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| RESEARCH ARTICLE

Demystification of Artificial Intelligence Systems in Linguistic Intelligence and English Language Domains

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| ABSTRACT
The term "artificial intelligence" was first coined by John McCarthy as "the science and engineering of making intelligent machines" in a document created for a conference on the campus of Dartmouth College in 1956. This conference kickstarted the beginning of serious AI research in the upcoming decades. The concept of Artificial Intelligence is not as modern as we think it is. This traces back to as early as 1950 when Alan Turing invented the Turing Test. Then, the first chat-box computer programmer, Eliza, was created in the 1960s. Indeed, in 2017, 61% of Europeans were positive about robotics and AI, while 30% were negative, to be managed carefully. The dynamics of public opposition and acceptance could be important factors shaping AI's long-term development path. The theoretical framework is that artificial intelligence could be viewed as an "overarching rubric which encompasses machine learning, which further encompasses deep learning." Rich and Knight (1991, p. 3) stated that "artificial intelligence (AI) is the study of how to make computers do things which, at the moment, people do better."

| KEYWORDS

Artificial intelligence, linguistic intelligence, computer programmes, computational linguistics, complex biological system, mindfulness ambiguities in AI.

| ARTICLE INFORMATION

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1. Introduction

Today, we can confidently argue that there are specific tasks in which computers, having and using some of the techniques from the artificial intelligence field, can challenge and exceed the performances of even the best humans with all the skills, creativity, and training of a human mind. It is often questioned if it will be possible that, at some point in the future, the number of these tasks will grow into a bigger group of skills that form some comprehensive artificial characteristics resembling consciousness and awareness of the environment and our physical world, forming an artificial mind similar to a biological one. In the end, according to some practitioners (Peter, 2008, p. 49), the human brain is only a very complex biological system with boundaries and biological, chemical, and physical limitations. At some point, and with enough theoretical resources, these practitioners argue, it should be possible to replicate this very complex system in an artificial non-biological environment.

One of the most immediate concerns about Artificial Intelligence is the fear of losing jobs. Artificial Intelligence-enhancing automation is also causing huge job losses around the world. According to a Forbes article, it is predicted that by 2025, automation will cause a loss of 85 million jobs.

Since the invention of computers or machines, their capability to perform various tasks has grown exponentially. Humans have developed the power of computer systems in terms of their diverse working domains, their increasing spread, and their reduced size with respect to time. A branch of computer science called Artificial Intelligence pursues creating computers or machines as intelligent as human beings (Tutorial, p. 1).

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The first generation of AI researchers made these predictions about their work:

- 1958, H. A. Simon and Allan Newell: "Within ten years, a digital computer will discover and prove an important new mathematical theorem."
- 1965, H. A. Simon: "Machine will be capable, within twenty years, of doing any work a man can do."
- 1967, Marvin Minsky: "Within a generation ... the problem of creating 'artificial intelligence,' will substantially be solved."
- 1970, Marvin Minsky (*In Life Magazine*): "Inform three to eight years, we will have a machine with the general intelligence of an average human being."

(Cited at CBSE, Artificial Intelligence Integrated in English, India, 2020, p. 18)

1.1 Research Problem:

The contemporary advancements of computer programmes, technologies, applied linguistics sub-fields, Sciences, and intelligence show knowledge, application, and language ambiguities to comprehend solutions and creations of Artificial Intelligence systems and disciplines in fields of learning and acquiring to replace the roles of human awareness and capabilities.

2. Research Methodology:

The research is descriptive, analytic, and experimental in terms of using the Dichotomous Questionnaire for (20) participants (10 Males and 10 Females).

2.1 Research Hypotheses:

a) Artificial Intelligence is the contemporary cognitive behaviour and perception that help to get knowledgeable information and production through systematic and technical processes and programmes that activate and motivate simulation, semiotics, language pretense, emulation, and imitation in teaching, learning, tutoring, training, and studying.
b) It requires the applied linguistic field of study computer science, programmes language, and software engineering to focus on solving the linguistic problems of daily life.
c) Areas of interest consist of language learning, language preservation, and automated linguistic tools. Applied and computational linguistics are used in educational applications.

2.2 Research Aims:

1. The study attempts to concentrate on speech recognition for language generation, which requires contemporary techniques.
2. Computers' accuracy, availability, implantation, and opportunities give creativity and offer recent technological trends through the adaptation of Artificial Intelligence.
3. The research illustrates the significance of revolutions in Artificial Intelligence, and Machine-Learning empowers humans to concentrate upon perception, classification, and prediction.
4. Modern concepts create invention and innovation around the world that are required through training, upgrading, and reasoning. It means the applied linguistics and natural language processing and applications integrate machine to knowledge relying upon the English language.
5. Linguistic Intelligence is shown as the ability to speak, recognise, and use mechanisms of phonology, syntax, and semantics. The article elaborates on the spoken and written languages through communication, observation, and construction. It shows the structures, sentences, phrases, and words in tutorial and educational perceptions through Artificial Intelligence usage and employment.
6. The descriptive and novelty findings illustrate the cognitive functions of human minds can produce creativity and productivity in teaching inside classrooms and motivate students and teachers to have mutual and shared responsibilities in ESL. The matter concerns the new trendy capabilities with attentive-individual-knowledge domination accordingly because ESL is the practical choice rather than the theoretical one.
7. Traditional Teaching Tools and Methods have been used locally in most Middle Eastern Educational Institutes, but competitive and modern ways and approaches have been discussed to show the opposite of classical skills and materials (knowledge), which are the target to be invented and invested as new instructional challenges that are the aim and purpose of this study to use the technology of Artificial Intelligence effectively, emotionlessly, and impassively to save money, time, and the utmost is the efforts through digitalised and strategic models and general intelligence.

