

Generative Artificial Intelligence (AI) Educational Pedagogy Development: Conversational AI with User-Centric ChatGPT4

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Abstract

In terms of language models, generative artificial intelligence (GenAI), and more specifically ChatGPT, offer a significant technological achievement as a revolutionary tool for natural language processing (NLP) and a transformative educational business tool. ChatGPT users' suggestions have the ability to optimize teaching and learning, thereby having a substantial impact on the educational environment of the twenty-first century. Educational robots are getting easier to access for a number of reasons. The human-robot cooperation that has advanced scientifically in industry 5.0 extreme digital automation, will also probably become a regular aspect of life in the days to come. This study examines the prospective uses of GenAI for NLP synthesis as well as its potential role as a conversational agent in the classroom business. GenAI's capacity to understand and produce language that is human-like by employing NLP to generate semantics was essential to its ability to replicate the most advanced human technology through comprehensive assumptions of patterns and structures it learns from its training data. With the rise of artificial intelligence (AI) driven conversational

agents, prompt engineering has become an important aspect of digital learning. It is essential to get ready for an AI-dominated future when general and educational technologies combine. The study demonstrated how society may impact and contribute to the development of AI pedagogic learning using an instructional robotics application driven by AI, emphasizing the responsibility of humans as producers to reduce any potential misfortunes. The study highlights that since generative AI technologies have the potential to drastically change teaching and learning approaches and necessitate new ways of thinking, more research on organizational robotics, with a focus on human collaboration and education, will emerge from the technological concerns raised in this study.

Keywords: ChatGPT, Natural language Processing (NLP), Human-Robot Co-Existence, Generative Artificial Intelligence (GenAI), Educational Pedagogy Development, Information and Communication technology (ICT).

1. Introduction

Studying human-robot interaction and its impacts on society as a whole is crucial because robots may have a big impact on civilization and the development of digital technology (Marinelli, 2023). The discussion about Society 5.0 had already started among academics and futurists, with the main goal of the initiative being the digital cooperation of people and robots (Mourtzis, Angelopoulos, and Panopoulos 2022). Society 5.0 has evolved into a civilization that puts the needs of digital natives first, makes links between social and economic advancements, and accomplishes this by methodically and scientifically fusing the real and technologically digital worlds (Ikumapayi et al. 2023). Aiming for inclusive, sustainable socioeconomic development, Society 5.0, also referred to as the super-smart society, is fueled by digital technologies that straddle the boundaries of robotics, science, evolution, artificial intelligence (AI), big data analytics, machine learning, the Internet of Things (IoT), and the most recent developments in generative artificial intelligence (GenAI) evolutionary command (Bozkurt 2023). The cyberphysical system is a widely accepted technological paradigm that underpins Society 5.0. It firmly integrates cyberspace with regard to information and communication technologies (ICTs) and physical space with regard to computational processes (Matthew, Kazaure, and Okafor 2021). At first, many people considered this concept to be a lofty ideal without providing any indication of how it would actually work. Inasmuch as they both refer to the current fundamental transformation of our

economic system into a new paradigm evolution of severe digital predominance, the Fourth Industrial Revolution and the shift to Society 5.0 are thought to be comparable. But because Society 5.0 aims to bring about drastic changes in our way of life and promote economic revolutions intended to divide human labor from that of machines, it is a more complete theory.

Nonetheless, the digital cooperation of people and machines will revolutionize society and have a great influence on how an educational institutions is run, (Saunderson and Nejat 2021). Since AI is being used widely in robotics to engineer technology and social-economic changes in today's society, the robots that are enabled with AI are constantly being given new and enriching qualities, such as significant gains in efficiency and sharpness as well as greater cognitive capacities. The boundaries between AI agents and humans are becoming progressively blurred, despite the fact that scientists still have a long way to go before creating connections with people that go beyond isolated exchanges in prearranged scenarios (Marinelli 2022). With measurable returns on investments, these machines which we may call robots will eventually take over most of the labor-intensive, repetitive, or dangerous jobs that humans today undertake. At the moment, students and undergraduates can program educational robots and engage in active learning with the help of accessible learning support robots that promoted interactive pedagogy (Matthew, Kazaure, Kazaure, Onyedibe, et al. 2022). By creating a serene environment in which the other party is not a person and by employing a teaching method that stresses movement as additional educational methodology, these robots elicit favorable responses from students. While in subject areas like programming and language learning, robots are being used to cover the void left by unqualified teachers, those same robots are also being developed for ICT systems like learning apps, AI teachers, and virtual classroom engagement (Matthew, Kazaure, Kazaure, Hassan, et al. 2022).

