof. Gülsün ATANUR BASKAN	Assoc. Prof. Aydan ORDU	Assist. Prof. Elif BULDU
Prof. Gürcü ERDAMAR	Assoc. Prof. Ayhan BABAROĞLU	Assist. Prof. Elif MEDETOĞULLARI
Prof. Hafize KESER	Assoc. Prof. Aysel ÇOBAN	Assist. Prof. Emine Gül ÇELEBİ İLHAN
Prof. Hakan ATILGAN	Assoc. Prof. Bahadır NAMDAR	Assist. Prof. Emine Hande AYDOS
Prof. Haluk ÖZMEN	Assoc. Prof. Bahadır YILDIZ	Assist. Prof. Engin KARAHAN
Prof. Hasan ARSLAN	Assoc. Prof. Baki ŞAHİN	Assist. Prof. Eren KESİM
Prof. Hasan COŞKUN	Assoc. Prof. Banu AKTÜRKOĞLU	Assist. Prof. Esra KIZILAY
Prof. Hasan DEMİRTAŞ	Assoc. Prof. Banu ALTUNAY	Assist. Prof. Hakan TURAN
Prof. Hatice BAKKALOĞLU	Assoc. Prof. Behçet ÖZNACAR	Assist. Prof. Işıl KELLEVEZİR
Prof. Hülya GÜR	Assoc. Prof. Behsat SAVAŞ	Assist. Prof. Kürşad DEMİRUTKU
Prof. Hülya ŞAHİN BALTACI	Assoc. Prof. Berna CANTÜRK GÜNHAN	Assist. Prof. M. EMRE SEZGİN
Prof. Hüseyin ÇALIŞKAN	Assoc. Prof. Birsel AYBEK	Assist. Prof. Melike ÜNAL GEZER
Prof. Hüseyin YOLCU	Assoc. Prof. Burcu ÖZDEMİR BECEREN	Assist. Prof. Meltem ÇENGEL SCHOVILLE
Prof. İlknur Çifci TEKİNARSLAN	Assoc. Prof. Bülent ÇETİNKAYA	Assist. Prof. Münevver İLGÜN DİBEK
Prof. İlknur MAYA	Assoc. Prof. Canay DEMİRHAN İŞCAN	Assist. Prof. Nalan BABÜR
Prof. İnayet AYDIN	Assoc. Prof. Cihat DEMİR	Assist. Prof. Nilgün KURU ALICI
Prof. İsmail AYDOĞAN	Assoc. Prof. Coşkun KÜÇÜKTEPE	Assist. Prof. Ömer KUTLU
Prof. İsmail Hakkı DEMİRCİOĞLU	Assoc. Prof. Davut SARITAŞ	Assist. Prof. Özlem CANARAN
Prof. İsmail KARAKAYA	Assoc. Prof. Derya YILDIZ	Assist. Prof. Özlem CEZİKTÜRK
Prof. James BANKS	Assoc. Prof. Didem KILIÇ	Assist. Prof. Özlem MELEK ERBİL KAYA
Prof. Kasım KARAKÜTÜK	Assoc. Prof. Didem KOŞAR	Assist. Prof. S. Burcu ÜÇOK
Prof. Kazım ÇELİK	Assoc. Prof. Emine DURMUŞ	Assist. Prof. Selçuk TURAN
Prof. Kerim GÜNDOĞDU	Assoc. Prof. Emine ZEHRA TURAN	Assist. Prof. Ümit KAHRAMAN
Prof. Kürşat ERBAŞ	Assoc. Prof. Emrah GÜL	Assist. Prof. Volkan ŞAHİN
Prof. Kyunghwa LEE	Assoc. Prof. Emre ER	Assist. Prof. Yurdagül BOĞAR
Prof. Lütfi ÜREDİ	Assoc. Prof. Engin ADER	Assist. Prof. Zerrin TOKER
Prof. Macid MELEKOĞULU	Assoc. Prof. Ergül DEMİR	Assist. Prof. Zeynep BİLKİ
Prof. Mediha SARI	Assoc. Prof. Erkan KÜLEKÇİ	Lec. Arzu KANAT MUTLUOĞLU

