

Suggestions for the Education Module of the South Africa National Income Dynamics Study

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Key research and policy questions

There can be little question that education plays a fundamental role in income dynamics, and that it should be an important focus of the National Income Dynamics Study. In preparing this document, we have been motivated by two basic questions. First, what are the key research and policy questions related to education in South Africa, especially in relation to income dynamics? Second, what dimensions of education are particularly well suited to analysis using longitudinal data of the type that will be collected in NIDS?

Several research and policy questions related to education are important to NIDS. One of the most obvious is the impact of education on employment and earnings. While cross-sectional surveys such as the Labour Force Survey provide a good deal of information about economic returns to education, NIDS will put these issues into a dynamic context. For example, the second wave of NIDS will make it possible to see whether better educated workers have a lower probability of losing their job or a higher probability of finding a job when they are unemployed. It will also be possible to see whether better educated households have lower volatility in income or more rapid transitions out of poverty.

A related set of research and policy questions have to do with the intergenerational transmission of inequality. Intergenerational transmission of education is one of the most important mechanisms for the intergenerational transmission of inequality, and NIDS will make it possible to study this mechanism in a dynamic context. For example, the panel data will provide evidence about whether children whose parents have less education and lower income have a harder time staying in school or making normal progress through grades. The panel data will also provide evidence about the impact of household shocks such as the illness, death, or job loss of adult household members on the schooling of children.

In addition to questions related to the quantity of schooling being received by young people, research in South Africa and other countries has shown that school quality can play an important role in determining later economic outcomes. Inequities in educational resources, while they have declined, continue to be an important dimension of the South African educational system. This is an area in which there is a great deal yet to be learned, and NIDS should be able to provide important policy-related evidence.

The panel data will make it possible to answer a number of questions about schooling dynamics that cannot be answered using cross-sectional data: Do household shocks cause KIDS to drop out of school? How do household economic circumstances affect grade repetition? Do teenage mothers go back to school? How does the quality of schooling affect early labor market experience?

In the following sections we discuss specific types of information that we believe should be collected in NIDS in order to answer these and other important research and policy questions related to education.

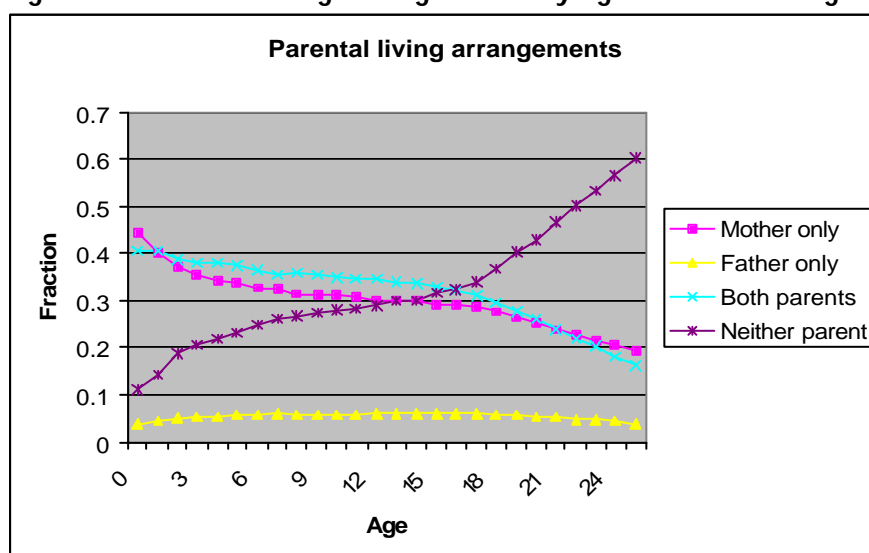
Parental characteristics

Information on parent's educational attainment is pivotal to understanding the intergenerational transmission of inequality. Parent's education is a strong predictor of children's schooling outcomes and subsequent labour market outcomes. For example, van der Berg (2004) finds that only a quarter of children whose parents had not matriculated reach matric as opposed to 87% of children of a graduated parent. Higher parental education also translates into higher average salaries. Matriculated black children's earnings were 25% higher if their parents had also matriculated. Parent's education is also a strong predictor of adult educational outcomes.

In addition to understanding how the ability to benefit from education is transmitted across generations, Glewwe(2000) recommends collecting data on parental education for econometric reasons. Parents education has been used by researchers in a wide variety of fields as an indicator "Estimation problems can arise if an educational outcome variable is used instead of its predicted value" and the educational level of an individual's parents is generally a very useful variable for predicting and individuals educational outcomes, especially adults.

