



Journal Homepage: - www.journalijar.com
**INTERNATIONAL JOURNAL OF
ADVANCED RESEARCH (IJAR)**



Article DOI: 10.21474/IJAR01/23011
DOI URL: <http://dx.doi.org/10.21474/IJAR01/23011>

RESEARCH ARTICLE

ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE EDUCATION: TEACHERS' AND STUDENTS' PERSPECTIVES IN ARAB SECONDARY SCHOOLS IN ISRAEL

Eiman Daibes- Qadri

1. Al Najah national university /Nablus-Palestine. Alresalah Comprehensive Secondary School/ Galilee-North Region.

Manuscript Info

Manuscript History

Received: 10 January 2026
Final Accepted: 12 February 2026
Published: March 2026

Key words:-

Artificial intelligence; English language teaching; educational technology; Arab schools in Israel; AI integration; digital divide.

Abstract

Artificial intelligence (AI) has increasingly become part of educational practices and is considered a promising tool for supporting teaching and learning processes. In language education, AI-based applications such as grammar checkers, automated feedback systems, and adaptive learning platforms have the potential to enhance students' engagement and provide personalized learning opportunities. Despite these advantages, the integration of AI in schools is not equally accessible across different educational contexts. This study investigates the use of AI in teaching English language skills in Arab secondary schools in Israel, with a particular focus on teachers' and students' perceptions of its effectiveness, challenges, and opportunities. The research adopts a qualitative approach using semi-structured interviews and focus group discussions with English teachers and students at Al-Risala High School in northern Israel. The findings indicate that AI tools can support language learning by improving vocabulary acquisition, providing immediate feedback, and encouraging students' active participation in learning activities. However, the study also identifies several barriers to effective implementation, including limited technological infrastructure, insufficient teacher training, and the lack of AI tools that adequately support the Arabic language. These challenges highlight the need for greater institutional support, targeted professional development programs, and the development of culturally and linguistically appropriate AI technologies. The study contributes to the growing body of research on AI in education and provides practical insights for improving the integration of AI in minority educational contexts.

"© 2026 by the Author(s). Published by IJAR under CC BY 4.0. Unrestricted use allowed with credit to the author."

Introduction:-

Artificial intelligence (AI) is one of the technological innovations that influence a lot of areas including the education sector. In the education sector, AI is essential in creating more personalized strategies for learning and

Corresponding Author:- Eiman Daibes- Qadri
Address:- Al Najah national university /Nablus-Palestine. Alresalah Comprehensive Secondary School/ Galilee-North Region.

teaching to improve student performance. Additionally, AI provides educators with opportunities to design more effective and personalized learning experiences. Thus, new models of teaching and learning are being developed. Recently, AI has become probably one of the leading technological innovations with most influence on modern education. AI-based systems produce adaptive learning environments that respond to individual learners by providing personalized feedback and improving learning outcomes. Also, these technologies enable teachers to monitor students' progress and adapt instructional strategies accordingly producing more efficient and student-centered learning environments (Holmes et al., 2019; Luckin, 2022).

Furthermore, implementing AI in education has been linked with improved student engagement, improved formative assessment, and the development of 21st century digital competences (Zawacki-Richter et al., 2019). Israel has taken significant steps toward integrating AI into its education system through national strategies aimed at developing students' and teachers' AI competencies. Knesset Research and Information Center (2025). In Switzerland, UniDistance Suisse University provided personal tutors based on AI and distance learning programs for bachelor's and master's degrees in several subjects. The results showed that students who interacted with these systems achieved significantly higher academic performance compared to their peers. This result can therefore be interpreted as meaning that AI can also improve the learning process by providing continuous support and encouragement to students by tracking them on AI system (Bailey et al., 2023).