Prof. Mehmet Akif OCAK	Assoc. Prof. Erkan TABANCALI	Lec. Aylin TEKİNER TOLU
Prof. Mehmet ARSLAN	Assoc. Prof. Ertuğ CAN	Lec. Merih UĞUREL KAMIŞLI
Prof. Mehmet DEMİREZEN	Assoc. Prof. Evren ŞUMUER	Lec. Nergis Hazal YILMAZTÜRK
Prof. Mehmet Fatih ÖZMANTAR	Assoc. Prof. Eylem DAYI	Dr. Ali TOSUN
Prof. Mehmet GÜLTEKİN	Assoc. Prof. Ezgi TOPLU DEMİRTAŞ	Dr. Beyza HİMMETOĞLU
Prof. Mehmet KANDEMİR	Assoc. Prof. Fatma ASLAN TUTAK	Dr. Çiğdem ŞAHİN
Prof. Mehmet SETTAR KOCAK	Assoc. Prof. Fatma ÇOBANOĞLU	Dr. Esma DAŞÇI
Prof. Mine GÖZÜBÜYÜK TAMER	Assoc. Prof. Fatma SAPMAZ	Dr. Fatma Zehra ÜNLÜ KAYNAKÇI
Prof. Muammer ÇALIK	Assoc. Prof. Ferhan GÜNDÜZ	Dr. Gizem HATİPOĞLU
Prof. Murat ÖZDEMİR	Assoc. Prof. Fırat Kıyas BİREL	Dr. Gülçin OFLAZ
Prof. Mustafa GÜNDÜZ	Assoc. Prof. Fulya ZORLU	Dr. Handan DOĞAN
Prof. Mustafa KILIÇ	Prof. Funda NAYIR	Dr. Hüsnü ERGÜN
Prof. Mustafa KÖKSAL	Assoc. Prof. Gizem UYUMAZ	Dr. Miray Tekkumru KISA
Prof. Mustafa Levent İNCE	Assoc. Prof. Gökhan ARASTAMAN	Dr. Nilay ÖZTÜRK
Prof. Mustafa SÖZBİLİR	Assoc. Prof. Gülfem SARPKAYA AKTAŞ	Dr. Nilgün DEMİRCİ CELEP
Prof. Mustafa YAVUZ	Assoc. Prof. Güliz KARAARSLAN SEMİZ	Dr. Pınar KIZILHAN
Prof. Necdet KARASU	Assoc. Prof. Gülseren KARAGÖZ AKAR	Dr. Ramazan ERTÜRK
Prof. Nergüz BULUT SERİN	Assoc. Prof. Hayriye TUĞBA ÖZTÜRK	Dr. Remzi YILDIRIM
Prof. Neriman ARAL	Assoc. Prof. Hülya ERCAN	Dr. Seçil DAYIOĞLU ÖCAL
Prof. Hünkar KORKMAZ	Assoc. Prof. Hülya ERTAŞ KILIÇ	Dr. Senem Oğuz BALIKTAY
Prof. Sevgi AYDIN GÜNBATAR	Assoc. Prof. Nurhan ÖZTÜRK	Dr. Tamer SARI
Prof. Nilüfer DİDİŞ KÖRHASAN	Assoc. Prof. Şahin İDİN	Dr. Zahid KISA
Prof. Muhammed Sait GÖKALP	Assoc. Prof. Esra BOZKURT ALTAN	Dr. Gürkan SARIDAŞ
Prof. Fatih TAŞAR	Assoc. Prof. Yasemin TAŞ	Dr. Kübra ÖZMEN
Prof. Sevgi AYDIN GÜNBATAR	Assoc. Prof. Cansel AKBULUT	Dr. Gülsüm Yasemin UZ
Prof. Nilüfer DİDİŞ KÖRHASAN	Assoc. Prof. Sevda YERDELEN DAMAR	Dr. Kübra ÖZMEN
Prof. Muhammed Sait GÖKALP	Assoc. Prof. Mehmet Buğra ÖZHAN	Dr. Ayşegül BAKAR ÇÖREZ
Assoc. Prof. Cansel AKBULUT	Assoc. Prof. Yasemin KATRANCI	Dr. Yurdagül DOĞUŞ
Assoc. Prof. Sevda YERDELEN DAMAR	Assoc. Prof. Fatma ERDOĞAN	Assoc. Prof. Elif ÖZATA YÜCEL
Assoc. Prof. Şule GÜÇYETER	Assoc. Prof. Adnan TAŞGIN	Assoc. Prof. Gözde ERTÜRK KARA

Main Theme

"Designing the Future: Changing Paradigms and Transhumanism with Artificial Intelligence in Education"

Sub-Themes

- Academic freedom, autonomy, and social responsibility in education
- Artificial intelligence and educational applications
- Augmented reality applications
- Barriers to learning
- Blended learning
- Computer-assisted measurement and evaluation
- Core skill sets for students and teachers
- Design of school buildings in the future
- Designing and delivering a digital strategy
- Digital competence
- Digital parenting
- Distance Education
- Earthquake Education
- Post Earthquake Trauma Training
- Earthquake and Effective Psychosocial Intervention Methods
- Earthquake and Trauma
- The Impact of Earthquakes on School Staff
- Education and society
- Education for healthy living and healthy communities
- Education for a sustainable life
- Education in the digital age: Primary, secondary, high school, higher education, and application examples
- Educational leadership in the digital age
- Effects of regional differences on education
- Equity, Diversity, and Inclusion Related to Marginalized Groups
- Emergency Management at Schools
- Evidence-Based School Counseling Services for Refugees and Marginalized Groups
- Globalisation and Education
- Higher education
- Innovative learning designs for student success
- Instructional technologies in the digital age
- Integration of immigrants into education
- K-12 education (preschool, primary, and secondary education)
- Learning management systems
- Lifelong learning
- Machine learning
- Management information system
- Managing schools
- Measurement and evaluation of students' learning outcomes
- Metaverse
- Migration and education
- Multicultural Classroom Concerns of Educators and Parents
- New educational system after COVID-19
- New skills to live and work in new times
- New technologies in teaching and learning