2.3 Main Innovations in Artificial Intelligence Evolutions:

According to the father of Artificial Intelligence, John McCarthy, AI is a way of making a computer, a computer-controlled robot, or a software think intelligently, in a similar manner to intelligent humans think. AI is accomplished by studying how human thinks and how humans learn, decide, and work while trying to solve a problem, and then using the outcomes of this study as a basis for developing intelligent software and systems through implementing the English Language.

Artificial Intelligence is a science and technology based on disciplines such as Computer Science, Biology, Psychology, Linguistics, Mathematics, and Engineering. A major thrust of AI is in the development of computer functions associated with human intelligence, such as reasoning, learning, and problem solving through the usages of the English language out of multiple contributions of programming and modifying properties with technical knowledge and various fields: one of them is the applied linguistics and Natural Language Processing and application to integrate machine, software, and special information through reasoning and advising that is based upon understanding and comprehension relying on the English language.

Some intelligent systems are capable of learning and comprehending the language in terms of sentences and their meanings while a human talks to them. It can handle different accents, slang words, noise in the background, and changes in human noise due to cold, etc. This is concerned with the Special Recognition. However, the handwriting recognition software reads text written on paper with a pen or on a screen with a stylus. It can recognise the shapes of the letters and convert them into editable text. This is related to Handwriting Recognition.

Scientists at the Stanford Research Institute Developed *Shakey*, a robot equipped with locomotion, perception, and problem-solving in 1959. Robots are able to perform the tasks given by humans. It belongs to Intelligent Robots.

Language is the key point in making the biggest fears regarding AI, including the scenario where machines become smarter and smarter and they end up being as opinionated and biased as some of the people training them. Automatisation of weapons is also a big reason people worry about the future of Artificial Intelligence. AI is also going to change the way we are going to communicate in the future. The growth of Artificial Intelligence in recent times has been exponential. We cannot even imagine how big and impactful AI is going to be in the near future and how drastically it is going to change and upgrade the world we live in today.

2.4 Major Novelties and Linguistics Intelligence Perspective:

The topic of Artificial Intelligence is at the top of its Hype Curve. And there are many reasons for that; it is exciting, promising, and a bit scary at the same time. If we showed the navigation system of our car to someone living in 1980, he or she would probably consider it as a form of Artificial Intelligence, whereas nowadays, it would probably not. We are seeing the same with speech and image recognition, natural language recognition, game engines, and other technologies that are becoming more and more common and embedded in everyday technology (Deloitte, 2018, p. 5).

On the other hand, various technology solution providers are taking the opportunity to rebrand their existing solutions to AI to take advantage of the huge hub that the market is experiencing and the resulting press coverage. If we had built a machine learning model that predicts customer demand, a solution that has existed for years, we would have called it "data mining" in the past, and we now see it rebranded as "artificial intelligence." This is adding to the confusion and may very well lead to inflated expectations. Nevertheless, recent developments in AI are impressive and exciting.

In 1990, major advances in all areas of AI: were significant demonstrations in machine learning, case-based reasoning, multi-agent planning, scheduling, data mining web crawler, natural language understanding and translation, vision, and virtual reality (Tutorialspoint, p. 5). As described by Howard Gardner, and an American developmental psychologist, Intelligence comes in multifold: linguistic intelligence means the ability to speak, recognise, and use mechanisms of phonology (speech sounds), syntax (grammar), and semantics (meaning).

Intelligence learning means the activity of gaining knowledge or skills by studying, practicing, being taught, or experiencing something. The ability to learn is possessed by humans and some animals, and there are different learning: auditory, episodic, motor, observational, perceptual, relational, spatial, and stimulus learning. Linguistic Intelligence is one's ability to use, comprehend, speak, and write verbal and written language. It is salient and important in interpersonal communication. Humans perceive by patterns, whereas machines perceive by a set of rules and data. Humans store and recall information by patterns; machines do it by searching algorithms. Humans can figure out the complete object, whereas machines cannot do it correctly.

Artificial Intelligence refers to a broad field of science encompassing not only computer science but also psychology philosophy, linguistics, and other areas. AI is concerned with getting computers to do tasks that would normally require human intelligence.