Other research has also indicated that the role of AI in the educational process extends to its ability to analyze the student's educational behavior, which facilitates making educational and pedagogical decisions such as improving student performance by developing a learning analysis tool based on AI models, analytical data and the evaluation of feelings such as levels of stress, curiosity and confusion among students, which provide opportunities for teachers to track students' behavioral, emotional and educational abilities (Saga et al., 2023). Recent research indicates that AI applications can enhance educational performance by supporting critical and creative thinking through interactive and adaptive learning environments, which are essential for developing 21st-century skills (Luckin, 2022; Holmes et al., 2019). Based on these studies, it can be concluded that AI has great potential to improve education and provides a unique educational experience for each student, which leads to a better quality of learning and increased student achievement. However, it should also address the potential challenges associated with adopting these technologies such as privacy, cost and students' trust in AI-based assessment models.

Research statement:

The rapid digital transformation in schools has become a global matter including the integration of AI in curricula. Israel has taken significant steps toward integrating AI into its education system through national policies and strategic initiatives aimed at developing AI skills among students and teachers (Knesset Research and Information Center, 2025). In addition, the integration of AI in Arab schools in Israel still faces significant challenges, such as the digital divide, inadequate and weak technological infrastructure, limited teacher preparation, and a lack of resources to facilitate the inclusion of AI technology in Arab schools (Bank of Israel, 2023). Despite the increasing interest in the use of AI in Israeli education, there is a significant lack of research studying how effective this technology is with Arab schools. As a teacher in an Arab school in Israel, the researcher has noticed the need to examine the implications of AI on Arab schools, the challenges and the opportunities of employing it as well as on how this technology could be enhanced to adequate the learning experience in Arab schools.

Additionally, Arab schools face inequities in funding, access to digital devices, and the development of AI-based curricula compared to Jewish schools, Organisation for Economic Co-operation and Development (OECD, 2023). Furthermore, there are other challenges that come from the language; In general, most of the AI educational tools and applications are established on the Hebrew and English language, while there is little support for the Arabic language, which may limit the full benefits that Arab students and teachers can take from these tools (Van Leer Institute, 2024). Therefore, the research statement could be presented with the following question: How do teachers and students in Arab schools in Israel perceive the integration of AI in the educational process, and what challenges and opportunities do they experience during its implementation?

Research Objectives:-

This study aims to assess how efficient AI is being integrated in Arab schools in north Israel and to identify the major challenges (technological, linguistic, infrastructural and financial) and its implementation of employing AI on English teachers at Alresalah High School.

Theoretical Significance:-

Theoretically, the study adds to the understanding of how AI is integrated in education. It concerns itself with technology-related progress among education for minorities domains with a strong focus on language and infrastructure-based equity, aiming to resolve gaps identified by existing literature.

Practical Significance:-

The study is important and beneficial for a wide range of stakeholders, including researchers, policymakers, educational stakeholders, curriculum developers, educators, and specifically the Ministry of Education in Israel. Practically, this research provides insights and actionable recommendations that are intended to facilitate understanding and informed policymaking and infrastructure development, teacher professional development, and AI tool creation.

Research Hypotheses:

This study is guided by the following hypotheses:

The use of AI-based educational tools leads to enhanced learning outcomes of students in Arab schools in Israel. The efficiency of employing AI in these schools is profoundly affected by technological infrastructure. Teacher professional development programs positively correlate with successful AI adoption in schools. Increased funding and equal access to digital resources greatly help in closing the gap in education between Arab and Jewish schools in Israel.

Study limitations:-

This study is subject to several limitations. First, the sample size is relatively small and limited to a single school, which restricts the generalizability of the findings. Second, the researcher's direct association with the school may have introduced potential bias in data collection and interpretation. Third, the study focuses on a specific sociocultural and linguistic context, which may limit the applicability of the findings to other educational settings. Future research is recommended to include larger and more diverse samples and to adopt mixed-method approaches to enhance the validity of findings.

Human limitations:

The study focuses on teachers and students. In this regard, the teachers and students are directly involved in the implementation and use of AI educational tools.

Spatial limitation:

The study focuses on one geographical area which is Arab students in Nahef village in Israel. Therefore, AI integration challenges and efficiency is specifically significant within the Arab schools in Israel.

Temporal limitation:

The study will take place in the 2025 academic year.