Figure 1 below shows parental living arrangements by age based on the 2001 Census. Even at very young ages a substantial proportion of children do not live with both of their biological parents. For adults the proportion would be even higher. One cannot therefore rely on information about parental education from the household roster or individual interviews with the parents. It is essential to ask questions about parental education directly in the child and adult modules. In household where parents and children are co-resident one could (and should) link children to their parents via the household roster. In these cases one may opt to skip the questions about parental education in the individual modules. The danger with this approach is that there can be inconsistencies between the household questionnaire and the individual questionnaires due to differing interview dates and/or respondents. While cautious we would recommend that questions about parental education are asked of everybody in the individual modules.

Figure 1: Parental living arrangements by age for children aged 0 to 25.



Source: Census 2001 (Stats SA)

While the education level of many parents should not change from year to year the number of parents who are still continuing their education is non negligible. Table 1 below shows the percentage of people with at least one living child who are attending an educational

institution. In light of this we would recommend collecting information on parents' education levels in every round.

Table 1: Percent of individuals with at least one living child attending an educational institution

Age	Percentage attending an educational institution	Estimated population size
12	78%	1390
13	70%	3031
14	63%	5633
15	59%	15738
16	57%	36733
17	50%	65854
18	43%	107131
19	37%	145228
20	30%	168921
21	23%	205625
22	18%	218111
23	13%	230709
24	11%	258966
25	8%	280384
26	6%	293448
27	6%	293265
28	5%	299688
29	5%	322355
30	5%	278819

Source: Census 2001 (Stats SA)

In addition to data on parent's education we recommend collecting data on parents' living arrangements and vital status. Using the 1995 October Household Survey, Anderson (2003) finds that black and coloured children who live with neither parent are consistently disadvantaged in terms of schooling outcomes and concludes that "variations in family structure are a contributing factor to continued racial inequality in educational attainment". van der Berg (2004) also argues that family structure "plays an important role in influencing whether children enroll in school, the highest grade they complete, and how far behind they are for their age. Family structure also influences the amount of money families spend on students' school-related expenses. Relative to children who live with both genetic parents, children who live with neither parent fare the worst, and children who live with single mothers frequently fare worse as well." Case and Ardington (2006) find that the loss of a mother is a strong predictor of poor schooling outcomes and use the timing of mothers' deaths relative to children's educational shortfalls to argue that mothers' deaths have a causal effect on children's educations.

Information on parents' vital status should be updated in every round of the panel. We would recommend collecting information on parents' living arrangements not only at the time of each wave but also for each of the intervening years.

School quality and school characteristics

Although inequities in the allocation of resources and quantity of completed education have decreased, there are still great inequities in the quality of outcomes (Ladd and Fiske (2004) and van der Berg (2002)). While information on the quantity of education received is relatively easy to collect, gathering information on the quality of such completed education is more challenging.

A number of studies have examined the relationship between school characteristics and learning outcomes (Ladd and Fiske (2004), van der Berg (2004), Bhorat (2006), Simkins (2001)) using school level data. Many researchers have investigated whether and how individual characteristics, family background and socio-economic status affect educational and related labour market outcomes using household and individual level survey data. There are very few studies that are able to combine school, household and individual level characteristics. Case and Deaton (1999) and Case and Yogo (1999) go some way towards merging household level and school level administrative data by assigning individuals the average school quality of their magisterial district. The Cape Area Panel Study (CAPS) is one of the few data sets that provides school quality data on the actual school that respondents attend(ed).

By merging school level administrative data with household and individual level data it becomes possible to assess the role of school quality variables in school choice and educational attainment while controlling for individual, family and socioeconomic effects. At the same time, by being able to control for school quality in a rigorous way, ensures that the magnitude of impacts that are attributed to individual, family and socio-economic factors is not distorted.

Detailed information on school resources is available from two sources: the School Register of Needs (SRN) conducted in 1996 and 2000 and administrative data from the Education Management Information System (EMIS). The SRN contains data on physical infrastructure and facilities and total number of learners and educators. EMIS contains more detailed information on educators and learners and is collected annually.

If NIDS collected the school name and detailed location information it would be possible to assign an EMIS code to each school and then merge the NIDS and administrative data thereby combining individual and household level data for each child with detailed school level administrative information. Such a merge is not a trivial data process or time commitment. However, it is well worth undertaking.

Through the Cape Area Panel Study (CAPS) we have valuable experience of such an undertaking. In the first wave of the CAPS respondents were asked for the name and detailed address of their current school and their previous school or for their last school if they were no longer enrolled. For both the current and previous school we were able to match 93% of the schools to the 2000 School Register of Needs (SRN). Current schools were almost entirely restricted to metropolitan Cape Town while previous or last schools were situated all around Southern Africa. Matching previous schools was therefore much more challenging as there are many instances where schools have the same or very similar names with slight spelling differences. It was therefore crucial to have detailed information about the location of the school in addition to the name of the school in order to make sure that the correct match was made. In the third wave of the CAPS a full schooling history was completed with the name and location of the school for every calendar year in which the respondent was enrolled. These schools have also been successfully matched to the SRN. The process of matching was both laborious and time consuming but ultimately successful.

