

RESEARCH AND INNOVATION: EDUCATION IN VISUAL, MANAGEMENT SCIENCES AND FOR AFRICAN DEVELOPMENT

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Abstract

Research and innovation are complex processes and are key concepts to the realization of Africa's development objectives. Over the years, emphasis has been placed on science and technology, to the abject neglect of arts and the social sciences in educational planning in Africa of recent. This paper appraises the importance of Arts and Social Science education in Africa and criticizes the lack of emphasis on Arts and Social Science education. The paper notes that educational policy, especially in Nigeria has been lopsided in favor of science and technology, which is an anomaly in educational planning. This paper advances reasons why education should be holistic, integrative and multi-dimensional and gives suggestions for a new outlook and direction in educational policy formulation in Africa in the twenty-first century. The paper begins with a clarification of concepts, reviews the existing trend in the educational policy formulation in some African countries, and proposes a way forward out of the educational impasse, by making some recommendations to improve the educational industry.

Keywords: Arts Education, Social Science Education, Research and Innovation, Educational Policy, Science and Technology, Holistic Education, Educational Planning, African Development.

INTRODUCTION

Education is a vital tool for national development as it forms the basis for social engineering and mobilization of national and human resources for national growth (Fafunwa, 2002; UNESCO, 2024). Hence, any nation that attempts to move ahead must establish a proper foundation for her educational industry (Taiwo, 2000; Okebukola, 2023). The National Policy on Education (1981) has recognized the instrumentality of education par excellence for national development (Federal Republic of Nigeria [FRN], 1981; FRN, 2013). Government has stated that education should be for the benefit of all citizens and that educational goals should be relevant to the needs of the individuals in terms of the society desired, the environment, and the realities of the modern world (FRN, 1981; UNESCO, 2021). To achieve these ends therefore, it is imperative that educational goals are clearly stated and unambiguous (Taiwo, 2000; Nwosu and Ozioko, 2022).

Since education is a dynamic instrument of change, it is pertinent that educational policy be constantly reviewed to ensure its adequacy and continued relevance to national needs and objectives (Fafunwa, 2002; World Bank, 2023). By a deliberate policy of government, Nigerian education has in recent years tilted in favour of science and technology where a greater proportion of educational expenditure is devoted to science and technology (FRN, 1981; Okebukola, 2023). This is done with the rationale that technically based professionals need greater exposure and that universities and other institutions within the education system should pay greater attention to the development of scientific orientation (Aina, 2004; UNESCO, 2024).

The ratio of science to liberal arts in Nigerian universities was fixed at 60:40 during the Third National Development Plan period (FRN, 1975; Aina, 2004). The ratio has continued to influence educational planning despite limited corresponding technological advancement and persistent manpower challenges in Nigeria (Akinyemi, 2018; World Bank, 2023). This has created concerns within the educational system regarding balance and equity in educational planning (Aina, 2004; Nwagwu, 2021).

Education in the Arts and Social Sciences has increasingly been relegated to the background without due regard to the role of such disciplines in enhancing national development (Nyerere, 1968; Nussbaum, 2010; Adesina, 2022). If education is to be meaningful to national growth and development, it must be holistic, integrative, and multidisciplinary in outlook (Dewey, 1916; Nussbaum, 2010; UNESCO, 2021).

This paper appraises Arts and Social Science education in Nigeria and criticizes the lack of emphasis placed on these disciplines. The paper notes that educational policy in Nigeria has remained disproportionately inclined toward science and technology, thereby creating an imbalance in educational planning (Aina, 2004; Adesina, 2022). The paper advances reasons why education should be holistic, integrative, and multidimensional and offers suggestions for a new outlook and direction in educational policy formulation in Nigeria in the twenty-first century (Nussbaum, 2010; UNESCO, 2024). The paper begins with a clarification of concepts, reviews existing trends in educational policy formulation, and proposes a way forward through recommendations aimed at improving the educational sector (World Bank, 2023; UNESCO, 2024).

Clarification of Concepts

The Arts are branches of knowledge generally regarded as non-scientific and non-vocational, including literature, philosophy, and languages (Encyclopaedia Britannica, 2024; Nussbaum, 2010). They also include music, theatre, dance, cinema, painting, and sculpture, which collectively constitute the creative arts (UNESCO, 2021; Efland, 2002).

