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Education in Africa

Improving the Quality of Nomadic Education in Nigeria



Association for the Development of Education in Africa

Improving the Quality of Nomadic Education in Nigeria:
Going Beyond Access and Equity

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African Experiences
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Improving the Quality of Nomadic Education in Nigeria: Going Beyond Access and Equity

A study conducted by the Federal Ministry of Education of Nigeria

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List of Acronyms

CSE	Community Sensitization and Empowerment
DFID	Department for International Development
EFA	Education For All
FGN	Federal Government of Nigeria
FME	Federal Ministry of Education
IRI	Interactive Radio
KSMC	Kaduna State Media Corporation
NCNE	National Commission for Nomadic Education
NEC	Nomadic Education Centers
NEP	Nomadic Education program
NGOs	Non-governmental Organizations
NPE	National Policy on Education
PTA	Parents-Teachers Association
TPRS	Teacher Performance Rating Scale
UNICEF	United Nations Children’s Fund
YBC	Yobe Broadcasting Corporation

Summary

The study briefly describes the nomadic people of Nigeria, who make their living by tending sheep and fishing. Their numbers are currently estimated at 9.3 million, of whom 3.1 million are school-age children. The enrollment rate of nomads in formal and non-formal education is very low, and the illiteracy rate is between 0.2% and 2.0%.

The study argues that some of the main reasons for low enrollment rates are:

- The constant travel and migration associated with their livelihood, which entails the search for pastureland or fish;
- The role played by children in the economic system, which prevents them from attending formal schools;
- A curriculum designed for the sedentary majority of the population, which does not take into consideration the special educational needs of the nomads.

The study deals with the Nomadic Education Program (NEP), which was set up to give nomads access to high-quality basic education. The NEP makes use of innovative approaches, like:

- Drawing up and using relevant curricula, teaching methods and materials, and suitable facilities;
- Flexible academic calendars and hours that suit the learners;
- Intensely building awareness among the community and empowering them; and
- A solid collaboration and partnership with the institutions involved in drawing up, carrying out and evaluating the programs.

It also deals with the National Commission for Nomadic Education (NCNE), which was put in charge of carrying out the NEP.

The case study presented by Nigeria to the ADEA 1999 Biennial Meeting, *Access to Basic Education: A Focus on Nomadic Populations of Nigeria*, emphasized the innovative approaches and strate-

gies employed and the accomplishments achieved in the effort to give nomads greater and fairer access to basic education. In addition to the issues of fairness and access, this case study prepared for the 2003 ADEA Biennial Meeting, also deals with improving educational quality for Nigeria's nomads.

After having presented the basic context, the study then considers the initiatives taken to improve NEP quality. It deals with how community awareness and empowerment have been promoted, as well as with teacher refresher courses and the development of teacher training, the design and production of teaching materials, the adaptation of the curriculum (for the main existing subjects, including English, math, science and social studies, with relevant content substituted for any irrelevant content), curriculum development (for new subjects like the Fulfulde language, health education, Islamic studies), and finally linguistic issues (with the choice of the Fulfulde language alone at the start, and the use of Hausa for the other communities while preparing their respective languages). It also deals with the development of new facilities (with the construction of mobile, quick-assembly classrooms, motorboat schools, but also fixed, permanent school buildings in light of the settlement of the nomads). In each case, the study gives the goals targeted, the strategies employed and the results obtained.

The study then presents an analysis of costs and an evaluation of quality, before reaching a conclusion and making recommendations. The decree authorizing the creation of the National Commission for Nomadic Education is given in the appendix.

1. Historical background

Greater commitment to the universalization of access to basic education has heightened interest in the provision of quality basic education to nomadic and other educationally disadvantaged groups in Nigeria. These segments of the population have serious limitations to equitable access to basic education through the conventional education system as a result of certain occupational and socio-cultural peculiarities. Out of the estimated 9.3 million nomadic peoples in Nigeria comprising pastoralists and migrant fishing groups, about 3.1 million are children of school age. The participation of the nomads in the existing formal and non-formal basic education programs is abysmally low, with literacy rates ranging between 0.2% and 2.0% (Tahir 1998).

The Nigerian nomadic pastoralists are made up of the *Fulani* (5.3m), *Shuwa* (1.01m), *Koyam* (32,000), *Badawi* (20,000), *Dark Buzzu* (15,000) and the *Buduma* (10,000). *The Fulani* are found in 31 out of the 36 states of Nigeria, while the others reside mainly on the Borno plains and shores of Lake Chad. The migrant fishing groups number about 2.8 million, comprising numerous tribes, and are found in the Atlantic coastline, the riverine areas and river basins of the country. These nomadic groups in Nigeria have similar traits with other nomadic and migrant peoples in West Africa; the *Masaai*, *Turkana* and *Karamajong* in East Africa; the *Travelers/Gypsies* in Europe and *Show* people in Australia.

In Nigeria, the nomads' major constraints to participating in existing basic education programs were found to result from:

- Their constant migration/movements in search of water and pasture for their livestock, in the case of the pastoralists, and for fish and other aquatic animals, in the case of the migrant fishing groups;
- The critical role of children in their production systems, which makes parents and guardians reluctant to release them to participate in formal schooling;

- The unsuitability of the formal school curriculum, time schedules and calendar, which are tailored to meet the needs of the mainstream sedentary groups and ignore the special educational needs of nomadic peoples;
- Their physical isolation and minimal social interaction with the larger society, as they live and operate in mostly inaccessible terrains; and
- A land tenure system that makes it difficult for the nomads to acquire land and have permanent settlements.

2. The need for a special education program for nomads

Since 1977, Nigeria's National Policy on Education (NPE) has placed emphasis on providing unhindered access to qualitative basic education to all Nigerians irrespective of their gender, social class, ethnicity, occupation and religion. As attempts to expand access to basic education intensified, it soon became obvious that the usual conventional approaches to the provision of basic education cannot succeed in the context of the highly mobile and semi-settled populations such as the nomads. Monitoring and assessment records proved that conventional approaches such as the use of the orthodox school curriculum, permanent structures for schools, rigid formal school calendar and time schedules have failed to provide unhindered and equitable access to qualitative basic education for nomads and to boost literacy among them.

The orthodox school curriculum is designed to suit the needs and experiences of the mainstream, permanently settled population. The curriculum derived from that background and its content draws from concepts, issues and illustrations that learners from there are familiar with and can relate to. Due consideration is not given to the peculiar circumstances and experiences of nomadic populations. Learners from among the nomads have difficulty in understanding and relating. This makes learning content mostly incomprehensible. The use of the orthodox curriculum therefore constituted a major disincentive to their participation in education.

Another impediment to the nomads' full participation in education using the conventional approach is the use of the rigid formal school calendar and time schedules. Learners are required to be in school at particular periods of the year and hours of the day. This rhythm has been carefully determined and established to suit the mainstream settled population and does not give adequate consideration to the seasonal migrations and work rhythms of nomadic populations.

Generally, the mainstream population appreciates and gives appreciable priority to modern education. There is therefore no serious difficulty in securing the collaboration of parents and guardians to maintain the school calendar and schedules. In the case of the nomads, low-level appreciation of modern education, conflict between their work schedules and the formal school calendar, and the critical role of children in their production systems make them extremely reluctant to send their children to school.

Furthermore, the use of permanent and immovable structures for conventional classrooms and schools are unsuitable for the nomads. The nomadic groups are continually on the move, migrating from one settlement to another in response to seasonal and occupational demands. These constant migrations disrupt their children's schooling. They do not stay long enough in a settlement for learners to complete an academic session or school year. Therefore to ensure a regular and uninterrupted schooling of children of the nomads, the "school" must move along with them.