Clearly current school characteristics are important in analyzing determinants of schooling outcomes. Another important area of research is the impact of school quality on wages and other labour market outcomes. This requires data on past school quality. While it would be great to have measures of school quality for all adults in the sample, respondents' ability to accurately recall school names and detailed locations diminishes with each year since completing school. We also do not have detailed school level data prior to 1996. We would recommend asking all adults up to the age of 30 who are no longer enrolled in primary or secondary education the name and detailed location of the last school that they attended.

The oldest of these adults would have been 19 in 1996 so we feel the 1996 and 2000 School Register of Needs should adequately cover the period.

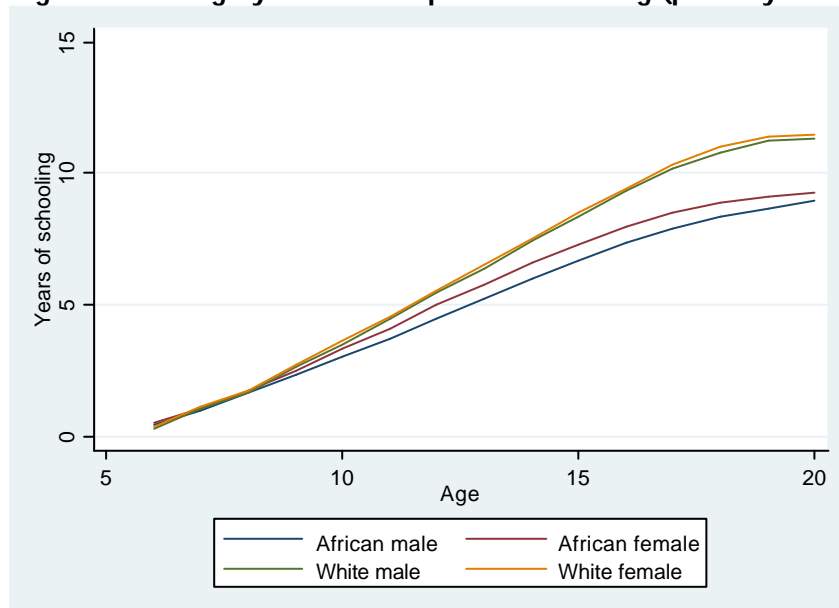
Other indicators of school quality

Aside from merging with school level administrative information, there are some questions that can shed light on not just the quantity of education but also on the quality. It is important and simple to collect data on school fees. Fees enable schools to buy more resources and so are an important component of school quality. Subject choice, particularly mathematics, is another measure of the quality rather than the quantity of education completed. "Only about half a dozen pupils in black schools in the Western Cape annually obtain the required C symbol or better for higher grade mathematics that would enable them to pursue tertiary studies in fields that are in particular demand in the labour market, such as engineering, commerce, and medicine" Van der Berg (2002). Information on grade repetition and literacy and numeracy tests provide powerful measures of educational quality and are discussed in the following two sections.

Grade repetition and retrospective calendars

As shown by Anderson, Case, and Lam (2001), grade repetition is a key determinant of disparities in school attainment in South Africa. Figure 2 below shows the average years of completed schooling (primary and secondary) by age, gender and race for children age 6 to 20. The figure shows that white males and females advance almost one grade of school per year on average, while Africans' age profile of grade advancement has a lower slope.

Figure 2 Average years of completed schooling (primary and secondary) by age and race

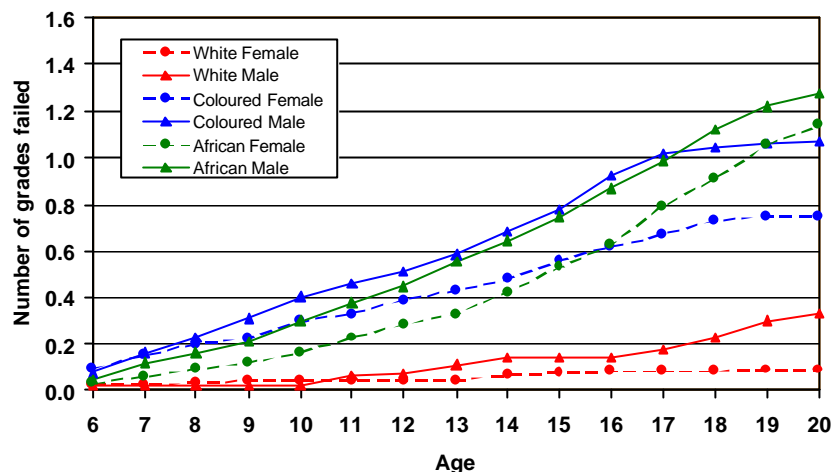


Source: Census 2001 (Stats SA)