Artificial Intelligence is a computerised system that exhibits behaviour that is commonly thought of as requiring intelligence. Artificial Intelligence is the science of making machines do things that would require intelligence if done by man.

The founder father of Artificial Intelligence Alan Turing defines this discipline as: "AI is the science and engineering of making intelligent machines, especially intelligent computer programmes."

Artificial Intelligence refers to the ability to plan, reason, and learn, sensing and building some kind of perception of knowledge and communicate in natural language (Ibid, p. 6).

A chess computer could beat a human in playing chess, but it could not solve a complex math problem. Virtually all current AI is "narrow," meaning it can only do what it is designed for. This means for every problem, a specific algorithm needs to be designed to solve it. Narrow AI is mostly much better at the tasks they were made for than humans, like face recognition, chess computers, calculus, and translation. AI is a single system that can learn about any problem and then solve it.

This is exactly what humans do. We can specalise in a specific topic from abstract maths to psychology and from sports to art, we can become experts at all of them. An AI system combines and utilises mainly machine learning and other types of data analytics methods to achieve artificial intelligence capabilities.

AI has the ability to sense, reason, engage, and learn through computer vision and natural language processing with voice recognition robotics and motion to make planning optimising and knowledge capture. Machine learning means the ability to learn and unsupervised learning with references to reinforcement learning. As well methods refer to the ability to reason, recognition, and decision trees with technologies. Machine learning is the process whereby a computer distills meaning by exposure to training data (6). Machine training is at the basis of most AI system. But while a machine learning system may look "smarter," in our definition of AI it is in fact not.

2.5 Intellectual and Recreated Expansions of Language and Computer Mindfulness:

Cognitive analysis is a subset of AI that deals with cognition behaviour we associate with "thinking," as opposed to perception and motor control. Thinking allows an entity to obtain information from observations, learning, and communication. A cognitive system is capable of extracting information from unstructured data by extracting concepts and relationships into a knowledge base (p. 7). The terms Machine Learning, Cognitive Robotics, and Smart Machines are used often in relationship to AI, or sometimes even as synonyms. AI is a complex field of interest, with many shapes, and forms.

Animals can process (visual or other), information from their environment and react adaptively to a changing situation. They use their nervous system to perform such behaviour. Their nervous system can be modeled and simulated and it should be possible to reproduce similar behaviour in artificial systems.

Natural Language Processing (NLP), in short, is a term for everything from speech recognition to language generation, each requiring different techniques. There is Part-of-Speech tagging, named Entity Recognition, and Parsing. Let us examine the sentence "John hit the can." One of the first steps of NLP is lexical analysis, here a technique is used called Part-of-Speech (POS) tagging with this technique every word is tagged to correspond to a category of words that have similar grammatical properties, based on its relationship with adjacent and related words. Not only words are tagged, but also paragraphs and sentences Part-of-Speech tagging is mainly done with statistical models, which give possibilities results instead of hard the rules, and is therefore more capable of processing unknown text. Also, they can cope with the possibility of multiple possible answers, instead of only one. For example: "can" in "the can," is more likely to be a noun than a verb. The result is that the words are tagged as follows: "John" as a noun (N), "hit" as a verb (V), "the" as a determiner (D), and "can" as a noun (N) as well (p. 15).

For a lot of tasks, computers are becoming or are already better than humans the increased accuracy, availability, and ease of implementation of artificial intelligence methods create opportunities and offers to multi-branches (p. 17).

One big advantage people still have over computers is that we can take over knowledge and training in our area, and apply it to a new task or area. Once that field is more developed, computers will be able to perform a series of difficult tasks that at the moment only people can perform.

AI will be becoming more advanced in the coming years and that will become more and more common in our daily lives (p. 21).

AI is the solution to analyse large amounts of unstructured data, AI needs big data in order to become "Intelligent." Consequently, developers of AI applications can rely on the knowledge and previous work of a large user base (p. 24). Researchers and practitioners compare the emergence of AI with the industrial revolution of the last century.

AI is and will remain a dynamic and broad field encompassing several areas of expertise, ranging from computer science to mathematics, and neuroscience all the way up to philosophy, linguistics, and even biology (Lucci and Naser, 2o18, p. 30).

The prospect of creating intelligent computers has fascinated many people for as long as computers have been around and, the first hints in the direction of Artificial Intelligence date even before that (Joost and *et al*., p. 2).

The traditional ways of designing intelligent systems, like a rule–based systems, never achieved the results that were expected at the time people started to realise that computers be used for more than just calculating numbers. So far, it has not been possible to construct a set of rules that is capable of functioning in everyday situations-"Expert systems know everything about almost nothing," which means among other things that they are quite different from human experts.

The United Nations Secretary General's Strategy on New Technologies recognises the importance of artificial intelligence (AI) and its promise for the advancement of human welfare, but also the potential risks it may pose for a global society. "AI and robotics promise enhanced economic growth, but they can also exacerbate inequality within and between nations and can contribute to unemployment. Neural networks and deep learning offer the promise of instantaneous translation, bringing us all closer together. But they may also learn and amplify our biases, driving us further apart." Stated and mentioned by (Stefano and *et al*., 2021).