The question thus arose: How do we improve access to basic education for the highly mobile nomadic groups in Nigeria? The dependence on conventional approaches to the provision of basic education suitable for the mainstream sedentary population was obviously ineffective and not giving the desired result. The need was therefore recognized for the design and implementation of a flexible and responsive education delivery program that would focus on the nomads and address their peculiar needs and circumstances. This recognition prompted initiatives by the Federal Government of Nigeria (FGN) to articulate and evolve innovative strategies and a special program for the widening of access to qualitative basic education and its effective delivery to the nomads. Efforts in this direction culminated in the introduction of the Nomadic Education program (NEP) and the establishment of the National Commission for Nomadic Education (NCNE) to implement the program.

3. The Nomadic Education Program (NEP)

The aims of the Nomadic Education program (NEP) are to provide an unfettered access to quality basic education for nomads and to boost literacy and equip them with skills and competencies to enhance their well-being and participation in nation building. To effectively meet this challenge, the NEP utilizes innovative approaches and strategies such as:

- Development and use of relevant curricula, teaching methods, materials and infrastructure appropriate to the needs and peculiar circumstances of the target groups;
- Flexible and responsive school calendar and time scheduling to suit learners;
- Intensive community sensitization and empowerment to stimulate and sustain program support; and
- Robust collaboration and partnerships with relevant governments, institutions and organizations in program development, implementation and evaluation.

The NEP remains one of the key programs of the Federal Government of Nigeria in its efforts to attain the Education for All (EFA) goals. The National Commission for Nomadic Education (NCNE), established by Decree 41 of 1989, is charged with the responsibility of implementing the NEP.

4. The National Commission for Nomadic Education (NCNE)

The National Commission for Nomadic Education (NCNE) was by Decree 41 of 1989 given the mandate to carry out the following functions towards the successful implementation of the NEP:

- Formulate policies and issue guidelines in all matters relating to nomadic education in Nigeria;
- Provide funds for:
 - Research and personnel development for the improvement of nomadic education;
 - The development of programs on nomadic education; and
 - The provision of equipment and instructional materials and construction of classrooms and other facilities relating to nomadic education;
- Determine standards of skills to be attained in nomadic education;
- Arrange for effective monitoring of agencies concerned with nomadic education;
- Establish, manage and maintain primary schools in the settlements carved out for nomadic people;
- Collate, analyze and publish information relating to nomadic education in Nigeria;
- Ensure effective inspection of nomadic education activities in Nigeria;
- Prepare reliable statistics of nomads and their children of school age; and
- Act as the agency for channeling all external aid to nomadic schools in Nigeria.

For effective discharge of its responsibilities, the NCNE has four operational departments, six zonal offices and four university-based Nomadic Education Centers (NEC).

The four university-based centers are for:

- Research and evaluation for the education of nomadic pastoralists located at the University of Jos;
- Teacher training and outreach programs for nomadic pastoralists located at the University of Maiduguri;
- Curriculum and instructional materials development for the education of pastoralists located at Usmanu Danfodio University, Sokoto; and
- Curriculum and instructional materials development, teacher training programs, research and evaluation for the education of migrant fishing groups located at the University of Port Harcourt.

The fourteen years' experience of NCNE in the implementation of the NEP has given it deeper appreciation of the nature of the problems and a clearer understanding of the target groups. These have facilitated the expansion and strengthening of access to basic education. Today, literacy rates among the Nigerian nomads have been substantially raised, and the challenge of quality improvement and assurance in the NEP is receiving serious attention.

5. General context: Expanding and strengthening access to basic education for nomads

The case study presented by Nigeria on: *Access to Basic Education: a focus on Nomadic Populations of Nigeria* at the 1999 ADEA Biennial Meeting highlighted the innovative approaches and strategies as well as accomplishments in making basic education more accessible and equitable to the nomads. The study reported substantial improvement in the participation of nomads in basic education and a sustainable growth in their literacy rates.

The key components of the approaches and strategies showcased in the report of the study were in the areas of:

- Capacity building for the sustainability of the NEP through community sensitization, empowerment and mobilization;
- Development and provision of infrastructure to broaden access and reach;
- Research, curriculum development and teacher training to engender empirical planning, curriculum relevance and functionality as well as effective content delivery;
- Monitoring and supervision for appropriate feedback and effectual follow-up;
- Distance learning techniques using interactive radio instruction for schools as well as for adult education schemes; and
- Broadening collaboration and partnerships to expand the resource base as well as to promote systemic linkages and international cooperation in the implementation of the NEP.

As reported in the 1999 case study, the impressive breakthroughs in the widening of access to basic education for nomads through the NEP are evidenced by:

- Sustained increase in total school enrollment among nomads from 18,831 in 1990 to 95,510 in 1995 and 155,786 in 1998;
- Narrowing the gap between male and female school enrollment figures from 54% parity in 1990 to 85% in 1998;
- Increase in school completion figures from 2,077 in 1994 to 7,632 in 1998; and
- Expansion in the number of nomadic schools from 329 in 1990 to 1098 in 1997.

6. Context of departure: Focus on improving the quality of nomadic education in Nigeria

Since the 1999 case study, Nigeria has continued to record even more impressive performances in widening access to basic education for nomads through the NEP. School enrollment figures among them have risen from 163,361 in 1999 to 229,944 in 2002 (See *Table 1*). In addition, the number of nomadic schools has increased from 1,098 in 1997 to 1,680 in 2002 (See *Table 2*), while the gender gap has been narrowed further.

Table 1. School enrollment figures in nomadic schools (1990-2002)

Year	Total enrollment	Annual difference	Annual increase rate
1990	18,831		
1991	36,501	+17,670	95%
1992	51,152	+13,651	37%
1993	53,588	+3,436	8%
1994	61,832	+8,244	15%
1995	92,510	+30,678	50%
1996	103,576	+12,066	12%
1997	118,776	+14,200	12%
1998	155,786	+37,010	24%
1999	163,361	+7,575	5%
2000	193,249	+29,888	15.5%
2001	203,844	+10,595	5.2%
2002	229,944	+23,100	10.2%

Source: NCNE Monitoring Reports (1990-2002)

Table 2. Number of schools and teachers in the Nomadic Education program (1990-2002)

Year	No. of schools	No. of teachers
1990	329	886
1991	473	1,489
1992	649	2,491
1993	676	2,362
1994	778	2,919
1995	860	3,170
1996	940	2,919
1997	1,098	3,355
1998	1,022	3,358
1999	1,369	4,358
2000	1,494	4,748
2001	1,571	4,907
2002	1,680	4,150

Source: NCNE Monitoring Reports and State Coordinators. Reports (1990-2002)

The figures in *Tables 1* and *2* reveal continual substantial increases in school enrollment and in the number of schools. This is illustrative of the tremendous achievement made in opening and strengthening access to education for nomadic populations.

Expanding access is only one of the main thrusts of the NEP. Beyond access and equity, another major thrust of the program is to ensure that the education provided is qualitative and relevant to the target groups. However, early monitoring and evaluation reports of the NEP revealed that the following impinged heavily on quality, relevance and functionality:

- Use of inappropriate, and sometimes irrelevant school curriculum, teaching methods and materials;
- Inadequate infrastructure and poor conditions of existing nomadic schools; and
- Insufficient teachers and low level of required skills and competencies among the available teachers.

