Nigeria
DHS EdData Profile
1990, 2003, and 2008

Education Data for Decision-making

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Demographic and Health Survey (DHS)
EdData Profile
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The 2010 Nigeria Education Data Survey (NEDS) was implemented by the National Population Commission (NPC) in collaboration with the Federal Ministry of Education and the Universal Basic Education Commission. RTI International provided technical assistance. The 2010 NEDS was jointly funded by the United States Agency for International Development (USAID) and the UK Department for International Development (DFID). This education profile uses information obtained from the 2008 Nigeria Demographic and Health Survey, which was produced by NPC and ICF Macro.

Suggested citation:

National Population Commission (Nigeria) and RTI International, 2011. *Nigeria Demographic and Health Survey (DHS) EdData Profile 1990, 2003, and 2008: Education Data for Decision-Making*. 2011. Washington, DC, USA: National Population Commission and RTI International.

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May 2011

National Population Commission
Federal Republic of Nigeria

Federal Ministry of Education
Federal Republic of Nigeria

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CONTENTS

Acronyms v
Demographic and Health Surveys (DHS) EdData Education Profiles vi
Data Presented in the Profile vi
A Supplement to Other Sources of Education Data vi
1. Introduction 1
1.1 Key Findings 1
2. Primary School Attendance Ratios: 1990, 2003, and 2008 2
2.1 Primary NAR 2
2.2 Primary GAR 2
3. Primary School NAR by Urban–Rural Residence: 1990, 2003, and 2008 3
4. Primary School NAR by Geo-political Zone: 2003 and 2008 3
5. Over-Age, Underage, and On-time Students in Primary School: 2003 and 2008 4
6. Primary School Repetition: 2003 and 2008 4
7. Primary School Drop Out: 2003 and 2008 4
8. Secondary School Attendance Ratios: 1990, 2003, and 2008 5
8.1 Secondary Net Attendance Rate 5
8.2 Secondary Gross Attendance Rate 6
9. Secondary School NAR by Urban–Rural Residence: 1990, 2003, and 2008 6
10. Secondary School NAR by Region: 2003 and 2008 7
11. Schooling Status of Youth Age 6–24: 2003 and 2008 8
12. Adult Educational Attainment: 1990, 2003, and 2008 8
13. Literacy among Women Ages 15–49 and Men Ages 15–59: 1990, 2003, and 2008 9
14. Literacy by Age: 1990, 2003, and 2008 9
Appendix 1: Indicator Specifications 10
Net Attendance Ratio (NAR) 10
Gross Attendance Ratio (GAR) 10
Primary School Underage, On Time, and Over-Age 11
Primary School Repetition Rates 11
Primary School Drop-out Rates 11
Survival Rates to Grade 5 and to the Last Year of Primary School (using the UNESCO Reconstructed Cohort Method) 11
Schooling Status of Youth Ages 6−24 12
Age-Specific Attendance Rate (ASAR) 12
Adult Primary and Secondary School Completion Rates 12
Adult Educational Attainment by Level of Schooling Attended 13
Adult Literacy 13

Acronyms

ASAR	Age-Specific Attendance Rate
DFID	UK Department for International Development
DHS	Demographic and Health Survey
GAR	Gross Attendance Ratio
GER	Gross Enrollment Ratio
NAR	Net Attendance Ratio
NEDS	Nigeria Education Data Survey
NER	Net Enrollment Ratio
NPC	National Population Commission
UBE	Universal Basic Education
UNESCO	United Nations Educational, Scientific and Cultural Organization
USAID	United States Agency for International Development

Demographic and Health Surveys (DHS) EdData Education Profiles

This document is based on the structure of a series of country education profiles that use internationally comparable data from the U.S. Agency for International Development's (USAID's) DHS to characterize children's participation in primary and secondary schooling and adults' schooling attainment and literacy. These profiles provide information that, combined with other country-specific data, can inform education decision making. Country profiles have previously been produced for 13 sub-Saharan Africa countries (Benin, Ethiopia, Ghana, Guinea, Kenya, Malawi, Mali, Namibia, Nigeria, Rwanda, South Africa, Uganda, and Zambia).

Data Presented in the Profile

This profile presents data from three nationally representative surveys of households conducted in 1990, 2003, and 2008. In addition to health-related data, these DHS surveys collected information on educational attainment and schooling status of household members, which allows for the calculation of net attendance rations (NARs) and gross attendance ratios (GARs, disaggregated by sex, urban–rural residence, and region); the percentage of students under age, on time, and over-age−by grade; age-specific schooling status of youth (attending, dropped out, or never attended); and adult primary and secondary school completion rates and educational attainment.

In 2004 and 2010, a second survey, using a subset of the DHS households was conducted to elicit more specific information on household schooling decisions. These DHS EdData household surveys focus on household demand for schooling and the decisions households make about how much of what kind of education to invest in for household members. Specific topics in the EdData survey include reasons for school-age children never having attended school or having dropped out of school, household expenditures on schooling, parent/guardians' perceptions of the benefits of schooling and of school quality, distances and travel times to schools, and frequency of and reasons for student absenteeism.

A more detailed analysis of household demand derived from the EdData survey is available in the 2010 Nigeria DHS EdData Survey report.[1] This profile primarily uses information from the 2008 DHS survey[2] to allow for comparison over time with the 1990 and 2003 surveys.

A Supplement to Other Sources of Education Data

The DHS measures of children's school attendance rates differ from supplement traditional sources of international statistics, such as those produced by ministries of education. Statistics on children's participation in schooling usually are derived from data on children's school enrollment, which are collected from school records and used to produce net enrollment ratios (NERs) and gross enrollment ratios (GERs).

