

A Contemplation of the Influence and Relationship between Artificial Intelligence and the Humanities

Author1. Priyadarshini Panda,

*Research Scholar, Department of Humanities and Social Sciences, Siksha 'O' Anusandhan
(Deemed to be) University Bhubaneswar.*

Author2. Dr. Swayam Prabha Satpathy.

*Associate Professor, Department. Of Humanities and Social Sciences Siksha 'O' Anusandhan
(Deemed to be) University Bhubaneswar.*

Abstract

Artificial intelligence, which is a phenomenon that encompasses a wide range of challenges and themes, is also connected to the field of humanities and plays an important part in the field of humanities. Various aspects of education are seeing revolutions due to artificial intelligence (AI), with language education progressively being included into these developments. This article conducts a literature analysis to examine prevalent trends and findings related to artificial intelligence technology and its applications. It contributes to discussions on comprehending and employing AI-assisted language learning and instruction through its insights. Artificial intelligence will be progressively integrated into language education, significantly influencing the learning and teaching processes associated with that language. Language educators must ensure that artificial intelligence is employed effectively to improve language learning and instruction in AI-driven contexts. To optimise the benefits of artificial intelligence for language acquisition, it is recommended that comprehensive study be undertaken on AI-assisted applications and their effects on language learning and instruction.

Key words- artificial intelligence, transformations, language education, applications

Introduction-

AI is increasingly playing a transformative role in language education. It offers innovative approaches to learning, teaching, and assessment by leveraging natural language processing (NLP), machine learning, and personalized learning platforms. The implementation of language learning programs that are powered by artificial intelligence has had a considerable impact on the manner in which young students acquire language competency, particularly in English, in the context of today's technologically advanced environment. Within the context of the current digital era, the incorporation of technology into educational settings has brought about a substantial transformation in the terrain of language learning, particularly between younger students.

Applications that are powered by artificial intelligence and are used for language learning have emerged as novel tools that have the potential to improve the language acquisition processes of students. In order to personalise learning experiences, these applications make use of algorithms that are powered by artificial intelligence. They provide platforms that are both interactive and adaptable for language learning.

In contemporary educational settings, it is of the utmost importance to comprehend the impact of AI-powered language learning apps on the language acquisition of young learners. These applications have the potential to revolutionise language learning methodologies by providing immersive language exposure, immediate feedback, and tailored learning experiences. Therefore, it is imperative to investigate their impact in order to determine the effectiveness, challenges, and opportunities they present in the development of language skills among young students.

Artificial intelligence is permeating our lives, moving from research laboratories to our homes and devices. The advantages of artificial intelligence are indisputable: the ability to swiftly analyse vast amounts of data, improve efficiency and convenience, streamline prolonged processes, and automate repetitive tasks without inducing weariness. Artificial intelligence is an essential element of the educational process. It possesses the capacity to transform the operational dynamics of the education system, augment the competitiveness of institutions, and empower educators and learners across all tiers. Voice assistants, such as Amazon Alexa, Apple Siri, and Google Home, facilitate user interaction with diverse educational resources at any time and place, eliminating the necessity for direct communication with the instructor. Intelligent content includes a diverse array of instructional tools, such as tailored interfaces and digital courses. Students can engage in many courses and curriculum worldwide by utilising the potential of artificial intelligence.

This article examines the literature to investigate the primary trends and common findings of studies conducted in relation to AI in language education and to contribute to discussions on the comprehension and application of AI-supported language learning and teaching. Although it is crucial to examine AI with respect to big data, data mining, deep learning, and machine learning, the article's primary emphasis is on AI technologies and their applications in the context of language and foreign language (FL) learning and teaching. From the 1950s, when tape recordings were used in "Language Labs," to the late 20th century, when computer-assisted language learning (CALL) was introduced, and to Google Translate in 2007, language learning has been undergoing digital revolutions. Today, the integration of Artificial Intelligence (AI) into language education is not only a continuation of the technological trends that are advancing, but also a demonstration of exponential evolution that paves the way for new, potentially problematic, horizons.

However, despite the availability of these prospects, a significant number of language teachers, both in our own institution and in other parts of the world, are hesitant to accept artificial intelligence for use in classroom or at home tasks. This reluctance manifests itself in a variety of concerns, ranging from pedagogical worries about academic integrity to suspicions about the role of the technology as a tool or a replacement for educators, as well as concerns regarding the (in)ability of artificial intelligence to improve educational equity and the risk of perpetuating and exacerbating biases.