Classroom interaction in nomadic schools was generally poor, learning achievements low, and the pupils were not acquiring the needed

knowledge and skills. Similarly, progress in equipping the nomadic communities with relevant skills and competencies to enhance their well-being remained unsatisfactory. Subsequently, concerns about quality improvement and assurance in the NEP began to receive greater attention and focus.

Over the years, various initiatives aimed at addressing the challenge of quality improvement and assurance have been implemented while some are on-going. The present case study, *Improving the Quality of Nomadic Education in Nigeria: Going Beyond Access and Equity*, presents the overview and analysis of these initiatives; their objectives, implementation strategies, accomplishments and the lessons learned. It is intended as a resource for others facing similar challenges of quality improvement and assurance in the provision of basic education not only for special-need groups but also for the mainstream population.

7. Initiatives for improving the quality of the Nomadic Education program (NEP)

Capacity-building initiatives

The capacity-building initiatives to improve the quality of the NEP have consisted of actions in the areas of:

- Community sensitization and empowerment (CSE);
- Pedagogical renewal and teacher development.

Community sensitization and empowerment (CSE)

Interventions in the area of community sensitization and empowerment to enhance the quality of the NEP began in 1992. The major driving force behind this initiative was the realization that one of the impediments to the effective implementation of the NEP was the lack of community support and participation due to little appreciation of the value of modern education among the nomads. To overcome this impediment, a more result-oriented community sensitization and mobilization strategy was adopted using extension services approach. The goal was to harness community resources and adequately empower nomads attitudinally, socially and economically to give tangible support to the NEP.

Achievement strategies

The following strategies were adopted for the success of the CSE initiatives:

- Public enlightenment and mobilization using radio, face-to-face interactions and meetings with influential community leaders;

- Provision of functional literacy and numeracy for adults;
- Provision of agricultural extension and veterinary services; and
- Organization and management of cooperative societies.

The focus is on providing the adult nomads with relevant skills and knowledge required for dealing with the complexities of modern society. These include functional literacy and numeracy, vocational skills and “new” income-generating activities, which integrate traditional and modern techniques of animal husbandry and other income-generating skills for poverty alleviation. Another approach is the use of ICT to enhance their socio-economic well-being and facilitate active participation in the democratic process.

Objectives

The aim of the CSE initiative is to build the capacity of the nomads to support NEP through effective community participation in decision making and providing inputs such as classroom structures, instructional materials, welfare for teachers and funds where possible.

The specific objectives are:

- Creating awareness, acceptance and participation in the implementation of the NEP;
- Facilitating the identification and harnessing of community resources for the successful implementation of NEP; and
- Empowering nomadic communities socially and economically to support the education of their children.

Achievements and outcomes

The main achievements of the CSE initiatives are:

- Development and establishment of an Interactive Radio Instruction (IRI) program for Kaduna State in collaboration with the Kaduna State Media Corporation (KSMC) in 2002;
- Development and establishment of an IRI program in collaboration with Yobe Broadcasting Corporation (YBC) in 2003 for Shuwa Arabs and Kanuri nomads in Borno and Yobe states;

- Formation of 198 nomadic radio listening groups in order to increase listenership of the NCNE sponsored *Hausa/Fulfulde* Radio program “*Don Makiyaya a Ruga*,” which means “for the nomadic pastoralists in the homesteads,” and also to raise a large audience for the IRI program;
- Development and production of an integrated adult literacy primer with elements of literacy, numeracy and social action skills in *Fulfulde* language titled “*Deftere Jande nde Maube*”. There are plans to replicate this in the languages of other Nigerian nomads;
- Establishment and management of 141 adult literacy centers in different parts of the country with 4,532 learners comprising 1,243 women and 2,289 men (extension agents serve as literacy instructors in these centers); and
- Training of 1,118 nomadic women in collaboration with UNICEF and NGOs on health care, nutrition, immunization and formation and management of cooperatives.

These modest achievements have led to nomadic communities demonstrating greater enthusiasm for and giving support to the NEP. Over 200 community schools have been established in which the communities provide land, structures, instructional materials and teachers’ welfare services. These schools have been found to be better-funded and managed than government-owned schools. The NCNE provides assistance in classroom construction, provision of classroom furniture, community clinics and other social welfare facilities as an incentive for nomadic communities to establish more schools.

Pedagogical renewal and teacher development

The pedagogical renewal and teacher development initiatives are aimed at producing adequate and well-trained teachers for the NEP and improving the quality of instruction. Prior to these initiatives, the NEP was plagued with numerous problems that negatively

imparted on quality. There were not enough teachers in nomadic schools to the extent that the teacher:pupil ratio was as high as 1: 80 in certain cases. The available teachers were mostly unqualified, poorly trained and inexperienced in dealing with the nomads. They had the background and training for teaching in the regular school system for the sedentary mainstream population. The teachers knew next to nothing about the nomadic groups and could not put their special needs and circumstances into proper focus. They used inappropriate and ineffective teaching methods and materials resulting in poor classroom interaction and low learning achievement of pupils.

Objectives

The objectives of the pedagogical renewal and teacher development initiatives are to:

- Produce and retain the critical mass of teachers needed to attain the goals of the NEP;
- Train new teachers with nomadic background;
- Re-train serving teachers to understand and appreciate the peculiar needs and circumstances of the nomads;
- Acquaint teachers, supervisors and coordinators with the policy, objectives and strategies of the NEP;
- Enhance knowledge, skills and competences of nomadic teachers through the use of innovative teaching methods; and
- Improve lesson delivery, classroom interaction and learning achievement of learners.

Achievement strategies

The achievement strategies for realizing these objectives include collaboration and partnerships with experts, nomadic communities, educational institutions, NGOs and international development partners to train and recruit new teachers from among the nomads and to retrain serving teachers and the entire workforce engaged in the NEP to improve knowledge and competencies. Within this framework the following were carried out:

- In-service training programs for teachers, supervisors and coordinators of nomadic schools;

- Orientation workshops to familiarize teachers with the contents, objectives and special features of the curriculum for the NEP;
- Pre-service teacher training for young people selected from the nomadic communities; and
- Provision of incentives to encourage teacher retention in nomadic schools.

The subject and content of the trainings and workshops include:

- Philosophy of education;
- Cultural background and lifestyle of the nomads; for example, elements of “Pulaaku”, the Fulani code of conduct;
- Teaching methodologies – group/peer discussion, child-centered teaching, lecture, textbook assignment, demonstration, drama, poems and songs;
- The effective delivery of nomadic education curricula in English, mathematics, social studies, primary science, health education, Islamic studies, Ffulfulde language and handicrafts; and
- Accurate record keeping in schools.

Among the incentives to encourage teachers’ retention in nomadic schools are:

- Provision of motorcycles and bicycles to teachers in nomadic schools to ease transportation difficulties;
- Provision of accommodation, health and other welfare services by some communities; and
- Affording teachers in nomadic schools greater opportunities for in-service training than their counterparts in the regular school system.

Achievements and outcomes

The following achievements have been recorded so far:

- 2,575 out of the 4,218 teachers in the existing 1,680 nomadic schools across the country have been trained in innovative methods of delivering the school curriculum for the NEP;
- 75 head teachers, 15 supervisors and 75 state coordinators have attended workshops to acquaint them with the NEP in all its ramifications;

- 64 new teachers have been produced from among the nomads, while 34 others are currently undergoing training; and
- Teachers, supervisors and coordinators have received training in the use of the newly developed NEP teachers' guides, pupils' texts as well as accurate record keeping.

