
**ARTIFICIAL INTELLIGENCE AS A TOOL FOR
COMMUNITY DEVELOPMENT AND SOCIAL JUSTICE
EDUCATION IN RURAL COMMUNITIES IN OGUN STATE**

Amos Oladimeji **SOTOYINBO**

*Department of General Studies in Education,
Federal College of Education, Abeokuta, Ogun State*

Abstract

In many Nigerian communities, community development is becoming an uphill task due to arrays of factors ranging from inadequate capital, poor planning / mobilization, endless lists of community projects, poor community participation to poor implementation / execution of community projects. Social justice as another variable in this paper ought to be delivered to community members through an approach that promote personalized learning; yet its delivery is hampered by the adoption of traditional teaching methods which often make learning difficult. Thus, the purpose of the paper is to examine the use of artificial intelligence for the delivery of community development projects and social justice education in rural communities. The discourse begins with conceptual Clarification of artificial intelligence, community development and social justice education. Common artificial intelligence tools for delivering community development projects and social justice education were also disclosed. Finally, and most importantly, the effect of artificial intelligence on the delivery of community development and justice education was discussed. The paper established that AI is significant to community development and social justice

education as it enhances community engagement, optimizes resources allocation, addresses social inequalities, promote personalized learning, promote digital literacy, aid teaching and learning process among others. The paper concluded that AI is pivotal to executing community development projects and successful delivery of social justice education.

Keywords: Artificial intelligence, Community development, Rural communities, Social justice education

Introduction

Community development is not a strange idea among the people of Ogun State and Nigeria in general. The idea of community development dates back to the era when people lived together under traditional leadership structure such as the Obi in Yoruba land, the Obi in Igbo land and the Emir in Northern region. During this period, various age grades were organised to provide security for the community, clean the village square, erect market structures, and engage in other activities aimed at making the community more habitable. According to Oduaran (1994) cited in Idowu (2019), the native administration of the eastern part of Nigeria was fascinated with the community development effort of the easterners which made the administration to remark thus” let us see that this agent and admirable customs is kept alive and used to develop not only the materials side of village life but in addition to the moral characters”

Community development efforts cannot be divorced from issues relating to social justice. This is so because no community can develop without a functional social justice system. Besides, social justice system remains the only platform through which community members are liberated from oppression. Social justice in this regard refers to a concept which propagates fairness and equality since it ensures that all individuals have equal access to opportunities and resources needed to live comfortably. A close look at the definition of social justice suggests that there is a strong bond between community development and social justice.

Therefore, the implementation of community development and social justice initiatives requires careful planning.

To enhance the effectiveness of community development project and social justice education delivery, one needs to integrate artificial intelligence into their processes. The integration of AI into these phenomena will not only aid their delivery but will help to revolutionize and optimize development processes and foster critical engagement thereby contributing to the overall quality of their delivery and implementation process.

The capacity of AI to efficiently perform this function is not in doubt as Onaja, Ajala and Ige (2022) rightly reported that AI is revolutionising community development by enhancing engagement, optimising resource allocation, and promoting equitable outcomes. In the same vein, Nonnecke (2017) posited that AI is increasingly applied to make consequential decisions that affect social, political and economic rights. To this end, the paper focuses on the application of artificial intelligence to enhance community development and social justice education in rural communities.

Conceptual Clarification

Artificial Intelligence: The entire world is gradually shifting toward the application of AI in virtually all the spheres of life. According to Ogu and Okechukwu (2024), AI is general-purpose Technology that has great impact on the society particularly in the areas of justice, human rights, democracy and the rule of law, the future of work and employment. While describing AI in relation to the society, European Economy and Social Committee (2017) argued that AI has a broader societal impact on domains which include safety, ethics, law and regulation, democracy, privacy, transparency, work, education and inequality. Likewise, the World Economic Forum (2024) noted that the pace at which AI technologies are evolving is astonishing as it permits various facets of human lives to give room to efficiency, optimization and new avenue for problem-solving.

In a bid to further describe AI, Ogu and Okechukwu (2024) submitted that AI is a domain of computer which deals with the

development of intelligent computer system capable of perceiving, analysing and reacting according to the inputs. AI basically focus on helping machine to find solutions to problems by using human intelligence inputted into it and applying them as algorithms in a computer to yield massive output. To this ends, Robinson (2018) defined AI as the ability of digital computer controlled machine or robot to perform tasks commonly associated with intelligent beings like humans. By implications AI employs digital electronics to aid and facilitate the creation of intelligent machine which can possibly replace humans in their various spheres of work.

Community development: Communities across the country are striving to bring development to their doorsteps. This idea is informed by the reality that the government alone cannot cater for the numerous needs of the community members. Adedokun (2010) posited the burden of facilitating development in all ramifications cannot be placed solely on the government. This assertion supports community development theory propounded by Alinsky (1971) which stated that community development is about organizing self-help rather than providing direct care. To this end, community participation is germane to successful implementation of community development initiatives. According to Alkasim (2022), Community development refers to the process by which the efforts of the people themselves are united with those of the governmental authorities to improve the economics, social and cultural conditions of communities, to integrate these communities into the life of the nations and to enable them contribute fully to national progress.