Artificial Intelligence did not emerge through a breakthrough or a relatively rapid revolution like the coming of the internet or block-chain that reshaped our economics and societies in just a few years. A revolution that is so much typical in the technology world. Instead, Artificial Intelligence endured a relatively long process of evolution spanning over decades and generations of slow improvements discoveries, and practical applications. Artificial Intelligence is an emerging and advanced technology, whose origins back as far as the first theoretical and practical application of modern informatics and computers back in the first half of the 20th century, but laid dormant waiting for its moment to rise and shine. And with an abundance of data about our world available and computing power more potent than ever before, this moment of the reawakening of Artificial Intelligence is right now (Stephan, et al., 2021, p. 4). When human activities (or part of them) digitised, their performance and precision are greatly improved. An important branch of Artificial Intelligence is learning humans to address different types of activities such as perception, classification, and prediction.

Humans performing repetitive perceptions, classification, and prediction tasks are empowered by machines, augmenting our capabilities at unprecedented levels (Ibid, p. 5).

2.6 Linguistics Difficulties and Ambiguities:

Lexical ambiguity is at a very primitive level such as word level, for example, treating the word "board" as a noun or verb. Syntax level ambiguity can be parsed in different ways, for example, "He lifted the beetle with redcap." Did he use the cap to lift a beetle or he lift a beetle that had a red cap?

Referential ambiguity refers to something using pronouns, for example, "Rima went to Gauri," she said, "I am tired." Exactly who is tired? One input can mean different meanings. Many inputs can mean the same thing (Tutorialspoint, pp. 34-35).

Linguistically speaking, Phonology in Artificial Intelligence means the study of organising sound systematically, Morphology is the study of the construction of words from primitive meaningful units, Morpheme is the primitive unit of meaning in a language, and Syntax refers to arranging words to make a sentence. It also involves determining the structural role of words in the sentences and phrases, Semantics is concerned with the meaning of words and how to combine words into meaningful phrases and sentences, Pragmatics deals with using and understanding sentences in different situations and how the interpretation of the sentence is affected, Discourse deals with how the immediate preceding sentence can affect the interpretation of the next sentence, and Word Knowledge includes general knowledge about the world (Ibid., p. 36).

Language matters, in many ways, the term "AI" has become an obstacle to meaningful reflection and production debate about the diverse range of technologies that it refers to. It could help to address the way we talk about AI including how we identify, understand, and discuss specific technologies, as well as how we articulate invasions of what we want from it (European Parliament Research Service, Philip, 2020, p. 7).

First-wave symbolic AI translation tools tried to encode the expertise of translators into rules for converting text from one language to another, but the approach largely failed as the rules proved to be too cumbersome. Sound and vision are more complicated than text. Visual and linguistic materials are used to understand the world. So, the word "king" has a closer proximity to "man" than it does to "woman." The approach of comprehension and impression enables impressive linguistic maneuvers such as "king-man + woman = queen." It is certainly a well–designed technique and may have some useful applications, but the meaning of words cannot be reduced to their statistical occurrence (Ibid, p. 11). The tool, that is used in the AI, does not know what a monarchy is and has no understanding of why such concepts matter. While it can convincingly use words that relate to each other such as "king" and "queen" or "patient" and "cancer," it cannot appreciate the human sentiments associated with these things because their experience of them is limited to the statistical occurrence of words that humans use to represent them. This is important to appreciate because, in some application areas, it might be dangerous to believe that AI really understands something when it is just very good at behaving as though it does. The term "AI" has become an obstacle to meaningful reflection and production debate about the diverse range of technologies to which it refers.

2.7 Language Learning and Technology of Artificial Intelligence

Technology use is deeply rooted within language learning. From the early use of language labs and more recent use of multi-media, we have seen the wide use of technology by language learners. Artificial Intelligence is used to support the sense-making and adaptation process (EPP, 2020). The use of technology in language learning began with the introduction of tapes where

learners would listen to someone talking in the second or additional language (L2) and repeat the utterance after having listened to it.

It is still difficult to auto-grade things like essays using pedagogically meaningful approaches; by virtue of the algorithms used, most successful auto-grading ignores the features that are pedagogically meaningful and instead uses relatively simple linguistic features to predict a holistic score. This leads to accurate models but fails to provide information that the learner or a teacher can act on.

Using analytics to adapt computer-based learning dates back to the 1970s, with several advances occurring in the 1980s and 1990s. providing analytics to learners or teachers so that they could understand and adapt learning began in the 1990s. Raw analytics that involve machine learning or modern techniques from artificial intelligence are being used.

Artificial Intelligence is a set of programme and hardware means to achieve an ultimate goal, viz. Corresponding its work with intellectual human activity. Nowadays, despite its imperfection, AI is closely integrated into social life at different levels, including higher education. It determines this sphere to change, e.g. it rearranges teaching a foreign language (Islamov, 2021, p. 8).

