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Contents

Labour Unrest, National Integration and Cohesion - Dorothy O. Imolorhe (Mrs.)	1-5
The Press/Mass Media and National Integration/Cohesion – The Nigerian Experience – Wogu, Joseph Oluchukwu	6-12
The Importance of Accounting Education in National Integration and Cohesion – Bakari Adamu Malgwi	13 -19
Is Resource Control Really the Answer? A Comment on the Niger Delta Region - Omonzejie, P. I. And Imimole, B.	20 - 26
The Importance of Primary Education in National Integration and Cohesion in Nigeria – Ogunboyede, M. O.	27 - 31
Incorporating the Tsangaya (Qur'anic) and Girl-Child Schools System into the UBE for National Integration and Cohesion – Ngada Audu James	32 - 36
Achieving National Integration and Cohesion Through Information Technology - Salisu, S.O. (Mrs.)	37 – 41
The Role of the Press/Media in Achieving National Integration and Cohesion - George N. Anaso	42 – 40
Ineffective Public Service: A Political Issue in National Integration and Cohesion in Nigeria - Mohammed Adama	47 – 52
Using Religion to Foster Unity in Diversity: Islam's Practical Views - Danjuma Doma	53 – 55
Social Studies Education and National Integration and Cohesion - Nsidibe Archibong Etuk	56 - 60
Integration of Exceptional Children: A Challenge for the Universal Basic Education (UBE) Programme - Ahon Adaka Terfa	61 - 65
Science and Technology in Early Childhood Education: A Veritable Tool in Achieving National Integration —Olusi, F.I. and Mrs. Edobor, R.I.O	66 - 71
Universal Basic Education as a Catalyst for Enhancing Effective Primary Education for the Promotion of National Integration: Prospects, Problems, and Priorities - G. Bolaji Olaniyi (Ph.d) and O.A. Oyinloye (Mrs.)	72 – 7

The Place of Language Education in Achieving National Integration and Cohesion - Nwakile I.C. (Mrs.)	78 – 82
Democracy, National Integration and Cohesion in Nigeria – Sunama A.	Ali 83 – 87
The Place of Language Education in Achieving National Integration and Cohesion - Abdullahi Amin S. Tarauni	88 – 92
The Place of Science Education in Achieving National Integration and Cohesion: A Focus on Secondary School - Andrew F. Mshelbwala	93 – 97
The Role of Home Economics Extension Services in National Integration and Cohesion for Nation Building - Ewubare, M.U. (Mrs.) and Ochonogor, E.O. (Mrs.)	98 – 102
Technological Development in Maintaining National Integration and Cohesion - Lawson Olorunwa Sunday	103 – 109
The Relevance of 1994 Cairo International Conference on Population and Family-Life Education in Engendering Population Education in Nigeria - Musa A. Garba	110 – 115
The Place of Geo-Political Education in Achieving National Integration and Cohesion – Samuel E. Egbehenyo	116 - 121
The Structure of Nigeria's Economic Fortunes and the Future of the Current Democratic Dispensation in the Country - Aminu Ibrahim Abubakar	122 - 125
Role of Sports in National Unity and Integration - Elisha S. Dimka	126 - 130
Resource Control, National Integration and Cohesion: The Challenge for Nigerian Education in the 21 st Century – Samsom I. Uduehi and Idamokoro, Gloria E.	131 - 135
The Imperative of Education in Enhancing National Integration and Development – P.O. Onah	136 - 140
Geographical Knowledge: The Sound Basis for National Integration and Cohesion in Nigeria – A. N. Edegbe	141 - 145
Utilisation of Functional Moral Education for Achieving A Successful Universal Basic Education Programme in Nigeria —Muhammad Saminu Muhd. Awwal	146
**************************************	146 - 150

