

REVIEW ARTICLE

RELATIONSHIP BETWEEN NATIVE INTELLIGENCE (NI) AND ARTIFICIAL INTELLIGENCE (AI): AN OVERVIEW

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ABSTRACT

Western Ideologists tend to attribute Native Intelligence (NI) to Africans / third-world concepts, indistinctly fixed to value and belief that aided social cultural, religious, political economic, spiritual evolution, and ancient societies. However, the Emergence of Artificial intelligence (AI) being the capacity of a computer system or machine to mimic human cognitive such as learning and solving problems, through a computer system that uses mathematics and logic, to simulate the reasoning ability of man, through the process of learning from new information, and transforming such information into actions, by making decisions that has increasingly enhanced the quality of human life. Therefore, researchers, are also of the school of thought that there cannot be a future without the past; and hence the purpose of this research is to take an overview of the relationship that may have existed between Native intelligence (NI) and Artificial Intelligence (AI), to harness the gains of the former development, growth, and performance of the later for the benefit of mankind. Opinion samples were carried out in five selected higher institutions in the southwestern part of Nigeria, namely; the Federal University of Technology, Akure; Adeyemi College/University of Education Ondo; Obafemi Awolowo University, Ile-Ife; Ekiti State University, Ado-Ekiti; University of Education, Ikere-Ekiti. The questions determined during the survey was categorized into three (3); namely (a) YES, (b) NO, and (c) UNDECIDED. The statistical analysis of results indicated: 60.2, 24.8, 15%, 63.4, 25.2%, 11.4% for Ondo; 64.1%, 23.7%, 12.2, for Osun; 74.0%, 18.4%, 7.6%, and 61.8%, 22.8%, 15.4%, for Ekiti State with an overall cumulative average of 64.7%, 23.0%, and 12.3%. The findings show that Native Intelligence played a significant role in the development of Artificial Intelligence..

KEYWORDS

Native Intelligence, Artificial Intelligence. Higher Institution

1. INTRODUCTION

Intelligence has been a subject of interest for centuries, with early philosophical discussions dating back to ancient Greece and China. In the 19th century, the concept of intelligence began to be studied scientifically. Sir Francis Galton, a British scientist, conducted research on human intelligence and developed the concept of "mental tests." The field of intelligence testing gained significant momentum in the early 20th century with the work of Alfred Binet and Theodore Simon, who developed the first modern intelligence test, known as the Binet-Simon Scale (Aledhari et al., 2020). The intelligence quotient (IQ) was introduced by William Stern in 1912 as a way to measure intelligence based on standardized tests. During World War I, intelligence tests were used to assess the cognitive abilities of recruits and to identify individuals suitable for specific military roles (Budzianowski et al., 2019). In the mid-20th century, researchers such as David Wechsler expanded the concept of intelligence beyond IQ and introduced the idea of multiple intelligences, including verbal,

performance, and practical intelligence (Barry, 2002). The cognitive revolution in the 1950s and 1960s led to the development of cognitive psychology, which focused on understanding how people think, reason, and solve problems. In the late 20th century, Howard Gardner proposed the theory of multiple intelligences, suggesting that intelligence is not a single, unitary concept but rather a combination of different abilities, such as linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic intelligence. The study of artificial intelligence (AI) emerged in the mid-20th century, aiming to develop machines capable of intelligent behavior (Du et al., 2020).

This field has seen significant advancements in areas such as machine learning, natural language processing, and computer vision.

- I. Intelligence is universal: Intelligence exists in all populations and is not limited to any particular region or ethnicity. People from all backgrounds have the potential for intelligence and can excel in

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- various domains.
- II. Cultural biases and standardized testing: Intelligence can be influenced by cultural factors, including language, education, and exposure to certain experiences. Standardized tests, which are often used to measure intelligence, may have inherent cultural biases that can disadvantage individuals from different cultural backgrounds.
- III. Diverse forms of intelligence: Intelligence is not solely measured by traditional IQ tests. Howard Gardner's theory of multiple intelligences suggests that there are various types of intelligence, including linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and naturalistic intelligence. Different cultures and societies may value and develop these intelligences in different ways.