- New trends in educational research
- New trends in learning and teaching methods
- New trends in research methods
- Pedagogy, educational programs, and teaching
- Politics, good governance, and leadership in the educational sector
- Program design and development
- Promoting equality, diversity, and inclusion
- Psychological counseling and guidance in education
- Quality assurance/standards and accreditation
- Research and innovations in education
- Research ethics
- Right to an education
- Sustainable Educational Goals Related to Refugees
- Teacher education in the digital age
- The Possibility of Fundamental Changes in the Curriculum
- The role of parents in education
- The skills we need to thrive in a post-COVID-19 world
- Vocational education
- Ways to overcome the digital divide

XI INTERNATIONAL EURASIAN EDUCATIONAL RESEARCH CONGRESS

2024 EJERCONGRESS SPONSORS

Author Information

This book has been compiled with contributions from 61 authors representing 35 different universities in Turkiye, the United States, and Iran, as well as Turkiye's Ministry of National Education. Among the contributors, there are 51 authors from 31 universities 6 authors from education institutions in Turkey, 3 authors from 2 universities in the United States, and 1 author from a university in Iran.

CONTENTS

Integrating Artificial Intelligence into Foreign Language Learning: Learners' Perspectives

Selami Aydın

Istanbul Medeniyet University, Turkiye

Maryam Zeinolabedini

Tabriz University, Iran

Abstract

In line with the rapid advancement in educational technology, and the application of artificial intelligence (AI) in particular, the teaching and learning of the English language has undergone a significant transformation. This paper aims to explore students' perceptions of integrating AI into the English as a foreign language (EFL) learning process. To this aim, data were collected from 26 senior students in the Department of English Language Teaching at a state University in Türkiye through a background questionnaire and interviews. Findings revealed that utilization of AI language tools was advantageous in providing equality in learning opportunities, access to authentic materials, reduced reliance on traditional learning settings and instructors, access to accurate information, and supporting various learning activities such as receiving timely feedback, error correction, idea generation, planning, outlining, summarizing, paraphrasing, note-taking, and proofreading. It also offers advantages in improving pronunciation and fostering autonomous and adaptive learning, while also reducing anxiety. However, challenges associated with utilizing AI-powered tools include the presentation of inaccurate, artificial, and inauthentic information, incorrect statements, a lack of instructional guidance, a mechanical learning experience, hindrance to creative writing and speaking, and concerns over data privacy and security. Thus, reevaluating teachers' roles, enhancing digital literacy, intensifying the infrastructure for easier and more affordable access to AI tools, increasing expert guidance, and addressing privacy concerns are recommended in utilizing AI-powered tools in EFL settings.

Introduction

While learning English as a foreign language provides unique opportunities, the process is fraught with challenges when the process of learning is considered. Learners suffer from a shortage of contextual and authentic materials, ineffective learning activities, limited practice opportunities, and an overreliance on the learners' first language (Savran Çelik & Aydın, 2018). Moreover, learners often face the challenge of a lack of exposure to comprehensible input and ineffective vocabulary and grammar knowledge (Krashen, 1982). These issues result in certain problems such as foreign language anxiety, low self-confidence, low self-esteem, amotivation, demotivation, and finally, failure to learn English as a foreign language. Moreover, not enough time is allocated to English classes, and the classrooms tend to be overcrowded (Özmat & Senemoğlu, 2021).

Emerging technologies, particularly AI applications, may present solutions for the existing issues stated so far. First, AI can transcribe texts from speech, recognize and correct mistakes and errors (Kanero et al., 2018), present translation services, foster cross-cultural learning (Shadiev et al., 2018), and constitute a competitive learning environment by situating learners within a learning community. Second, artificial intelligence applications are helpful for providing an environment within the scope of autonomous and collaborative learning. In other words, learners can self-regulate their learning processes and interact with native speakers (Kannan & Munday, 2018). Third, learners can access contextual and authentic materials and develop essential language skills such as grammar and vocabulary. However, the efficiency of using artificial intelligence in the process of foreign language learning heavily depends on their perceptions as it can significantly influence their achievement and progress in the target language. Dramatically enough, research on learners' perceptions of using AI remains too limited to conclude, as the research synthesis below indicates. However, before synthesizing the current research, a theoretical framework is drawn regarding perceptions and the utilization of AI in foreign language learning.