Topical limitations:

This study examines the efficiency, challenges, and opportunities of using AI technology in educational environments.

Methodological limitations:

Methodologically this research is qualitative analysis, and data will be collected by interviews.

Definitions of Terms:-

AI: is the ability of a computer to perform intelligent tasks like a human. These tasks include problem-solving, learning and reasoning. AI also performs other AI tasks like running games. (Russell & Norvig, 2021).

Inclusion of AI: The use of AI technologies within educational curriculum and methods to improve learning experience and teaching quality (Russell & Norvig, 2021).

Digital Divide: The difference between demographic groups or regions that have sufficient access to modern information and communications technology, and those that have restricted or no access; for example, Arab schools in Israel are a disadvantaged group (Holmes et al., 2019). Schools require the necessary hardware, software, and network technologies as well as sufficient AI capacity, to implement and integrate AI effectively (Van Dijk, 2020).

Literature Review:-

A short introduction:-

Theoretical Framework:-

Recent research on AI in education highlights its growing role in enhancing teaching and learning processes through adaptive and personalized learning environments. Several studies (Holmes et al., 2019; Luckin, 2022; Zawacki-Richter et al., 2019) collectively emphasize that AI technologies can improve student engagement, provide immediate feedback, and support individualized instruction. However, these studies predominantly focus on well-resourced educational contexts, often overlooking the challenges associated with implementing AI in under-resourced and linguistically diverse environments. The integration of AI in education can be better understood through theoretical frameworks such as constructivism and the Technological Pedagogical Content Knowledge (TPACK) model. Constructivist theory emphasizes active knowledge construction through experience (Piaget, 1950), which aligns with the adaptive nature of AI technologies. Similarly, the TPACK framework highlights the importance of integrating technological, pedagogical, and content knowledge for effective teaching (Mishra & Koehler, 2006), with recent research emphasizing the need for continuous teacher training for successful AI integration (Mishra & Koehler, 2023).

However, the TPACK (Technological Pedagogical Content Knowledge) was first published in 2006 shows that teachers need three key skills to use AI effectively, understanding the technology and how it works, teaching methods how to use it in class and subject knowledge how it applies to their subject (Mishra & Koehler, 2006).

The latest research (Mishra & Koehler, 2023) stresses that teachers need proper training to expect success. This represents a significant challenge in Arab schools in Israel, where many teachers haven't received AI training (Bank of Israel, 2023). Furthermore, scholars argue that educational technology should be critically examined in relation to social and institutional contexts, since inequalities in access to digital infrastructure may limit the benefits of technological innovation in education (Selwyn, 2023).

Policy reports indicate that the successful integration of AI in education requires not only technological infrastructure but also teacher training and curriculum adaptation (Knesset Research and Information Center, 2025). According to Tucker (2024), equity should be considered in AI design and implementation to ensure accessibility for marginalized groups. This can include supporting multiple languages (like adding Arabic, not just Hebrew/English) culturally responsive content, and affordable access. In the context of Arab schools in Israel, these challenges are further compounded by linguistic barriers. Existing studies indicate that most AI-based educational tools are designed primarily for Hebrew and English speakers, with limited support for Arabic (Van Leer Institute, 2024). This lack of linguistic inclusivity not only reduces accessibility but also increases cognitive load, as students must process content in a non-native language, thereby limiting the effectiveness of AI-supported learning.

Conceptual Framework:-

A short introduction:-

This study is guided by the TPACK framework (Mishra & Koehler, 2006), which emphasizes the integration of technological, pedagogical, and content knowledge in effective teaching. In the context of AI integration, this framework highlights the importance of teacher readiness, instructional strategies, and technological accessibility. Additionally, the study draws on equity-oriented perspectives in AI in education (Tucker, 2024), focusing on issues of access, language inclusion, and digital inequality.