Community development process consists of two basic elements which include people's participation and the provision of technical and other support services from government agencies. Community members' participation in community development encompasses all efforts put in place by community members to improve their standard of living while technical support and services may be in form of the professional services rendered to communities by government workers or grants offered to communities for implementing various development projects.

Many communities are in dire need of help hence such communities need communities members who have the skills knowledge and experience required to undertake initiative to tackle varying degrees of problem confronting the community. Besides, such community members will also participate fully in the democratic process of the community.

Social justice education: is a programme of study aimed at creating equitable and inclusive learning environment for learners. Social justice education can possibly achieve this feat by addressing all issues relating to systematic inequalities while also awakening learners' critical consciousness through teaching bothering on promotion of critical thinking propagation of active participation and building of confidence which authoritatively challenges biases that bar the nation from being a just society.

Coninck, et. al. (2013) posited that social justice education is a concept which deals with the nature and structure of the state especially in areas of equality and fairness. It basically deals with equal distribution of natural resources, goods and services within the nation. This definition is in agreement with social justice theory of Rawls (1971) which stated that each person possesses an inviolability founded on justice that even the welfare of society as a whole cannot over ride. Social justice education is preserved on ethical concept and relies solely on ethical frame work for its teaching.

Social justice education teaches about fair, just and deserved judgment which place the citizens especially the oppressed at advantageous position to deal with issues of insecurity in form of justice. It is worthy of note that feeling of insecurity can be detrimental to one's life as it adversely affects people feelings, attitude in their interactions with others, behaviour and general wellbeing. According to Gabriel (2014), feeling of insecurity which comes in form of injustice are closely related to feelings of anger and envy which can aswell lead to psychological depression and moral decadence. Gabriel (2014) added that the judgment of fairness is significantly related to people's positive dispositions.

Common Artificial Intelligence Applications in Community Development and Social Justice Education

Artificial intelligence offers quality tools with varying capacity in enhancing the implementation of community development project and delivery of social justice education. Such tools include Intelligent tutoring system, which is unique in analyzing community members learning styles and needs. It considers community members diverse background and their learning disability in its content and delivery. Intelligent tutoring system is adopted for personalized learning experience to help learners with learning disabilities. Kabudi, et. al. (2021) submitted that AI can personalize learning experience to ensure that learners received tailored support based on their unique needs and ability.

Natural Language Processing is basically programmed to understand, interpret and generate human language; thereby making it very efficient in automating communication within the community and creating accessible informational content to improve both oral and written communication for community members. Computer vision enables AI to see and visualized information. This feature affords AI the opportunity to monitors and assess community infrastructure using images and video.

Generative AI is used to generate texts and images necessary for generating tailored instructional content and assisting community members to create vital documents. -Machine learning is often programmed to make prediction or decision. Hence, it can possibly analyze community members demographic and social trends to identify and understand community needs and optimize resources allocation for implementing community projects

Language Translation Services is employed to bridge accessibility gaps by making educational contents available to non-native speakers and learners with special needs, thereby promoting inclusion in the educational sector.

Magic School AI helps teaching personnel in lesson planning, generating individualized educational plan and helping them to create appropriate assessment tool for different subjects.

Application of this AI in teaching and learning process helps to minimize teachers time while they focus more on teaching tasks.

Artificial Intelligence and Community Development

Artificial intelligence tools are increasingly used to enhance and implement community development initiatives for the well-being of the community members: Some of the merit of AI in community development are presented below:

Overtimes, AI platforms have proved to be viable channels through which important information are disseminated to the entire community populace for enhanced community engagement. Such platform is majorly used to give updates on community development projects, encourage community members participation to yield tangible outcomes. Saner, Yiu and Ngugen (2020) noted that A.I tools can facilitate ongoing dialogue, feedback and enable community members share insight, track progress and adjust as required.

AI tools are very effective at optimizing resources allocation. Such tools can be employed to address challenges associated with resources allocation in various communities. AI tools like Predictive analytics is very useful as it offers enormous potentials for innovations to enhance development of varying kinds in communities. Ajala and Ige (2022) submitted that AI has the potential to revolutionize community development by enabling more efficient resource allocation, improving public services and fostering greater community engagement

One unique attribute of the AI tool lies in their ability to address social inequalities. Such tools are programmed to analyze data and identify systemic inequalities while proffering various intervention strategies to address all manners of social injustice in communities. Vajjala, Majumder, Crupta and Surana (2020) reported that AI tools address long- standing inequalities and inefficiencies in community development

The strength of the AI tools is evident in their ability to formulate policy and prevent crimes in the community. These tools can detect areas with high crime rate. Such tool can as well be

employed to develop appropriate intervention mechanism to reduce the rate of crime in communities.