Robotics adoption by the general public and technology breakthroughs will determine how quickly automation permeates human existence (Hellou et al. 2021). With real-world use case demonstrations, the game-changing aspect will be showcasing the benefits of collaborating robotics and AI as well as turning any areas of mutual interest into the partnerships that is aimed at advancing humanity toward a sustainable and human-centered society 5.0. Over the past few decades, robots have already been instrumental in addressing major global concerns in a variety of situations. Tools for generative artificial intelligence (GenAI) are become easier to get and have changed education in many ways. But most of the

conversations take place in higher education. In educational settings, the viewpoints of educators are essential for comprehending cutting-edge technologies (Baidoo-Anu and Ansah 2023). OpenAI built a sizable language model called ChatGPT, which is intended to produce writing that resembles that of a human depending on a prompt or circumstance. It can be applied to many different natural language processing applications, including language translation, conversation production, and text completion. Therefore, the purpose of this qualitative study is to look into how teachers' and leaders' perceptions on how GenAI affects teaching in schools. The first structure proposed in a systematic literature review study on AI in education was done, utilizing four domains: learning, teaching, assessment, and administration. In order to conclude the study, the authors briefly address potential future research areas for global long-term educational sustainability. They do this by contrasting future educational methodology in Society 5.0 and Robots applications, focusing on the issues related to human-robot collaborative work in educational pedagogic development.

2. Objective of the Study

Adopting natural language processing (NLP), OpenAI (2022) that created ChatGPT, a generative AI model that stands as one of the greatest technological advances in the history of digital information communication and technologies (Dwivedi et al. 2023). Text generation, virtual assistants, chatbots, and language translation are just a few of the NLP applications that ChatGPT is especially made for. Using human knowledge to spot patterns that would escape human awareness, generative AI has the ability to learn human language one of the most intricate and advanced technologies ever developed. ChatGPT can learn, unlearn, and relearn language when given the right training, which enables it to change and grow with the demands of human conversation. The present study aimed to provide evidences for the need for AI-mediated education automation in connection with Research in Education and Network (REN) for process modernity, which is a precondition for educational investment in society 5.0 and extreme digital automation. Specific of objectives of this research paper include:

- i. Based on UNESCO's recommendation on AI and education policy roadmap and OpenAI's (2022) creation of ChatGPT, the authors of this study developed technology trends on the application of AI in education to address basic learning demands driven

by society 5.0. These trends supported AI-enabled learning futures with inspirations of rethinking our futures together.

- ii. To prove that the future may see a more distinctive separation of human and artificial intelligence, with the distinction between algorithmic generation and human creativity being the key to this movement. One must be ready for a world in which generative AI predominates, as it is set to have a significant impact on teaching and learning methodologies.
- iii. Examining the intricate patterns and structures of human language as necessity to investigating how well generative AI understands and produces text that resembles that of a human. This can be done by taking a critical look at the ways in which generative AI facilitates human-computer interaction within a definable context.