Artificial Intelligence (AI):-

refers to the computer systems which can do the work which needs human intelligence. For example, natural language processing, pattern recognition, and making independent decisions. Recently, AI encompasses advanced techniques such as machine learning (ML), deep learning, and neural networks to process large datasets for applications such as chatbots, automated marking, Recommendations for personalized learning (Chassignol et al., 2021) While the use of AI in education is highly valuable, it also raises important ethical concerns. How can Issues such as student data privacy and ethical use of AI must be carefully addressed? will AI eventually take the place of teachers? According to UNESCO (2021), AI technology can deliver exciting possibilities for schools and classrooms. However, it is important that schools use this power with transparency, fairness, accountability and safety.

Integration of AI:-

AI in education is the process of embedding AI-driven tools (e.g., adaptive learning platforms, intelligent tutoring systems) into curricula to enhance engagement, self-learning tasks, and provide real-time feedback. To make a substantial impact, AI tools must be aligned with pedagogy, teacher training, and evaluation (Zawacki-Richter et al., 2019). The integration of AI in schools is not just about adopting new tools but more about creating personalized learning techniques using student data. For instance, AI analytics detects learning issues and NLP helps students who learn in diverse languages. If individuals use AI too much, critical thinking and other important skills could weaken (Luckin, 2022).

Digital Divide:-

The digital divide refers to the gap between people who have easy access to technology and fast internet, and those who don't - especially affecting poorer communities, rural areas, and disadvantaged groups. For example, in Arab schools in Israel, the lack of proper equipment and connections makes it harder to use AI in classrooms, making educational inequalities worse (Ragnedda & Muschett, 2021). It is not only the availability of technology that matters, but also how effectively it is used. Even when schools have adequate tools, differences in digital skills among students and teachers can create deeper inequalities in learning opportunities (Helsper et al., 2021). Studies on digital inequality indicate that access to technological resources and digital infrastructure significantly affects students' learning opportunities. Educational institutions that lack technological infrastructure or professional development opportunities often face difficulties when integrating advanced technologies such as AI into teaching practices (Williamson et al., 2023).

Technological Infrastructure:-

Schools require proper technological infrastructure for AI to work in education. The physical and digital infrastructure that allows for innovation (UNESCO, 2022). This includes basic things such as computers and servers, good internet and essential software, learning management system (LMS) tools and AI-based materials (OECD, 2021). Schools would find it impossible to implement even simple technology, such as virtual labs or AI tutoring systems, without digital resources (Williamson et al., 2023). This view of infrastructure acknowledges that achieving success in employing AI in schools is not just about technological resources, but about the people systems behind their use.

Pedagogical Impacts:-

Studies have recently shown that AI can improve the learning experience in several ways:

Adaptive Learning Systems:-

Recent research shows AI math tutors helped Arab students improve test scores by 22% (Baileyvard et al., 2023). However, Hebrew-speaking students saw even bigger gains (37% higher), likely because Arab students had to spend mental energy translating materials instead of focusing on learning (Kabaha, 2023). This creates an unfair disadvantage.

Automated Assessment Tools:-

However, only 12% of Arab schools used these time-saving tools, compared to 64% of Jewish schools. This finding is supported by research highlighting structural inequalities between Arab and Jewish education systems in Israel, particularly in terms of funding, infrastructure, and access to educational resources (Saffuri, 2025). New data shows Arab schools get less than one-third (32%) of the technology funding that Jewish schools receive for each student (OECD, 2023). This funding gap is shown in Arab schools in having just 1 computer for every 12 students, while Jewish schools have 1 for every 3. Arab schools have only 0.3 IT staff per school compared to 2.1 in Jewish schools and the gap is also in language barriers, 91% of educational AI tools work in Hebrew, but only 9% support Arabic, and just 2% include Palestinian dialects (Van Leer Institute, 2024).

In addition to the training gap, previous research indicates that many teachers in under-resourced schools lack adequate training in the use of AI technologies. Teachers also face challenges when using platforms that are not available in their native language, and there is a strong need for professional development programs in Arabic (OECD, 2023; Van Leer Institute, 2024). These inequalities mean Arab students often can't use the same learning tools as Jewish learners, putting them at an unfair disadvantage. This study uses Tucker's (2024) framework for creating equal opportunities with AI, focusing on four key areas: Basic Tools - Having computers and good internet, cultural fit - using students' languages and relevant examples, teaching methods - adapting how we teach and test, and support systems - training teachers and tech staff.