The safety of the community members is non-negotiate. Hence, all hands must be on deck to make sure that communities are free of environmental crises which may be in form of pollution and other environment hazards that pose serious threat to public safety. In this regard, AI tools are very effective. Vajjala Majumder, Crupta and Surana (2022) argued that predictive analytics powered by machine learning can identify health risks at the community level, enable early intervention and more targeted public campaigns.

Artificial Intelligence and Social Justice Education

AI tools can be very instrumental in the delivery of social Justice education. Its usefulness is evident in their ability to promote personalized learning. These tools offer immense benefits to learners; especially those with learning disabilities by tailoring educational contents and delivery in such a way that their learning needs are taken care of. Nguyen and Walker (2020) posited that Intelligent tutoring system supports personalized instruction, offers real-time feedback, especially in subjects requiring frequent practices like mathematics and languages

Likewise, AI tools are very effective in the promotion of civic engagement. They can be employed to create platforms where interactive decision can take place among learners. Creation of such platforms will go a long way to help in disseminating information in regards to community news, allowing community members to take part in making vital decision, air out their minds, confront and hold their leaders accountable when they exhibit unhealthy behaviour. The World Economic Forum (2024) argued that innovation in AI has permeated various facets as regards human existence, boost efficiency, optimize and create new awareness for problem solving.

Through various AI tools, online learning is gaining recognition among learners. Besides, its emergence has practically knocked out the rigidity associated with face to face learning. Elber (2008) reported that empirical studies have

supported the ability of online courses to provide a learning experience that is equal to that of face to face classroom learning.

The emergence of AI tools has greatly helped to promote digital literacy among learners. The conservative behaviour of the learners and other deficiencies can be bridged by the introduction of AI tools which will give the learner opportunity to constantly interact with the entire world electronically, thereby increasing their digital literacy skills.

The AI tools can be programmed to aid lesson planning and offer support to the teaching and learning process. Such tools can help to automate teaching tasks like lesson planning; there by creating individualized lesson plan which will afford the teacher the opportunity to focus more on assembling teaching materials and seeking appropriate teaching methodology that will make teaching more impactful.

More so, AI tools can be used to organize learning activities in sequence to make learning easier and achievable within a short period of time. Going by the merits of AI in community development and social justice education, it imperative for the government to formulate policies which bind AI with community development and social justice education with a view to bring development to the doorsteps of community members.

Challenges encountered by Artificial Intelligence

As landable as AI may be, its utilization enhanced community development and social justice education delivery is being confronted by lots of challenges. Rusdi, Indah, Pinky and Nindia (2024) listed technology complexity and integration requirement, concerns regarding data security and privacy, algorithmic bias and its impact on community decisions, implementation cost among others as major challenges of AI. Issues like infrastructure deficit, high cost of technology, digital literacy, digital divides, and resistance to change on the part of the learner are not also left out. In addition to this, Holmes, Bialik and Fadel (2021) reported that AI tools cannot efficiently handle tasks like human interaction, mentorship and emotional support in Education, hence balancing

the benefit of AI with the need to preserve these human elements is crucial to the holistic development of learners.

In the era of digital transformation, community development activities and social justice education are increasingly shifting from analog to online-based platforms, with community actors utilizing all opportunities such as AI platforms to actualize community objectives. Rusdi, et. al. (2024) argued that the application of AI based technology is now common among communities to enhance community development activities.

Relating the use of AI tools to real situation in communities Kagwa, Eleogu, Okonkwo and Ajoke (2024) affirmed that Supare and Iwaro communities in Akoko South-West of Ondo State have deployed AI to analyze community members' preferences in order to identify community development projects in their order of importance.

This scenario clearly demonstrate that AI has become an important element in various aspects of life; including community development and social justice education; yet one cannot shy away from the fact that the use of AI in community development and social justice education has its challenges.

Conclusion

Artificial Intelligence tools like Intelligence Tutoring System, Natural Language Processing, computer vision, Language Translation Services, Generative AI, magic school and many others are very effective in the delivery of community development projects and social justice education which are parts of the major elements required for standard living. The benefits of integrating AI in community development and social justice education include enhanced community engagement, optimization of resources allocation, addressing social inequality, formulating policy and preventing crimes, fostering community safety, promotion of accessibility and inclusion among community members, promoting personalized learning, promoting civic engagement, recognition of online learning, promotion of digital literacy and aiding of lesson planning and offering support to teaching and learning process.

Suggestions

The States and local governments must work to ensure that internet facilities are installed in all the nooks and crannies of the state. Such project will go along a way to bridge the gap between cities and rural communities. It is also very important for community heads and all other stakeholders to stage comprehensive sensitization programmes in order to acquaint the entire community about the benefits of the use of AI tools. Such campaign will help to change the mindset of the community members especially those that are conservative towards the use of AI tools for community progress. The cost of technological devices is on the high side, hence the government should strive to ensure that AI powered devices are made available to the citizens especially the rural community members as this will help to facilitate their transition to digital literate members of the society.

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