3. Literature Review

The establishment that AI has the potential to enhance some parts of education is verifiable based on the pedagogical linkages between the twenty-first century digital media technology components and education itself, but the comprehensive solution, particularly in places where digital flexibility and knowledge transfer are required by AI-robots, continues to be problematic (Mhlanga 2021). Humans are considered the best model to imitate while creating artificial intelligence technologies. Replicating one of the most sophisticated technological innovations made possible by human language is also required under this viewpoint. Language is viewed as a soft technology that may be imitated from ChatGPT's standpoint as a generative artificial intelligence technology that makes use of both machine and deep learning approaches (Dwivedi et al, 2023). ChatGPT and other related generative AI technologies are primarily trained to interpret and generate human language, but they can also analyze the intricate patterns and structures of human language by employing the Generative Pre-Training Transformer (GPT) model (Bozkurt 2023). Even though NLP has been researched for decades in the field of computers, more recent developments in technology have prompted the creation of complex AI models, such as Chat Generative Pre-trained Transformer (ChatGPT). These models provide great opportunities for academic efficiency since they can generate human-like replies to a variety of language challenges.

According to (Min et al. 2023), using a vast amount of publicly available digital content data from natural language processing, GPT models can read and generate text that is similar to human writing in a variety of languages. They are also capable of writing creatively, from a paragraph to a full research article, and they can do so convincingly or almost convincingly on a wide range of subjects. These models can even converse with customers in a human-like manner, much like chatbots for customer support or imaginary characters in video games (Chakraborty et al., 2023). Recently, a more advanced version of the Generative Pre-trained Transformer (GPT)-3 has been created. GPT-3, with 175 billion parameters, is designed to improve task-agnostic performance and even match previous state-of-the-art fine-tuning methods (Koubaa et al, 2023). GPT-3 is ten times more than any prior non-sparse language model (Koubaa et al, 2023). The recently created language model ChatGPT, which has drawn interest in a number of disciplines, including but not limited to education, uses GPT-3 as its fundamental NLP engine. Technological developments have a big impact on how we learn and teach, and the field of education is always changing (Mhlanga et al, 2023), as NLP and GenAI for interactive educational pedagogy is one such technological advancement that has the potential to completely change the education sector. According to (Mhlanga et al, 2023), the literature study on Open AI in education focuses on the moral and suitable application of ChatGPT in the interest of lifelong learning, which has transformed into a state-of-the-art language model. In the fields of NLP and AI, ChatGPT has been making waves. But as it's being employed more often in a range of contexts, including education, concerns about the moral and responsible deployment of this kind of technology are beginning to surface.

(Gill et al, 2024), observed that the way that students obtain knowledge and access information in the field of education can be entirely changed by ChatGPT. Having been trained on an enormous volume of data, GPT is a huge language model that can produce useful, cohesive, human-like writing, making it an invaluable tool for creating course materials, study guides, and textbooks, among other educational materials. Additionally, complex literature can be analyzed and summarized using GPT, which can improve comprehension and save time for teachers and students. GPT holds the potential to completely change the way we teach and learn. Its capacity to support NLP applications and build intelligent tutoring systems is a breakthrough that could change the educational landscape and impact learning in the future. The model's ability to generate reactions that resemble those of humans allows students to take

advantage of learning opportunities that are both intellectually stimulating and tailored to their interests. The capacity of ChatGPT to handle several languages and a broad range of topic matters may help make learning more accessible to students worldwide. However, concerns over users' moral and responsible behavior arise when ChatGPT is used in educational contexts. ChatGPT has the ability to reinforce preexisting stereotypes and forms of discrimination because of its sophisticated artificial intelligence capabilities, which could lead to unfair and uneven learning experiences (Mhlanga,2023). Furthermore, the employment of such technology in classrooms may make pupils less competent critical thinkers because they may start depending too much on the answers provided by AI rather than developing their own thoughts.

It has generated a lot of hype and doomsday predictions regarding student assessments in higher education as well as a host of other topics and subjects, making ChatGPT the most sophisticated chatbot in the world to date (George and George 2023). Unlike other chatbots, it can produce impressive prose in a matter of seconds. The GPT language model from OpenAI, which was created to produce writing that is identical to text written by people, is the basis for ChatGPT, a cutting-edge language model that can converse with users in a way that seems simple and natural (Fitria 2023). According to (AlAfnan et al, 2023),adopting novel and creative approaches in educational settings is made possible by ChatGPT's ability to write essays, and many experts in the industry maintained that using technology to improve learning is a good idea since AI technologies will soon play a major role in education. Providing educators with the resources they need to test as a learning tool as well as a learning process is one strategy to improve assessment practices.