DHS, on the other hand, measures children's participation in schooling using data on school attendance, as reported from a representative sample of households. NARs and GARs are calculated based on questions about whether children attend school. Although the NAR and GAR may be seen as proxies for the more commonly used NER and GER, discrepancies between attendance and enrollment ratios can be expected.

[1] National Population Commission (NPC) [Nigeria] and RTI International. 2011. *Nigeria Demographic and Health EdData Survey 2010*. Research Triangle Park, North Carolina, USA: NPC and RTI.
[2] National Population Commission (NPC) [Nigeria] and ICF Macro. 2009. *Nigeria Demographic and Health Survey 2008.* Abuja, Nigeria: National Population Commission and ICF Macro.

1. Introduction

The Nigeria DHSs were conducted in 1990, 2003, and 2008.[3] Having data from three surveys allows for an analysis of changes in the educational setting over time.

1.1 Key Findings

Although there was a moderate increase in primary school attendance from 1990 to 2003, attendance has remained static since then.

- In 2008, 61% of primary school-aged children attended primary school, compared with 60% in 2002 and 51% in 1990.
- In 2008, males ages 6–11 were somewhat more likely than females to attend primary school (64% versus 58%); this gender gap has not been reduced since 2003.

In the three surveys, at the secondary level, rates of attendance among youth age 12–17 were low.

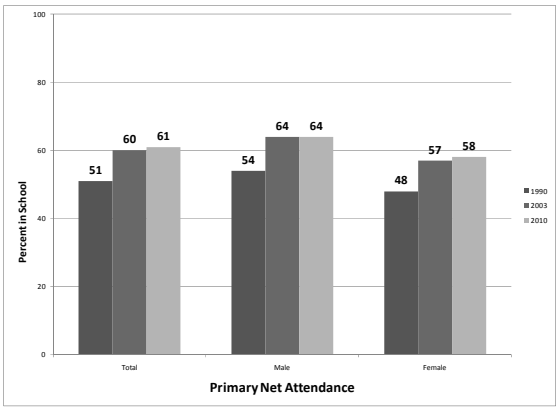
- The percent of youth ages 12–17 that attended secondary school increased from 35% in 2003 to 44% in 2008.
- Male youth of secondary school age were slightly more likely than female youth to attend secondary school in 2003 and 1990.
- There is no difference in attendance by gender in 2008.

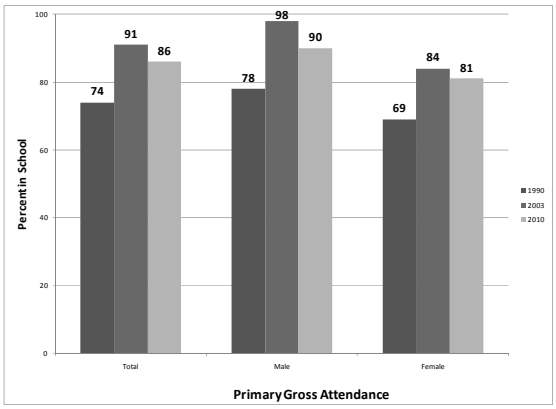
Adult educational attainment was moderate but increasing with considerable gender disparities. In addition, there was a substantial gender gap in literacy among adults.

- Whereas 37% of the population age 15 and older had completed primary school in 1990, half of them had done so in 2003 and nearly 2 in 3 by 2008. In all the three years, men were more likely than women to have completed that level of schooling.
- In 2003, 20% of men and 12% of women ages 15 and older had completed secondary school, compared with 29% of men and 20% of women in 2008.
- Literacy rates have remained constant, with half of the women ages 15–49 able to read a simple sentence in 2003 and 2008, compared with 3 in 4 men ages 15–59 for both years.

[3] The 1990 survey was administered to 8,999 households and 8,781 women ages 15–49 from those households. The 2003 survey was administered 70 7,225 households, 7,620 women ages 15–49 and 2,346 men ages 15–59 from those households. The 2008 survey was administered to 34,070 households and 33,385 women ages 15–49 from those households and 15,486 men ages 1–49 from those households. A survey was also conducted in 1999, but this survey does not provide usable information on educational attainment and other variables of interest.

2. Primary School Attendance Ratios: 1990, 2003, and 2008





NAR is the percentage of the official primary school age population (ages 6–11 in Nigeria) that attends primary school. GAR is the total number of students attending school—regardless of age—expressed as a percentage of the official school-going age. The GAR is higher than the NAR because of the presence of over-age or underage children.

2.1 Primary NAR

The percentage of children ages 6–11 attending primary school increased from 1990 to 2003 and remained stable up to 2008.

- In 2008, 61% of school-aged children in Nigeria attended primary school, similar to 60% in 2003 and up from 51% in 1990.

School-aged males continue to be somewhat more likely than females to attend primary school.

- The rate of primary school attendance among school-aged males in 2008 was 64%, compared with 58% for school-aged females for the same period. A gap of 6% has persisted since 1990.

2.2 Primary GAR

Many of the children attending primary school are outside of the official age range (as reflected in the difference between NARs and GARs). This can influence the availability of educational infrastructure, the experience in the classroom, and education planning.