If a machine can imitate the cognitive functions of a human mind such as learning, communicating, and problem-solving, it is known as Artificial Intelligence. AI can increase the productivity of teaching and classroom management to all language needs of the students which could also increase the class productivity and reduce the amount of responsibilities of the ESL teacher (Keerthiwansha, 2018, p. 31). When the contemporary situation of education is concerned, AI has already been playing a significant role in the administrative section of several world-renowned universities. Stefan and Sharon (2017) argue that it is important to admit the current limits of technology and admit that AI is not ready yet to replace teachers, but it presents the real possibility to augment them. They argue that when the real potential of AI is properly used it would be able to extend human capabilities and possibilities of teaching, learning, and research. Similarly, Michael J. Timms (2016) proposes that the field of AIED is now mature enough to break away from being delivered mainly through computers and pads so that it can engage with students in new ways and help teachers to teach more effectively. He brings up the notion of an "Educational Cobot," a robot designed to support human teachers.

Underwood and Luckin (2011) discuss the necessity of using AI in education and they state that a key motivation for using AI techniques in the development of Technology Enhanced Learning is to support the development of Technology that helps teachers and learners to do the right things to maximise learning. This involves understanding and modeling learners' teachers, effective pedagogies, and learners' contexts. AI is a way of improving the use of both learner and teacher time, and face-to-face teaching can be replaced by online teaching, individual learning, and group work.

In the most recent study Kessler (2018), argues that Modern learning management systems, along with social media sites, provide a window into such activity in a way that has allowed teachers to understand students' abilities and challenges better. He states that this knowledge can be used to design individualised instruction that caters to specific student needs, including increased uptake of feedback and awareness of linguistic forms. Therefore, the data gathered through artificial intelligence can thus provide learners with individual and appropriate support.

Computer-based training (CBT) and computer-aided instruction (CBI) were the first such systems deployed in an attempt to teach using computers. In these kinds of systems, the instruction was not individualised to the learner's needs and the learner's abilities were not taken into account. While both CBT and CAI may be somewhat effective in helping learners. They do not provide the same kind of individualised attention that a student would receive from a human tutor (Bloom, 1984).

Wolf (1992) has identified four major components in Artificial Intelligence education: the student model, the pedagogical module, the domain knowledge module, and the communication module, in addition, Beck, J., Stern, M., and Haugsjaa, E. (2005) have identified a fifth component as the expert model. The function of these five models can be simply elaborated as follows:

1. **The Student Model** stores information on every learner in a class such as attendance and assignment marks, etc.
2. **The Pedagogical Module** provides a model of the teaching process, such as student review dates, suitable moments to give the students a new topic to write, and the best topic for a writing activity, etc. More importantly, this model can communicate with the student module and assess the proficiency level of every student to choose the best teaching process to ensure the quality of the class.
3. **The Knowledge Domain** stores all the information in ESL situations, grammar, vocabulary, reading comprehension skills, listening skills, and all the lessons and activities the teacher has prepared to do in the class. This is considered the most important component as, without it, there would be nothing to teach the student.
4. **The Communication Module** carries out interactions with the learners in the class including verbal communication, e-mail handling, and screen layouts.

5. **The Export Model** is similar to the domain knowledge since it must contain the information being taught to the learner. However, it is more than just a representation of the data; it is a model of how someone skilled in a particular domain represents the knowledge and is capable of solving problems in the domain, and this model can compare its solution to a problem with the learner's solution and pinpoint the places where the learner has to improve. In the ESL context, the expected model can compare its compare with the learner's grammar and point out the areas they should reconsider.

2.8 Benefits of Artificial Intelligence in Education

Information Technology (IT) advances rapidly nowadays to the point it drives educational institutions to adopt mobile computing devices for academic activities (Bajcsy, 2002; Gikas and Grant, 2013). AI is designed as virtual assistance in executing and easing human tasks (Russel and Norving, 2016).

Educational programmes driven by AI have been helping students to learn many skills considering AI offers students a much wider range of services, improves learners' motivation, and broadens the audience's frame of conventional-based learning to the digital world which is essential in the 21st century (Wekke, Yandra, and Hamuddin, 2016), language learning actively such as English as a Foreign Language (EFL) (Gric-Coast et al., 2000; Hamuddin and Dahler, 2018). With the increased affordability and reliability of AI technologies, the use of AI in teaching EFL has become a practical choice (Abad, 2013). AI can improve student's speaking skills in a foreign language (Allen, 2014).

Teachers and students must be trained and educated with AI programmes and concepts practically and theoretically. There must be plans and projects of initiating technical support and requirements to them with motivated and enhanced tools, assessments, and educational integration accordingly relying upon AI benefits.