The achievements have led to the following outcomes:

- Improved quality of curriculum content delivery;
- Enhanced teachers communication, classroom interaction and greater feedback from pupils. (Teachers now have self-confidence in handling the newly developed curriculum; adopt child-centered teaching strategies that promote active pupils participation in the classroom, e.g., group method, achievement method, drama, discussion; tailor their lessons to exploit the curiosity and love for activities in children, such as in modeling, making crafts, weaving, dyeing and matting and improvisation using local equipment and materials for teaching);
- Establishment of a stimulating atmosphere for effective teaching and learning;
- Good and adequate record keeping in schools;
- Overall improvement in the learning achievement of pupils in nomadic schools; and
- Improvement both in the quality and quantity of teachers for NEP, as shown in *Table 3*.

As can be seen from the figures in *Table 3*, the number of nomadic education teachers rose steadily, except for a slight drop in 1996, from a mere 886 at inception in 1990 to 4,150 in 2002. Similarly, the number of those qualified also increased from 486 (54.8%) in 1990 to 3,139 (76%) in 2002. These increases in the number and qualification of teachers became more rapid from 1995 to date.

Table 3. Teachers by qualification and growth rate (1990–2002)

Year	No. of teachers	Teachers		Unqualified teachers		
		growth rate (%)	Qualified teachers	%	%	
1990	886	-	486	54.8	400	45.2
1991	1,489	69	613	41.2	876	58.8
1992	2,491	67	872	35	1,619	65
1993	2,362	05	623	26.4	1,739	73.6
1994	2,919	23.6	834	28.6	2,085	71.4
1995	3,170	08.6	1,421	44.8	1,749	55.2
1996	2,919	-08	1,390	47.6	2,224	52.4
1997	3,355	14.9	1,563	46.6	1,792	53.4
1998	3,358	0.8	1,646	99	1,712	51.1
1999	4,358	22.9	2,599	60	1,755	40
2000	4,748	8.21	2,948	62	1,800	38
2001	4,907	3.24	3,212	65	930	34
2002	4,150	18.2	3,139	76	1,011	24

Source: NCNE Monitoring Reports and State Coordinators Reports (1990-2002)

8. Design and development of instructional materials

The effort to improve the quality of instruction was also approached from the perspective of relevance. This perspective is based on the belief that the quality of any education program can be measured from its demonstrable relevance to its target populations, since the essence of education is to better the lives of recipients. Efforts to provide nomads with education prior to the inception of NEP in 1989 did not make any special arrangement for the type of curriculum and instructional materials to be used. Instead, the existing national curriculum and textbooks designed for conventional schools were adopted without any regard to the particular needs and circumstances of the nomads. Earlier studies (Ezeomah 1983, Junaid, 1987) cited this neglect as illustrative of why the previous attempts failed and why relevant curriculum is an important complement to high-quality educational provision for the nomads. Driven by this quest for relevance, NCNE in collaboration with its Nomadic Education Center for Curriculum Development at the Usmanu Danfodiyo University, Sokoto set out to develop relevant curricula, pupils' texts and teachers' guides that address the educational needs, aspirations and peculiar circumstances of the nomadic populations.

Objectives

The goal of the initiative to develop instructional materials is to produce relevant and qualitative materials that reflect the nomads' socio-cultural lifestyles and draw concrete examples from their backgrounds and economic activities for use in the nomadic schools. The objectives are to:

- Adapt the existing curricula in core-primary subjects (English, mathematics, science and social studies) to reflect the needs and socio-cultural lifestyles of nomads;
- Design and develop relevant and qualitative curricula, pupils'

texts and teachers' guides that give due consideration to nomads and draw concrete illustrations and examples from their backgrounds and economic activities; and

- Give prominence to local culture and languages of the nomads.

Achievement strategies

Curriculum adaptation

This involved the adaptation of existing core-primary curricula consisting of English, mathematics, science and social studies.

In carrying out this exercise, experts in the respective subject areas who have considerable understanding of the cultures of the nomads or whose backgrounds were nomadic with demonstrable experience in curriculum development were drawn from universities and colleges of education and given the task of adapting the core curriculum to suit the educational needs of the nomads.

The adaptation exercise involved synchronizing the various sections of the curriculum for each subject, namely objectives, content, teaching and evaluation methods. This was to ensure a match across board between each objective, related content, instructional and evaluation methods.

Efforts were also made to make each objective child-centered. In addition to examining the objective, curriculum content was scrutinized for relevance with respect to the objective in question and to the needs and conditions of the nomads. Irrelevant contents were removed and substituted with more relevant ones, or modified to make them more appropriate.

Irrelevant contents are materials, names, objects, concepts, illustrations and environmental activities that are alien to the nomads. These are replaced with those they are familiar with and can relate to, especially in the first three levels of their education. For instance in primary science, rabbit and pig raising, which are not practiced by nomads, were replaced with goat and sheep raising and cattle

herding. This is to make learning relevant and interesting and to start from the known in the early levels of schooling to the unknown in the higher levels of learning. Similarly, in social studies, children are taught the various types of work in the nomads' homestead, like milking, churning, removing ticks from livestock, herding and cooking, before they are taught types of work done in the larger society. This makes for easy transfer of learning from known to unknown.

The entire curriculum adaptation exercise was done using the nationally accepted core curricula in English, mathematics, science and social studies as working documents. A lot of care was taken not to reduce the level of exposure of the learners in nomadic schools below the contents of the original core curricula in order to ensure that they get educational experiences similar to those of their counterparts in conventional sedentary schools. This is expected to put the nomadic children on a par with the sedentary school children.

One area that received considerable attention was teaching methods and classroom activities. Specifically, attempts were made to draw the teacher's attention to the use of indigenous practices and materials that can make the teaching of the given topic more appealing and relevant to the children. The teacher is also exposed to various approaches to teaching different topics for use or adaptation, depending on the resources at his or her disposal. Where possible the teacher is encouraged to use illustrations and tasks that can help pupils apply the knowledge and skills used in their homes and everyday experiences. Evaluation is also child-centered when measuring attainment of the teaching objectives.

Curriculum development

This involved the development of educational materials from scratch in subject areas in which there were no existing curricula, namely, *Fulfulde* language, health education, Islamic religious knowledge and handicrafts.

The development of these new curricula and instructional materials involved the following steps:

- **Commissioned writing:** This involved the identification and commissioning of experts for each subject to produce the required drafts of curricula, pupils texts and teachers guides to serve as working documents for the next step, which is the development workshop.
- **Development workshop:** The draft curricula, pupils texts and teachers guides were subjected to critique by experts and practitioners at a writers workshop hosted by the Center for Curriculum Development with the goal of improving the quality of the draft materials before submission to NCNE.
- **Critique workshop:** As a final stage before the printing of the newly developed materials, the NCNE also subject the submitted drafts to a further critique by a different set of experts for each subject in order to ensure the much needed quality and relevance of the developed materials.

The language question

One of Nigeria's drives towards the improvement of the quality of basic education is the introduction of a national policy on the use of mother tongue or the language of the immediate environment of the learner as the language of instruction in the first three levels of primary education. NEP started implementing this by adopting the use of *Fulfulde*, the predominant language among pastoral nomads as the medium of instruction in the first three levels of nomadic schools.

Many texts have been translated to *Fulfulde*; teachers of *Shuwa* Arabic and *Kanuri* pastoralists schools are encouraged to use these languages as medium of instruction in the first three levels in their respective schools. Where teachers do not speak any of the three languages (*Fulfulde*, *Shuwa* and *Kanuri*), the *Hausa* language, which the majority of pastoralists speak and understand, is used.