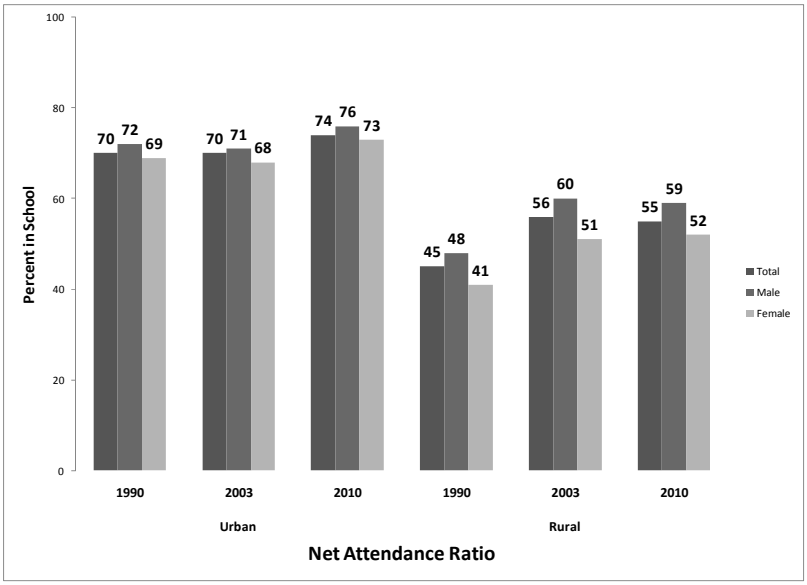
In 2008, the GAR was lower than in 2004. This appears to reflect a decline in the proportion of children outside (either younger or older than) the official school age range of ages 6–11, which may be attributable to the decline in over-age children.

- In 2008, students over or under the official primary school age range made up 29% (GAR 86− NAR 61/GAR 86) of the primary school population, compared with 34% in 2004 and 31% in 1990.

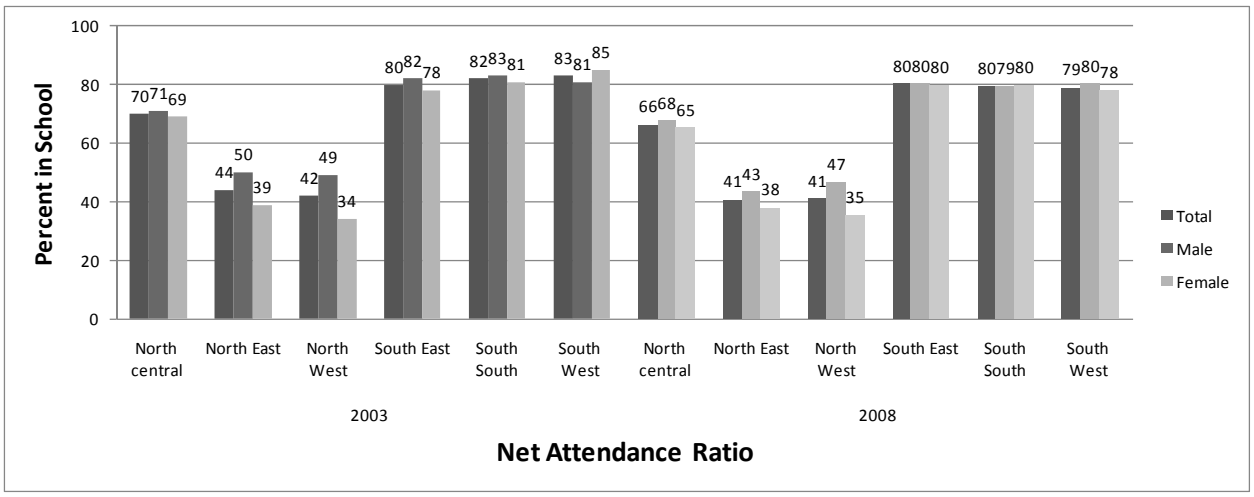
3. Primary School NAR by Urban–Rural Residence: 1990, 2003, and 2008

Over time, children ages 6–11 in urban areas remain more likely to attend primary school than children in rural areas.

- In 2008, 74% of children ages 6–11 in urban areas attended primary school, compared to 55% in rural areas.
- Between 1990 and 2003, the NAR in rural areas increased by 11 percentage points while NAR in urban areas remained constant. Between 2003 and 2008, NAR in rural areas slightly declined,while NAR in urban areas increased by four percentage points.



4. Primary School NAR by Geo-political Zone: 2003 and 2008[4]

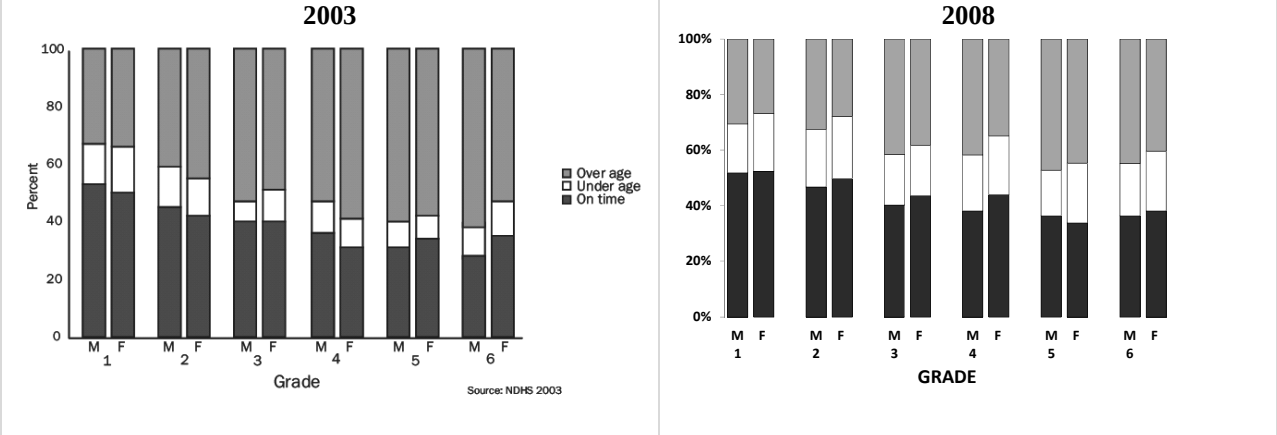


The pattern of large regional disparities in the rate of primary school attendance in Nigeria has not changed over time, despite some minor fluctuations in regional school attendance.