Forms and Implications of Examination Malpractice – Dr. Jonathan N. Nwokafor and Mrs. Mamunatu O. Abdulazeez	151 – 155
Influence of Social Studies Education on National Integration and Cohesion - Ubong James Akpan	156 – 161
Language: An Essential Tool for National Integration and Cohesion – Salih M. Jumah	162 – 165
Role – Playing and Language Use – S.G.E. Eshiotse	166 - 168
Communication Education Through Drama for National Integration and Cohesion - Simon D. Aniama	169- 171
An Islamic Approach for the Sustainability of Good Governance and Accountability Towards National Integration and Cohesion in Nigeria – Hameed A. Abdulrasheed	172 –178
The Politics of National Integration and Cohesion - Manuwa, Toye	179 – 184

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SCIENCE AND TECHNOLOGY IN EARLY CHILDHOOD EDUCATION: A VERIFABLE TOOL IN ACHIEVING NATIONAL INTEGRATION

Mr. Olusi F. I. And Mrs. Edobor R.I.O.

Abstract

The highlights on some of the factors which influence dis-unity were given. These factors have grent influence on the adults who have wrong conception of the definition of education. Education was therefore re-defined. The writers noted that science and technology education has method/principles, which are capable of changing and moulding societal values. Hence they encourage it's implementation in the early childhood education, so that the future generation will be able to imbibe it's virtues. The nature of the curriculum design at this level was given. Lastly the writer notes that despite the advantages of science and technology at this level there are challenges and therefore identified them and the way forward.

Introduction

To ensure national integration, concerted effort should be made to sustain our young democracy. Every organ of the society can be harnessed into a formidable homogenous entity with a common destiny when the dividends of democracy are allowed to ripe and reaped. This is what is sustaining the developed nations of the world like the United States of America and Britain. Every member of Nigerian society should be able to live free in any part of the nation and be able to contribute to the development of such a place of abode without any fear of molestation.

However, over the past the adults of this nation have failed us. It is true that there is lack of unity among Nigerian citizens. The cankerworm of ethnicity, tribalism, religious intolerance, cultural difference to mention but a few has eaten deep into the fibre of the members of the society.

Successive military governments in the past before the present civilian regime have contributed in no small measure in worsening the situation. These views were supported by Imobighe (1987) and lweiobor (1990) who identified the followings dialectical approach as necessary measures of ensuring integration and national unity:

- The establishment of unity schools in each state.
- ii. Introduction of free primary education.
- iii. Introduction of the principle of federal character
- iv. The creation of more states and local government councils.
- v. Establishment of national mass media agency and radio and television.
- vi. National reconciliation rehabilitation and reconstruction.

Looking from the above it will be agreed that all these measures has been fully implemented, yet the desired national consciousness is not achieved. We hear of Aguleri and Umuleri crises in the East; Modakeke and Ife/Hausa and Yoruba crises the West; Jukun and its neighbours in the Middle Belt; Ijaw and Ishekiri in the Delta region; the list is endless. The question that may arise is what are the causes of these problems? These writers strongly identify the wrong conception of national basic education among other things. According to the Conference of Ministers of Education of African member states in Lagos (1976) basic education is a type of education (raging from formal to informal) which is linked to development of the minimum provision of knowledge, attitudes, values and experience which should be made to every individual and should be common to all.

Hence to be able to change the orientation of the Nigerian society effort should be focused on the type of education given to the child/youth, since they are the future of the country. It is the opinion of these writers that there is the need for early childhood education in science and technology in Nigerian schools for obvious reasons. Science and technology has method/procedures which helps the individual to imbibe the following virtues: critical thinking, honesty, unbiased/objective individuals, and truthfulness which are discussed in detail in this paper.

Historical Development Of Early Childhood Education

According to Makanjuola (2001) from Commenius through Rousseau and from Pestalozzi to Freebel and Dewey there has been a consistent and reoccurring call on educators to respect the right of the child to education and to place early childhood education at the centre stage of the educational system. He lamented that only when education is seen as a commercial venture are we sensitized to the need for nursery/kindergarten schools as a vehicle for early childhood education. Early childhood education is not simply a service for children but a vehicle for changing attitudes which is vital to the whole development process of nation. It ensures adequate stimulation of the child and aims at the holistic development. The programme therefore servers the children, their parents and indirectly the wider society. Early childhood education is life itself and education opportunity before the start of primary school.