The Humanities comprise subjects that focus on human culture, especially language, literature, philosophy, history, and classical studies (Nussbaum, 2010; Britannica, 2024). The Social Sciences deal with the organization of people in societies and communities, including sociology, anthropology, economics, political science, and history (Giddens and Sutton, 2021; Haralambos and Holborn, 2019).

Research is a detailed and systematic investigation into a subject area with the aim of discovering and applying new facts or information (Creswell and Creswell, 2023). It often involves inquiry into unexplored issues in order to generate new knowledge and directions for development (Kothari, 2004; Creswell and Creswell, 2023).

Development research focuses on discovering new or improved processes, products, and methods of introducing innovations (OECD, 2023). In this paper, development research refers to research that seeks new opportunities and innovations for growth and transformation in Africa (UNDP, 2024). Innovation refers to new ideas, processes, methods, or opportunities that create alternative ways of achieving objectives (OECD, 2023). Beyond technological innovation, social innovation and policy innovation are important dimensions of social science research (Mulgan, 2019; OECD, 2023). These innovations play critical roles in achieving developmental objectives (UNDP, 2024). Consequently, research and innovation are recognized as complex processes that are fundamental to the realization of Africa's development agenda (African Union, 2024).

Development means improvement that reflects a particular vision in political, social, or economic spheres (Todaro and Smith, 2021). It is an evolutionary and multidimensional process that reflects societal transformation (Sen, 1999; Todaro and Smith, 2021). Development is the progressive creation, proliferation, and enhancement of conditions necessary for the good life of citizens within a nation (Iziren, 2005; Sen, 1999).

The Educational System

The educational system according to Taiwo (2000) is a complex organization of interactions among interdependent bodies, groups, and individuals aimed at achieving educational goals (Taiwo, 2000). These bodies include governments, religious organizations, voluntary groups, teachers' associations, teachers, parents, and the wider public (Taiwo, 2000; Fafunwa, 2002).

The principal interacting bodies are government agencies, teachers' associations, and citizens (Taiwo, 2000; Nwagwu, 2021). Religious organizations continue to play significant roles in the

Nigerian educational system through ownership and management of educational institutions (Fafunwa, 2002; Adesina, 2022). Private institutions and individuals also cooperate with federal, state, and local education authorities in educational administration (FRN, 2013; UNESCO, 2024). Educational stakeholders, though interdependent, must interact harmoniously if educational goals are to be achieved effectively (Taiwo, 2000; Okebukola, 2023). Parents, employers, and the public also play significant roles because their expectations influence educational outcomes and policy directions (World Bank, 2023). Although educational goals may appear similar among stakeholders, their motivations may differ (Taiwo, 2000). Education may therefore be viewed both as a privilege for the younger generation and as a societal responsibility aimed at preparing citizens for national service and development (Dewey, 1916; UNESCO, 2021).

The Issue of National Development

National development is a multifaceted process with economic, political, social, and educational implications for national growth (Todaro and Smith, 2021; UNDP, 2024). It involves improving a country's condition through investment in infrastructure, educational institutions, human capital, and sustainable economic systems (World Bank, 2023; African Union, 2024).

Development enhances a nation's maturity, advancement, organization, and capacity to meet citizens' needs (Sen, 1999; Todaro and Smith, 2021). The issue of development has assumed greater significance because nations continuously seek strategies for improving living standards and promoting societal transformation (UNDP, 2024).

Some scholars have described development as a process of engineering society for social and national transformation (Rodney, 1972; Todaro and Smith, 2021). It involves progress in political, economic, social, and educational spheres (African Union, 2024).

Developing responsible citizens through education becomes particularly important during periods of national transformation (Adedeji, 2003; UNESCO, 2021). Many young people grow up in environments characterized by poverty, deprivation, and limited opportunities (UNDP, 2024; World Bank, 2023). Adedeji (2003) noted that poverty, social inequality, declining values, and discrimination are symptoms of societies lacking the basic necessities required for human development. Recent studies continue to identify these factors as major barriers to sustainable development in Africa (African Union, 2024; UNDP, 2024).

According to Breslin (2005), good citizenship is developed through quality education that enhances people's capacity to participate actively in socio-economic, political, cultural, and religious processes. Contemporary research similarly emphasizes citizenship education as a foundation for democratic participation and sustainable development (UNESCO, 2021; Adesina, 2022).

There is little doubt that when quality education in the Arts and Social Sciences is provided, citizens become better equipped for critical thinking, social responsibility, innovation, and economic participation (Nussbaum, 2010; OECD, 2023). Such empowerment contributes positively to national development and societal transformation as a whole (UNDP, 2024; African Union, 2024).