Gender parity has improved slightly in all regions. In the South East and South South regions, females and males attend equally in primary school.

[4] The 2003 and 2008 Nigeria DHSs provide primary NAR by region for each of Nigeria's six regions. In 1990, however, the survey provided estimates for four regions, which do not correspond directly to the six regions used in 2003. Consequently, this profile compares data by region between 2003 and 2008.

5. Over-Age, Underage, and On-time Students in Primary School: 2003 and 2008



By grade 6, in 2010, only 60% of students were on time, but there has been an overall general reduction in over-age students, from 58% in 2003 to 42% in 2008.

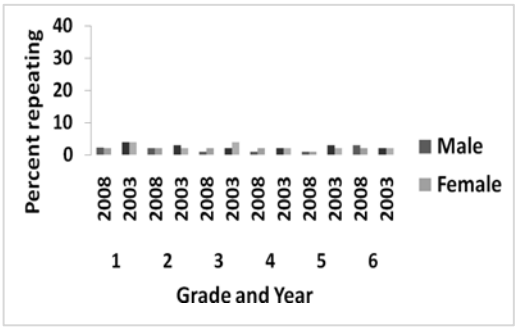
- In 2010, female students were more likely to be at the appropriate age for the grade attended.
- Overall, the percentage of underage students for grade increased between 2003 and 2008. For instance, the percentage of underage students in grade 6 doubled from approximately 10% in 2003 to 20% in 2010.

Students are considered to be over-age if they are two or more years older and underage if they are one or more years younger than the official age for their grade. Students are considered on time if they are the official age for their grade or one year older. Since the official age for grade 1 is six in Nigeria, a grade 1 student who is six or seven is considered on time. A student age eight or older is over-age, and a student age five or under is considered underage.

6. Primary School Repetition: 2003 and 2008[5]

Grade repetition at the primary level was uncommon, although over time, it has declined slightly in the early grades.

- In both 2003 and 2008, the percentage of males and females repeating a grade was comparable throughout the primary cycle.

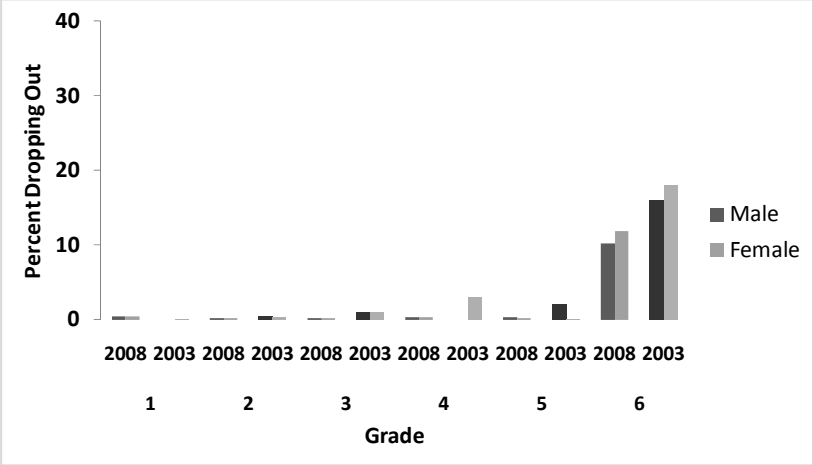


7. Primary School Drop Out: 2003 and 2008[6]

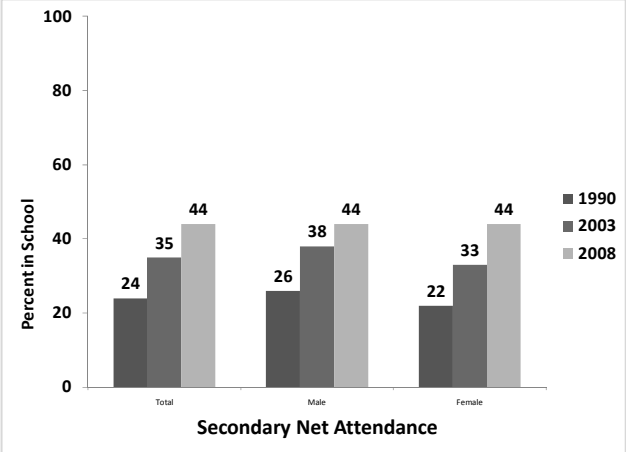
[5] Data on repetition rates are not available from the 1990 survey.
[6] Data on drop-out rates are not available from the 1990 survey.