The complex nature of natural language processing (NLP) and artificial intelligence (AI) technologies, which are becoming more adept at "understanding" human language and carrying out tasks that need an increasing level of detail and expertise, is the source of these concerns.

Literature Survey-

A dramatic shift in the way scholars address conventional topics in subjects such as literature, history, philosophy, and the arts has occurred as a result of the incorporation of artificial intelligence (AI) into the humanities. The intersection of artificial intelligence and the humanities provides a combination of computing techniques and qualitative analysis, which makes it possible to conduct a more in-depth investigation of cultural artefacts, human behaviours, and social situations. In fields such as computational social sciences and digital humanities, where humanistic and social problems requiring enormous amounts of data are researched and solved, neuro-symbolic artificial intelligence has a significant deal of promise for application. It is obvious that artificial intelligence has brought about a dramatic change in the methods of social and human sciences.

Not only does Artificial Intelligence (AI) revolutionise the modelling and analysis of data, but it also revolutionises the fundamental knowledge of methodology for conducting research. Artificial intelligence (AI) makes it possible to process massive datasets and unveils complex patterns that were previously hidden by utilising machine learning and deep learning techniques. AI also permits the revelation of previously hidden patterns. This paradigm shift has resulted in the emergence of empirical techniques, which have the potential to redefine the fundamental character of inquiry in a variety of other domains.

One of the most significant components of this shift is the widespread implementation of machine learning algorithms. Artificial intelligence makes it possible for scholars to investigate social and human issues in greater depth, hence revealing more nuanced features and complexity. Machine learning has become a useful tool for understanding social behaviours, cultural dynamics, and human connections as a result of the development of complex algorithms and insights generated by data. Additionally, artificial intelligence opens up new chances for analysis and gives researchers access to perspectives that were previously unavailable to them. Combining artificial intelligence technologies with those of the social and human sciences not only increases the depth and accuracy of analysis but also speeds up the processing of data. Artificial intelligence (AI) is a beacon in this digital age, guiding academics towards a future in which AI will not only improve but also radically revolutionise empirical research. This future is becoming increasingly important as AI continues to advance. This study investigates the revolutionary potential of AI-driven social theory in the field of social sciences, while at the same time openly acknowledging the limits that are currently associated with AI systems. It takes a critical look at the technical, and practical restrictions that prohibit artificial intelligence from completely realising its potential to advance social theory. The most important argument that will be presented in this discussion is that the capabilities of modern artificial intelligence systems are not adequate for the creation of social theory.

These limitations encompass a wide variety of challenges, ranging from possible biases in the data collection process to issues concerning the generativity and transferability of the information generated by artificial intelligence. In spite of these challenges, the article paints a picture that is both visionary and compelling. It emphasises the urgent need for additional research to fill in the gaps that currently exist and lays forth a comprehensive roadmap for social theory that is driven by artificial intelligence. There is a bright future ahead of us, one in which AI-driven cumulative developments will take the lead in significantly impacting social theory, according to the paper, which makes a compelling argument that if the gaps are carefully filled in by means of large-scale research projects, then there is a bright future ahead of us. For artificial intelligence systems to be able to process huge datasets, it is essential to add the appropriate functionalities to them. Within the context of the paper's debate, the merits and disadvantages of present AI approaches are analysed in relation to the potential of these methods to advance social theory. In doing so, it lays the framework for a more in-depth consideration of the ways in which these limitations might be overcome through the implementation of targeted research projects. The social sciences and humanities examine the substantial societal implications of AI within an interdisciplinary framework. Artificial intelligence is ubiquitous in commerce, healthcare, professional environments, and everyday life. It is utilised in facial recognition, robotics, interconnected devices, and human-computer interaction. This transformative influence raises numerous complex challenges, including data protection, legal accountability, addressing biases, and the effects on the economy, geography, and environment. To cultivate ethically and socially acceptable AI, academics from several disciplines collaborate to transform these issues into research enquiries. The primary objective is to develop tools and methods that align with ethical ideals and promote the general welfare of society. Artificial Intelligence (AI) is revolutionising various industries by surpassing human capabilities in tasks such as learning and problem-solving. Concerns have emerged over AI's impact on jobs, social dynamics, individuality, and the fundamental nature of humanity, despite the technology's promise to transform areas such as transportation, business, and healthcare. This chapter examines the contribution of humanities education in addressing the challenges posed by artificial intelligence (AI).

