

**SOCIAL SERVICES AND THE POOR:
A QUALITATIVE STUDY OF BENUE STATE, NIGERIA**

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ABSTRACT

The study aimed at characterizing poverty in qualitative terms focusing specifically on the access aspect. Main element of access problem were affordability quality as well as constraints facing the poor coupled with their capacity to evolve alternative coping strategies. Based government areas were selected wherein villages or communities represented with different poverty statuses as regards availability and the quality of social services. First hand information was obtained directly from the poor themselves through group interviews using an unstructured interview guide applied by tape recorders and note-taking. Supplementary sources data included direct observation, documentary materials, focus group discussions (FGD) and selected case studies. It was found that the physical availability of certain services is not equitable and fail to synchronize well with the priority expressed by the poor. Second, the quality of services leaves much to be desired as exemplified in clinics without drugs and beds, let alone doctors and schools without chalk and other important items as well as qualified teachers. Third, access is hampered by the inability of the poor to even afford the basic services owing the limited ability to generate purchasing power. The study concludes that the current approach to social services provision runs head-long into access problems that hamper the combined efforts of governments and donor agencies to alleviate poverty in the populace; hence the need for incorporating the access factor in strategies in the country has to come very obvious.

Key words: Poverty, Social services, Access, qualitative measures.

INTRODUCTION

Development in terms of strategies for abating poverty has progressed in definite stages, from GDP or GNP growth followed by

redistribution with growth and then by the "basic needs" approach. In the process, one of the unresolved issues is the unique characterization of poverty. Development specialists have relied for many years on

quantitative criteria such as personal and national incomes as the basis for designing projects for poverty alleviation in developing countries to be funded by the World Bank and other international agencies. However, the subsequent emphasis on the basic needs approach in the past few decades has revealed the inadequacy of quantitative criteria for characterizing poverty. The rationale for this approach, as expressed by Ströcken and Burki (1978), that "it is difficult for a malnourished, illiterate, rapidly growing population in ill-health to make progress towards sustained development" implies that the poverty character is less of quantitative than qualitative parameters. Moreover, as earlier established by Srinivasan (1977), several measurement problems exist to make the quantitative methods ineffectual.

This is where the characterization of the Jakarta poor made remarkable difference as studied by Papanek and Kuntjoro - Jakti (1978) who showed how poverty was demonstrated among various vulnerable groups including harlots and street boys in such ways that no quantitative measures could possibly capture. Therefore the objectives of the present study is to characterize poverty in qualitative terms focusing specifically on the access aspect. The central theme is that the "basic needs" approach goes beyond mere provision of social services but extends to the ways and means of facilitating the access of the poor to the services. The issues involved in investigating the access problem were affordability, quality as well as constraints facing the poor coupled with their capacity to evolve alternative strategies and coping mechanisms.

Such a qualitative investigation of the access of the poor to basic social

services in different places is crucial to the effective delivery of domestic and international intervention programmes in Nigeria and other parts of the world.

METHODOLOGY

Benue State of Nigeria is typical in the poverty profile of the country. There is observation to the effect that the population of the State is characterized by a large rural poor who (i) live in places distant from any urban centre; (b) are poorly served by transport infrastructure and services; (c) are lacking facilities for health, education and others; and (d) are growing mainly subsistence rather than cash crops. There is also a sizeable proportion of urban poor in the capital (Makurdi) and other major towns whose features include people (i) living in unofficial housing area (predominantly thatched roof houses or huts); (ii) not enjoying piped water and no formal sanitation services; (iii) having inadequate transport, (iv) having inadequate school and child care facilities, (v) with high proportion of children working and (vi) that are subjected to considerable socio-cultural constraints.