Plans are on to translate pupils' texts in the three core subjects of mathematics, primary science and social studies for levels 1-3 into *Shuwa* Arabic and *Kanuri*. Texts in other subjects in Arabic and *Kanuri* languages would also be developed by the NCNE to meet the requirement on the use of mother tongue.

One of the key objectives of this pedagogy is to facilitate understanding and a more natural passage into the use of English language. Three main strategies are employed to implement this, namely: community sensitization using radio programs on the need to check language shift, teacher training, and the development, production and use of learner-centered textual materials.

Accomplishments and outcomes

To date, the National Commission for Nomadic Education (NCNE) has recorded the following achievements in the area of design and development of instructional materials:

- Adaptation/development and production of curricula in eight subject areas namely; English, mathematics, primary science, social studies, health education, handicrafts, Islamic religious knowledge and *Fulfulde* language for the education of nomadic pastoralists (15,000 copies for each subject have been printed);
- Adaptation/development and production of curricula in the four core subjects namely: English, mathematics, primary science, social studies for the education of migrant fishing groups (7,000 copies for each subject have been printed);
- Development and production of pupils' textbooks in English, social studies and primary science (24,000 copies for each subject have been printed);
- Development and production of teachers' guides in English, mathematics, social studies and primary science for the NEP;
- Development and production of pupils' textbooks in health education and handicrafts for the NEP (27,000 copies for each subject have been printed); and
- Translation into *Fulfulde* language of levels 1-3 pupils textbooks in mathematics, primary science and social studies.

The achievements have resulted in the:

- Availability of relevant and appropriate curricula for the effective implementation of the NEP;
- Use of the mother tongue, *Fulfulde*, as the medium of instruction in the first three years/levels of primary education for Fulani pastoral nomads in Nigeria;
- Availability of suitable pupils' texts and teachers' guides for the NEP;
- high school completion rates enhanced pupils' school performance and learning achievement;
- Greater community appreciation and support for the NEP.

9. Development of infrastructure

The provision of appropriate and conducive environment for teaching and learning is one of the prerequisites for improving the quality of learning in schools. At inception, the NEP faced serious problems of infrastructure such as inadequate classroom structures, shortage of furniture and an environment not conducive to learning. Teaching in most cases was conducted under tree shades and in public places such as churches and town halls. These ad hoc arrangements constituted serious impediments to effective and efficient teaching and learning.

Objectives

The objectives of this initiative are to:

- Provide a conducive environment for the teaching-learning process;
- Make suitable and adequate classroom structures available to stimulate and facilitate teaching and learning in nomadic schools;
- Supply adequate furniture for use by pupils and teachers.

Achievement strategies

The provision of infrastructure for NEP presented a peculiar problem because of constant migration of the target groups, which made the use of permanent school buildings in many cases inappropriate. Their seasonal occupational activities require that at different periods of the year they are at different settlements. To conform to the work rhythm of children and their migratory patterns, suitable infrastructure had to be used for adequate reach and accommodation. This underscored the need for innovations in the provision of infrastructure to better serve the nomadic populations. In pursuance

of this, the NCNE established close collaboration and partnerships with the respective communities to utilize local materials and resources to provide and maintain classroom structures and furniture. This undertaking came up with innovations that have helped in taking educational services to the door steps of the nomads.

The notable innovations in classroom provision are:

▪ **Mobile collapsible classrooms**

The mobile collapsible classrooms are made of canvas and light aluminum props. They can be dismantled, carried on and re-assembled in new locations as the nomads migrate seasonally. A mobile collapsible classroom accommodates about 15 pupils. So far, over 700 mobile collapsible classrooms for pastoral nomads have been provided to nomadic primary schools in the Sahel and Savannah zones of the country.

▪ **Purpose-built motorized boat schools**

The purpose-built boat schools are motorized. Each motorized boat school has three classroom compartments. The boat schools traverse the camps or settlements of nomads along the coastal and riverine areas; pick-up children for lessons and return them when the schools close for the day. Presently, there are 25 motorized boat schools in use. These two innovations (mobile collapsible classrooms and purpose-built boat schools) have helped to ensure an unbroken schooling for the pastoral nomads and migrant fishing groups.

▪ **Provision of permanent classroom structures**

Permanent structures in the form of a cement block of classrooms are also used for the pastoralists, based on the premise that the ultimate aim of NEP is to settle the nomads and integrate them fully into the mainstream Nigerian society. Such structures could serve as focal points for permanent settlement.

The NCNE has spent N18,446,141.00 on rehabilitation of 196 classrooms and construction of 42 cement wells across 238 nomadic communities. In addition, N135,102,789.00 has been expended on the provision of infrastructure and furniture to the nomadic schools

across the country. The magnitude and spread of this nationally can be gauged from the details of expenditure presented in *Table 4* below:

Table 4. Impact of the National Commission for Nomadic Education community development projects in the nomadic communities

Zones	1999/2000			2000/2001			2001/2002			2002/2003		
	Nature of asst.		Total Cost (N)	Nature of asst.		Total cost (N)	Nature of asst.		Total cost (N)	Nature of asst.		Total cost (N)
	Cement wells	C/ room rehab.		Cement wells	C/room rehab.		Cement wells	C/ room rehab.		Cement wells	C/ Room rehab.	
North-west	5	8	630,000 \$45,000	1	10	680,000 \$4,857	2	8	950,000 \$6,786	-	16	960,000 \$6,857.14
North-Central	5	17	839,000 \$5,993	4	9	1,110,000 \$7,929	1	15	1,320,000 \$9,426	-	8	710,000 \$5,071.42
North-East	16	-	984,000 \$7,039	-	7	1,680,000 \$12,000	2	24	1,740,000 \$12,429	-	10	650,000 \$4,643
South-west	4	4	400,000 \$2,857	2	10	890,000 \$6,357	-	11	830,000 \$5,929	-	5	310,000 \$2,214
South-south	-	4	400,000 \$2,857	-	2	180,000 \$1,296	-	5	750,000 \$5,357	-	3	220,000 \$1,571
South-east	-	2	100,000 \$716	-	9	1,010,000 \$7,214	-	9	890,000 \$6,357	-	3	213,141 \$1m525
Total	30	32	3,353,000 \$23,950	7	47	5,550,000 \$39,643	5	72	6,480,000 \$46,286	-	45	3,063,141 \$21,880

Note: 42 Cement wells, 196 classes rehabilitated with 238 communities benefiting, total cost – N18,446,141.00 (\$131,758.15)

Source: NCNE Annual Reports and Zonal Offices Reports (1999-2003).

Accomplishments and outcomes

The infrastructure development initiatives aimed at improving the quality of the NEP has accomplished the following:

- Over 500 new nomadic schools were built and furnished;
- More than 700 mobile collapsible classrooms provided have been for the NEP, 25 motorized boat schools have been built and are in use in migrant fishing communities;
- More permanent classroom blocks have been built in nomadic schools across the country;
- Environments more conducive to learning have been created in nomadic schools; and
- School enrollment, retention and completion have increased.

10. Cost analysis

In the planning and implementation of the NEP quality improvement and assurance initiatives, the NCNE has spent N151,758,956.13¹ on the development of curricular and instructional materials; N18,594,573.00 on teacher development, and N140,102,787.00 on the provision of infrastructure and furniture for the various nomadic schools across the country (See *Table 5*).