Most frameworks focus only on technology. Tucker's model is unique because it considers all these important aspects together. While Tucker's (2024) framework provides big-picture guidelines for making AI tools fair, this study focuses on real experiences to study the efficiency of integrating AI in schools, by using interviews to gather qualitative feedback from high school teachers and students. The study aims to find practical solutions and recommendation for Arab high school in Israel. Although previous studies have extensively examined the benefits of AI in education, there remains a lack of research exploring its implementation in under-resourced and linguistically marginalized contexts. Specifically, limited studies have investigated how AI is perceived and utilized in Arab secondary schools in Israel, where infrastructural and linguistic challenges intersect. This study seeks to address this gap by examining teachers' and students' perspectives on AI integration in this context.

Study Design:-

This study will use a qualitative approach to better understand how AI is used in Al-Risalah High School. This method provides an in-depth understanding of how effective AI is and what challenges students and teachers face. The qualitative approach was selected as it allows for an in-depth exploration of participants' perceptions and experiences, which cannot be captured through quantitative methods alone.

Participants:-

A sample size of 15 participants consisting of 10 students and 5 teachers from Al-Risalah High School. The selection of participants will be done through a sampling technique of stratified random samplings. The researcher works at Al-Risalah School in Northern Israel. The selected school for the study is one the researcher knows well in terms of students and teachers at the school. As a result, it will become easier to carry out the study effectively and collect the required information.

Data Collection Tools:-

Interviews: 10 students from 10th grade with different socioeconomic status and with different academic achievements. In addition, 5 English teachers will have interviews. These interviews will allow them to talk more deeply about their experiences with AI.

Focus Groups: To gather insights into attitudes towards AI, we will conduct two group discussions. One group will consist of four students in the 11th and 12th grades and another group consisting of two Arabic teachers and two math teachers.

Validity and Reliability:-

The study made sure the results are reliable by checking them with participants and discussing them with others. This helped make the findings more accurate and reduced bias.

Data Analysis:-

The information from interviews and focus groups will be documented, organized, and analyzed to find common ideas and experiences. The qualitative data were analyzed using thematic analysis following the six-phase approach proposed by Braun and Clarke, which allows the identification of recurring themes in participants' responses (Braun & Clarke, 2006).

Ethical Considerations:-

The study will respect participants' rights. Everyone will be asked for permission to join the study. Their names and answers will stay private.

Timeline:-

The research will begin in the month of January 2025 and end in June 2025. The analysis and report writing of the data collected in the research will be done after the collection of the data.

Research Instruments:-

The interview consists of two main sections:

Section One: Demographic Information:-

This section gathers background details about the participants such as gender (male/female), grade level and socioeconomy level (for students), teaching experience (for teachers).

Section Two: interview:-

This section includes the domains of the interviews:

- 1) The effectiveness of AI tools in enhancing learning outcomes
- 2) Technological challenges in implementation of AI
- 3) Linguistic and contextual barriers in Arab schools
- 4) Teachers' and students' motivation and readiness for AI adoption

Study Variables:-

Independent Variables:

Gender (male / female)

Years of teaching experience (less than 5 years / 5–10 years / more than 10 years)

Grade (10th, 11th, 12th)

Dependent Variable:

The level of effectiveness in AI integration in educational processes.

Results:-

The findings about the integration of AI in teaching English language skills were identified from the qualitative data collected by way of interviews and focus group discussions at Al-Risalah High School.

Perceived Benefits of AI:-.

According to most teachers and students, tools like grammar checkers, translation applications, and interactive exercises can enhance vocabulary acquisition, sentence structure and engagement. While students found that AI gave prompt feedback, they took corrective action and continued to practice. Teachers said that the AI-supported learning platforms helped customize appropriate lessons for different levels. This finding suggests that AI tools support learner autonomy by providing immediate feedback and personalized learning opportunities. These features are essential for effective language acquisition, as they allow students to practice independently and improve continuously. This result is consistent with previous research indicating that AI-based systems enhance learning outcomes through adaptive feedback and individualized instruction (Holmes et al., 2019; Zawacki-Richter et al., 2019).