The CAPS data provides direct measures of grade repetition through a retrospective history. In the first wave of the CAPS a life history calendar was used to record information about schooling for every single year of the respondent's life. For each year respondents were asked whether they were enrolled, the level enrolled, the result, whether they changed schools and whether they worked while enrolled. Figure 3 below show the cumulative number of grades failed at each age for CAPS respondents aged 20-22. It is clear from Figure 3 below that Coloured and African students both fail grades at a much higher rate than whites, with higher failure rates for males. African and coloured males have failed an average of one grade by age 17. The life history calendar produces panel data retrospectively in one wave and is particularly useful for variables such as grade repetition. It is however time consuming

data to collect and given the multi-purpose nature of NIDS is probably inappropriate. As a substitute for a full life history calendar we would suggest asking about not only the current year but the preceding year for children enrolled in school. This would enable researchers to have some insight into grade repetition and school choice at baseline. In the second wave we should ask about the schooling outcomes for each intervening year separately.

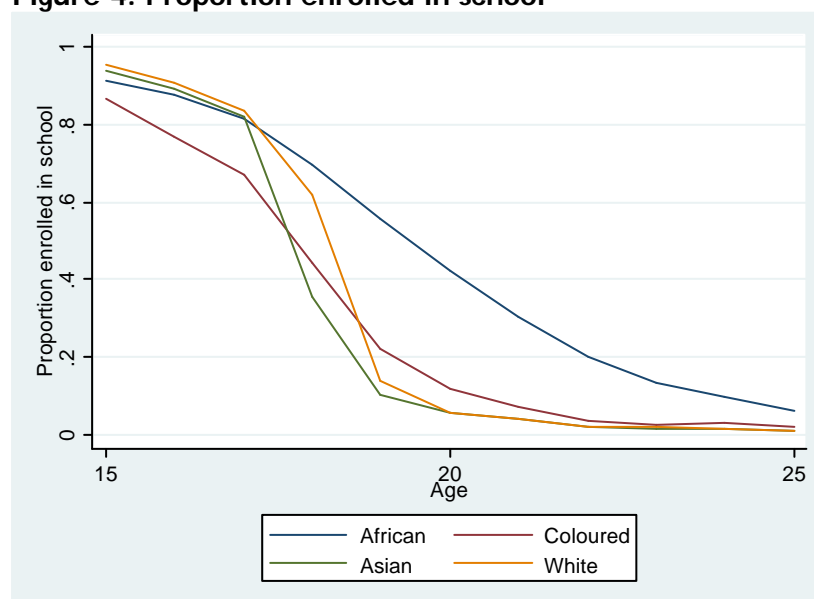
Figure 3: Schooling experience from retrospective histories, CAPS Wave 1 respondents age 21-22, 2002



Source: Cape Area Panel Study

It is also important to collect some measure of grade repetition for adults in the sample. Disparities in the quantity of education completed are actually muted because although African students advance at a slower rate they stay in school much longer. Figure 4 shows the proportion of individuals of each age who are enrolled in primary or secondary school. At the age of 20 over 40% of Africans are still in school as opposed to less than 10% of Coloured, Asians and Whites. For those who have already completed school we would ask how many grades they repeated and their age when they completed their last grade. The latter will hopefully be less subject to recall bias and offer a good proxy for grade repetition.

Figure 4: Proportion enrolled in school



Source: Census 2001 (Stats SA)

Dropping out

It is also important to collect data related to dropping out of school. The questions we propose on schooling activity in the current and previous year will be significantly better than data from only the current year, since it will be possible to clearly identify students who dropped out in the current year. We recommend that questions be included about the reasons for not attending school, similar to those in CAPS and other surveys.

Table 2: Percentage not attending an educational institution conditional on not having completed matric

Age	Percentage not attending conditional on not having completed matric
10	5%
11	5%
12	4%
13	5%
14	6%
15	8%
16	12%
17	18%
18	28%
19	40%
20	52%
21	64%
22	76%
23	84%
24	88%
25	92%

Source: Census 2001 (Stats SA)

Literacy and Numeracy tests

Glewwe (2000) provides a cautionary warning about the direct measurement of cognitive skills: "Measurement of learning outcomes (in other words, measurement of the acquisition of cognitive skills, general knowledge, and specialized technical skills) can be complicated. Measuring values and norms can be even more difficult. One way to avoid difficulties in measuring learning outcomes is to collect data on other variables that are closely related to learning. For example, it is much easier to collect data on years of schooling completed and on certificates or diplomas received, and these data should be highly correlated with skills and knowledge."