Based on these identification features, three local government areas (LGAs) were selected for study wherein villages or communities were represented with different poverty statuses as regard availability and quality of social services. The LGAs and villages or communities selected were Makurdi LGA (Logo community), Otukpo LGA (Adankari, Adoka villages) and Oju LGA (Anyuwogbu, Adum villages). The Makurdi LGA represents an urban community with an urban infrastructure complex; the Oju LGA represents a typically rural settlement while the Otukpo LGA represents a peri-

urban poverty group with mixed features and infrastructure. The rule of thumb applied was to draw the lines with three concentric circles, radius circles with less than 5km, between 5 and 50km, and further than 50km from the metropolis to demarcate urban, peri-urban and rural respectively.

The qualitative survey was conducted in late 1993 and early 1994 and involved collection of first-hand information directly from the poor themselves about their current situation, how they attempted to improve this, how government policies and services affected them, and what their own priorities for improved services and opportunities were. These data were collected through in-depth interviews, group interviews, direct observations, documentary materials, focus group discussions (FGD) and selected case studies. The main sources of data included the following:

- (i) Government officials - such as officials involved in the administration of relevant services in government agencies, e.g., State Utility Board (water and electricity), State Ministry of Health, Local Government Departments (Health and Education);
- (ii) Local leaders - the network of local leaders established along specific programme lines (e.g., opinion leaders for the family planning programmes);
- (iii) Traditional service providers - including traditional headers, informal school proprietors (e.g., koranic schools, home lessons, bible classes);
- (iv) Modern service providers - health clinic workers, school teachers among others;
- (v) Vulnerable groups of the poor -

including, but not limited to, the following sociological categories of particular interest:

- divorced/widowed/unmarried/young mothers,
- recent migrants with families,
- families with large number of children,
- pregnant woman/women in labour,
- sick poor (child/adolescent/adults/male or female heads of household).

The main instrument of data collection was an unstructured interview guide. This was applied using tape recorders to record discussions and interviews in addition to note-taking. A typical focus group discussion was homogenous with respect to gender and age classes, with size ranging from five to eight participants. Health and education were the critical social services concentrated upon in the study.

RESULTS AND DISCUSSION

PARAMETERS OF ACCESS

Physical Availability and Quality of Services

The relevance of physical availability of social services is quite obvious as only the available facilities can be accessed by the poor. Figure 1 presents the physical availability of health and education facilities in three circumferential ranges. The local government managed primary health centres (PHCs) were located at close range in all cases. Additionally, a secondary health facility in the form of state-managed hospital or maternity centre was located at close range to the peri-urban and urban poor while the urban poor at Makurdi and Olukpo also had the more advanced general hospital close-by. The Adoka PHC illustrated the bad quality of health services to the poor majority.

Only one staff was employed, whose designation was Community Health Extension Worker (CHEW), to attend to the sick in the clinic. The drug cupboard was completely empty and critical items including sterilizing unit and gloves were missing. A number of patients slept on mats and light textile materials spread on the cemented floor. Drips being administered to patients were hung on a nail on the window frame.

Table 1 breaks down the primary health care into its components and assesses the availability of each component. The rural poor lacked some critical health services desired at close range, including family planning, provision of essential drugs, protection of water sources among others. In particular, protection of water sources was not available to all categories of the poor at close range.

A primary school was located at close range while secondary school was present at medium range only; the rural poor could obtain middle level and higher education at distant range only. The peri-urban poor studied had the benefit of secondary school at close range in addition to primary school but the middle-level and higher education facilities were available at medium range and distant range respectively. In contrast, all levels of educational service were available to the urban poor at close range including a federal-managed agricultural university and a state-managed general university. The quality of educational service available varied from place to place but was generally poor in terms of infrastructure, teaching materials and staff strength which were not investigated further in good depth. Nevertheless, the primary school observed at Adoka had its building structures made of thatch and wooden

poles. There were neither a playing ground nor assembly ground and the floors were not cemented. Children sometimes received instructions in the open air while the shortages of chalk, duster and teaching aids as well as basic record-keeping items such as registers and others were reported. The secondary school at Adoka also lacked teachers in specific subjects especially science and mathematics.