THE TREND IN THE PRACTICE OF EDUCATION

There has been a long-standing controversy regarding the classification of disciplines within the social sciences and humanities, particularly whether history should be classified as a social science or as part of the humanities (Ake, 2002; Heywood, 2021). Similarly, some geographers argue for classification within the natural sciences, while restricting social science geography to human geography alone (Easton, 1965; Okolie and Ojukwu, 2021). Certain psychologists also define their field as biological science and limit only social psychology to the social sciences (Kaplan, 1957). Anthropology overlaps with both the humanities and biological sciences, reflecting the interdisciplinary nature of knowledge systems (Galtung, 1969; Mazower, 2012). Economics, law, and political science are closely aligned with professional disciplines such as business studies, law, and public administration (Dudley, 1982; Heywood, 2021). History, in some interpretations, is

treated as a social science, particularly where its analytical methods align with empirical inquiry (Claude, 1964).

It is therefore important to emphasize that rigid compartmentalization of academic disciplines is largely artificial and inconsistent with modern multidisciplinary approaches to knowledge production and development (Ramsbotham et al., 2023). Disciplines are increasingly viewed as complementary and interdependent when considered within the framework of national development (Mazower, 2012). Claude Ake (2002) argues that Western social science scholarship often reflects imperialistic tendencies in developing societies, reinforcing capitalist institutions and ideologies. Such scholarship, he notes, produces forms of knowledge that serve global power asymmetries and economic dominance structures (Ake, 2002; Prunier, 2007). In the African context, Arts and Social Science education should therefore be directed toward critical self-understanding, value reconstruction, and social transformation (Galtung, 1969; Richmond, 2022).

Through Arts and Social Sciences, societies can strengthen value systems and develop frameworks for economic and political progress (Deng, 1995; Okolie and Ojukwu, 2021). In Nigeria, the interaction of educational stakeholders reveals multiple competing interpretations of educational purpose, resulting in fragmented policy implementation (Nwabueze, 2000; Adetula, 2022). This has contributed to persistent challenges in the implementation of the Universal Basic Education programme (Kurah, 2008; UNESCO, 2024). These conflicting perspectives significantly shape educational governance and policy execution, often undermining national educational objectives (Okeke, 2021; World Bank, 2023). Consequently, Nigeria’s educational system continues to reflect structural imbalance and policy inconsistency (Akinyemi, 1989; Gambari, 2008).

EDUCATIONAL PLANNING AND FINANCING IN FAVOUR OF SCIENCE AND TECHNOLOGY

Educational planning in Africa has increasingly prioritized science and technology over Arts and Social Sciences, reflecting a policy shift toward technological development (Abubakar, 2004; Ade-Ibijola, 2022). This is evident in Nigeria’s historical 60:40 admission and funding ratio favoring science-based disciplines (Federal Republic of Nigeria, 1979; Nwosu and Iwuoha, 2018). However, this policy direction has remained largely unchanged despite evolving labour market needs and socio-economic realities (UNESCO, 2024; World Bank, 2023). Between 1966 and 1977, the Nigerian government established several science-based research institutes to strengthen technological capacity and reduce underdevelopment (Abubakar, 2004; Saliu, 2006).

National science policy has been positioned as a key driver of economic transformation and industrial growth (Akinterinwa, 2010; Heywood, 2021). Even the Basic Education Curriculum places strong emphasis on STEM-related competencies and ICT integration (UNESCO, 2024). Specialized universities of technology were also established to expand scientific knowledge production and manpower development for industrialization (Gambari, 2008; Williams, 2020). However, despite these investments, funding for education in Nigeria remains below international benchmarks recommended by UNESCO (UNESCO, 2024).