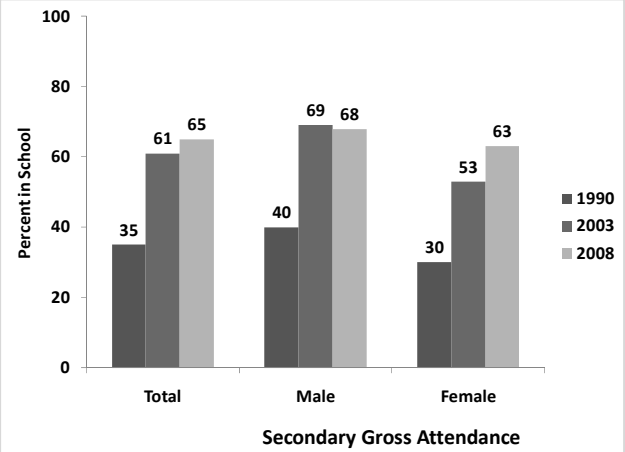
Drop out is not a significant problem in Nigeria, with primary drop-out rates remaining low in 2003 and 2008. Drop out at grade 6 remains high but has been reduced in 2010, primarily as a result of the introduction of Universal Basic Education (UBE), which legally mandates opportunity for access to grade 7.

- In grade 6, drop out was reduced from 16% for males and 18% for females in 2003 to 10% for males and 12% for females in 2008.
- In the remaining grades, drop-out rates were low—0% to 3%.



8. Secondary School Attendance Ratios: 1990, 2003, and 2008





8.1 Secondary Net Attendance Rate

The percentage of youth ages 12–17 attending secondary school increased notably and consistently from 1990 to 2008.

- In 2008, 44% of secondary school-aged youth attended secondary school, compared with 35% of youth in 2003 and 24% of youth in 1990.

By 2008, the gender gap between male and female youth had been removed, with equal percentages of male and female youth attending secondary school.

8.2 Secondary Gross Attendance Rate

Between 1990 and 2008, among students of all ages (gross attendance), rates of secondary attendance consistently increased.

- In 2008, the GAR was 65, compared with 61 in 2003 and 35 in 1990.

In all surveys, male youth of all ages were found to be more likely than female youth to attend secondary school, although, by 2008, the gender gap had been reduced.

- In 2003, there was a 16-point gap in the GAR by sex (GAR among males of 69, compared with 53 among females). In 1990, the GAR among males was 40, compared with 30 among females. By 2008, the gap was only five points (GAR among males of 68, compared with 63 among females)

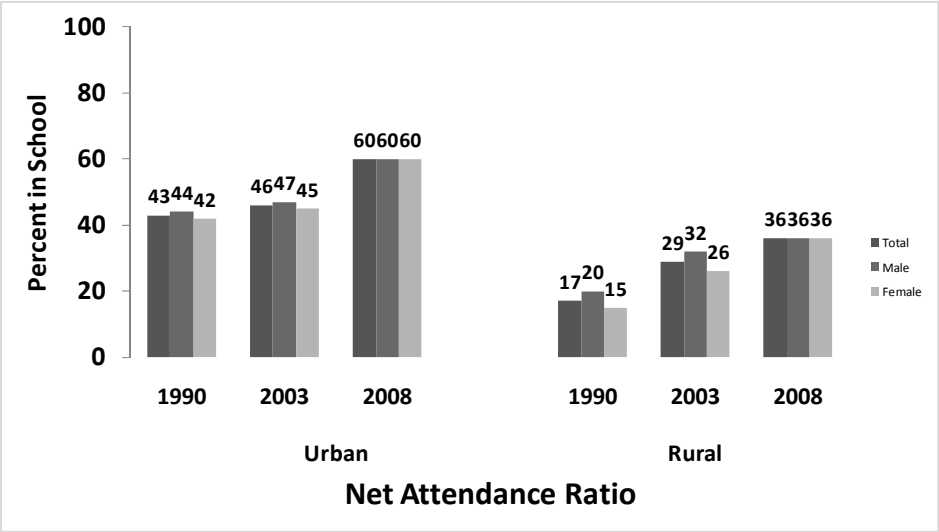
NAR is the percentage of the official secondary school-aged population (ages 12–17 in Nigeria) that attends secondary school. GAR is the total number of students attending secondary school—regardless of age—expressed as a percentage of the official school-going age.

9. Secondary School NAR by Urban–Rural Residence: 1990, 2003, and 2008

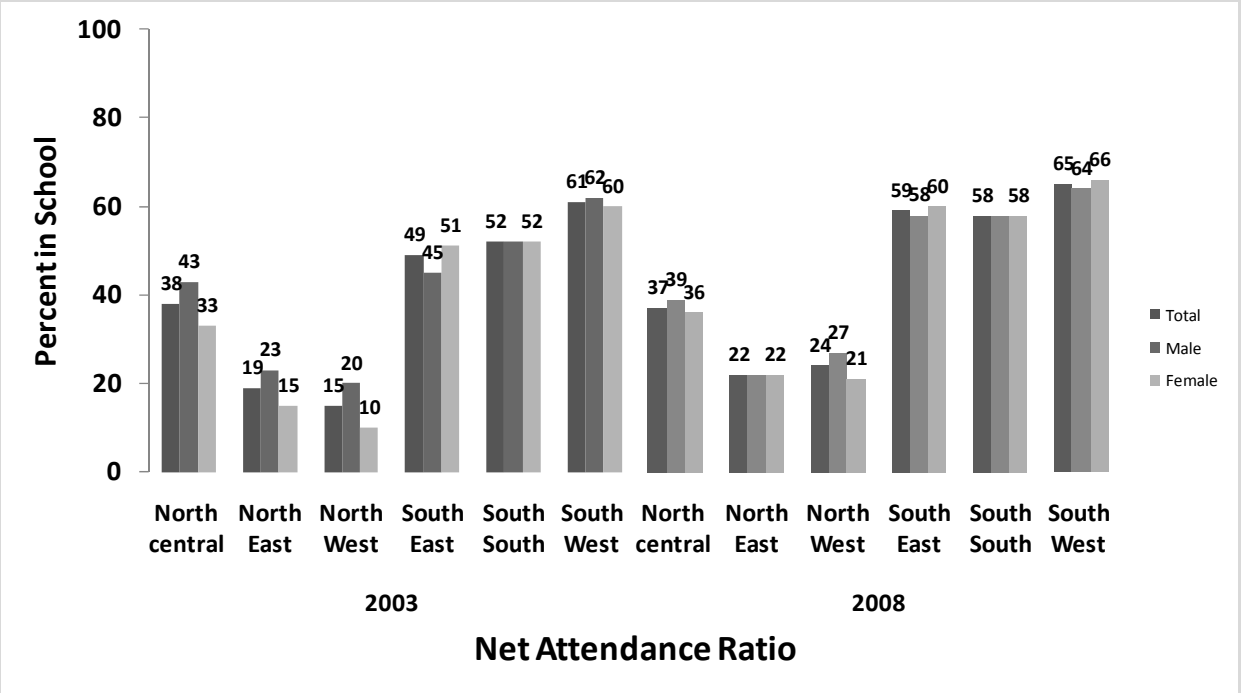
Youth ages 12–17 in urban areas were much more likely than those in rural areas to attend secondary school across all years.