According to Table 2 the rural poor lacked all types of education services at close and medium ranges except primary school, probably explaining why the rural-urban migration in terms of children moving to town for high education was most active at the post-primary school age.

Affordability of Social Services

The issue of affordability is important in so far as it affects access of the poor to the limited available services. Failure to make services available at affordable costs prevents the poor from gaining access to such services. This issue is determined by the observed socio-economic profile of the poor, particularly concerning the proportion of disposable income that can be expended to obtain basic services, considering the price regimes, transportation and other incidental costs involved. The minimum size of poor household (defined as all persons living under the same roof and having common eating arrangement including boarders and members that were temporarily absent but excluding lodgers) as encountered in the field was six with no striking difference across the locations. The youth, especially children under 15 years, were in large proportions indicating a high dependency ratio. Based on the different frequency of observing aged persons (over 60 years), rural dependency

ratios might be generally higher than urban dependency ratios.

The housing conditions of the poor households were practically sub-standard. The urban poor were observed to live more often in single rooms hired apartments inside buildings while their rural counterparts lived more in owned whole buildings. The urban poor often shared kitchen and bathroom facilities but the rural poor usually had no such facilities. All categories of the poor households lived mostly in dwellings without toilet facility. The central pit system was available in Logo (urban) and Adoka (peri-urban) while the frequently observed means in the rural areas (Adum and Adankari) was to pass excreta in the near-by bushes. A balanced mixture of corrugated iron sheet-roofed and thatched-roofed houses was observed in logo (urban) and Adoka or Anyuwogbu (peri urban) unlike those used by the rural poor in Adum or Adankari that were predominantly thatched-roof types. In all the houses visited, the walls were made of either cement block or rendered mud with or without concrete floor. Refuse was generally disposed within compound or through unauthorised heaps, the former method being more prevalent in the rural (Adankari, Adum) and peri-urban (Adoka, Anyuwogbu) places.

The employment status of the poor also varied considerably. Most adult males interviewed in Logo (urban poor) were engaged in paid employments such as messenger in the ministry, security guards in the universities among others where they earned the current minimum public sector wage rate (about N1300 per month). Their wives engaged in selling provisions or drinks except a few that were full-time housewives. We observed a number of school age children in the community working in the Makurdi metropolis as bus

conductors, bread sellers, motor park touts, to mention a few. The women reported incomes of N50 - N200 per month range with which they supported their families.

On the other hand, farming predominated as a source of employment in the rural and peri-urban places. The household members selected operated family farms (using members as main source of labour), growing food crops, a good part of which was consumed at home. Revenue from last season operations ranged from N5000 to N10,000 per rural household. In general, wives and children were observed to engage in other activities in these places than farming and food marketing. Women kept a few livestock, especially which scavenged freely in the villages. Additional jobs of adult males encountered in the rural and peri-urban places included blacksmith, carpentry and other artisanal. A blacksmith was interviewed at Anyuwogbu who had sold up to five machetes (about N25 each) over the past two months and he appeared too old to farm to earn additional cash and non-cash incomes.

Reviewed against the background of their economic status, the inability of the poor to meet the cost of social services became self-evident. They made particular mention of the education services (uniform, fees, levies) and health services (purchase of drugs) as their priority cost items. Several children were observed staying out of school based on such reasons as non-payment of fees. The differential physical availability worsened the affordability issue further. For instance, based on Fig. 1, for the rural poor to access secondary health facility, they must incur additional cost of transportation over at least 50km whereas such a cost might only be necessary to access an advanced secondary type in the

case of peri-urban poor and was completely eliminated in the case of the urban poor. The problem of transport cost was worsened by the need for multiple visit to the health facilities by the poor when follower-ups became essential as was often the case. Differential transportation in the same direction for accessing educational services by the different categories of the poor was also evident. Generally the rural poor were most disadvantaged concerning the necessity to incur such costs compared to their peri-urban and urban counterparts. Apparently this represents an important factor to explain the frequent out-migration of people from rural to peri-urban and finally to urban places in the state.