Technological and Infrastructure Barriers:-

According to teachers, outdated devices, unstable internet connections, and lack of software compatible with AI make integration difficult. Students reported that they often used their own devices, so not everyone had the same access at home. This indicates that technological infrastructure plays a critical role in the success of AI integration. Without adequate resources, even effective AI tools cannot be implemented properly, which limits their educational impact. This finding aligns with studies showing that insufficient infrastructure is a major barrier to adopting educational technologies, particularly in under-resourced schools (OECD, 2023; Williamson et al., 2023).

Language and Cultural Limitations:-

A significant issue raised was the dominance of Hebrew and English in AI tools, with extremely limited support for Arabic. This caused problems, especially for students who weren't very good at them. Both students and teachers expressed the need for AI content and a user interface that are culturally relevant in Arabic. This finding highlights the importance of linguistic accessibility in AI-based learning environments. When students cannot fully understand the language of the tool, it reduces the effectiveness of learning and increases cognitive load. This result supports previous research emphasizing that language inclusivity is essential for equitable AI implementation in education (Van Leer Institute, 2024; Tucker, 2024).

Teacher Readiness and Training:-

Many teachers admitted they did not get training appropriately using AI in teaching. They relied on self-learning and trial-and-error. Many participants mentioned that having structured professional development in Arabic would improve their confidence. This suggests that teacher preparedness is a key factor in successful AI integration. Without proper training, teachers may struggle to use AI tools effectively, which reduces their potential impact on student learning. This finding is consistent with the TPACK framework, which highlights the importance of integrating technological, pedagogical, and content knowledge for effective teaching (Mishra & Koehler, 2006; 2023).

Student Motivation and Engagement:-

Students reported increased motivation and engagement in using AI as it is a new interactive way of learning. Nonetheless, they also reported frustration when their tools wouldn't understand their request because it was misinterpreted due to language or tech problems. This reflects the dual impact of AI on student motivation. While AI can enhance engagement through interactive and personalized learning, existing barriers may reduce its effectiveness and lead to frustration. Similar findings have been reported in previous studies, which show that the benefits of AI depend on usability, accessibility, and contextual relevance (Luckin, 2022; Selwyn, 2023).

Discussion:-

The findings of this study provide strong evidence that AI has the potential to enhance English language learning through personalized and adaptive learning environments. Consistent with previous research (Holmes et al., 2019; Zawacki-Richter et al., 2019), participants reported that AI tools support vocabulary development, improve grammatical accuracy, and increase student engagement. However, this study goes beyond confirming these benefits by demonstrating that the effectiveness of AI is highly dependent on contextual factors, particularly in under-resourced and linguistically diverse educational settings. Unlike studies conducted in well-resourced environments, where AI integration is often associated with improved learning outcomes and seamless implementation (Luckin, 2022), the present findings reveal that such outcomes cannot be generalized to Arab secondary schools in Israel. The data suggests that the success of AI integration is not solely determined by the availability of technology, but rather by the interaction between infrastructure, teacher preparedness, and linguistic accessibility. This highlights the importance of adopting a contextualized approach when evaluating the impact of AI in education.

One of the most significant findings of this study is the role of technological infrastructure as a determining factor in the effectiveness of AI integration. Consistent with prior research (OECD, 2023; Williamson et al., 2023), participants emphasized that limited access to devices, unstable internet connectivity, and insufficient digital resources hinder the implementation of AI tools. This suggests that technological readiness is a prerequisite for successful AI adoption, and without adequate infrastructure, even the most advanced educational technologies may fail to produce meaningful outcomes. In addition to infrastructural challenges, the study highlights the critical issue of linguistic inclusivity. The dominance of Hebrew and English in AI-based educational tools creates significant barriers for Arabic-speaking students. This finding extends previous research (Van Leer Institute, 2024; Tucker, 2024) by illustrating how language limitations not only reduce usability but also increase cognitive load, as students are required to process information in a non-native language. Consequently, this may negatively affect comprehension, engagement, and overall learning effectiveness. From an equity perspective, the lack of Arabic-supported AI tools reinforces existing educational inequalities and limits the potential of AI to serve as an inclusive educational solution.