The welfare of children and their educational needs have been a great concern to a large group of adults at different times in history (Charles et al., 1978). Plato (422 – 347 BC) was the first person to clarify education into formal levels as we now know them. He commented on the status of childhood education for children from birth to age six. He also noted that learning should be internal and that their education should be a sort of amusement.

In same vein Oduolowu (2001) believed that early childhood education was important and argue that children have varying talents and skills which are to be enhanced. According to Quintillian (35-97 AD) in order to produce young adults of good character education must begin at the age of He said that responsible parents and tutors as well as carefully chosen companies are important in the life of children because they set examples and speech patterns. He noted that what the child learns while young would have life long implication on him. In other words the inculcation of the spirit of scientific method in early childhood education have high implication to the future life experiences of the child. This fact is true because at this age all the factors such as ethnic/cultural differences, religious fanatism economic/capitalist tendency, political difference which influence the adults and tend to divide us have no hold on these categories of children. Hence catching them young with these methods of knowledge will encourage careful observation, effective thinking, creativity in the learner, developing sound attitude to life and living, furnishing the learner with knowledge and understanding of man and nature in order to live as useful citizens, and assists the development of manipulative skills which are embedded in science. Therefore for effective integration of an heterogeneous society like Nigeria the need for early science and technology in the child's education becomes imperative.

Science And Technology Curriculum Conception, Planning And Execution In Early Childhood Education

Science and technology element of early childhood education relate to its methods, hence content should encourage careful observation which aids inquisitiveness, and effective thinking. Ability to synthesize, predict and making useful guesses. Olusi and Okecha (2001) have noted that the guiding principle for science and technology in early childhood education is to improve content, method and material, also improve training science teachers not for intellectual reasons or in order to accumulate scientific facts, but to give children experience of discovery while at the same time developing technological skills. They observed that technology can be imparted at this level through the use of educational toys, which stimulate children's creativity and ingenuity. For example chessboards, building blocks, scrabbles, use of sound trays, abacus and computer games.

In the words of Olorode (2001), the aim of introducing science and technology to the early childhood human will be to increase his awareness of the elements of the physical world and their relationships and the relationship of these elements to their use by man. To achieve this aim curriculum needs to be based on what the child has to do (activities involving large and small motor skills and basic biological needs and (b) activities that are incidental to the acquisition of motor skills, and satiation of biological needs. At the same time the curriculum should be based on a mission to enhance the child's creativity.

Other Advantages Of Science And Technology in Early childhood Education

The following are some other advantages science and technology can bequeath a child in early childhood education (Olusi and Okecha, 2001).

Science education can help children to think in a logical way about everyday events.

- 1) Science and its application in technology can help to improve the quality of peoples' lives. Science and technology are socially useful activities with which young children should become familiar.
- 2) As the world becomes increasingly scientifically and technologically oriented, it is important that future citizens should be equipped early enough to live in it.
- 3) Science if well taught especially through discovery can speed up children's intellectual development and increase their easy exploratory ability.
- 4) Science can positively assist children in other subject areas, especially in languages and information technology in which deductive reasoning is required.
- 5) Pre-primary school is the first formal school and should create opportunity to explore the environment in a logical and systematic way.

However despite these numerous advantages of science and technology, early childhood education, there are challenges to be overcome.

Challenges/And Way Forward

Although early childhood education is included in the Universal Basic Education of the present democratic government. Yet their emphasis is on primary and junior secondary levels in education. Olorede (2001) noted that in the national education programme, the foundation of early childhood is the weakest for the large majority of our children. There is therefore the need for the government to shift attention to this group of the nation education.

According to Okebukola (2001) the challenges facing this level of education include the following health factors school related factors.