Table 5. Federal government funding of Nomadic Education program 1990-2003

Year	Instructional materials curriculum	School building and furniture	Teacher development	Total (N)	Dollar equivalent \$
1990	2,622,630.00	1,604,509.00	-	4,227,139.00	30,193.85
1991	2,209,157.00	2,622,630.00	453,015.00	5,284,802.00	37,748.60
1992	1,354,073.00	1,604,509.00		2,958,582.00	21,132.73
1993	564,803.00	10,362,443.00	298,298.00	11,225,544.00	80,187.46
1994	2,717,070.00	4,213,368.00		6,930,438.00	49,503.13
1995	2,508,196.00	65,700.00	580,000.00	3,153,896.00	22,527.83
1996	7,747,287.00	35,000.00	1,147,249.00	8,929,536.00	63,782.40
1997	7,544,430.00	36,742.00	1,295,000.00	8,876,172.00	63,401.25
1998	5,497,198.00	-	1,116,500.00	6,613,698.00	47,240.70
1999	14,026,272.00	-	1,650,000.00	15,676,272.00	111,973.37
2000	13,822,572.00	-	3,560,000.00	17,382,572.00	124,161.23
2001	27,715,771.00	50,005,593.00	3,604,000.00	81,352,364.00	581,088.31
2002	19,929,497.13	64,552,293.00	3,390,511.00	87,872,301.13	627,659.30
2003	43,500,000.00	5,000,000.00	1,500,000.00	50,000,000.00	357,142.85
Total	151,758,956.13	140,102,787.00	18,594,573.00	310,456,316.13	2,217,743.01

Source: NCNE Budgetary Allocations 1990-2003

Table 6 below identifies the incremental costs and sources of funding for the Nomadic Education program.

1. Figures are in Nigerian Naira

Table 6. Incremental cost and sources of funding of Nomadic Education program

Recurrent	Government	Donor	NGO	Parents	Total (N)	Dollar Equivalent \$
Teachers Salary						
Instructional Materials	151,758,956.13	3,694,400	1,000,000		155,953,056.13	1,113,950.40
Teacher development	18,594,573.00	7,000,000			25,594,573.00	182,818.38
School Supervision	17,000,000.00				17,000,000.00	121,428.58
Maintenance & operation	18,446,141.00				18,446,141.00	131,758.15
Adminis- tration						
Investment						
Class rooms	118,068,984.88				118,068,984.88	843,349.90
Furniture	4,000,000.00				4,000,000.00	28,571.43
Vehicle	68,312,054.00				68,312,054.00	487,943.25

Source: NCNE projections based on 2003 figures

Table 7 provides more details on the general funding of the Nomadic Education program:

Table 7. Funding of Nomadic Education 1990 – 2002

Year	Recurrent grant (N)	Capital grant (N)	Total (N)	Dollar equivalent \$
1990	4,868,887.00	-	4,868,887.00	34,777.8
1991	13,260,000.00	-	13,260,000.00	94,714.3
1992	13,260,000.00	-	13,260,000.00	94,714.3
1993	28,390,000.00	6,588,000.00	34,978,000.00	249,842.9
1994	31,238,875.00	8,300,000.00	39,538,875.00	282,420.5
1995	36,280,088.00	8,262,500.00	44,542,588.00	318,161.3
1996	36,280,090.00	14,805,000.00	51,085,090.00	364,893.4
1997	42,455,090.00	13,503,750.00	55,958,840.00	399,706.0
1998	58,388,808.00	33,808,750.00	92,197,558.00	658,554.0
1999	80,832,640.00	83,000,000.00	163,832,640.00	1,170,233
2000	147,291,366.00	62,728,000.00	210,019,366.00	1,500,138.3
2001	55,168,204.00	87,000,000.00	142,168,204.00	1,015,487.2
2002	34,211,000.00	-	34,211,000.00	244,364.3
Total	581,925,048.00	317,996,000.00	899,921,048.00	6,428,007.5

Source: National Commission for Nomadic Education Financial Record 1990 - 2002
Exchange rate: N140 to 1 US\$ as @ April, 2003

Long-term cost to government

In the spirit of Nigerian National Rolling Plan, this long-term cost to government for improving the quality of Nomadic Education in Nigeria represents the budget for the period 2004 to 2006. The schedules are presented in the tables below:

Table 7a. Identification of long term cost to government budget

Year	Variables and estimates				Total (N)	Dollar equivalent (\$)
	Requirement cost	Instructional materials	School buildings & furniture	Teacher development		
2004	47,603,106.67	45,675,000.00	67,779,600	3,560,036.55	164,617,743.20	1,175,841.02
2005	56,152,624.63	47,958,750.00	71,168,580	3,738,038.38	179,017,993.00	1,278,699.95
2006	66,237,636.01	50,356,687.50	74,727,009	3,924,940.30	195,246,272.80	1,394,616.23
Total	169,993,367.31	143,990,437.50	213,675,189	11,223,015.25	538,882,009.00	3,849,157.21

Source: NCNE projections based on 2003 figures

The estimates above are based on the average growth rate of nomadic schools, staff recruitment and student enrollment for the past thirteen years, that is, from 1990 to 2003.

Table 7b. Beneficiaries (students, teacher and school population) estimates for 2004 to 2006 based on existing average annual growth rate

Year	Student	Teacher	Schools
2004	258,223	5,788	1,764
2005	353,790	6,826	1,852
2006	438,841	8,052	1,945

Source: NCNE projections based on 2003 figures

Table 7c. Annual recurrent cost estimate

Year	Total Recurrent Cost (N)	Recurrent Cost per Student (N)	% Recurrent cost over total cost
2004	51,163,143.22	179.38	31.08
2005	59,890,663.01	169.28	33.46
2006	70,162,576.31	159.88	35.94

Source: NCNE projections based on 2003 figures

As shown in the above table, the total recurrent estimate is made up of recurrent cost and teacher development cost.

Table 7d. Annual total cost per student

Year	Total cost on annual basis (N)	Cost per student (N)
2004	164,617,743.20	577.15
2005	179,017,993.00	506.00
2006	195,246,272.80	444.91

Source: NCNE projections based on 2003 figures

Based on the current level of recurrent expenditure (cost) per student is N148.78. However, *Table 7c* shows that the estimated recurrent expenditure for the three years (2004 to 2006) is slightly above that of the 2002 recurrent cost per student.

This notwithstanding, the recurrent expenditure (cost) for the years under consideration range between 31.08% and 35.94%. This implies that more money will be expended on the capital projects.

Table 7e. Annual investment cost for three years

Year	Investments (N)		
	Classrooms	Furniture	Vehicles
2004	123,972,434.10	4,200,000	71,727,656.70
2005	130,171,055.80	4,410,000	64,896,451.30
2006	136,679,608.60	4,630,500	68,141,273.87

Source: NCNE projections based on 2003 figures

11. Evaluation of quality

The quality of NEP was assessed through regular monitoring and evaluation activities.

The monitoring initiatives

Monitoring and evaluation are the major tools of assessing the progress and effectiveness of any program. Initially, monitoring of the NEP was carried out using the conventional school monitoring instruments. These instruments were found to be unsuitable for the NEP, given its specialized nature. They were not appropriate for assessing its peculiar teaching and learning process. To redress this, new monitoring approaches and instruments were designed to obtain comprehensive and reliable data for quality assessment and compliance to stipulated standards. This was to accurately determine the effectiveness and viability of the NEP. The new approach currently in use is participatory in nature and much more comprehensive. A joint committee of stakeholders carries out monitoring; the committee's membership is drawn from the Federal Inspectorate Division of the Federal Ministry of Education (FME), the State Inspectorate Units, State Coordinating Units of NEP, Local Government Education Authority, Active Community Leaders, Pastoral NGOs, Parent-Teacher Association (PTAs) and the NCNE. This approach has further strengthened the support and commitment of all stakeholders. In particular, it has reinforced the confidence of the nomadic communities and boosted their sense of belonging and ownership of NEP. Furthermore, it has brought about a remarkable improvement in the school-community relationship. Many communities now provide accommodation for teachers in their homesteads, donate land for the citing of schools, build classrooms and even contribute to paying teachers' remuneration.