Through technology, students can have access to authentic materials of the target language and take more responsibility for their learning in a meaningful context (Ahmadi, 2018; Murphy, Deparsquale and Mcnamara, 2003; Parvin and Salman, 2015; Pourhossein Gilakjani, 2017). With the enhancement of the fifth generation of computers, artificial intelligence (AI) has been greatly enhanced, and the focus of artificial intelligence during this period is to make intelligent boards that can help learners practice AI applications. Artificial Intelligence (AI) is the simulation of human intelligence processes by machines, especially, computer systems (cited by Ghoneim and Elghotomy, 2021, p. 4).

Most people who speak a language do not speak properly, therefore; it is prudent to introduce learners to language with other forms of language. Through real objects and contexts, learners actually articulate language speech features (overlapping turns, fillers, and false starts). AI boards can contain many resources, such as online television broadcasts, YouTube – videos, magazine articles, blogs, and social media (Thornbury, 2012; Fox, 2010; and Martin, 2010).

Su (2007, p. 27), explained that English as a foreign language provides learners with insufficient proper opportunity to practice the English language and stated that: "this traditional teaching procedure decreases students' motivation and interest in learning English. Students are encouraged to identify a large number of individual words idioms, and grammatical structures to enhance their language competence rather than use the language for real communication purposes."

Generally, language arts: listening, speaking, reading, and writing are like an interwoven texture and it is hard to determine precisely where it starts and where it ends. As a result, separation among language arts is unrealistic (Ali, 2020, p. 70).

Artificial Intelligence is an approach that makes use of new innovative technologies in facilitating learning and facing the challenges resulting from unmotivated learning and the absence of expert teachers. Artificial Intelligence could be leveraged to create a better student experience (Gardner, 2018).

One way to understand whether AI could be harmful or beneficial to EFL teaching and learning is to see from the teachers' perceptions. Artificial Intelligence (AI) and its automation feature could be the next big thing in education. Advancements in technology have created new challenges and demands for both teachers of AI in education, Sumakul (2019) elaborated that there are specific skills that affect existing classroom practices. Studies in AI and language learning should focus on the roles of teachers. The development of AI technologies that help learners learn languages should be based on what teachers would do in language and learning contexts (Sumakul; Hamied; and Sukyadi, 2021, p. 235). Wilson & *et al*., (2021) found that although it would offer assistance to teachers, it may also create new instructional challenges. In short, despite the positive perceptions, there are some aspects worth considering regarding the use of technology in language classrooms. AI is a relatively contemporary technology, but it is modifying the world.

Computer-assisted teaching systems have been widely promoted in today's society, and teaching quality and efficiency have been improved (Gu, Song, and Wu, 2022, p. 133). The rapid development of artificial intelligence technology has also brought

new strategies to the teaching management system, and intelligent technology can be integrated into the English language and literature teaching management system. Since the beginning of the 21st century, with the continuous development of science and technology, teaching modes have undergone significant changes. With the improvement of computer power and the rapid development of hardware systems, artificial intelligence technology has developed rapidly in recent years. It is an autonomous learning and highly intelligent technology, which may bring new ideas to the traditional computer-assisted education management model (Ibid., 134).

Artificial Intelligence (AI) is a cognitive science and the history of its evolution suggests that it has grown out of the knowledge derived from disciplines such as science, mathematics, philosophy, linguistics, computing, and others. It is fair for any education system (CBSE: Artificial Intelligence Integrated in English, 2020, p. 3). AI is being widely recognised to be the power that will fuel the future global digital economy and has gained strategic importance.

Learners must learn to represent the collected data in the form of identifiable models. Once the students have the data to solve the problem, they can progressively be made to develop the skill of representing the collected data in visual presentations in the form of graphs, charts, etc. The understanding and skill to build such comprehensible models is critical learning for a 21st century student. Computers are the given machines that help store data and represent models (Ibid., p. 13).

As a beginning in this direction, CBSE/India has introduced Artificial Intelligence as an optional 6th subject in class 9 from the session 2019-2020. To enhance the multidisciplinary approach in teaching learning and also to sensitise the new generation, it has been decided that schools may start an AI "Inspire Module" of 12 hours in Class 8 itself (p. 17).

3. Results

Table 1
Participants' Answers to the Questionnaire

No.	Questions	Yes	No
1.	The English teacher needs to use data to deal with the structures and rules by using Artificial Intelligence. Systems.	**20**	
2.	It is required from the English teacher the ideal usage of the capacity to deduce, realise, and infer to get reliable results in educational, teaching, and studying cases and invest the self-awareness through relying upon Artificial Intelligence Systems.	**20**	
3.	The ability of the knowledgeable to learn and acquire depends upon historical samples quality and expert inputs and the cycle of the feedback by employing Artificial Intelligence Systems.	**20**	
4.	The capacity of analysing complex problem solutions in special titles and cases for public purposes required turning to Artificial Intelligence Systems.	**20**	
5.	The machine-learning and its methods and usages in contemporary techniques regarded as one trait of the Artificial Intelligence Systems that is heuristic and exploratory to turn the English teacher when teaching, educating, and training the developmental, scientific materials and syllabi, and empowered sources.	**20**	
6.	Do the Iraqi educational institutions implement, use, apply, or develop Artificial Intelligence Systems or Programmes?		**20**

English teachers are unfamiliar with the advanced programmes that have been reflecting upon their old materials, tools, devices, and methods with unaccepted outcomes. It is far-levels of teachers' expectations become of limitations and shortages of artificial intelligence systems. It also reflects great gaps between educational institutions and the actual demands of development and enhancement to deal with modern merits and values.