4. Educational Robots and Natural language Processing (NLP)

The manner in which education is delivered is being altered by the integration of robotics and natural language processing algorithms, which enable personalized coaching and strategy modifications for each student (Younis et al. 2023). With their help, students' cooperation, communication, and critical-thinking abilities are also enhanced, which boosts their engagement in the classroom. Thanks to natural language processing (NLP) techniques, robots can now automatically grade assignments, read and evaluate information, and respond instantly in any kind of situation. NLP-driven discourse and translation improve language

acquisition because they can be used to create inclusive, adaptable, and dynamic learning environments. NLP and robots are transforming education by enabling teachers and students to work together, inspire one another, and propose new course designs. As Dr. Janice Gobert, a professor at Rutgers University and the CEO/co-founder of Apprendis, pointed out in her essay about the creation of the Inquiry Intelligent Tutoring System (Inq-ITS), building AI for education undoubtedly demands an interdisciplinary team of specialists working together (Adair 2023). Using a wealth of information from the cognitive and learning sciences in combination with AI computational techniques, Dr. Gobert and the Inq-ITS team created scalable performance assessments of science inquiry competencies. Within the Inq-ITS environment, students work on virtual science experiments and are automatically evaluated in real-time on their science practices. If they encounter difficulties in the lab, a pedagogical agent will help them with solutions.

With an emphasis on utilizing AI to enhance science, technology, engineering, and mathematics (STEM) education, Dr. Xiaoming Zhai, an assistant professor at the University of Georgia, tests ChatGPT, a well-known AI chatbot, to see how well it can create assessment items that match nationally accepted educational standards (Adair 2023). He also looked at the chatbot's capacity to provide individualized learning recommendations, assess science essays submitted by students, and tailor feedback to each individual student's needs. However, Dr. Zhai contemplates the potential of ChatGPT to enhance teaching. Dr. David Joyner, the Georgia Institute of Technology's executive director of online education, urges teachers to welcome their students' use of ChatGPT and other similar technologies. Dr. Joyner believes ChatGPT will develop into a useful tool by drawing comparisons to the evolution of calculator use in the classroom.

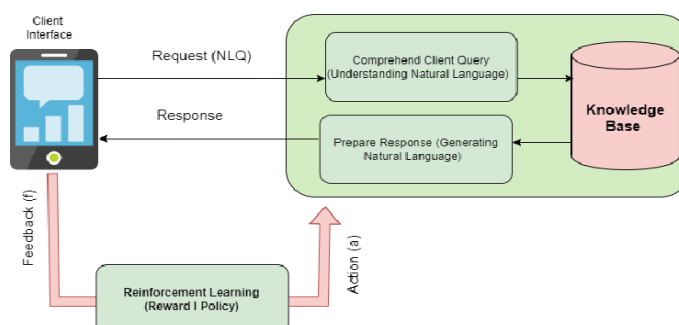


Figure 1. ChatGPT's General AL, NLP Enabled Architecture(Gill and Kaur 2023).

With reference to Figure 1, ChatGPT is a versatile tool that may be used for interactive programs, text generation, and language comprehension with its strong NLP capabilities (Gill and Kaur, 2023). Understanding its origins and development is crucial to ChatGPT's mission of advancing scientific research: precipitating from the field of NLP, a branch of artificial intelligence, is where ChatGPT got its start. As per OpenAI, ChatGPT is an improved version based on the renowned GPT-3.5 series that uses reinforcement learning from human feedback (RLHF) and almost identical techniques to Instruct GPT, with a very minor variation in the configuration for data gathering architecture (Okey et al. 2023). It exhibits competence in a variety of challenging NLP tasks, such as converting natural language into code by utilizing the vast information included in GPT-3.5 and carefully refining the process under the guidance of human input. It is important to note that ChatGPT is a language model constructed on the GPT architecture, not a Generative Adversarial Network (GAN) model. GPT models are designed for NLP tasks like language comprehension and text output, while GANs are more frequently used for tasks like image creation.