Today, intelligence continues to be a topic of research and debate, with ongoing efforts to understand its nature, measure it accurately, and develop AI systems that can mimic human intelligence. Indeed a new dawn is here (Wolf et al., 2019; Ghimire and Rawat 2022). Where humanity is faced with everyday stack realities of the conflicting interest between civilization, modernization, globalization, and a sound understanding of the intricacies and the interrelationship/dependence between Native Intelligence (NI) and Artificial Intelligence (AI), both of which exist as products human interest, rooted in the drive for growth and excellence (Wolf et al., 2019; Kulkarni et al., 2020). Native intelligence arose as a direct consequence of human intuitions, resulting from man's study, and understanding of the fundamental principles of creation, nature, and environment, resulting in cultural, political, economic, scientific, and many times spiritual; evolution; all directed at growth, development and human excellence (Wolf et al., 2019; Obschonka and Audretsch 2020). Artificial Intelligence (AI) arose as a product of a human sustainable drive toward social economic scientific and Technological race toward human excellence and a sustainable future driven by computers and human machine (Witt and Young 1997; Li et al., 2020; Pengcheng, 2022). Therefore, a genuine understanding of the concepts, realities, and actualities of Native Intelligence (NI) may be a great pointer to the future of excellence in Artificial Intelligence (AI) that humanity craves. Native Intelligence (NI) is a metaphysical understanding of the mind, body, and society. Furthermore, according to Humanity Unorthodox-sridhar Ratna Kumar, Native intelligence (NI) was defined as "autochthonous acumen" or: Indigenous prudence or congenital judicity; meaning a down-to-earth and master-of-fact practicality".

On the other hand, Artificial Intelligence (AI) has been variously defined by Wikipedia as "the Intelligence of machine or Software, as opposed to the intelligence of human animal" It was further defined as an umbrella term that compasses a wide variety of technologies, including machine learning, deep learning and natural language". Artificial Intelligence (AI) "refers to the simulations of human intelligence in machines that are

programmed to think and act like human (Witt and Young 1997; William, 2002).

Even though it is noted that some Western ideologists, tend to attribute Native Intelligence (NI) to African/third world/developing world concepts. Artificial Intelligence cannot divorced from a fundamental understanding of the quest of mankind for a better society, driven by machine, based on sound principles an chore on the dynamics of the ancient past, rooted in culture, morality, ancient religion, native knowledge, and the dynamics of nature and historical past; that drives mankind toward growth and development (Pengcheng, 2022; Rehena, 2022). The fact remains that there cannot be a present without a past, and there cannot be a future without a past. Hence this study is directed at the evaluation of the relationship between Native and Artificial intelligence, with a view to understanding the Dynamics of their relationship and the benefits accruable to mankind in harnessing their relationships, To reconcile the human race with morality; in our quest for a new world of machine-driven Technology (William, 2002; Rehena, 2022).

In the quest for knowledge man from time immemorial has always reconciled with nature, environment, traditional; schools of thought, religions, culture, and many a times traditional schools of divinity, all of which are directly past and even present Africans have relied on so much on divinities like Ifa, Opele, Amadioha, Orunmila, Nana, Buluku, etc for a better understating of nature, environment and the essence of human existence, the Asians have also come to rely on divinities like Zhenren, Tamil Nadu, Budhas Buddhist, Manipuri, Zao Jun, Sarawak, Vishnu, Shiva and a host of others, while in recent past, Israelis, have relied on a sound knowledge of Judaism in shaping their future, and Egyptians have depended heavily on Ra, ISIS, Sets Anubis, in brim making meaning out of life, all of which have enriched our native intelligence, vis-à-vis our understanding of life: nature science and in variable Technology.

Therefore it has become very expedient to find out the relationship between Native Intelligence (NI) and Artificial Intelligence to be able to establish their possible inter-dependence in the past, and how their relationship/interaction may have played a significant role in human advancement. Through this background knowledge; an opinion survey was carried out, where the respondents were expected to answer: "YES", "NO", or undecided to the Questions.

2. NATIVE INTELLIGENCE (NI) HAS PLAYED A SIGNIFICANT ROLE IN THE DEVELOPMENT AND GROWTH OF ARTIFICIAL INTELLIGENCE (AI).

Five higher institutions were selected across three (3) states of the Federation: While a thousand opinions were sampled per institutions making five thousand sampled views (Table 1). Figure 1 exhibits the pie chart of the percentage of the respondent's opinion.