- In 2008, 60% of youth ages 12–17 in urban areas attended secondary school, compared to 36% in rural areas.

Between 1990 and 2003, the secondary NAR increased more in rural areas. Between 2003 and 2008, the reverse was true, with urban areas experiencing a 15-point increase in net attendance compared to a 7-point increase.



10. Secondary School NAR by Region: 2003 and 2008[7]

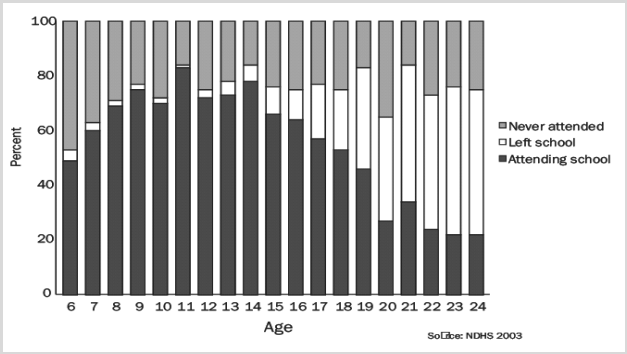


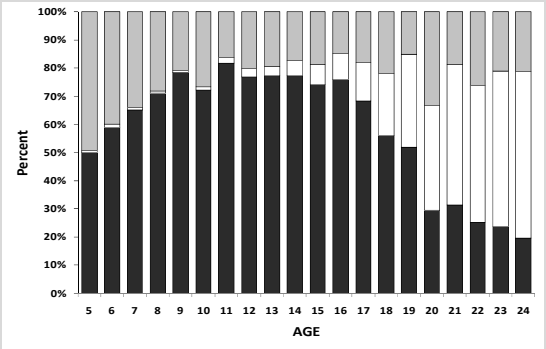
The zonal imbalances noted at the primary level are also reflected in differences in the secondary school NAR, and these have even been exacerbated over time.

- Despite steady growth in secondary net attendance, North West (24%) and North East (22%) regions continue to have the lowest NARs.
- South East (59%) and South South (58%) regions have seen 10- and 6-point increases in secondary NAR and have come closer to South West region's NAR of 65%
- All zones have seen a narrowing in the gender gap, and in South East and South West regions, the NAR for girls is higher than for boys.

[7] The 2003 and 2008 Nigeria DHS provides the secondary NAR by region for each of Nigeria's six regions. In 1990, however, the survey provided estimates for four regions, which do not correspond to the six regions used in 2003. Consequently, this profile compares data by region only from 2003 and 2008.

11. Schooling Status of Youth Age 6–24: 2003 and 2008





In 2003, the peak age of attendance was 11, with 83% of children aged 11 attending school. By 2008, this peak age remained the same, but the percentage of 15 to 17 year olds staying in school increased. This reflects the impact of UBE, extending compulsory education for an additional three years after the end of primary.

The percentage of youth who have never attended school remained constant from 2003 to 2008 at 16%.

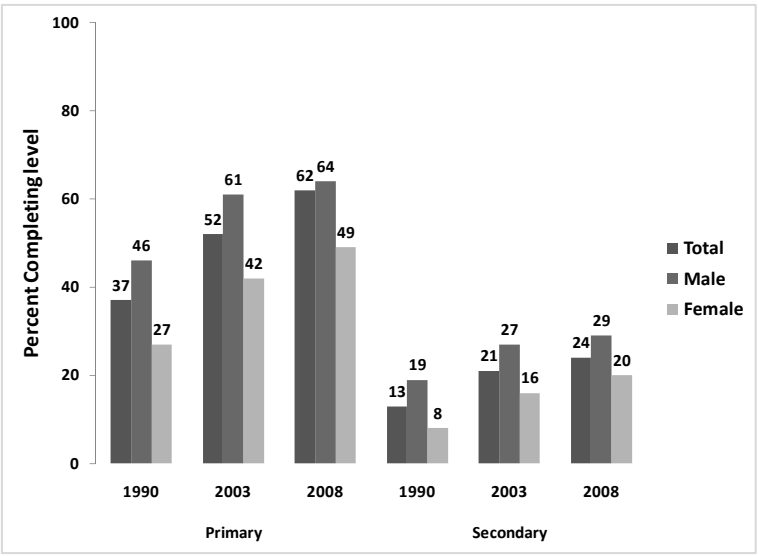
- In 2008, the percent of youth ages 6–11 that have dropped out was negligible (less than 1% in any age) confirming low drop out.
- Interestingly, in both 2003 and 2008, the age of 20 appears to be the decisive year in school attendance.