Theoretical framework

Autonomous learning, which is one of the learning theories rooted in Bandura's (1986) Social Cognitive Theory can be defined as an agentive activity of initiative, resourcefulness, and persistence in one's self-regulated and/or self-directed learning (Ponton & Rhea, 2006). As a multi-faceted construct, autonomous learning is described as "critical thinking, planning and evaluating learning, and reflection, a conscious effort on the part of the learner to continuously monitor the learning process from beginning to end" (Horváth, 2007, p. 103). Differently from Behaviorism and Cognitivism, the Social Cognitive Theory emphasizes that human behavior is intentional and is vastly affected by cognitive processes and the environment. The agency is based on the learner's attitudes, perceptions, and beliefs which produce behavioral intentions and other behaviors (Fishbein & Ajzen, 1975).

AI is a platform that performs multitasks including learning, adapting, and understanding knowledge. Within this scope, it

reactivates the current knowledge and uses creative language that can be produced by human intelligence (Sarker, 2022). The use of AI in language learning might be clarified regarding Activity Theory. That is, Activity Theory deals with the mental capabilities of the individual within the scope of cultural and technical aspects of human actions (Bertelsen & Bødker, 2003) in a socio-technical system through the elements of the objective of the activity system, actors engaged in the activities, social context, concepts, tool mediation, division of labor, and rules (Bryant et al., 2005). From this perspective, it can be stated that AI as a tool and environment presents a dynamic experience that combines cultural context and technical aspects (Woolf et al., 2013) in the foreign language learning process.

Previous studies

The results of the fairly limited number of studies on learners' perceptions of integrating AI into foreign language learning also seem conflicting. For instance, Phan (2023) examined 100 learners' perceptions regarding AI-powered writing tools through a combination of quantitative and qualitative research methods. The results demonstrated positive perceptions among learners concerning the simplicity, adaptability, and accessibility of AI tools. Nevertheless, lack of tool variety and learners' technology anxiety were assumed as challenging parameters. In another study, Lozano and Fontao (2023) focused on learners' perceptions of AI technology from a dual perspective, as learners and future teachers. Showing a positive perception of artificial intelligence usage in English classrooms, participants did not perceive AI as a threat to the educational system. On the other hand, they pointed out that more knowledge in terms of accurate use of AI tools was required to ensure the quality of education.

Overview of the current study

As previously stated, foreign language learning includes significant benefits such as creating opportunities for communicating, developing cultural awareness, enhancing memory and problem-solving, and critical thinking skills. However, learners suffer from the lack of contextual and authentic materials, ineffective activities, and the lack of practice opportunities. Within this scope, AI applications may present solutions for the potential problems listed above since they help to provide environments enabling autonomous and collaborative learning. On the other hand, while learners' achievement and progress in the target language may be affected by their perceptions of using artificial intelligence environments, research on learners' perceptions of using artificial intelligence remains too limited to conclude. According to the research findings, the integration of AI results in an improvement in reading comprehension, speaking performance, writing quality, and an increase in motivation, whereas research also shows that AI tools fail to make complicated reasoning, increase plagiarism, and debilitate critical thinking and problem-solving skills. Moreover, the results of only two studies that focus on learners' perceptions do not show a consensus. With

these concerns in mind, the current study aims to explore learners' perceptions of integrating AI into the foreign language learning process.

Method

Research context

The present study was designed to adopt a qualitative research design that was based on a synthetic approach and a heuristic objective. In other words, since the current literature has not presented evidence regarding the underlying factors that were related to learners' perceptions of integrating AI into foreign language learning, a synthetic approach was preferred for defining the phenomenon and understanding the factors. Moreover, the study is designed to be in a heuristic objective, since it did not include a research question or hypothesis (Seliger & Shohamy, 1989).

Participants

The sample group of the study consisted of 26 senior students in the Department of English Language Teaching at a state university in Türkiye. The group included 19 female (73.1) and seven male students (26.9). The mean score for their age was 22.04 within the range between 21 and 24. They all have an advanced level of proficiency in English (C1) in accordance with the Common European Framework of Reference for Languages (CEFR) standards. The rationale behind the participant selection procedure depended on two reasons. First, the participants had high levels of interest in learning English as a foreign language, were experienced language learners, and studied in the Department of English Language to become English teachers in their future professional lives. Second, they all had familiarity and experience with using AI during their language learning process.

Tools

The study used a background questionnaire and interviews for data collection. First, background information such as their age and gender was acquired through the background questionnaire. Second, the participants were interviewed on their experiences and perceptions about integrating and using AI tools and environments during their EFL learning practices. Several reasons can be listed regarding the rationale behind using interviews. First, using interviews seemed beneficial for a deeper and better understanding of the participants' experiences, perspectives, and perceptions without causing any ambiguity. Second, it was necessary to understand the complex phenomena in terms of using the AI tools and environments in the mentioned process in a holistic view. Last, interviews were found to be flexible and adaptable to the specific aspects of the issues within the scope of the current topic (Seliger & Shohamy, 1989).