Health Factor

The Situation And Policy Analysis (SAPA) 1993 reports revealed that attendance in early childhood education institutions is hindered by ill health. Diseases such as malaria (93.5%), measles (65.5%), cough (62.2%), diarrhea (46.3%) and skin diseases (32.4%) are predominant among children and these reduce the number of enrolment in pre-schools (see table 1). Also, inadequacies in water, health and sanitation facilities in the school feature prominently (Oduolowu, 2001).

Government effort in the area of cradicating poliomyelitis in children by engaging in house immunization is worth commending. However effort should also be intensified in the areas yet to be faced. The various private sectors in education of this set of children (large schools) should be encouraged to have professionals in children's health in their employment or ensure that there is close health service near the school.

Table 1: Projected Enrolment of Pre-Primary Education 1993-2000

Year	Population of children under age Six years, in within	Expected No. Enrolment	No. Enrolled in Million	
1993	23.3	7.21		
1994	23.9	9.71	2.3	
1995	24.5	12.21	3.0	
1996	25.1	14.71	3.7	
1997	25.7	17.21	4.4	
1998	25.4	19.71	5.2	
1999	27.0	22.21	6.0	
2000	27.7	24.71	6.8	

Source: FME and YD (1993).

From Table 1 it is evident that there was low enrolment of children in pre-primary school. When the enrolment of primary and pre-primary was compared, from 1993 1997 see Table 2.

Table 2: Difference in Enrolment in Pre-Primary and Primary Education

School	1993	1994	1995	1996	1997
Pre-Primary	1.7%	2.3%	3.0%	3.7%	4.4%
Primary	15.9%	16%	16%	15%	17%
Differences	14.20%	13.70%	13.0%	11.30%	12.6%

The differences in enrolment within the two levels of education in significantly show as 14.20, 13.7, 13.0, 11.30 and 12.6 percent respectively.

School Related Factors/Learning System

The Universal Basic Education blue print (2000) identified the followings,

- i. Poor teacher preparation.
- ii. Irregular in-service training and re-training of teaching and non-teaching personnel.
- iii. Inadequacy of relevant instructional materials and guides
- iv. Large number of untrained and unqualified teachers in these areas.
- v. Generally poor learning environment.
- vi. Lack of reliable education data for effective planning etc.

General Poor Learning Environment: Studies of Imogie (1996), Okebukola (2000) both reveal that learning environment of most schools are unfriendly. This is occasioned by the inadequacies in the basic requirement of learning environment like adequate land scape, classes and teaching aids. According to Odunolowu (2001) churches and mosques serve in some areas as accommodation, so also motor car garages and open spaces. The organized private sector who are largely involved in early childhood education must be supervised by the government authority to ensure standard of learning environment. The government should as a matter of urgency wake up to its responsibility by focusing its interest in the provision of early childhood education to its citizenry—according to Olusi and Okecha (2001) government in its attempt to encouraging the private sector in the running of early childhood education, completely left its responsibility to the private sector who are only interested in this aspect of education because of the financial benefits.

Lack of trained and qualified teachers in early childhood education is occasioned by the fact that most of these schools are run by the private sector who do not pay remuneration as compared to government schools. Student teachers shy away from taking professional courses in this area of study.

Inadequacy of relevant instructional material and guides was noted in studies carried out by the federal government of Nigeria and United Nations International Children Education Fund. They listed the percentage availability of facilities in pre-primary schools as follows. See table 3.

Table 3: Facilities in Pre- Primary Schools

Instructional Material/Equipment	Percentage Availability	
Play ground	42.3	
Slides	40.7	
Ladder	58.8	
Sand boxes	25.6	
See-saws	41.7	
Merry - go - round	42.4	
Hoops	40.3	
Skipping ropes	35.7	
Pesting cots	10.8	
Doll	40.6	
Fantasy Equipment	45.8	
Building blocks	38.5	
Puzzles	38.7	
Musical equipment	27.8	
Radio	26.3	
Television	8.3	
Video equipment	7.0	
Chart posters	3.5	
Computers	3.5	

From the foregoing it is clear that facilities are inadequate in most schools. Hence there is the urgent need by both the private sector and government to intensify effort in the provision of these requirements considering the important role these materials/facilities will contribute in enhancing the teaching and learning process at this level of education. Hence creating a friendly learning environment.