12. Adult Educational Attainment: 1990, 2003, and 2008

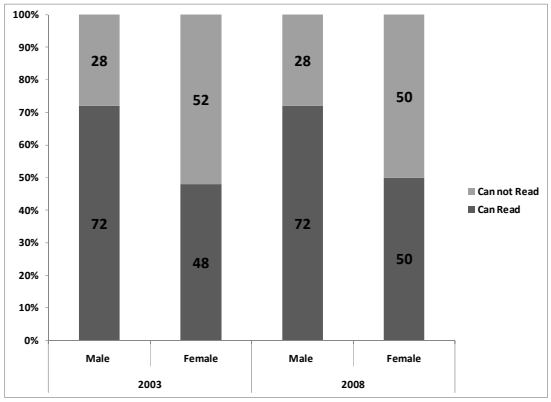
Educational attainment among men and women ages 20–24 has maintained a steady increase over time.

- In 2008, 62% of individuals ages 20–24 had never attended school, compared with 17% in 2003.
- In 1990, 41% of women ages 20–24 had never attended school, compared with 35% in 2003 and 31% in 2008 (data not shown).

In general, between 1990 and 2008, men were considerably more likely than women to have attended primary school or higher, with 64% of males having completed primary school and 29% having completed secondary school in 2008, compared with 49% and 20%, respectively, for women.

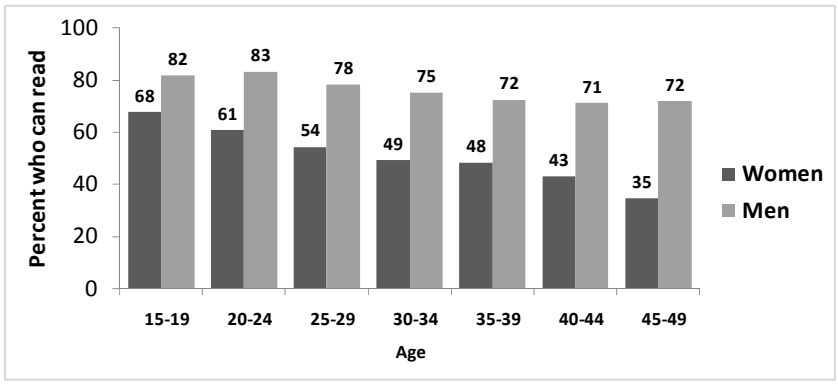


13. Literacy among Women Ages 15–49 and Men Ages 15–59: 1990, 2003, and 2008[8]



In 2008, 50% of women could read, compared with 48% of women in 2003 and 36% in 1990. In contrast, the percentage of male respondents that could read remained constant at 72%.[9]

14. Literacy by Age: 1990, 2003, and 2008



Between 1990 and 2008, literacy has steadily increased among younger women.

- In 2008, 61% of women ages 20–24 could read, compared with 56% in 2003 and 49% in 1990 (data not shown).

Over the past 30 years, literacy has been increasing among adults. Younger adults are more likely than older adults to be literate.

- In 2003, 61% of women ages 15–19 could read, compared with 22% of women ages 45–49 (data not shown for 2003). In contrast, in 2008, a total of 68% of women ages 15–19 could read, compared with 35% of women ages 45–49.

[8] The 1990 survey collected literacy data for women only.

[9] Among women who had never attended school and those who attended primary school, literacy was self-reported in 1990. Literacy was tested for both men and women in 2003and 2008. Literacy was tested by asking the respondent to read a 4-word sentence in a language in which he/she was likely to be literate. Men and women who attended secondary school or higher were assumed to be literate. Consequently, the percentage literate includes both those who attended secondary school or higher and those who reported themselves to be literate (1990) or those who were able to read (2003, 2008).

Appendix 1: Indicator Specifications

The methods used to calculate the indicators presented in the education profiles are described below.

Net Attendance Ratio (NAR)

Primary level

- Number of students of primary school age attending primary school
- Number of people of primary school age in the population

Secondary level

- Number of students of secondary school age attending secondary school
- Number of people of secondary school age in the population

NAR is the percentage of children in the target age range for the specified level of schooling who are attending that level of schooling. NAR is calculated separately for primary and secondary school. A primary NAR of 95% would indicate that nearly all of the children of primary school age attend primary school. A primary NAR of only 38%, on the other hand, would indicate that a majority, or 62%, of the children of primary school age do not attend primary school. By definition, the NAR cannot exceed 100%.

Gross Attendance Ratio (GAR)

Primary level

- Number of students attending primary school, regardless of age
- Number of people of primary school age in the population

Secondary level

- Number of students attending secondary school, regardless of age
- Number of people of secondary school age in the population

GAR for a given school level is the total number of students attending at that level, divided by the population of the official age range for that school level. The GAR is calculated separately for primary and secondary school. Unlike the NAR, the GAR can exceed 100.