In yet another study, Radwan, asserts that AI can address numerous challenges in English teaching and learning: utilising Information Retrieval techniques to enhance reading comprehension; employing Machine Translation to improve translation skills; applying Automatic Speech Recognition for accurate pronunciation; implementing Text-to-Speech technologies for visually impaired students; utilising open digital language dictionaries to expand vocabulary; leveraging intelligent programs to enhance speaking abilities for English learners; and incorporating writing evaluation techniques to instruct on paragraph and essay composition.

Language acquisition has been examined via multiple theoretical perspectives. The behaviourist perspective, advocated by B.F. Skinner, underscores the role of environmental cues and reinforcement in the formation of language development. Critiques of behaviourism underscore its inadequacies in elucidating the inherent human ability for language. Conversely, the cognitive approach, as promoted by Piaget, emphasises cognitive processes and developmental stages that facilitate language acquisition.

Moreover, Vygotsky's sociocultural theory underscores the significance of social interaction and cultural context in language acquisition. These theories offer varied viewpoints, with the cognitive approach emphasising internal cognitive processes and the sociocultural perspective underscoring societal factors.

The incorporation of technology in language acquisition has evolved from first computer-assisted language learning to the development of advanced AI-driven language learning apps. These applications employ artificial intelligence to customise educational experiences, providing adaptive feedback, speech recognition, and interactive activities. Research assessing the efficacy of AI-driven language learning applications has yielded encouraging findings, indicating their capacity to improve language acquisition results. Nonetheless, comparisons with conventional procedures and studies on long-term efficacy persist as subjects of ongoing research.

The effects and obstacles of technology on young learners' language development are complex. Although technology provides stimulating and dynamic educational experiences, apprehensions exist over screen time, possible diversions, and content quality. It is essential to implement age-appropriate strategies, curate information, and design interfaces that correspond with children's developmental phases. Furthermore, comprehending the cultural and socioeconomic aspects that affect access to technology and its influence on language learning outcomes in young learners necessitates additional investigation.

Identifying Gaps in the Literature –

Aspects of insufficient study in the field of language acquisition via technology include multiple dimensions. Certain age demographics, including infants and toddlers, may have a limited number of studies concentrating on technology-mediated language acquisition. Moreover, studies on the incorporation of AI and machine learning to address various linguistic origins or less frequently spoken languages may be scarce. Moreover, whereas current research frequently assesses the efficacy of technology-mediated language acquisition, there is a want for longitudinal studies that measure the enduring effects and retention of language competencies gained through these platforms. Emerging developments in language acquisition research via technology underscore the possibility for interdisciplinary partnerships. Examining the convergence of neuroscience and artificial intelligence in elucidating the neurological underpinnings of language acquisition may facilitate the development of novel therapies. Furthermore, the investigation of the ethical implications, privacy issues, and socio-cultural dimensions of technology-mediated language acquisition is still a relatively neglected field. Future study may explore the incorporation of augmented or virtual reality in language learning settings to facilitate immersive and contextually enriched experiences for learners across various ages and competence levels.

Subsequent Implementation –

It is crucial to implement AI in a manner so that one can avoid it becoming a costly solution. Nevertheless, this straightforward approach can considerably enhance the app's learning impact. In language applications, the most critical aspect of AI is the testing of the user based on their progressive development. For instance, grammar exercises would be modified and repeated until the user is able to effectively apply the provided rules.

The user will be assessed on the new word in a variety of contexts until they are aware of its use and context. This can be achieved through vocabulary acquisition. This is a significant advantage of AI in mobile applications, and it is likely the most critical. This is due to the fact that no human teacher is capable of processing the vast amount of information regarding individual students and the words or grammar that each one requires.

The future advancement of AI integration in mobile applications for foreign language acquisition is likely to be rapid, as evidenced in other domains, making it peculiar that our study field remains underdeveloped. The rationale also pertains to diminished economic prospects associated with certain applications.