Priorities of the poor for social services

Priority relates to access in that the poor would wish to obtain those services that they have considerable preference for. Such preferences were revealed through the allocation of resources at their disposal. The revealed preference of the poor for selected social services was evaluated through a priority rating by the poor themselves. Water supply was top-most in all cases whereas different priorities were attached to the other services depending on the location. The general order was: rural: water and sanitation, electricity, health, education, roads and communication; peri urban: water and sanitation, electricity, roads and communication (or health), education, health; urban:- water and sanitation, electricity, education or health, electricity.

The highest priority of the poor for water and sanitation services reflected the widespread observed inadequacy of water supply to poor households. In Adankari (rural), the poor had no form of water and sanitation available at close range; they

relied on an all-season stream only. The peri-urban poor in Adoka had only one bore-hole provided by the government which yielded irregularly in addition to two tubwells that did not function at the time of visit. A public waterworks project had been abandoned there a long time ago. Although the urban poor of Logo (urban) had no water point within their community, they obtained piped water in Makurdi metropolis within close range using plastic containers transported on motorcycles or buses.

According to Table 2, top health priorities were expressed by the poor for maternal and child care, provision of essential drugs and treatment of endemic diseases. Incidentally provision of essential drug was found most unavailable (Table 1) while family planning and some other services readily available were not considered by the poor as priority health services. The observed discrepancy between availability and priorities implies presence of unused facilities and unfulfilled desires for services at the same time, with the obvious implication for efficiency of public resources allocation.

Top priorities for education services was expressed for primary, secondary and technical among all categories of the poor. The rural and peri-urban poor also desired secondary school relatively highly as they also did for agricultural college. Adult education and university education were highly favoured by the rural poor. The differential priorities attached to types of education services reflects their scarcity value at each location.

Alternative Strategies and Coping Mechanisms of the Poor

Surely, the poor do have alternative strategies to fall back upon on when their access to government services is hampered.

as they also have several mechanisms to cope with the situation. These constitute the safety nets for the poor to survive. The alternative options to public health facilities were mission hospitals, private hospitals, or clinics, chemist shops, local herb sellers, itinerant drug seller, traditional service providers (e.g., traditional birth attendants), and prayer. Five private clinics and one mission clinic were available in Adoka (peri-urban) within a close range. The female traditional healer at Adankari (rural) attributed her knowledge of the private to the parents and late grand parents. A number of untrained traditional birth attendants were also found in the village. In Adoka (peri-urban), an old man who was very popular as "doctor" practised itinerant drug sales and also prescribed drugs.

The possible options that the poor had as alternatives to public schools were, private schools (nursery/primary), adult education, bible schools, nomadic education, and apprenticeship. Private nursery/primary schools were encountered in Logo community (urban poor) and Adoka and Anyuwogbu (peri-urban) but not in Adankari or Adum (rural poor). Adult education classes were available for all categories of the poor. Cases of withdrawing children from schools to engage in farm work among the rural poor were reported in Adankari and Adum, but the practice was unthinkable to the urban and peri-urban poor (Logo, Adoka, Anyuwogbu) in the present times. Another popular action observed was to engage children as apprentice in learning trades such as tailoring, motor mechanics and others, but the practice was limited to the urban and peri-urban places in the close range. Such options were also available to the rural poor in the medium and long ranges only. In all communities visited,

cases of adolescents who dropped out of school to become bus conductors, domestic helps or to get married (girls especially) were sighted.