Both a GAR greater than 100 and a GAR greater than the NAR indicate the presence in the classroom of children who are either older or younger than the official age range for the school level. The magnitude of difference between the NAR and GAR indicates the extent of over-age/underage attendance. For instance, if the primary NAR is 35% and the GAR is 65, then 54% (35/65) of the primary school students are of primary school age while 46% are either older or younger than the official age range. In some countries, where there is a substantial difference between the GAR and the NAR, the number and proportion of over-age and/or underage students burdens the school system, absorbing resources that might otherwise be spent on children in the official age range for the level.

Primary School Underage, On Time, and Over-Age

Students in each grade of primary school are either underage, on time, or over-age for the grade attended. Students are underage for the grade if they are younger than the official target age for the grade. Students are on time if they are at the official age for the grade, or are one year older than the official age. Students are over-age if they are 2 or more years older than the official age of the grade. For example, if the official age for grade 1 is six, a student aged 5 or younger is underage, a student aged 6−7 is on time, and a student aged 8 or older is over-age.

The percentage of students on time for the grade attended is calculated as follows:

- Number of grade X students who are at the target entry age for the grade or one year older
- Total number of students attending grade X

Primary School Repetition Rates

- Number of students repeating grade X in year 2
- Number of students attending grade X in year 1

Repetition rates measure the percentage of students in a given grade who also attend that same grade in the following school year. These rates are calculated from data on children's school attendance for two school years in a row. For instance, if a student is in grade 3 at the time of the survey, and was also in grade 3 during the previous school year, the student is repeating that grade.

Primary School Drop-out Rates

- Number of students in grade X in year 1 who no longer attend school in year 2
- Number of students attending grade X in year 1

Drop-out rates measure the percentage of students who left school after attending a particular grade. These rates are calculated from data on children's school attendance for two school years in a row. For instance, if a student did not attend school the school year during in which the survey was conducted, but attended grade 1 in the previous school year, then that student dropped out of school.

Survival Rates to Grade 5 and to the Last Year of Primary School (using the UNESCO Reconstructed Cohort Method)

The survival rate estimates the percentage of students attending grade 1 in a given year that is expected to reach a subsequent grade, with or without repetition. The survival rate is calculated using rates of promotion, drop out, and repetition for a given school year. This projection is based on several assumptions, including a) that there are no new entrants to the school system (including dropouts returning to school); b) that at any grade, the same promotion, repetition, and drop-out rates apply to all students, regardless of whether a student is in the grade for the first time or is repeating; c) that the same promotion, repetition, and drop-out rates observed during one school year apply for all students when they attend that same grade; and d) that the number of times students may repeat a grade is defined. The survival rate estimates presented in these profiles allow for students to attend a grade four times, after which it is assumed that the students drop out of school.

For a detailed flowchart of the calculation of this indicator, refer to "Education for All: The Year 2000 Assessment Technical Guidelines" published by UNESCO (also see the web site at www.education.unesco.org/efa).

Schooling Status of Youth Ages 6−24

For each age, from ages 6−24, the percentage attending school

- Number of people aged 6 attending school, at any level
- Number of people aged 6 in the population

For each age, from ages 6−24, the percentage who have left school

- Number of people aged 6 who used to attend school, but have dropped out
- Number of people aged 6 in the population

For each age, from ages 6−24, the percentage who have never attended school

- Number of people aged 6 who have never attended school
- Number of people aged 6 in the population

Schooling status indicates the percentage of children and youth, by age, who attend school (at any level), have dropped out of school, or who have never attended school. Added together, these percentages total 100% for each age.

Age-Specific Attendance Rate (ASAR)

For each age, from ages 6−24:

- Number of people aged 6 attending school, at any level
- Number of people aged 6 in the population

The ASAR indicates the percentage of a given age cohort attending school—regardless of the level attended (primary, secondary, or higher). The ASAR cannot exceed 100%, and the closer it is to 100%, the higher the participation of that age group in the population.

Adult Primary and Secondary School Completion Rates

Primary

- Number of people aged 15 or older who have completed the last grade of primary (or higher)
- Number of people aged 15 or older in the population

Secondary

- Number of people aged 20 or older who have completed the last grade of secondary (or higher)
- Number of people aged 20 or older in the population

The completion rates presented here are indicators of the level of primary or secondary school completion among those who are beyond primary or secondary school age. Those in the numerator have either completed the specified level of schooling or attended school at a higher level. In other words, the percentage of adults who have completed primary school includes those who have attended secondary school or a higher level of schooling. Note that the calculation of this indicator differs from the calculation of the primary and secondary completion rates.

Adult Educational Attainment by Level of Schooling Attended

For each level of attainment

- Number of people age 20 or older who never attended school
- Number of people in the population age 20 or older

These indicators present the percentage of the adult population aged 20 or older that has never attended school, attended primary school, or attended secondary school or higher. Results are presented in 5-year age ranges, and for age 65 or older. Within each age range, the percentages, added together, total 100%. This indicator is useful in tracking changes in attainment by age group, gender, and other subgroups.

Adult Literacy

Women (and in many countries, also men) ages 15−49[1] who never attended school and those who left school before reaching secondary school were asked to assess their literacy or to demonstrate literacy. If respondents were asked to report on their literacy, the question was: "Can you read and understand a letter or newspaper easily, with difficulty, or not at all?" People who said they can read easily or with difficulty were grouped together as literate. If literacy was tested, which is the case with most surveys, respondents were asked to read (in a language in which they were likely to be literate) a short simple statement about everyday life. If the respondent could read part or the entire sentence, or had attended secondary school or higher, the respondent was classified as literate.

[1] The age range for men is often different from that of women and is most commonly ages 15−54 or 15−59.