In South Africa, however, it is clear that grade attainment is a poor measure of skill and knowledge. Many students are promoted to higher grades without having acquired the skills taught in lower grades and there are still great inequities in the quality of schooling. van der Berg (2002) finds large differences in labour market outcomes for people with the same level of education.

A number of studies test skills and knowledge, but most of these studies use school-based samples and so do not cover young people who are not attending school and do not provide household and individual level information. Two exceptions are the LSMS and CAPS. A basic literacy and numeracy skill test was administered to each young adult respondent in Wave 1 of CAPS. This was a self-administered written test that was taken by respondents after the completion of the young adult questionnaire. The test had 45 questions and took about 20 minutes to complete. The respondent could choose to take the test in either English or Afrikaans. There was no version in Xhosa, the home language of most African respondents.

The English language test was taken by 99% of the African respondents, 43% of the coloured respondents, and 64% of the white respondents. In the LSMS a literacy and numeracy test was administered to one adolescent and one adult member of every sixth household. The test was administered in both English and the respondent's home language. The test was set at about the Grade 7 level (Fuller et al 1995).

Figures 3 and 4 present kernel density estimates of the distribution of numeracy and literacy test scores in CAPS for each population group. Each score is standardized to zero mean and unit variance. The differences in test scores across population groups are striking. For both the numeracy and literacy scores, we see only a small area of overlap between the test scores of African and white respondents. The distribution of numeracy scores for coloured youth sits between, with considerable overlap with both the white and African distributions. Similar patterns are evident in the densities of the LSMS test scores for teenagers in Figure 5.

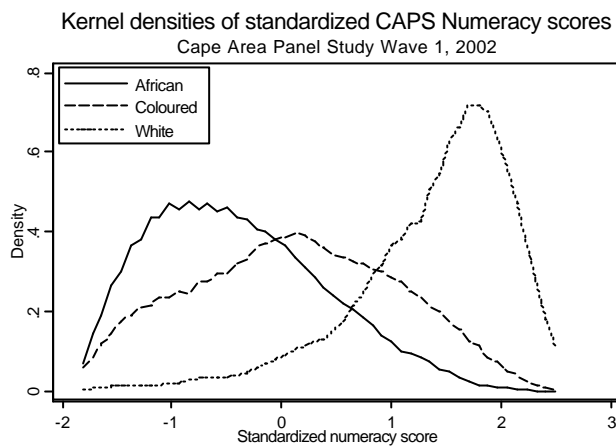
While in CAPS students in higher grades do generally have higher test scores there is still a worrying degree of overlap between test scores across the grades. Figure 6 shows the LSMS literacy and numeracy test scores by years of education for black teenagers. While there is a positive linear trend there is large variation within each level of completed education and overlap between levels of education. This highlights the need to collect data not only on the quantity but also on the quality of education received. Lam et al (2006) use the CAPS literacy and numeracy scores as a measure of previous schooling and find that racial difference in grade advancement are no longer significant on the inclusion of such scores in a simple regression. Van der Berg (2002) uses the LSMS literacy and numeracy scores as a measure of the quality of education received in working out wage differentials.

While literacy and numeracy test scores are extremely powerful they do present some real challenges in the field, not least of which is identifying the appropriate level of the test. Even within the age group 14 to 22 in metropolitan Cape Town there is enormous diversity in skill and it is clear that the literacy test in particular did not span a wide enough range for White adolescents. There are many other questions around household survey based literacy and numeracy evaluations: who is to be tested, which skills are tested, what should the length of the test be, what is the relationship between tests and national curriculum, where should tests take place.

Given the longitudinal nature of the survey, rather than testing a wide range of children and adults it may be worth selecting a cohort of children and testing them in two consecutive waves of the survey. In this way researchers would be able to examine the impact of individual and household events on learning outcomes.

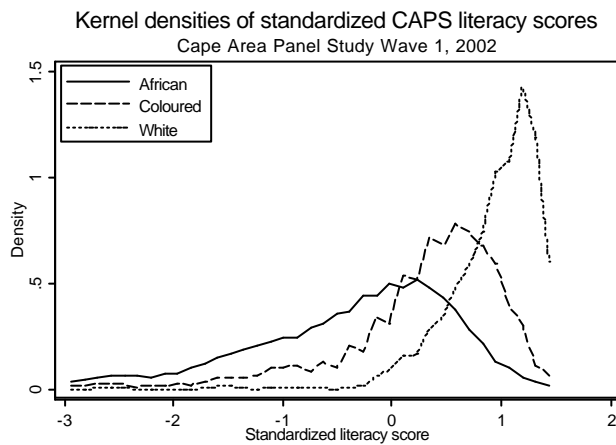
Given time constraints and the other challenges mentioned above it may be worth considering a few short questions on self assessed literacy and observing respondents' ability to read a short sentence and solve a simple calculation.