Self-awareness is not sufficient to ensure and invest in reliable teaching and studying the educational cases to cope with new technologies in the advanced institutions, especially deduction, and realisation of the English language usages, unless the ability of teachers is related to the artificial intelligence systems. This is indicated by the whole questionnaire participants who require these technologies systems urgently.

Historic samples of feedback display the realities of old procedures and approaches in acquiring knowledgeable learning, especially the blackboard usages in illustrations and elaborations which are thoroughly different from the valued and qualified or impactful artificial intelligence systems. This displays that the English teachers are not acquainted with the newest cycling of employing such technical programmes and systems in educational institutions.

Turning programmes and systems obtain efficient solutions and emendations, if materials and topics are related to accurate time and valid comprehension as far as the English teachers are concerned, with the complex procedures of analysing things. It displays that English teachers are asking for such progressive systems to invest in the inventions and innovations of artificial intelligence requirements positively. Now, things are being completed routinely in educational institutions.

Educational and nurturing of the English language must be technical, scientific, and developmental to obtain contemporary empowerments and sources of the English language which are robotics, natural language processing, expert systems, natural network, and intelligent retrieval with the opposite advanced programmes and systems by the artificial intelligence, expert system engineering, and neural networks development of thinking computer systems. It is challenging, imperturbable self-possession and nearness that demand attention and manual inputs.

Future personality content analyse functional and organisational computer systems and mimics human intelligence to understand different definitions and technologies in learning and teaching activities, safeguarding, and protecting the educational processes of the new integration of artificial intelligence in English teaching, especially the transformative methodologies to encompass computer systems to perform tasks and purposes of advanced samples, patterns, and sophisticated interactions. The world's imagination and data protection are obtained through artificial intelligence which does not exist in our schools. Therefore, promotion and expound strategy have not been done yet. Modelling English teachers is the critical point of behaviour improvement and integration. Customised content and automation agitate adaptive learning experiences for students.

4. Discussions

Artificial intelligence does not allow expectations and pretexts to be implemented in advanced programmes and systems, especially since these matters and topics are highly-sensitive and required nowadays. Thereafter, things and materials must be adapted according to technical systems and projects that are really reflective and functional to be impetus and motivational to those English teachers and learners who are looking at obtaining more accurate merits simultaneously without being delayed in dealing with old procedures that might not be useful in the contemporary countries. Therefore, promotion and valued developments are the key factors of new progressions.

Being capable of presenting scientific materials represented by the English teachers is not enough to determine the realistic levels and status because of limitations and shortages of technical and computerised devices that hinder most of the activities and delay daily and monthly projects of enhancing practical assessments and logical evaluations, especially teaching rules and structures that are highly-recommended to be taught and learned according to the newest procedures and techniques. Relying on personal skills and experiences is not sufficient to deal with more advanced progressions in scientific matters. Thus, English teachers must be qualified and motivated impetus to create modern protocols to display typical and ideal outcomes that are mostly impactful on the students.

English teachers must be creative and innovative to look at themes and novelties that could make them capable of acquainting themselves with the operational advancements in the world. Matters and issues must not rely on the ancient approaches, which are easily obtained and understood, to display capacities and abilities, particularly turning systems and programmes into the newest processes and procedures, which are demanded and urgent. So, the existing learning and the acquired studies must be mutual and beneficial in their directions toward modern technology as systematic and functional to achieve great results in terms of time, effort, and processes.

English teachers must be comprehensive in their learning to mingle modern technologies with their limited sources and resources, especially things of quickness and accuracy that are thoroughly dependent on the devices and tools with the efficiency of persons who use and apply them inside and outside classes. Consequently, exploratory investments and reliable procedures are required to deal with the daily advancements and punctual needs of such projects. Scientific nurturing and developmental promotion require critical thoughts and technical views with the most valid adaptations and variations.

Artificial intelligence might mean different things to English teachers who are not really acquainted with such technologies that require different things to clarify their applicable definitions and activities. Its dominations and applications obtain futuristic advancements as it gets widespread applications in educational institutions. It is salient to think about the heavy tasks of English teachers using the old methods, especially preparing lessons, making resources, creating evaluations, providing feedback, and producing powerful productivity. Students' needs must be generational and analytical to reflect their performances in applying patterns through strengthening the effective levels of communication and feedback.

5. Conclusions:

Artificial Intelligence is the contemporary cognitive behaviour and perception that help to get knowledgeable information and production through systematic and technical processes and programmes that activate and motivate simulation, semiotics, language pretense, emulation, and imitation in teaching, learning, tutoring, training, and studying.