Teacher Performance Rating Scale (TPRS)

Towards a more effective monitoring and evaluation, a Teacher Performance Rating Scale (TPRS) was introduced to evaluate the performance of teachers. The rating scale has four variables: planning of lessons, classroom management, teaching procedure, and teachers' personality. The use of the TPRS has considerably improved the level of instruction in nomadic schools, because the feedback from its use allows for a more accurate assessment of training and re-training needs of teachers. This has helped to make the implementation of teacher training and development of programs and activities more focused and results-oriented. Subsequently, there has been a remarkable improvement in lesson preparation and presentation as well as appropriate use of teaching aids by the teachers.

The new monitoring and evaluation initiatives have contributed to the significant improvement in pupils' learning achievement and performance in public examinations. Pupils in nomadic schools now compete favorably with their counterparts in conventional schools at the national common entrance examinations into secondary schools and in first school leaving certificate examinations. *Table 8* shows the rate of transition of pupils from nomadic schools into junior secondary schools.

The Table shows that between 1992 – 1998, 28,769 pupils graduated from the nomadic primary schools in Nigeria, and 15,429, representing (54%) of these pupils gained admission into secondary schools. By 2002, the number of graduates from nomadic schools rose to 46,824, and the rate of transition to secondary schools rose to 55%.

Table 8. Rate of transition of graduates of nomadic primary schools to junior secondary school/unity schools 1992-2002

Year	Total graduates	No. admitted to secondary schools	%	No. not admitted	%
1992	1,274	534	45	650	55
1993	1,541	742	48	799	52
1994	2,079	1,050	51	1,029	49
1995	4,430	2,363	53	2,065	47
1996	5,609	3,090	55	2,519	45
1997	6,304	3,588	57	2,716	43
1998	7,632	4,072	53	3,560	47
1999	7,632	4,072	53	3,560	47
2000	6,333	3,456	54.35	3,560	46.65
2001	7,600	4,147	55	3,452	45
2002	9,120	4,976	54.6	4,142	45.4

Source: NCNE Monitoring Report, 2002

12. Summary and conclusions

Having recorded considerable success in widening access to basic education for the hitherto hard-to-reach Nigerian nomadic populations through the NEP, the NCNE began to give greater focus to quality improvement and assurance of the program. The challenge of improving the quality of the NEP to ensure the attainment of the stated objectives and the desired outcomes in learners called for innovations, considering the peculiarities of the target population. The NCNE, in addressing this challenge, designed and embarked on a number of interventions and initiatives which are primarily learner-centered and specific to the target group. A key component of this quality improvement drive is capacity building for effective community involvement and active collaboration for program support and sustainability. Other components include:

- Pedagogical renewal and teacher development to enhance content delivery and the quality of instruction;
- Design and development of appropriate materials for program relevance to stimulate and facilitate learning; and
- Development of infrastructure to engender a conducive learning environment as well as ensure full and meaningful participation of the target groups in education.

The community sensitization and empowerment initiatives have been very successful. The nomadic populations now show remarkable interest in the successful implementation of the NEP. Many of the communities readily donate school buildings and classroom structures with furniture, collaborate with NCNE to ensure proper school management and contribute to teacher welfare and remuneration. Efforts in pedagogical renewal and teacher development have led to the availability of more teachers and improved teacher quality. The lesson delivery skills and competencies of the NEP teachers have been enhanced, resulting in improved pupils' academic performance. The NCNE has also recorded landmark achievements in the design and development of tailor-made curricula and instructional materials, including pupils' texts and teach-

ers' guides. Emphasis has been placed on appropriateness and relevance of the learning content. Furthermore, prominence has been given to the nomads as well as their socio-cultural milieu. In all, there has been a remarkable and highly significant improvement of the NEP as a result of the initiatives of NCNE reported in this case study.

Although the quality improvement drives of the NCNE are still ongoing, results so far have been very encouraging. It is certain that with greater impetus and program sustenance, even better results will be achieved. Efforts will be intensified in the following areas:

- Selection of more individuals from nomadic communities for training as teachers;
- Heightened use of cost-effective distance learning techniques to widen access to basic education and improved tuition;
- Development and production of instructional materials in other indigenous languages than Fulfulde;
- Seeking new partnerships and greater collaboration with development partners and other stakeholders;
- Evolving new strategies to increase community support and ownership of schools.

13. Recommendations and lessons learned

The experiences and recorded successes of the NCNE in its implementation of the NEP clearly show that barriers to improving the quality of basic education can be transcended through innovative policies and programmatic interventions. These innovations in the delivery of education hold promise for educational reforms in Africa if adopted and replicated, as the case may be, to suit different situations and target groups across the continent.

Initiatives directed at quality improvement must be learner-centered. Every effort must be made to make the quality improvement initiatives community-based. The experience of the NCNE has also shown that community support and participation is a key prerequisite for success. Therefore, it is instructive to make the benefiting community the major stakeholder of all education development programs.

Pedagogical renewal, through regular teacher development and re-training, should be an integral part of quality improvement and assurance initiatives. The teacher is a key factor in the education delivery system and should therefore be adequately prepared at all times.

Education delivery systems need flexibility to make them more responsive to the target groups.

An integrated approach to the provision of education should be adopted. Educational development initiatives should be planned and aligned with other community improvement and development programs such as agricultural extension, rural development and social welfare services. This approach attracts the interest and involvement of more stakeholders as well as guarantees community support and collaboration.

It is important that from the onset, the planning and implementation of education programs give adequate attention and due consideration to widening access and ensuring equity as well as quality improvement and assurance.

14. Appendix

Table 9. Summary presentation of initiatives for improving the quality of the Nomadic Education program