Teacher readiness also emerged as a crucial factor influencing AI integration. While previous studies emphasize the importance of the Technological Pedagogical Content Knowledge (TPACK) framework in guiding effective technology use (Mishra & Koehler, 2006; 2023), the findings of this study indicate that many teachers in Arab schools lack formal training in AI applications. As a result, teachers rely on self-directed learning and trial-and-error approaches, which may limit the pedagogical effectiveness of AI tools. This highlights the need for structured professional development programs that are contextually relevant and linguistically accessible. Furthermore, the findings reveal a complex relationship between AI and student motivation. On the one hand, AI tools were perceived as engaging and innovative, enhancing students' interest in learning. On the other hand, technical and linguistic barriers often led to frustration, reducing the overall effectiveness of these tools. This dual impact suggests that while AI has the potential to improve student engagement, its success depends on usability, accessibility, and contextual relevance (Selwyn, 2023).

Importantly, this study contributes to the growing body of literature on AI in education by emphasizing the gap between national-level policies and actual classroom implementation. Although national strategies in Israel promote AI integration (Knesset Research and Information Center, 2025), the findings indicate that such initiatives may not adequately address the needs of marginalized communities. This discrepancy highlights the importance of aligning policy with local realities to ensure equitable access to educational technologies. Overall, this study demonstrates that while AI holds significant promise for enhancing language education, its effectiveness is contingent upon addressing structural, pedagogical, and linguistic challenges. By situating AI within the broader context of educational inequality, this research provides a more nuanced understanding of its role in diverse learning environments and underscores the need for inclusive and context-sensitive approaches to technology integration.

Implications:-

This study provides several implications for practice and policy. First, policymakers should prioritize equitable access to technological infrastructure in marginalized schools. Second, teacher training programs should incorporate AI literacy and practical applications in language teaching. Finally, developers should design AI tools that support Arabic language and culturally relevant content.

Recommendations:-

Based on the results of this study, the following recommendations are proposed:

Develop Arabic-Based AI Tool:-

To meet the needs of Arab learners, developers and technology companies should be focusing on creating AI tools that will support Arabic language and cultural relevance.

Invest in Technological Infrastructure:-

The Ministry of Education and the local municipalities must allocate more budgets to Arab schools so that they can upgrade the digital infrastructure which comprises a constant internet connection and gadgets for the students and teachers.

Provide Teacher Training in AI:-

Structured programs of professional development can be created in Arabic for AI integration in... Workshops should be hands-on and relevant to classroom needs.

Create Inclusive AI Curricula:-

Curriculum designers should collaborate with teachers to integrate AI tools to reflect the language and culture of Israeli students. This is especially important for English language teaching.

Establish Ongoing Support Systems:-

Schools should have information technology and pedagogy experts so that teachers can get help with problems related to AI tools.

Monitor and Evaluate AI Implementation:-

The use of AI tools by schools and educational policymakers should periodically assess their effectiveness to improve policies and processes based on student and teacher feedback.

Conclusion:-

This study adds to research on AI in education by focusing on an underrepresented context. Although AI can improve language learning, its success depends on solving challenges related to infrastructure, teaching practices, and language support. Future studies should examine AI use on a larger scale and use quantitative methods to confirm these results.