Figure 3: Kernel densities of standardized CAPS Numeracy scores



Source: Lam, Ardington and Leibbrandt (2006)

Figure 4: Kernel densities of standardized CAPS Literacy scores



Source: Lam, Ardington and Leibbrandt (2006)

Figure 5: LSMS test score densities for teenagers

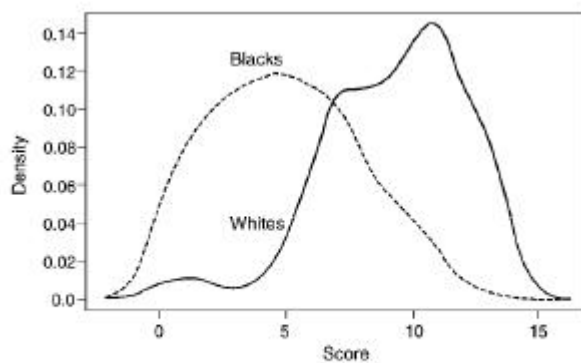


Figure 3: Test score densities for teenagers

Source: van der Berg et al (2002)

Figure 6: LSMS test scores by education for black teenagers

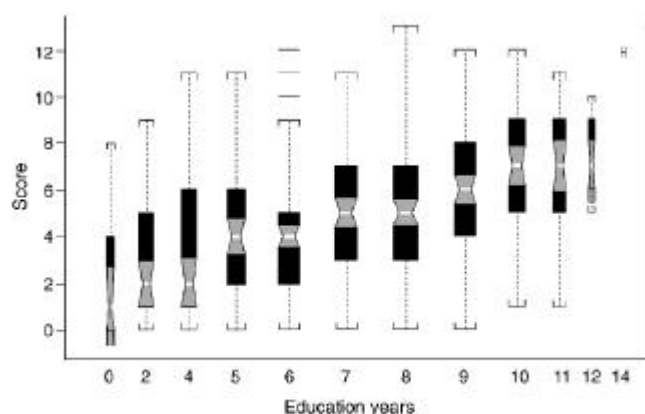


Figure 7: Test score by education in years for black teenagers

Source: van der Berg et al (2002)

Pre-school

Data from the 2001 Census indicate that enrollment in pre-school between the ages of 4 and 6 is fairly significant. We do not have any specific recommendations regarding questions that should be included about pre-school, but we flag the issue for consideration. Given the evidence from the U.S. and other countries on the importance of early childhood investments in human capital, there may be a high value in collecting data on pre-school enrollment. It might be advisable to get specific input on this question from researchers with expertise in early childhood education.

Table 3: Pre-school enrollment

Age	Attends an educational institution	Type of institution conditional on enrollment	
		Pre-school	School
0	2%	98%	0%
1	5%	97%	0%
2	11%	98%	0%
3	19%	99%	0%
4	29%	80%	19%
5	46%	68%	32%
6	71%	37%	62%
7	89%	4%	96%

Source: Census 2001 (Stats SA)

Educational expectations

CAPS has a number of questions about educational expectations, asked from the perspective of both parents and young people. While these have been used for interesting research in CAPS, we are not sure that this is an important priority for NIDS. We have included some questions in our draft modules, but we consider them to be lower priority. We think they should be on the table for discussion, however, since some may want to argue on their behalf.

Proposed Questionnaire Modules

We have attached four draft modules. Comments are marked in yellow and questions marked in blue are considered lower priority.

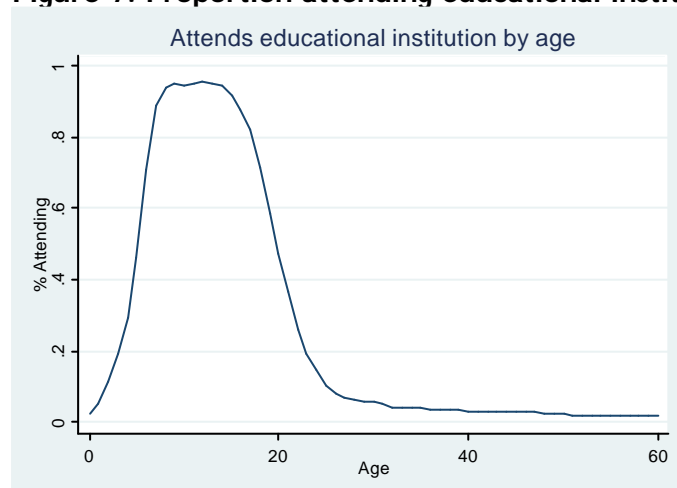
Child module - baseline

This module will be administered to the primary care giver's of all children aged 15 and under. The education questions will be restricted to children aged 5 to 15 inclusive. Questions about parent's education, living arrangements and vital status should be asked for all children.