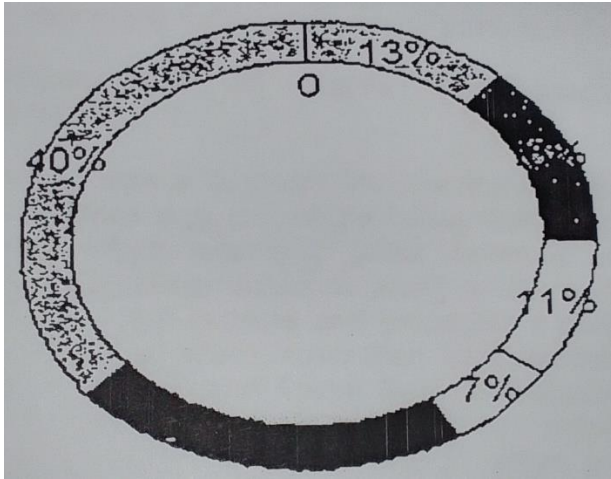
UNESCO recommends that developing countries allocate approximately 26% of their national budgets to education, but Nigeria consistently allocates less than 10% (UNESCO, 2024; World Bank, 2023). This funding gap places severe constraints on educational quality and infrastructure development (Adetula, 2022). Given competing national priorities such as health, agriculture, and defense, government alone cannot sustain educational financing (World Bank, 2023). Consequently, effective educational development requires multi-stakeholder participation, including private sector involvement and community-based support systems (UNESCO, 2024; Okolie and Ojukwu, 2021).

SCIENCE INSTITUTES ESTABLISHED BETWEEN 1966 - 1977

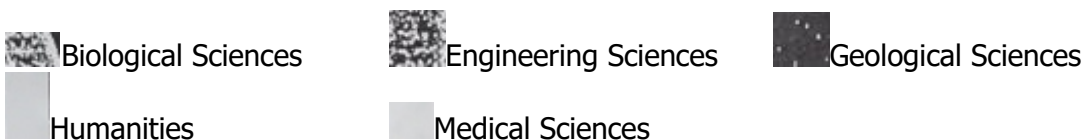
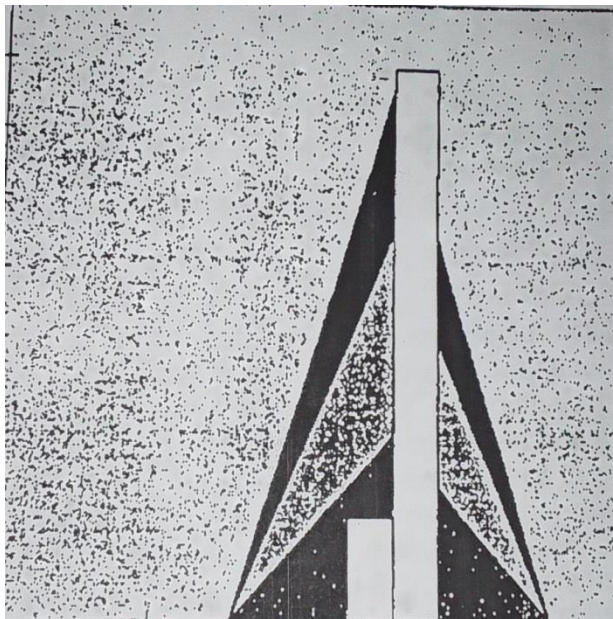
YEAR	SCIENCE INSTITUTES ESTABLISHED BY GOVERNMENT
1966	The National Council for Scientific and Industrial Research (NCSIR)
1970	The Council For Science And Technology (NCST)
1971	The Agricultural Research Council of Nigeria (ARCN)

1973	Medical Research Council of Nigeria (MRCN)
1973	Industrial Research Council (NSCN)
1977	The National Science and Technology Development Agency (NSTDA)

Distribution of university courses in Nigeria



DISTRIBUTION OF UNIVERSITY COURSES: SCIENCES, LIBERALARTS AND SOCIAL SCIENCES



THE ROLE OF EDUCATION AND CRITIQUE OF WESTERN ORIENTATION IN NIGERIAN EDUCATIONAL DEVELOPMENT

The federal and state governments ought to assign a higher priority to education as a fundamental driver of national development (UNESCO, 2024; World Bank, 2023). The changing Nigerian economic conditions, coupled with the population's increasing demand for education, necessitate continuous reform of educational content and structure to ensure alignment with national development objectives (Okeke, 2021; Adetula, 2022). Educational outputs must be relevant to the manpower requirements of the economy, particularly in emerging sectors of development (UNESCO, 2024). Consequently, the quality of leadership, moral orientation of schools, and graduate employability have become central concerns in educational policy formulation (Nwosu and Iwuoha, 2018; Okolie and Ojukwu, 2021).