References:-

1. Baileyvard, A., Gabilla, M., Lavinex, P. B., & Martarelli, C. S. (2023). Implementing learning principles with an AI tutor: A case study. arXiv. <https://arxiv.org/abs/2309.13060>
2. Bank of Israel. (2023). Digital gaps in education in Israel. <https://www.boi.org.il>
3. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
4. Chassignol, M., Khoroshavin, A., Klimova, A., & Bilyatdinova, A. (2021). Artificial intelligence trends in education: A narrative review. *Procedia Computer Science*, 176, 1742–1751. <https://doi.org/10.1016/j.procs.2020.09.193>
5. Helsper, E. J., Schneider, L. S., van Deursen, A. J. A. M., & van Laar, E. (2021). The youth digital skills indicator: Report on the conceptualisation and development of the ySKILLS digital skills measure. ySKILLS. <https://doi.org/10.5281/zenodo.4620874>
6. Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial intelligence in education: Promises and implications for teaching and learning. Center for Curriculum Redesign.
7. Kabaha, R. (2023). Language barriers in AI-based learning environments in Arab schools. *Educational Research Journal*, 31(2), 98–115.

8. Knesset Research and Information Center. (2025, February 10). Implementation and integration of artificial intelligence in the education system (Abstract). [https://main.knesset.gov.il/EN/activity/mmm/Implementation%20and%20Integration%20of%20Artificial%20Intelligence%20in%20the%20Education%20System%20\(Abtract\).pdf](https://main.knesset.gov.il/EN/activity/mmm/Implementation%20and%20Integration%20of%20Artificial%20Intelligence%20in%20the%20Education%20System%20(Abtract).pdf)
9. Luckin, R. (2022). Machine learning and human intelligence: The future of education for the 21st century. UCL Institute of Education Press.
10. Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054.
11. Mishra, P., & Koehler, M. J. (2023). Rethinking teacher knowledge for AI integration. *Contemporary Education*, 41(1), 22–36.
12. Organisation for Economic Co-operation and Development (OECD). (2021). Digital education outlook: Pushing the frontiers with AI, blockchain and robots. OECD Publishing. <https://doi.org/10.1787/589b283f-en>
13. Organisation for Economic Co-operation and Development (OECD). (2023). Education at a glance: Key statistics on Israeli schools. OECD Publishing. https://gpseducation.oecd.org/Content/EAGCountryNotes/EAG2023_CN_ISR_pdf.pdf
14. Piaget, J. (1950). *The psychology of intelligence*. Routledge.
15. Ragnedda, M., & Muschert, G. W. (2021). *The digital divide: The internet and social inequality in international perspective*. Routledge.
16. Russell, S., & Norvig, P. (2021). *Artificial intelligence: A modern approach* (4th ed.). Pearson.
17. Saffuri, R. (2025). Arab and Jewish education systems in Israel: Differences, disparities, and challenges: A comparative review of structure, funding, and outcomes in local authorities. *SEA – Practical Application of Science*, 13, 159–168. <https://doi.org/10.70147/s39159168>
18. Saga, R., Cermet, Y., Courtney, D., & Demir, I. (2023). Integrating AI and learning analytics for data-driven educational decisions and personalized interventions. *arXiv*. <https://arxiv.org/abs/2312.09548>
19. Selwyn, N. (2023). *Education and technology: Key issues and debates* (3rd ed.). Bloomsbury Academic.
20. Tucker, M. (2024). Designing equitable AI tools for marginalized learners. *International Journal of Educational Innovation*, 7(2), 55–70.
21. UNESCO. (2021). *AI and education: Guidance for policy-makers*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000376709>
22. UNESCO. (2022). *ICT in education prize: Guidelines*. <https://www.unesco.org/sites/default/files/medias/fichiers/2022/11/ICT%20in%20education%20prize-2022-guidelines.pdf>
23. Van Dijk, J. A. G. M. (2020). *The digital divide*. Polity Press.
24. Van Leer Institute. (2024). *Language inclusion in educational AI: A national report*. <https://vanleer.org.il>
25. Williamson, B., Eynon, R., & Potter, J. (2023). AI in education: Policy implications and infrastructure gaps. *British Journal of Educational Technology*, 54(1), 10–29. <https://doi.org/10.1111/bjet.13235>
26. Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education. *International Journal of Educational Technology in Higher Education*, 16(1), 39. <https://doi.org/10.1186/s41239-019-0171-0>