Integrating AI into them would require significant investment of time and resources, however, the long-term advantages are considerable for both the user and the organisation providing the AI solution. The quantity of research about the application of AI in language education is on the rise. The research predominantly investigates AI technologies or applications utilising particular sorts of AI algorithms or systems. Recent research indicate that language learners have favourable sentiments towards AI aids for language acquisition. Artificial intelligence can deliver immediate feedback and adaptability in educational settings. Utilising AI enables learners to attain greater autonomy in their education and access additional learning possibilities beyond the classroom. The predominant language skill examined in AI-related Computer- Assisted Language Learning (CALL) research has been writing.

The future of AI in the humanities suggests a promising domain where computer technologies can enhance our comprehension of human culture, language, and history. A primary focus is the advancement of textual and sentiment analysis; as AI-driven language processing progresses, forthcoming tools will be capable of recognising not only word patterns but also sentiment, tone, and underlying ideologies inside extensive text corpora. This will allow humanities academics to discover fresh insights regarding societal values and cultural transformations from sources such as historical texts, literature, and social media, providing scholars with a more comprehensive perspective on narratives and themes across time and regions. The advancement of multilingual natural language processing (NLP) models will facilitate cross-cultural analysis, enabling researchers to analyse and contrast perspectives across many languages within a single study.

A potential domain is the preservation and restoration of cultural heritage. Artificial intelligence has commenced the transformation of the digitisation and restoration of historical artefacts and texts; however, prospective applications may further this by facilitating interactive, immersive experiences via virtual reality (VR) and augmented reality (AR). AI's capability to restore damaged artefacts and mimic historical situations enables both researchers and the public to engage with these artefacts in their original or speculative states. For example, damaged manuscripts or lost pieces of ancient writings may be recreated using patterns from analogous texts, so rendering them accessible for examination in unparalleled detail. By democratising access to cultural assets, AI is poised to enhance global comprehension and appreciation of collective human history.

AI-driven adaptive learning tools in humanities education are poised to substantially customise the learning experience. These platforms could employ AI to discern students' distinct learning styles and requirements, modifying information and offering customised recommendations to facilitate individual development. This customisation will be particularly beneficial in intricate humanities disciplines such as literature, history, and philosophy, where AI-driven virtual tutors or interactive platforms may assist students in grappling with challenging texts, historical circumstances, and philosophical discussions. This degree of adaptation can render humanities education more accessible and significant, promoting profound exploration and cultivating critical thinking among students.

Ultimately, the function of AI in creativity and story analysis possesses transformative potential for the humanities. AI-facilitated creativity, shown by generative AI tools for art, music, and writing, has the potential to broaden the scope of artistic and literary expression, enabling partnerships between AI and human creators. Humanities academics may utilise AI to provide novel interpretations or digital reconstructions of historical works, igniting debates concerning authorship, originality, and the essence of creativity. In narrative studies, AI may be employed to examine cross-cultural storytelling patterns and discern common themes in narratives that transcend generations. This emphasis on narrative structure and thematic analysis can uncover common human values and examine how storytelling influences human experience and identity across diverse cultures and historical eras.

Conclusion -

The future of AI in the humanities offers a transformative possibility for research and teaching, facilitating a more profound examination of culture, history, and language. The capacity of AI to analyse extensive datasets, reconstruct lost historical artefacts, and aid in creative endeavours expands the horizons of humanistic scholarship in unprecedented ways. AI can enhance humanities knowledge accessibility and relevance through enhanced textual analysis, immersive cultural heritage preservation, and personalised learning experiences. These breakthroughs enable scholars to reveal fresh insights, providing perspectives on human behaviour, values, and creativity that enhance our comprehension of both the past and today. Nonetheless, as AI progresses, its incorporation into the humanities must be harmonised with ethical considerations. The interpretive and subjective essence of humanistic inquiry must be acknowledged, ensuring that AI functions as a tool that enhances, rather than supplants, the critical and nuanced viewpoint integral to these fields. The humanities will be essential in establishing ethical frameworks for responsible AI usage, protecting cultural authenticity, and maintaining human-centered values in technological advancement. By collaborating, AI and the humanities can create a future in which technology enriches our collective cultural and intellectual legacy, leading us to a more profound and significant comprehension of human existence.

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