Because of these intersecting pressures, Nigeria's educational system has often been described as being shaped more by political considerations than by professional educational planning principles (Akinyemi, 1989; Gambari, 2008). This politicization has contributed to inconsistencies in policy implementation and long-term planning deficits in the education sector (World Bank, 2023). There is also an observable trend of aligning Arts and Social Science education with Western epistemological models, which critics argue reinforces intellectual dependency and structural underdevelopment (Ake, 2002; Rodney, 1972; Mazower, 2012). Such models tend to reproduce external value systems that may not adequately reflect African socio-political realities (Galtung, 1969; Prunier, 2007). This orientation has been argued to weaken indigenous knowledge systems and distort developmental priorities (Richmond, 2022; Deng, 1995).

Furthermore, it has been argued that reliance on imported intellectual frameworks limits Africa's ability to fully understand and address its own developmental challenges (Ake, 2002; Okolie and Ojukwu, 2021). Scholars have increasingly emphasized the need to decolonize educational content and rethink curriculum structures in African universities (Dei, 2021; Mbembe, 2016). Without such intellectual restructuring, underdevelopment and dependency may persist due to externally driven epistemologies that shape policy thinking (Rodney, 1972; World Bank, 2023).

THE CONTRIBUTION OF ARTS AND SOCIAL SCIENCES TO NATIONAL DEVELOPMENT

The various disciplines within the Arts and Social Sciences play a critical role in achieving sustainable development objectives, particularly in relation to governance, social cohesion, and human capital formation (UNESCO, 2024; Williams, 2020). These fields are essential for understanding societal complexity and for supporting policy frameworks aligned with development goals such as the Sustainable Development Goals (SDGs) (United Nations, 2023; Heywood, 2021).

Arts and Social Sciences should not be uncritically modeled after Western development paradigms, as such frameworks often reflect specific historical and ideological contexts that may not align with African realities (Ake, 2002; Galtung, 1969). Many of these models are value-laden and tend to prioritize economic growth metrics over broader social transformation goals (Mazower, 2012; Richmond, 2022).

Instead, development studies in Africa should be reoriented toward indigenous epistemologies and contextual problem-solving approaches that reflect local realities (Dei, 2021; Mbembe, 2016). Such a shift would enhance the capacity of educational systems to address social unrest, inequality, and governance challenges in African societies (Adetula, 2022; Okolie and Ojukwu, 2021).

Furthermore, Arts and Social Science education should prioritize political stability, social engineering, and democratic consolidation as core objectives (Easton, 1965; Okeke, 2021). Even where scientific rigor is maintained, research outputs should reflect African cultural values and developmental priorities (Galtung, 1969; Deng, 1995).

Finally, Arts and Social Sciences must adopt a multidisciplinary framework that integrates sociology, economics, political science, history, and philosophy in order to adequately address complex societal challenges (Ramsbotham et al., 2023; Heywood, 2021). A holistic and integrated approach is

essential for producing graduates capable of responding effectively to contemporary developmental demands (UNESCO, 2024; World Bank, 2023).

CONCLUSION

We have looked at education as the basis for social engineering and mobilization of resources. We have examined Arts and Social Science educational trend in Nigeria and have noted that there is a deliberate neglect of Arts and Social Science education in favor of science and technology. This we observed is an anomaly that goes against our national development goals. A multi-disciplinary approach to development studies is appropriate. Education is holistic and must be integrative and multi-disciplinary in perspective. We advocate a multi-disciplinary approach to the educational policy for national development purposes. Ethical education of the citizenry, especially the youth, should be taken seriously in our educational policies. Citizens should be educated on the national ethics as a moral guide that involves behavior towards oneself, one's neighbors and the society. Thus Arts and Social Sciences education must enhance national ethics, which prescribe discipline, integrity, dignity of labor, social justice, religious tolerance, self-reliance and patriotism. In history, we study the culture of the people. History and culture provide a veritable tool for forging national development. This is because the past mirrors the present and the future. For development to have an enduring impact in the society there is need for it to be rooted in the people's culture which is the totality of our historical experience. It is imperative that a clear understanding of the past could complement contemporary efforts to advance the progress of humanity (Adediran, 2005). The study of history and culture should be made compulsory in our educational curriculum; this is without prejudice to the study of science and technology, which has become the craze of modern educational policy in Africa. In order to improve the extent to which Africa innovates and the extent to which these innovations contribute to the solution of Africa's problems, Social Science and humanities research is critical. Increasing the integration of social sciences and humanities research and innovations should not lead to neglecting or overlooking this sector as a domain in itself. All we need is the right mechanism and dynamics to capture our innovation and research.

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