Key initiatives	Situation before initiative	Objectives of the initiative	Achievement strategies	Accomplishments	Outcomes
Capacity Building, Community Sensitization and Empowerment.	<ul style="list-style-type: none"> Low appreciation of modern education by nomadic communities resulting in lack of support for the NEP. Poor participation of children of nomads in NEP. 	<ul style="list-style-type: none"> Create awareness, acceptance and participation in NEP. Facilitate the identification and harnessing of community resources for the successful implementation of NEP. Build capacity of nomadic communities to give tangible support and participate effectively in the implementation of NEP. 	<ul style="list-style-type: none"> Public enlightenment and mobilization using radio and other information technologies. Provision of functional literacy for adults. Provision of agricultural extension and veterinary services. Organization and management of cooperative societies. Enhancing the socio-economic well-being of nomadic communities. 	<ul style="list-style-type: none"> Development and establishment of an Interactive Radio Instruction (IRI) program for adult nomads. Formation of 198 radio listening groups among nomads. Establishment and management of 141 adult literacy centers in nomadic communities. Training of women in nomadic communities in health care, nutrition and new income generating skills. 	<ul style="list-style-type: none"> Nomadic communities now demonstrate enthusiasm for NEP, participate actively in its implementation and give tangible support. Over 200 community schools have been established in which the nomads provide school structures, instructional materials and contribute to teachers' welfare. Improved participation of children nomads in NEP.
Pedagogical Renewal and Teacher Development.	<ul style="list-style-type: none"> Inadequacy of teachers. High teachers attrition rate. Available teachers unqualified and largely inexperienced. Teachers knew next to nothing about the nomadic populations, their educational needs and circumstances. Teachers had background of sedentary groups and their training prepared them for conventional schools and teaching methods. Classroom interaction very poor and uninspiring. Low learning achievement by pupils. 	<ul style="list-style-type: none"> Re-train serving teachers to understand and appreciate the peculiar needs and circumstances of the nomads. Acquaint teachers, supervisors and coordinators with the rationale, policy, objectives and strategies of the NEP. Train new teachers with nomadic backgrounds. Produce and retain the critical mass of teachers needed to attain the goals of the NEP. Improve lesson delivery, improve classroom interaction and learning achievement. 	<ul style="list-style-type: none"> In-service training programs for teachers, supervisors and coordinators of nomadic schools. National teachers orientation workshops to familiarize teachers with the contents, objectives, special features and expectations of the developed curriculum for the NEP. Pre-service teacher training for young people selected from the nomadic communities. Provision of incentives to encourage teacher retention in the nomadic school system. 	<ul style="list-style-type: none"> To date trained 2,575 out of a total of 4,218 teachers in the existing 1,680 nomadic schools across the country have been trained in innovative methods of delivering the new NEP Curriculum. 75 Head teachers, 15 supervisors and 75 State Coordinators to acquaint them with the rational, policy and objectives of the NEP. 64 new teachers from among the nomads while 34 others are still undergoing training. Teachers, supervisors and coordinators have received training in the use of developed NEP teachers guides, pupils texts and accurate record keeping. 	<ul style="list-style-type: none"> Improved quality of curriculum content delivery. Enhanced teachers communication, classroom interaction and greater feedback from pupils. Establishment of a stimulating atmosphere for effective teaching and learning. Good and adequate record keeping in schools. Overall improvement in the learning achievement of nomadic school children.

Key initiatives	Situation before initiative	Objectives of the initiative	Achievement strategies	Accomplishments	Outcomes
<p>Design and Development of Instructional materials.</p> <p>Curriculum Adaptation and Development.</p> <p>Production of pupils' textbooks and teachers guides.</p>	<ul style="list-style-type: none"> Use of the national curriculum and textbooks designed for conventional schools. Curriculum and textbooks in use focused on the sedentary segment of population with no consideration to the special needs and peculiarities of nomads. Local languages and socio-cultural lifestyles of nomadic peoples completely neglected in the existing curriculum and textbooks. No curricula or textbooks in the local languages, health education and Islamic religious knowledge 	<ul style="list-style-type: none"> Adapt the existing curriculum in core-primary subjects of English, Mathematics, Science and social studies to reflect the needs and socio-cultural lifestyles of nomads. Design and develop relevant and qualitative curricula, pupils texts and teachers' guides that give due consideration to nomads and draw concrete illustrations and examples from their backgrounds and economic activities. Give prominence to local culture and language in the teaching learning process for effectiveness 	<ul style="list-style-type: none"> Collaboration with curriculum experts with nomadic backgrounds to synchronize and adapt the existing in curricula in the core-subjects to be appropriate to nomads. Collaboration with curriculum experts with backgrounds or demonstrable experience of nomadic cultures to design and develop relevant curricula, pupils texts and teachers' guides. Translation of mathematics, primary science and social studies textbooks from English language to Fulfulde, the local language of Nigerian nomadic pastoralist 	<ul style="list-style-type: none"> Adapted, developed and produced 15,000 copies each of the curricula in eight (8) subject areas, namely English Language, Mathematics, Primary science, Social studies, Health Education, Handicraft, Islamic Religious Knowledge and Fulfulde Language for the education of NEP nomadic pastoralists. Adapted, developed and produced 7,000 copies each of curricula in four subject areas namely: English Language, Mathematics primary science and social studies for the education of migrant fishing communities. Developed and produced 24,000 copies each of pupils textbooks in English language, social studies and primary science. Developed and produced 6,000 copies each of teachers' guides in English language, Mathematics, Social studies and primary science for the NEP. Developed and produced 27,000 copies each of pupils textbooks in Health Education and Handicraft for the NEP. Production of Fulfulde and Islamic Religious Knowledge textbooks in progress. Translation of Mathematics, Primary science and Social studies pupils textbooks, 1 from primary 1 to 3 in Fulfulde the mother tongue of the pastoral nomads. 	<ul style="list-style-type: none"> Availability of relevant and appropriate curricula for the effective implementation of the NEP. Use of the mother tongue, Fulfulde, as the medium of instruction in the first three years/ levels of primary education for pastoral nomads in Nigeria. Availability of suitable pupils texts and teachers guides for the NEP. High school completion rates enhanced pupils' school performance and learning achievement. Greater community appreciation and support for the NEP.

Key initiatives	Situation before initiative	Objectives of the initiative	Achievement strategies	Accomplishments	Outcomes
<p>Development of Infrastructure.</p> <p>Developing conducive learning environment (classroom structures and furniture).</p>	<ul style="list-style-type: none"> • Inhospitable learning environment. • Teaching conducted in very unsuitable places such as under trees, and public places. • Over crowded classrooms. • Dismal school attendance records as a result of the unsuitable and inhospitable classrooms and learning environment. • Acute shortage of classroom furniture such as desks, and tables. 	<ul style="list-style-type: none"> • Provide conducive environment for the teaching-learning process. • Make suitable and adequate classroom structures available to stimulate and facilitate learning in nomadic schools. • Supply adequate furniture for use by pupils and teachers. 	<ul style="list-style-type: none"> • Adoption of mobile schools by using: (a) collapsible and movable materials such as canvas and light aluminum props to build classrooms (b) purpose built motorized boats. • Collaborating with local communities to use indigenous materials and resources to build, provide and maintain classroom structures. • Collaborating with local communities to establish more schools. 	<ul style="list-style-type: none"> • Over 500 new nomadic schools established. • More than 700 mobile collapsible classroom provided for the NEP. 25 motorized boat schools built and are in use in migrant fishing communities. • More classroom blocks built in nomadic schools across the country. 	<ul style="list-style-type: none"> • Creation of more conducive learning environment in nomadic schools. • Increased school enrollment retention and completion.

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Improving the Quality of Nomadic Education in Nigeria

The book

The study describes efforts to provide basic education to 3.1 million school-age children of the nomadic people of Nigeria, comprising migrant communities who make their living by tending cattle, sheep and goats and also fishing. Prior to these interventions, the enrollment rate of nomads in formal and non-formal education was very low, and the illiteracy rate was between 0.2% and 2.0%. The Nomadic Education Program (NEP) was designed to give nomads unhindered access to high quality basic education. Nigeria's National Commission for Nomadic Education (NCNE) is in charge of carrying out the NEP.

The study elaborates on the innovative approaches and strategies employed and the accomplishments achieved in the effort to give nomads greater and fairer access to basic education and to improve the quality of their education. The NEP has developed and used relevant curricula, teaching methods and materials, and suitable facilities for the nomads. NEP schools have flexible academic calendars and hours that suit the learners. It is building awareness in the various target communities and empowering its members to take responsibility for educating their children.

The study gives the goals targeted, strategies employed and results obtained in initiatives to improve teacher training, adapt the curriculum and create new materials using local languages, and construct mobile, quick-assembly classrooms, motorboat schools as well as permanent school buildings.

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