Community self help projects constituted an important coping mechanism of the poor in respect of inadequate access to basic social services. Several instances could be cited:

- (i) The main secondary school in Adoka was initially a community effort; later state government took it over in terms of staff salaries;
- (ii) The parents-teachers association (PTA) had donated items to school including the block of classrooms at the Methodist Primary School, Anyuwogbu (peri-urban) as well as chalk, register, duster and other items, the community also donated a six-classroom block costing N35,000 each to the primary school in Anyuwogbu (peri-urban) and Adankari (rural);
- (iii) The health equipment at the Adankari, PHC (rural) was donated by the community.
- (iv) Other miscellaneous community actions to support social services provision encountered included (a) management services in respect of water supply (such as the regulated closure and opening of tube well using padlock at Anyuwogbu; (b) the communal dam project constructed at Adoka (peri-urban) and the employment of a night watch-man there (c) communal self-help effort in road construction in Adankari (rural) where the old wooden bridge was reconstructed annually by the poor themselves; and (d) purchase of electricity poles to facilitate power supply as embarked upon in Logo (urban).

The role of chemist shops as a coping strategy or facility for maintaining the health of the poor households deserves illumination to a greater extent. The chemist shop is expected to contribute to the effective delivery of the health programmes especially the PHC, but this facility was largely abused by the poor as observed during the study. Instead of limiting itself to the range of drugs under license such as mild analgesics, anti-diarrhoea and simple creams like analgesics, among others, the chemist sold fake and expired drugs, antibiotics or other "poisons" and "DDAs." The shops also administered injectables.

Worse still, we ascertained the sale of "mixtures" or "combinations" of drugs dispensed arbitrarily by shop owners. A given "combination" was dispensed to address particular ailment presented by the sick poor. With slight alterations by different shop operators, typical combinations were obtained and subjected to identification tests with the help of government pharmacist as follows:

- (i) Fever - Chloroquine x 2, Paracetamol x 2, B-Complex x 1, Ferrous sulphate 1, and Folic acid x 1;
- (ii) Headache - Librium x 2, Paracetamol x 2, Cafegot x 1, and Optalidon x 2;
- (iii) Catarrh/cough - Septrin x 2, Actifed x 2, Contac x 2, and Piriton x 2;
- (iv) Stomach ache - Tetracycline or Ampicillin x 2, Flagl x 2, Mist Magnesium Trycilate x 2, and Soda mint x 2;
- (v) Dysentery/Diarrhoea - Thalazole x 2, Tetracycline x 2, Sulphadimeldine x 2.

As explained by medical experts contacted, the practice of selling the

"combinations" has certain features which put the health of the poor at great risk, including the following:

- incomplete prescription;
- dispensing is involved which chemist shops should not undertake at all, let alone dispensing poisons;
- practising beyond the scope of license of the chemist shops;
- there are chances of resistance to drugs;
- there are wrong combination of drugs;
- illegal drug administration (e.g., soda mint has been blacklisted but is made part of the combination for stomach ache).

CONCLUSIONS

The provision of social services could alleviate poverty to a considerable extent as conceived and implemented. In Nigeria, both governments and donors, have sometimes regarded availability of the services and weak financial position of the poor as the main obstacles to efforts to raise the standard of living. Yet as the preceding cases illustrate, the mere presence of such facilities together with projects to raise income levels has failed to make the desired impact in many years. In the extreme cases, the poor could ignore modern facilities in preference for crude services that put their lives in great danger and perpetuate poverty more deeply in their midst.

The consideration of critical access parameters has helped to elicit the qualitative information required to understand the nature of the problem better and facilitate effectiveness of the social services. First, the physical availability of certain services is not equitable and fails to synchronize well with

the priority expressed by the poor. The available types of education and health facilities fail to match their revealed preferences for these services. Second, the quality of services leaves much to be desired as exemplified in clinics without drugs and beds, let alone doctors, and schools without chalk and other important items as well as qualified teachers. Third, access is hampered by the inability of the poor to even afford the basic services owing the limited ability to generate purchasing power. This leads frequent withdrawal of children of the poor from schools and their resort to crude health services and sending children to work or marry too early as alternative mechanisms to cope with the situation.