Adult module - baseline

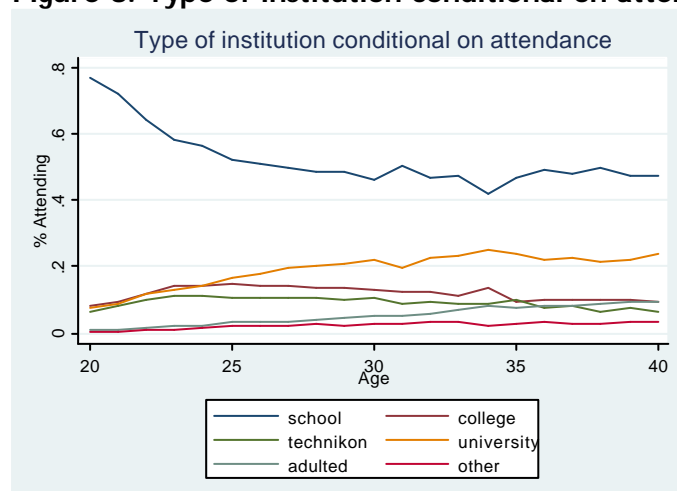
This module will be administered directly to all household members aged 16 and older. The education section has general questions that will be asked of everyone. A subset of the questions explore current enrollment. It is difficult to determine what the age cut off for these questions should be. As shown in Figure 7, attendance in educational institutions drops rapidly during the twenties, but continues to be positive at older ages. Surprisingly, as shown in Figure 8, those above age 25 who are attending an educational institution are mostly reported as being in school. These are small percentages above age 30, however, and it may make sense to limit questions about schooling to those under age 25 or 30.

Figure 7: Proportion attending educational institution by age



Source: Census 2001 (Stats SA)

Figure 8: Type of institution conditional on attendance



Source: Census 2001 (Stats SA)

Child and Adult modules - second wave

The questions in the second wave are very similar to those of the first wave. Rather than just asking about the current status of schooling in the second wave, we strongly recommend asking about enrollment and schooling outcomes for each intervening year separately. We should also be sure to ask for results of schooling in the first wave.

Appendix: Power calculations

In considering the kinds of research questions that NIDS should attempt to answer, it is important to think carefully about whether the data will be likely to provide clear evidence on specific questions. In this appendix we provide some power calculations regarding one specific issue – the impact of a household shock such as parental death on children's schooling outcomes. Detecting significant differences in enrollment, levels of completed education, spending on education, cognitive skills (as measured by standardized tests) or any other outcome between children who do and do not experience a shock at the cross section does not enable us to establish whether the shock has a causal effect on any of these outcomes. Households in which a shock occurs may be systematically different than other households leading to associations between poor schooling outcomes and the shock. Panel data with outcome measures both pre and post a shock should enable us to move some distance in establishing whether shocks have a causal impact on children's outcomes. It is useful to assess whether we will have adequate power to detect significant differences across children in households who experience various shocks and those that do not.

Our ability to detect differences across children depends on the sample (or cohort) size, magnitude of the impact and the incidence of the shock between waves of the panel. In Wave 3 of the CAPS 14% of young adults report a household member dying in the last 3 years, 12% report serious illness of a household member and 16% report a household member losing their job. While some of these events may have a serious impact on children's schooling outcomes it is unlikely that all deaths in the household will have equal (or indeed any) impact. Parental death has been shown to have a negative impact on a range of children's outcomes (see Case and Ardington (2006) for example) and is fairly rare. We therefore base our power calculations below on the potential impact of parental death. Table 4 shows the estimated number of maternal, paternal and double orphans for a sample of 8,000 households using the 2001 Census. Assuming that the incidence of orphanhood remains at 2001 rates we can estimate the number of new orphans in each age cohort over a 2 and 3 year period.