The goal of creating ChatGPT was to formulate a strong and adaptable AI language model that could assist with a variety of tasks, including data analysis, translation, and text creation (Rasul et al. 2023). ChatGPT was developed on top of the Transformer architecture to solve some of the shortcomings of earlier sequence-to-sequence models for natural language processing.

This innovative design allowed for the development of powerful language models such as OpenAI's GPT series, which included GPT-2 and GPT-3, the versions that preceded ChatGPT.

Based on an enhanced version of OpenAI's GPT-3 model, the GPT-3.5 architecture serves as the foundation for ChatGPT. GPT-3.5 generates good results in numerous NLP domains, including text generation, machine translation, and language understanding, while having fewer variables. With the aim of producing conversational replies, ChatGPT was refined by training on an enormous corpus of text data, which enabled it to generate answers to user queries that penetratingly resembled those of a human (Gill and Kaur, 2023). In this study, the authors covered how to utilize ChatGPT-4, the most recent GPT release from OpenAI, to build a chatbot that answers to users how they wish, including how to set up the

architecture, knowledge retrieval, prompt design, and engineering. The Application Programming Interface (API) settings that can influence the response's voice, tone, and personality are outlined by the authors in a timely technical adaption.

OpenAI's ChatGPT-4 makes it very easy to create a chatbot, but in order to achieve great outcomes, you must consider the user experience when using ChatGPT. While ChatGPT is a separate topic of study, designing the user experience includes not only interface design but also prompt design and engineering. Ensuring a strong user experience requires engineers, designers, and product managers to consider the chatbot's user interface, tone, and personality, as well as its comprehension and responsiveness to client requests. ChatGPT presents educational institutions with amazing prospects to automate customer care, personalize student interactions, and enhance communication with academia and partners worldwide, even in spite of the difficulties associated with creating an efficient chatbot. Educational businesses can create chatbots that enhance customer satisfaction, boost engagement, and propel business success by harnessing ChatGPT's potential and putting the user experience first. OpenAI has created plug-ins, such as the retrieval plug-in, to further increase the efficiency and accessibility of generative AI adoption in business products since working on this prototype. With these developments, companies should be able to create chatbots that are even more efficient and user-friendly.

Further uses for ChatGPT include developing instructional strategies, increasing student involvement and collaboration, and encouraging experiential, hands-on learning (Chaudhry et al, 2023). Despite the fact that ChatGPT is a potentially disruptive technology, it offers a fantastic chance to update education, with many opportunities and problems for teachers when ChatGPT is implemented in an educational setting. Some consider ChatGPT's capacity to write essays as a threat to established techniques for assessing students, but it also presents educators with an opportunity to create entirely new methods for assessing students' knowledge and abilities (AlAfnan et al, 2023). ChatGPT can be used to help teachers assess their students more effectively, encourage student cooperation and teamwork, and provide additional opportunities for students to learn by doing. Above all, ChatGPT is a technology that is regarded as disruptive in the field of education; nevertheless, via innovation, it has the power to change education (Mhlanga 2023).