The incidence of the access parameters highlighted is varied among the spatial classes of the poor. As observed physical availability deteriorates from urban to rural in that progression while the problems of bad quality and unaffordability of services bites hardest among the rural poor.

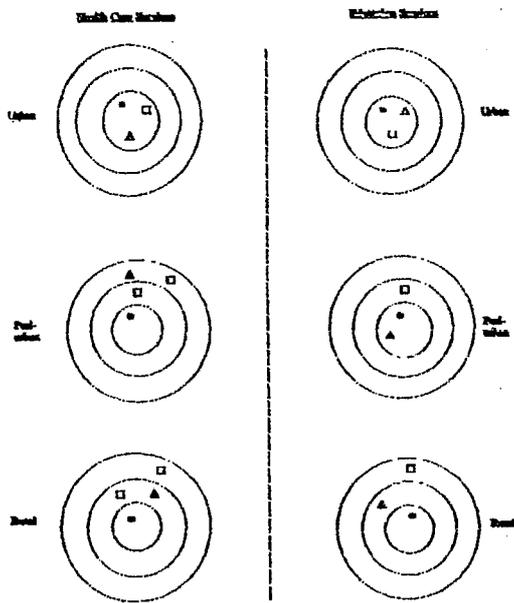
By and large, the current approach to social services provision runs head-long into access problems that hamper the combined efforts of governments and donor agencies to alleviate poverty in the populace; hence the need for incorporating the access factor in the design and formulation of poverty alleviation strategies in the country has become very obvious. The critical dimensions to consider with availability and quality include the issues of affordability of the services and the priorities implicit in the poor themselves as the targeted beneficiaries of poverty-alleviation projects.

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Key: • Primary facility Δ Secondary Facility ◻ Middle-level/tertiary facility

Figure 1. Schematic representation of availability situation with health and education facilities.

Table 1. Availability of and Priorities for Primary Health Care

PHC Categories	AVAILABILITY												PRIORITY		
	Close Range (< 5km)				Medium Range (5-50km)				Long Range (> 50km)				R	PU	U
	R	PU	U	R	PU	U	R	PU	U	R	PU	U			
Maternal and Child care	+	+	+	+	+	+	+	+	+	+	+	+	1	1	2
Family Planning	-	+	+	+	+	+	+	+	+	+	+	+	3	3	2
Immunization	+	-	+	+	+	+	+	+	+	-	+	+	3	3	2
Growth Monitoring	-	-	+	+	+	+	+	+	+	-	+	+	3	2	2
Food Demonstration	-	-	+	+	+	+	+	+	+	+	+	+	2	1	3
Protection of water sources	-	-	+	+	+	+	+	+	+	+	+	+	3	3	2
Environmental Sanitation	-	-	+	+	+	+	+	+	+	-	+	+	1	1	1
Provision of Essential Drugs	+	+	+	+	+	+	+	+	+	+	+	+	1	1	2
Treatment of Endemic diseases	+	+	+	+	+	+	+	+	+	+	+	+	3	3	3
Health Education	+	-	+	+	+	+	+	+	+	+	+	+	2	2	3
Home visits	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2
Reform	+	+	+	+	+	+	+	+	+	+	+	+	1	2	2

Footnotes: R = Rural (Adankari), U = Urban (Logo), PU = Peri-urban (Adoka)

+ = available, to the knowledge of the poor

- = not available, to the knowledge of the poor

Priorities were assessed by using figures: 1 = topmost priority, 2 = high priority, 3 = low priority; the poor themselves assigned these figures by consensus during focused group discussions conducted in local languages.