Lack Of Educational Data For Effective Planning

The failures of government and private sector in the provision of adequate materials in the past is occasioned by the inability of government to extrapolate the number of school age children from the national population figures. Reasons include:

i. That the national population census have been over politicized and figures inflated.

ii. There is a great deal of imperfection and lapses in existing published educational statistics, with the result that they can not be of good use in planning.

The technical capacity for data collection and analysis in terms of equipment and know-how still leaves much to be desired.

iv. Lack of data awareness, the need for updated record keeping at all levels and lack of awareness of the importance of data collection for planning by the mass.

v. The issue of discordant data this arises due to variety of sources of statistical data collection in Nigeria. There is wide variety of sources and approaches data collection by researchers.

To overcome this problem the government should carry out a general survey on the spot assessment of pre-school enrolment in the country. The local government education board should be mandated to submit report of the number of enrolment yearly.

The government should ensure that fresh hands are given the work to do yearly to check fraud.

Conclusion

Government effort in resolving these challengers should involve a wholistic approach, providing these provisions from the pre-primary to other levels of education. Government and private agency effort should be directed at inculcating science and technology virtues in all levels of education. This can be achieved by following up it's directives of admission quota of 60% science and technology and 40% to non science related courses studies in the higher institution.

The government should intensify all efforts to create national consciousness and unity of the nation. Hence effort placed on the early child will be an investment worthwhile in achieving the desired national unity and integration.

References

Akinbode, O (2000) Universal Basic Education in Nigeria: Issues Prospects and Problems. A Lead Paper Presented at the 3rd National Conference of Education, FCE Osicle, Abeokuta.

Imobighe, T. A. (1987) Problem of National Integration; Issues of Nigerian Citizenship and State Indigenes. *Nigerian Journal of Policy and Strategy*. 2.1.

Iweriobor (1990) Nigerian – Building Since Independence 1960 – 1990, Nigerian Journal of Policy and Strategy 5 – 1.2.

Makanjuola (2001) Opening Address Delivered at the National Conference or on the Universal Basic Education and the Challenges of Early childhood Education.

Charles, C.M.; Gast, D.K.; Servey, R.E. and Burnside H.M. (1978) Schooling Teaching and Learning: American Education. Saint Louis: The C. V. Mosley Company.

Oduolowu (2001) Current Status of Early Childhood Education Ibid Nigeria.

Olusi and Okecha (2001) Inculcation of Science and Technology. Concept Through the UBE; the Bedrock of National Development. Paper Presented at the National Conference. Of the OAU Institute of Education; the Universal Basic Education.

Olorode, O. (2001) Science and Technology. In Early Childhood Education. A Lead Paper Presented at the National Conference of the OAU Institute of Education: the Universal Basic Education.

Hildebrand, V. (1976) Introduction to Early Childhood Education. Macmillan N.V. P. 470

Olusi, F. I. (2000) Student Interest in Science and Technology; a Master Thesis Presented to the Graduate School Through the Department of Curriculum and Instruction. AAU. Ekpoma.

Okebukola, P. (2000) The Child Friendly School Initiatives As a Dimension in Educational Development in Nigeria. A Paper Presented at the 7th Annual Conference on Education Development. Lagos State.

Federal Government of Nigeria/UMCEF (1993) Situation and Policy Analysis of Basic Education in Nigeria. National Report (ed.) E. Ayofunde Yoloye, Lagos: Gaouro Public Co Ltd.

Piaget, J (1950) The Psychology of Intelligence. London: Kegan Paul.