Procedure

After informing the participants about the purpose and significance, outputs, and ethical rules of the study, it was assured that their participation was voluntary, that their privacy was protected, and that the data obtained from the study were confined to scientific purposes. They were also informed that the study did not include any social and psychological risks. Then, the researcher interviewed each of the participants to seek answers to questions regarding their background information about EFL learning, their perceptions, attitudes, awareness, and familiarity, the tools preferred and their effectiveness, the contributions of AI tools to EFL learning, their future expectations, and concerns and challenges.

Data analysis

After designing the interview schedule in accordance with the purpose of the study, the participants were selected and recruited within a purposeful sampling under the criteria of having experience in EFL learning and AI utilization. After an interview guide was created, a five-participant group was used for piloting to identify the possible problems with the questions and the flow. Then, the interviews were scheduled and conducted in five days. After the recorded interviews were transcribed via software, a thematic analysis was conducted to identify the themes. In this process, two blind analyzers coded the data and categorized the codes into patterns. Finally, a comparison of the patterns seemed similar, trustworthy, and valid. The rationale behind this procedure was that it was necessary to gather data about participants' perspectives in terms of the phenomenon in a realistic setting (Denzin, 2017). The process of coding by separate researchers was preferred to obtain the validity and trustworthiness of the data (Patton, 1990).

Results

The findings obtained from the study show that the participants were experienced and familiar with the use of AI tools and environments in the language learning process. In the process, they used a wide variety of tools such as Babbel, Birdbrain, Busuu, Call Annie, Chat-GPT, DeepL, Duolingo, Gamma App, Google Bard, Google Translate, Grammarly, HelloTalk, Kahoot, Kukarella, and Lingodeer. The other tools and environments were Memrise, Mondly, Narakeet, ProWritingAid, Quillbot, Quizlet, Rosetta Stone, Snapchat AI, Speaky, Tandem, Voscreen, and Wordwall. It should be stated that the platforms listed included language learning-specific tools and environments, as one participant stated.

I think I am pretty much aware of AI in the context of language learning. Also, in my opinion, it is a crucial piece of knowledge that teachers should obtain. I am glad that tools such as Grammarly, Memrise, Kahoot, TedED, Padlet, and Duolingo have been encountered in my language-learning journey because I started using AI to improve my French and to teach English. Thus, I like the idea of integrating artificial intelligence into foreign language learning.

EFL learners believe that the utilization of AI tools has certain advantages. For instance, they believed that AI-based environments contributed to providing equality in learning opportunities, reduced dependence on formal learning settings and teachers, and allowed learners to access authentic and diversifying visual and audio materials, as mentioned by one of the students. In addition, they believed that they reached accurate information in a short period, enhanced their study schedules, and lessened their workload.

I benefited from it more when I used it to create activities for my internship because it gave me marvelous ideas. I managed to apply 6 activities in one lesson thanks to the activities I created by taking ideas from AI.

EFL learners mainly prefer using AI-based tools for communication and interaction within the scope of EFL learning, and use them to develop basic language skills and knowledge areas, as stated by one participant below. For instance, they used the platforms to receive feedback, correct their errors, and understand concepts while learning grammar. To enhance their vocabulary knowledge, they focused on word combinations, idioms, and references. The participants stated that AI tools could be used as a source of comprehensible input. They also believed that AI tools were ideal for developing conversations, fluency, cultural understanding of the target language, and awareness of various accents in terms of speaking skills. Next, the participants used AI tools and environments for generating ideas, planning, outlining, summarizing, paraphrasing, note-taking, instant, real-time, and individualized feedback, error and mistake correction, and proofreading while learning writing. Regarding pronunciation skills, AI tools were used for producing and practicing sounds, receiving feedback, converting texts to speech, and correcting their mistakes and errors.

I find AI-enhanced methods more effective than the traditional ones, even though I was able to progress in grammar, vocabulary, reading, and writing without any AI tool. However, I did notice that I lacked speaking skills, which, I think, was because of overly traditional language learning. Thus, in my opinion, especially for developing communicative skills, AI tools are essential. On the other hand, even though reading, writing, grammar, and vocabulary can be learned with traditional methods, AI makes the process a bit funnier.

Results indicate that the integration of AI tools contributes to their learning process in a variety of skills. For instance, they stated that their utilization was beneficial for autonomous, personalized, self-paced, and adaptive learning since AI tools could be prompted in accordance with individual needs and expectations, as reported by a participant below. Moreover, they thought that AI platforms could be used for blended, flipped, and gamified learning. EFL learners also stated that they could develop their creativity, problem-solving skills, and translation skills. Finally, the participants thought that using AI-based environments contributed to achievement since they preferred using them for diagnosing weak and strong areas in the target language and examination preparation.

The potential benefits of using AI in language learning could be the personalized practices it can provide and its

accessibility. Since every learner is different with different needs, strengths, and weaknesses, with the help of AI, the language learning process can become a lot easier.