Table 2: Availability and Priority for Educational Services

Type of Education Service	AVAILABILITY												PRIORITY			
	Close Range				Medium Range				Long range				R	PU	U	
	R	PU	U	R	PU	U	R	PU	U	R	PU	U				
Primary Schools	+	+	+	+	+	+	+	+	+	+	+	+	+	1	1	1
Secondary Schools	-	+	+	+	+	+	+	+	+	+	+	+	+	1	1	2
Technical School	-	-	+	+	+	+	+	+	+	+	+	+	+	1	3	3
Vocational Centres	-	-	-	+	+	+	+	+	+	+	+	+	+	3	3	3
College of Education	-	-	-	+	-	-	+	+	+	+	+	+	+	2	3	2
Polytechnic	-	-	-	+	-	-	+	+	+	+	+	+	+	3	2	2
Agriculture College	-	-	-	+	-	-	+	+	+	+	+	+	+	1	1	2
Nursing School	-	-	-	+	-	-	+	-	-	+	+	+	+	2	2	3
Adult Education	-	+	+	+	+	+	+	+	+	+	+	+	+	1	3	2
University	-	-	+	-	-	+	+	+	+	+	+	+	+	1	3	3

Footnotes:

R = Rural (Adankari), U = Urban (Logo), PU = Peri-urban (Adoka)

+ = available, to the knowledge of the poor

- = not available, to the knowledge of the poor

Priorities were assessed by using figures: 1 = topmost priority; 2 = high priority; 3 = low priority; the poor themselves assigned these figures by consensus during focused group discussions conducted in local languages.

Table 3: Accessibility of Educational Services to the Poor

Type of Educational Service	Physical A variability						Access Ratings ⁽¹⁾						Composite Accessibility Rating ⁽²⁾									
	R		U		R		PU		U		R		PU		U		R		PU		U	
Primary Schools	3	2	2	3	2	2	2	2	2	4	3	2	2	2	3	2	2	3	2	3	D	C
Secondary Schools	2	2	2	4	3	3	3	3	3	4	2	1	2	2	2	1	2	2	2	2	D	C
Technical School	4	1	1	5	3	4	3	4	4	5	3	1	2	2	3	1	2	3	3	3	E	D
Vocational School	3	3	3	5	4	5	4	5	5	3	4	-	2	2	3	3	2	3	3	3	D	E
College of Education	4	4	4	5	5	5	5	5	5	5	2	1	2	2	5	1	2	1	1	1	E	E
Polytechnic	4	3	3	4	5	4	5	4	4	4	2	1	2	2	4	1	2	1	1	1	D	E
Agriculture College	4	3	3	4	5	4	5	4	4	5	2	1	2	2	3	1	2	1	1	1	E	C
Nursing School	4	2	2	5	4	5	4	5	5	5	2	1	2	2	5	1	2	1	1	1	E	D
Adult Education	3	2	2	3	2	2	2	2	2	4	3	2	1	2	3	2	1	1	3	1	D	C
University	4	1	1	5	5	5	5	5	5	5	3	1	1	1	3	1	1	1	1	1	E	E

Footnotes:

The numerical ratings were assigned to match the verbal descriptions of the accessibility of the different educational services and constraints faced through in-depth interviews and focus group discussions.

(1) R = Rural (Adankari), U = Urban (Logo), PU = Peri-urban (Adoka)
The ratings 1,2,3,4,5 were assigned to mean excellent, good, fair, intermediate and poor; the rating of constraints is different: 1,2,3 mean severe, minor, none, respectively, - = not evaluated/not available.

(2) Composite accessibility ratings are as follows:
A = Excellent accessibility: Constraints: non (i.e. 5); any one among the other access variables, excellent (i.e. 1)
B = Good accessibility: Constraints at most minor (i.e. ≥ 2); any one among the other access variables, at least good (i.e. ≤ 2)
C = Fair accessibility: Constraints at most minor (i.e. ≥ 2); any one among the other access variables, at least fair (i.e. ≤ 3)
D = Weak accessibility: Constraints severe or less (i.e. ≥ 1); any one among the other access variables, at least indeterminate (i.e. ≤ 4)
E = Poor accessibility: Constraints severe or less (i.e. ≥ 1); any one among the other access variables at least poor (≤ 5)