Artificial intelligence can perform various tasks with the power of computer systems of diverse work domains. It reduces time consumption and increases efficiency awareness and capabilities. These realities indicate that artificial intelligence has salient effects on societies on the economic and cultural levels. It transforms many aspects of daily life with rapid evolutions of practical technology. It has got reputable educational professions because machines are allowed to execute tasks that require human cognition. Data safety, ethics, and equity will be affected by artificial intelligence which provides multifaceted machine-learning algorithms.

Arguments can be free by using artificial intelligence, especially by reducing student contact by automating grades, plans, and administrations in the classrooms that will enhance learning and develop individual learning by replacing human activities with computers. Early education is the powerful interactive skills to learners that make teachers and students capable of data analysis, scheduling, facilities management, and content technology with the critical roles of innovative solutions that collaborate with designed educational solutions through personalisation, adaptability, scalability, interface, and organisation. Students can be engaged and impetuous to access accessibility and inclusivity in education.

It requires the applied linguistic field of study computer science, programmes language, and software engineering to focus on solving the linguistic problems of daily life.

The application of artificial intelligence in education reveals the potential improvement in learning because technology provides innovative ways for teaching and learning with educational experience and skill enhancement. Learning can be customised based on individual needs and personalised instruction and feedback to retain information and comprehend learning outcomes positively. This technology allows data analyses to determine patterns and models of student performance. It displays targeted intervention and support and helps students overcome problems through creating interactive simulations and virtual reality enjoyment in the learning process. Thus, artificial intelligence increases efficiency and ability in various aspects of teaching and learning.

Immediate evaluation is provided to see students' improvement, progress, and performance which is opposite to the traditional manual methods. Technology gives opportunities to teachers to use a range of tools and resources to ensemble them with different learning styles, especially the software, charts, graphics, PowerPoint presentation, and platforms to benefit in creating templates to save time and providing consistency and visual appeal with the easy customisation and professionalism so as to achieve the quality and credibility of the education. Relevance, compatibility, and functionality are being chosen in education so that powerful presentations can be effectively delivered as aids in illustrating complex concepts and enforcing knowledgeable points and facilities in education.

Areas of interest consist of language learning, language preservation, and automated linguistic tools. Applied and computational linguistics are used in educational applications.

New opportunities are discovered by the integration of artificial intelligence in education to create accessible and inclusive personalised and engaged instruction. This aspect requires intelligent tutoring systems and natural language processing materials to achieve high-quality education. Students will be able to determine their own pace to obtain instant feedback and evaluation with continuous learning and improvement. The connection of teachers with students is enhanced through technology replacements with guidance and advice by facilitators concerning potential challenges and emotional supports or immersive learning expressions.

Machines are powerful devices to deal with the language elements: speaking, writing, reading, and listening which links the natural language processing with the computational interdisciplinary fields of sciences to interact software with machines that concentrate on the systematic concepts to learn the inputs and outputs of human language. Consequently, the information extraction and machine translation are completed tasks with more efficiency and accuracy. Humans are using and applying technology to evolve tools for accomplishing tasks actively. Computational linguistics helps in deciphering customers' promotions with accurate responses. Machine interpretation software programmes and knowledge extraction stimulate good options for natural language interfaces and sentimental analyses through developmental approaches. Therefore, there will be more linguistics knowledge to the educational requirements. Realities of linguistics or English can provide valuable language skills, whereas mathematics and computer science offer salient programming and analytical capacities.

Language acquisition reveals positive evidence of meaningful models of deep learning and incredible memory which displays functional evolution. The engineering discipline deals with understanding written and spoken language from a computational

perspective because language is a mirror of minds to provide insight into thinking and intelligence, especially communicative texts and resources. Question answers ensure the relationship availability of general-purpose computers in a network of concepts associated with impressive systems of featured significant planning reliabilities and developments. Multi-modality applications enhance essential language preservation and protection.

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Apendix

The Dichotomous Questionnaire:

1	The English teacher needs to use data to deal with the structures and rules by using Artificial Intelligence. Systems.	**Yes**	**No**
2	It is required from the English teacher the ideal usage of the capacity to deduce, realise, and infer to get reliable results in educational, teaching, and studying cases and invest the self-awareness through relying upon Artificial Intelligence Systems.	**Yes**	**No**
3	The ability of the knowledgeable to learn and acquire depends upon historical samples quality and expert inputs and the cycle of the feedback by employing Artificial Intelligence Systems.	**Yes**	**No**
4	The capacity of analysing complex problem solutions in special titles and cases for public purposes required turning to Artificial Intelligence Systems.	**Yes**	**No**
5	The machine-learning and its methods and usages in contemporary techniques regarded as one trait of the Artificial Intelligence Systems that is heuristic and exploratory to turn the English teacher when teaching, educating, and training the developmental, scientific materials and syllabi, and empowered sources.	**Yes**	**No**
6	Do the Iraqi educational institutions implement, use, apply, or develop Artificial Intelligence Systems or Programmes?	**Yes**	**No**