Findings demonstrate that using AI tools relates to both positive and negative effects in terms of emotions and affective states. First, the participants stated that using AI tools increased their attention and learning motivation, enhanced foreign language enjoyment, and engagement, and reduced anxiety since they found AI environments stress-free, as stated by one of the participants below. However, they thought that they had suffered from the lack of emotional support from their peers and teachers, and interactions with humans. Moreover, they felt alone and addicted to technology.

Regarding engagement, AI significantly boosts it. The interactive nature, personalized pathways, and instant feedback of AI-driven tools make language learning more enjoyable and engaging.

ELF teachers have conflicting ideas about the integration of AI tools and environments into the EFL learning process. For instance, some participants stated that innovations based on AI-related activities could result in their integration into current approaches, methods, and techniques. They also claimed that teachers' roles need to be redefined after the appearance of AI-based learning environments, as stated by one participant below. On the other hand, some participants believed that AI could be seen as a supplementary tool rather than a replacement for teachers. Last, some students suggested a blend of traditional teaching and AI-enhanced applications considering their flexibility and adaptability. As a final point, EFL learners strongly needed teacher supervision while using AI tools in their language learning process.

I recognize the advantages of technology, which is integrated into the traditional methods in a balanced way to optimize the foreign language learning process. I believe that blended teaching methodologies can provide the best solutions to foreign language learning problems.

EFL learners experience some problems, difficulties, and challenges while using AI tools for learning. First, they encountered inaccurate, artificial, and inauthentic information, incorrect statements, and a lack of cultural relevance and sensitivity. Second, they believed that they needed instructions from their teachers for the effective use of AI, since they had no instructions in formal learning settings. In other words, they suffered from the lack of guidance from knowledgeable individuals to ensure the effectiveness of the integration of AI tools into the EFL learning process. Under this perspective, they had reservations about the effectiveness of AI tools to replace teachers due to the lack of sincerity and warmth and felt a sense of disconnection from real-life learning environments after experiencing a mechanical learning process. Third, they believed that using AI tools for writing skills constituted a barrier to creative writing and prevented developing speaking skills in real-world situations. Dramatically enough, they stated that AI use could debilitate the learning process and prioritize having higher grades rather than learning. Fourth, they felt concerned about data privacy and security. As a final point, they thought that providing equipment and registering would cost more than they expected, as stated by one of the participants below.

To give an example, I tried to improve my French with Duolingo, but its free version has extremely annoying ads. Thus, I do not think teachers' importance will decline with AI evolving in language learning environments.

Conclusions and Discussion

Seven main conclusions can be drawn based on the findings presented above. The first one refers to the experience users of AI language tools possess, especially in using a wide variety of AI tools. The second one is that AI-based environments can provide equality in learning opportunities, availability of authentic audio-visual materials, reduced dependence on formal learning settings and teachers, and access to accurate information in a short time. The third conclusion is that learners prefer AI tools as a source of comprehensible input, communication, and interaction when they make an attempt to get feedback, correct their errors, and enhance their vocabulary knowledge. In addition, they find AI language tools beneficial in generating ideas, planning, outlining, summarizing, paraphrasing, note-taking, proofreading, and enhancing pronunciation. The fourth conclusion pertains to the benefits of implementing AI in EFL learning settings in boosting autonomous, personalized, and adaptive learning based on individual needs, providing blended, flipped, and gamified learning, developing creativity, problem-solving, and translation skills, and diagnosing weak and strong areas in the target language and examination preparation. The fifth conclusion focuses on affective states; according to participants' views, AI tools increase their attention and learning motivation, enhance foreign language enjoyment and engagement, and reduce anxiety. The sixth conclusion is concerned with conflicting views about the integration of AI tools and EFL learning settings. Some participants believe that innovations in the realm of AI-related activities may integrate with current approaches, methods, and techniques. Moreover, while some interviewees call for a reevaluation of teachers' roles in this new technological era, others insist on viewing AI-based techniques as supplementary tools instead of a replacement for teachers. Consistently, some are reminded of their need for teacher supervision while utilizing AI tools. Likewise, using a blend of traditional teaching and AI-oriented techniques is some participants' suggestion. The last conclusion documents the difficulties or challenges most users face while utilizing AI-powered tools for learning. To mention some, inaccurate, artificial, and inauthentic information, incorrect statements, lack of instructions and guidance, lack of sincerity and warmth, and experiencing a mechanical learning process. What is more, some participants find AI tools as a hindrance to creative writing and speaking, besides, some raised concerns regarding data privacy and security and the cost of registration to such instruments.