Table 1: A breakdown of the Statistical Analysis							
RESPONDENT / PERCENTAGE							
S/N	NAME OF INSTITUTION	LOCATION	NO.OF SAMPLE	YES M F	NO. M F	UNDECIDED M F	REMARK
1	Federal University of Technology	Ondo State, Nig.	1000	400 202 602 = 60.2%	144 104 248 = 24.8%	85 65 150 = 15%	
2	Ondo State Adeyemi College/University of Education	Ondo State, Nig.	1000	432 202 634 = 63.4%	152 100 252 = 25.2%	78 36 114 = 11.4%	
3	Osun State Obafemi Awolowo University, Ile Ife	Osun State, Nig.	1000	400 241 641 = 64.1%	137 100 237 = 23.7%	82 40 122 = 12.2%	
4	Ekiti State University, Ekiti	Ekiti State, Nig.	1000	520 220 740 = 74%	100 84 184 = 18.4	46 30 76 = 7.6%	
5	University of Education, Ikere-Ekiti.	Ekiti State, Nig.	1000	408 210 618 = 61.8%	128 100 228 = 22.8%	84 70 154 = 15.4%	

3. SUMMARY AVERAGE

$YES = \frac{60.2 + 63.4 + 64.1 + 74.0 + 61.8}{5} = \frac{323.5}{5} = 64.7\%$

$NO = \frac{24.8 + 25.2 + 23.7 + 18.4 + 22.8}{5} = \frac{114}{5} = 22.98\%$

$UNDECIDED = \frac{15.0 + 11.4 + 12.2 + 7.6 + 15.4}{5} = \frac{61.6}{5} = 12.32\%$

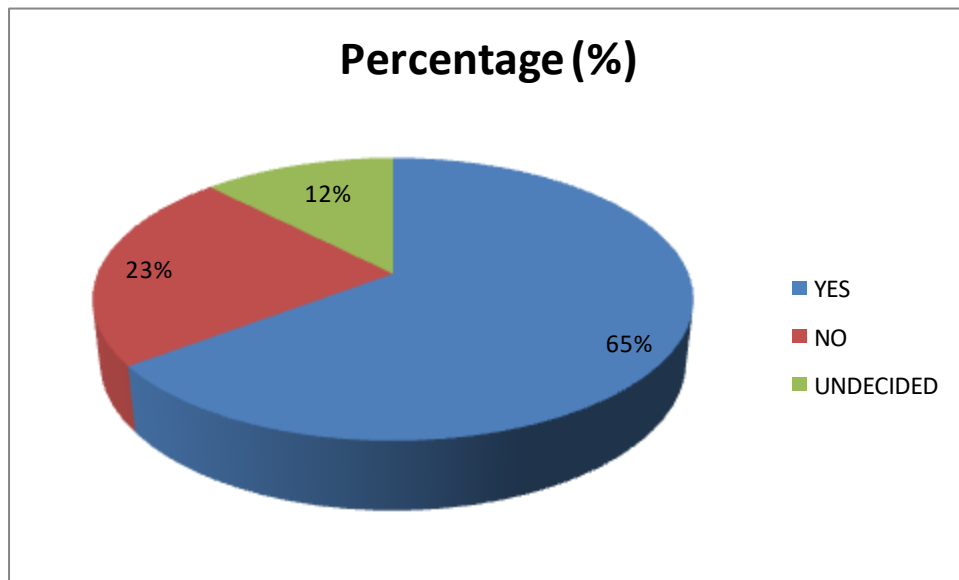


Figure 1: Pie Chart showing the percentage of respondents

4. CONCLUSION

Findings have revealed that 64.7% of the respondents agreed that Native Intelligence (NI) played a significant role in the growth and development of Artificial Intelligence (AI): while 23% are of the view that Native Intelligence (NI) has no role in the growth and development of Artificial Intelligence. It can therefore be inferred that Native Intelligence has played a significant role in the evolution, growth, and development of Artificial Intelligence. Based on this finding, it is recommended that more emphasis should be given to research in Native Intelligence as a stimulus to the future growth and development of Artificial Intelligence.

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