5. Research Motivation

Of the 25 research articles that were published between 2022 and 2023 about the topic and context of ChatGPT as a tool for generative artificial intelligence and NPL, none contained the structure and framework for the Chat Generative Pre-trained Transformer model. Without mentioning the framework, the writers of all the academic papers concentrated only on ChatGPT's theoretical analysis. In the current paper, the authors built an actor network (ANT) for both the current ChatGPT and the future generative artificial intelligence for academic pedagogy development as part of their contribution. Through extensive scholarly and scientific investigations, they were able to design the structure and framework for ChatGPT. The foundation of ChatGPT is a transformer architecture, a kind of neural network that has proven to be highly successful in applications involving natural language processing. Through extensive training on a vast corpus of literature, including novels and articles, it acquires the ability to produce text that has similarities to the original text. The model takes in input, analyzes it, and produces a response when it is given a prompt or context. The model generates the response word by word, inferring the subsequent word from the input and the words it has already generated. In order to produce a response that is coherent and suitable for the given context, the model makes use of attention mechanisms to concentrate on the most pertinent portions of the input. Once trained, the model can be adjusted for a particular job, like answering questions or generating dialogue, by feeding it task-specific examples and adjusting the model based on the collected data. Additionally, it may produce text in several languages by feeding the model the language code or fine-tuning it on the multilingual dataset.

6. Research Methodology

The current research makes use of design science methodology, which requires the creation of scientific artefact. The practice of design science is intimately related to the idea of an articulated scientific model. It incorporates information technology, which provides precise criteria for evaluation and iteration inside research initiatives, and covers the methodology of numerous research disciplines. This approach enabled us to create an actor network called the ANT model. The actor network (ANT) is a computer-based paradigm where actors operate as the main computational agents and interact with both the internal and external environment to address learning issues (Kaasinen et al, 2022). Whether a given actor is human or not, according

to ANT theory, the source of an action is an actor. An actor needs the help of other actors, particularly in the form of patterns that enable the actor to perform effectively; an actor cannot operate alone. Because of this, ANT thinks that technology has the power to change social processes and that it developed from social interests. According to ANT, the world is composed of networks that include things, ideas, and people. These networks and their activities are collectively referred to as actors within the network. The main objective of ANT is to research and construct a theory of how network systems can function best despite the connections that currently exist between them, the roles that each actor plays, and other factors within the digital ecosystem.

The ANT technique is efficient, but it makes the assumption that if one of the active players leaves the network, it will negatively affect all of the other active players as well. However, networks are constantly evolving due to the complexity and unpredictability of social developments within organizational enterprise (Magruk 2022). Various studies have identified other agents and technical barriers as contributing to the constrained research in various higher education institutions. Intelligent tutoring is a method of education that offers individualized and flexible training by utilizing AI and machine learning (ML) methodology. This ANT creates personalized learning routes by analyzing student performance data to identify strengths and shortcomings. It offers prompt feedback, tailored direction, and corrective assistance. It works well to shorten learning sessions, raise student engagement levels, and enhance learning results. GPT's as an ANT possessed sophisticated natural language processing powers that can improve the tailored and adaptive training that intelligent tutoring systems offer. With the help of GPT, a larger audience may access education by creating high-quality content, including lesson plans, quizzes, and summaries that are based on particular learning objectives. With its ability to analyze written information, it can offer recommendations for better readability, grammar, and punctuation. Rephrasing and structuring text, detecting gaps in the research, and offering structural suggestions are all ways that GPT can help with research writing (Imran and Almusharraf ,2023). Additionally, based on each learner's unique progress, GPT can offer tailored feedback, which will help in the creation of more thorough and educational learning resources. The literature identified cooperation at the local and international levels, in addition to limited access and skill to ICTs, as barriers. The suggested ANT model is presented in Figure 1, although it may be expanded based on the development of future technologies and scientific

knowledge. The ANT model suggests that more actors should be involved in creating the national research and education network's (NREN) service portfolio and roadmap, despite the fact that the current study utilized the ANT model shown in Figure 2. The AI educational robotic environment with NLP [22] is used in NREN to distinguish NREN from other networks and supports for a high-speed backbone network, which often includes dedicated channels for specific research projects. NREN is a dedicated internet service provider whose goal is to satisfy the needs of the nation's research and education sectors through radical technology transformation, such as the ChatGPT language model.