Pedagogical implications

Consistent with our elicited findings, several studies emphasize the virtues of AI technology in language learning. For instance, various researchers observe that the utilization of chatbots and AI has been useful in education because they could potentially provide a communicative use and collaborative situation (e.g., Fitria, 2021; Lozano & Blanco Fontao, 2023; Tafazoli et al., 2019; Yin et al., 2021). Research indicates that AI-powered tools such as Grammarly, Naver Papago, and Google Translate are highly supportive of English learners in terms of writing skills, vocabulary, and sentence structure (Fitria, 2021). In addition, AI technologies can assist learners in research planning, topic, and paper draft development (Utami et al., 2023). However, the participants in the current study point out AI's advantages in proofreading. Furthermore, using AI tools to learn English is an exciting experience since each learner enjoys having the opportunity to have a native teacher to assist her/him when listening, speaking, writing, and correcting mistakes (Fitria, 2021; Yin et al., 2021). Similar to the findings in the current study, it seems unlikely for learners to rely solely on formal education provided at institutions throughout their lives. As raised in the study, AI boosts learners' motivation and inspiration (Bailey et al., 2021) and stimulates learners' participation in activities (Gayed et al., 2022). However, as far as comparison between traditional and AI-based teaching is concerned, although some of our participants prefer a blend of both, while the likelihood of autonomous and more successful learning through traditional textbook learning was found to be 35%, its probability was 53% through using artificial intelligence technology (Zhang, 2022). However, despite these encouraging findings, the detrimental consequences of the use of AI-powered technologies or challenges should not be underestimated. For example, as the interviewees partially mention, the increase in plagiarism within learners' writing assignments, the inaccurate translations, and the hindrances might arise from excessive use of AI-powered tools as well as the scarification of critical thinking and problem-solving abilities caused by overreliance on AI writing tools (Perkins, 2023) which are not raised by the participants in this study. Furthermore, some studies point out unreliability, being unnatural, inappropriate, and decontextualized (Hood & Wilson, 2001), privacy and security of information as well as the possibility of cheating in AI tools which are argued by the participants in the current research. However, although Phan (2023) states technology anxiety when utilizing AI-based tools, the results of the study show that using AI tools reduces anxiety. As Lozano and Fontao (2023) underlie, the current study highlights the reevaluation of teachers' roles and the role of digital literacy in this new technological era.

Practical recommendations

Several recommendations can be noted within the scope of the conclusions reached in the study. First of all, to be in line with this fast-evolving technological teaching-learning era, it seems necessary to enhance digital literacy for both teachers and learners, then, they can get more benefit from various AI-powered tools while redefining their new roles. Next, providing equality in learning opportunities for as many users of AI tools is required in at least main universities or major EFL learning settings. Afterward, intensifying the infrastructure to easy and convenient access to AI tools, at affordable costs, in correcting written or spoken errors and receiving feedback under the umbrella term of communication can be of utmost importance in learning or using English in even academic contexts. Furthermore, paying systematic attention to the concept of autonomous and self-paced learning, especially, via implementing more blended, flipped, and gamified learning in line with the appropriate utilization of AI-powered technology can lead to a tremendous revolution in teaching-learning processes; particularly, since most learners feel more relaxed and stress-free when using AI-tools. Last but not least, perhaps using AI-based technology in its new face in education in general and in EFL settings, in particular, seems partially perplexing; to alleviate the arising problems, more guidance from experts is required while working on the betterment of privacy issues.

Limitations and recommendations for further research

This study has a number of limitations. First, the sample group of the study was confined to 26 senior students in the Department of English Language Teaching at a state university in Türkiye. Second, the data collected were confined to a background questionnaire and interviews. Finally, the data were analyzed thematically.

Although the implementation of AI-powered tools in English classes is the hot topic of educational research at present, there is scant evidence and knowledge of accurate pedagogical approaches and correct utilization of artificial intelligence in teaching and learning English. Hence, it is recommended to investigate the long-term impacts of AI-oriented education, through triangulation such as observation or case studies as well as quantitative research designs to scrutinize a large number of participants prior to making any decisions or making any substantial alterations to the learning-teaching process and even in the educational model which can be occurred toward adapting to unavoidable transformations which will be encountered in upcoming years.

References

Bailey, D., Southam, A., & Costley, J. (2021). Digital storytelling with chatbots: mapping L2 participation and perception patterns. *Interactive Technology and Smart Education*, *18*(1), 85–103. https://doi.org/10.1108/ITSE-08-2020-0170

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice Hall.

Bertelsen, O., & Bødker, S. (2003). Activity theory. In C. Carroll (Ed.), *HCI models, theories, and frameworks: Toward a multidisciplinary science* (pp. 291–324). Elsevier. https://doi.org/10.4135/9781412957397.n3

Bryant, S., Forte, A., & Bruckman, A. (2005). Becoming Wikipedian. *Proceedings of the 2005 International ACM SIGGROUP Conference on Supporting Group Work - GROUP '05*, 1–10.

https://doi.org/10.1145/1099203.1099205

Denzin, N. (2017). *Sociological Methods: A Sourcebook*. Routledge.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Addison-Wesley Publishing Company.