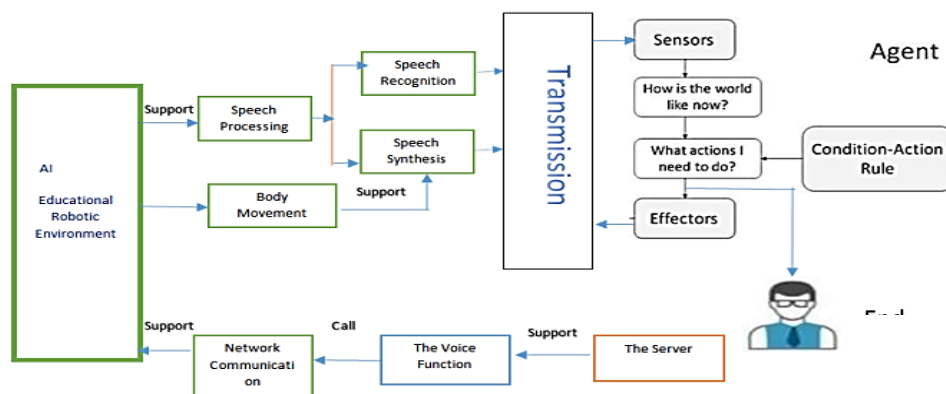


Figure 2. AI Educational Robotic Environment with NLP [22]

The current research methodology made two important contributions to the literature:

- i. Uses the ANT model [22] in future NREN service requirements in order to raise the standard of teaching and research in tertiary institutions of higher learning.
- ii. As a method of determining technology end-user requirements, it strengthens the adoption of traditional and disruptive technologies for educational modernism.

The current research found a wide range of unmet needs for a number of services and technologies used in both education and research that NREN is unable to fulfill in its present nomenclature. In order to achieve the targeted goal, NREN should concentrate on providing tools and services that help public higher education institutions raise the standard of educational instruction and increase their output of research as a matter of urgency. However, the current system will permit the following in accordance with the research design, with special attention

on Figure 2. In future work the study aims to identify the proper devices and components that could be used in the design of educational robot. From the present study:

- i. Users will be able to decide how to study in ways that match their individualized learning environment.
- ii. The server will set up a session, establish the selected user's learning input, extract and load the necessary data, and properly match platform adjustments.
- iii. The user determines the duties associated with collecting feedback, while the server methodically clarifies if the information request initiated by the student is allowed or not.
- iv. Based on the communication details provided by the operators, the server automatically resolves to share knowledge content.
- v. AI educational robots and users will start exchanging intelligence to achieve educational business purposes.
- vi. The educational environment supported by AI encourages learning that will provide students who are suffering academically with the insight they need to succeed and stick with their studies.

7. Conclusion

Global educational modernism has a significant and far-reaching impact on GPT and other major language models. The ways in which we interact with technology and one another could change when these technologies advance and develop further. The options are virtually limitless, ranging from customized advice and customer support to content creation and language translation. Yet, there may be societal and ethical issues that need to be addressed, just like with any new technology. We need to make sure that we are utilizing these tools properly and taking into account how they will affect society as a whole as we continue to rely more and more on language models. But the rapid advancement of human-AI integration and the digital revolution in our culture have fundamentally altered our conception of what it means to be human and how we engage with technology. We are developing a digital humanism that will direct our educational efforts. Conventional ideas about humanism must be revised.

Whether or not Society 5.0 promotes human-robot collaboration, it will nonetheless be a significant shift for the corporate world. In actuality, humans will probably undergo a significant transition as robots become more prevalent in daily life. The creators of this work have made an effort to build a technological species that is similar to humans in many ways. For some, this is new and fascinating. Concerns regarding biases in the data used to train models, security and privacy preservation, understanding the impact of human creativity, and potential repercussions on employment and job displacement are some of the issues surrounding continued radical automation. We must continuously evaluate and take into account the implications of GPT and other language models to ensure that their use is beneficial to society as a whole. We can guarantee that these technologies will be used to their fullest potential while minimizing any potential downsides by taking this action.

8. Conflict of Interest

There is not conflict of interest regarding this publication. The publication is supported by U&J Digital Consult Limited , an IT and Educational Consulting Firm base in Nigeria.

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