Fitria, T. (2021). Grammarly as AI-powered English writing assistant: Students' alternative for writing English. *Metathesis: Journal of English Language, Literature, and Teaching*, *5*(1), 65–78. https://doi.org/10.31002/metathesis.v5i1.3519

Gayed, J., Carlon, M., Oriola, A., & Cross, J. (2022). Exploring an AI-based writing assistant's impact on English language learners. *Computers and Education: Artificial Intelligence*, *3*, 1–7. https://doi.org/10.1016/j.caeai.2022.100055

Hood, W., & Wilson, C. (2001). The literature of bibliometrics, scientometrics, and informetrics. *Scientometrics,* *52*(2), 291–314. https://doi.org/10.1023/A:1017919924342

Horváth, I. (2007). Autonomous learning: What makes it work in postgraduate interpreter training? *Across Languages and Cultures*, *8*(1), 103–122. https://doi.org/10.1556/Acr.8.2007.1.6

Kanero, J., Geçkin, V., Oranç, C., Mamus, E., Küntay, A., & Göksun, T. (2018). Social robots for early language learning: Current evidence and future directions. *Child Development Perspectives*, *12*(3), 146–151. https://doi.org/10.1111/cdep.12277

Kannan, J., & Munday, P. (2018). New trends in second language learning and teaching through the lens of ICT, networked learning, and artificial intelligence. *Círculo de Lingüística Aplicada a La Comunicación*, *76*, 13–30. https://doi.org/10.5209/CLAC.62495

Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Pergamon Press.

Lozano, A., & Blanco Fontao, C. (2023). Is the education system prepared for the irruption of artificial intelligence? A study on the perceptions of students of primary education degree from a dual perspective: Current pupils and future teachers. *Education Sciences*, *13*(7), 1–12. https://doi.org/10.3390/educsci13070733

Özmat, D., & Senemoğlu, N. (2021). Difficulties in learning English by EFL students in Turkey. *Ankara University Journal of Faculty of Educational Sciences*, *54*(1), 141–173. https://doi.org/10.30964/auebfd.742803

Patton, M. (1990). *Qualitative evaluation and research methods*. Sage Publications Ltd.

Perkins, M. (2023). Academic integrity considerations of AI Large Language Models in the post-pandemic era: ChatGPT and beyond. *Journal of University Teaching and Learning Practice*, *20*(2). https://doi.org/10.53761/1.20.02.07

Phan, T. (2023). Students' perceptions of the AI technology application in English writing classes. *Proceedings of the AsiaCALL International Conference*, *4*, 45–62. https://doi.org/10.54855/paic.2344

Ponton, M., & Rhea, N. (2006). Autonomous Learning from a Social Cognitive Perspective. *New Horizons in Adult Education and Human Resource Development*, *20*(2), 38–49. https://doi.org/10.1002/nha3.10250

Sarker, I. (2022). AI-based modeling: Techniques, applications and research issues towards automation, intelligent and smart systems. *SN Computer Science*, *3*(2), 1–20. https://doi.org/10.1007/s42979-022-01043-x

Savran Çelik, Ş., & Aydın, S. (2018). A review of research on the use of native language in EFL classes. *The Literacy Trek*, *4*(2), 1–14.

Seliger, H. W., & Shohamy, E. (1989). *Second language research methods*. Oxford University Press.

Shadiev, R., Wu, T., Sun, A., & Huang, Y. (2018). Applications of speech-to-text recognition and computer-aided translation for facilitating cross-cultural learning through a learning activity: issues and their solutions. *Educational Technology Research and Development*, *66*(1), 191–214. https://doi.org/10.1007/s11423-017-9556-8

Tafazoli, D., María, E., & Abril, C. (2019). Intelligent language tutoring system. *International Journal of Information and Communication Technology Education*, *15*(3), 60–74. https://doi.org/10.4018/IJICTE.2019070105

Utami, S., Andayani, A., Winarni, R., & Sumarwati, S. (2023). Utilization of artificial intelligence technology in an academic writing class: How do Indonesian students perceive? *Contemporary Educational Technology*, *15*(4), 1–13. https://doi.org/10.30935/cedtech/13419

Woolf, B., Lane, H., Chaudhri, V., & Kolodner, J. (2013). AI grand challenges for education. *AI Magazine*, *34*(4), 66–84. https://doi.org/10.1609/aimag.v34i4.2490

Yin, J., Goh, T., Yang, B., & Xiaobin, Y. (2021). Conversation technology with micro-learning: The impact of chatbot-based learning on students' learning motivation and performance. *Journal of Educational Computing Research*, *59*(1), 154–177. https://doi.org/10.1177/0735633120952067

Zhang, Y. (2022). Construction of English language autonomous learning center system based on artificial intelligence technology. *Mathematical Problems in Engineering*, *2022*, 1–12. https://doi.org/10.1155/2022/7900493