Table 4: Maternal, Paternal and Double Orphans by Age

Age	Estimated sample size	Maternal only	Paternal only	Double	# new orphans in age cohort over 2 years			# new orphans in age cohort over 3 years		
					Maternal only	Paternal only	Double	Maternal only	Paternal only	Double
0	599.2	2.7	20.6	1.4	2.4	11.1	1.3	3.9	16.6	1.7
1	573.5	3.6	26.1	1.6	2.9	11.2	1.5	4.4	17.5	2.7
2	581.1	5.1	31.8	2.7	2.9	11.9	1.6	4.1	19.2	2.6
3	575.5	6.6	37.3	3.1	2.6	13.7	2.2	4.7	16.9	2.8
4	600.3	8.0	43.6	4.3	3.2	10.5	1.7	3.8	17.0	3.6
5	641.9	9.2	51.0	5.3	2.7	9.7	2.5	3.7	12.3	2.2
6	634.0	11.2	54.2	5.9	1.6	9.2	1.6	4.3	18.5	3.7
7	648.1	11.8	60.7	7.9	3.7	12.0	1.8	5.4	17.7	3.0
8	635.1	12.8	63.3	7.5	4.4	15.1	3.4	5.0	20.7	4.7
9	680.3	15.6	72.6	9.6	2.3	11.4	2.5	2.5	13.8	2.6
10	710.1	17.2	78.4	10.9	0.8	8.0	1.3	2.0	12.8	2.6
11	696.1	17.9	84.0	12.2	1.4	7.2	1.2	1.9	10.9	1.6
12	667.5	18.1	86.5	12.2	1.7	8.4	1.6	4.3	17.6	3.8
13	665.2	19.3	91.2	13.4	3.1	12.8	2.5	4.6	19.0	3.6
14	659.7	19.7	94.9	13.8	4.1	15.3	3.2	3.9	17.7	3.5
15	681.1	22.4	104.0	15.9	1.3	8.6	1.3			
16	691.0	23.9	110.2	17.0						
17	660.4	23.6	112.6	17.3						
Total	11600.0	248.6	1222.9	161.8	41.2	176.1	31.3	58.5	248.4	44.5

Source: Census 2001 (Stats SA)

The power calculations below assume that a literacy and numeracy evaluation is conducted in two consecutive waves. Assume that a test administered to children has a mean of 100 and a standard deviation of 15, that children's test scores have a correlation of 0.8 across years (a number consistent with literature on many standard tests of developmental outcomes); and that becoming an orphan leads to a 3-point (1/5 of a standard deviation) decline in the test score. Power calculations were based on simulated data (with 500 replications) that was used to estimate the following regression model:

$$\Delta \text{Score}_{t,t-1} = \mathbf{b}_0 + \mathbf{b}_1 I(\text{Shock between } t-1 \text{ and } t) + \mathbf{e}$$

Regressions were estimated using differences between Wave 2 and Wave 1 data. We have not conducted power analyses that include additional covariates in the model, since we do not yet have information on the covariances between other independent variables and the outcomes of interest. The estimate of power is equal to the fraction of cases (in the 500 regressions estimated) in which the null was rejected at the 5% level or better.

Power of test: Null that $\mathbf{b}_1 = 0$ versus alternative that $\mathbf{b}_1 < 0$					
Age group	Cohort size	Shock	% experiencing shock	Impact of shock	Power
7-14	5,360	Loss of either parent	2.4%	1/5 of a standard deviation	0.988
7-14	5,360	Loss of a mother only	0.7%	1/5 of a standard deviation	0.616

These estimates suggest that a shock with the hypothesized impact would be statistically detectable if it occurs to as little as 2.4% of the sample, but would not be detectable if it occurred to less than 1%, which is the percentage of 7-14 year-olds that we predict would become maternal orphans between waves. These power calculations do not take design effects into account so are an over estimate of the power of these tests.

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Module C: Education

Comments highlighted in yellow

Lower priority questions highlighted in blue

Ask everybody

C.1	What is the highest grade in school that you have successfully completed? (Do not count the final year you were in school if you did not successfully complete the year.)	Grade 1/Sub A	01	
		Grade 2/Sub B	02	
		Grade 3/Standard 1	03	
		Grade 4/Standard 2	04	
		Grade 5/Standard 3	05	
		Grade 6/Standard 4	06	
		Grade 7/Standard 5	07	
		Grade 8/Standard 6	08	
		Grade 9/Standard 7	09	
		Grade 10/Standard 8	10	
		Grade 11/Standard 9	11	
		Grade 12/Standard 10/Matric without exemption	12	
		Grade 12/Standard 10/Matric with exemption	13	
		Other (specify):	25	
No Schooling / Grade 0 / Little Sub A	95	C.7		
Don't know	99			

C.2	In what year did you successfully complete this grade? If you do not know the year, how old were you when you successfully completed this grade?	Year		
		Age		
		Don't know	99	

C.3	<p>What is the highest grade or level at school in which you studied mathematics?</p> <p>This refers to highest grade studied and not necessarily highest grade passed. Incomplete years should also be included.</p>	Never /Grade 0/ Little sub A	95	
		Grade 1/Sub A	01	
		Grade 2/Sub B	02	
		Grade 3/Standard 1	03	
		Grade 4/Standard 2	04	
		Grade 5/Standard 3	05	
		Grade 6/Standard 4	06	
		Grade 7/Standard 5	07	
		Grade 8/Standard 6	08	
		Grade 9/Standard 7	09	
		Grade 10/Standard 8	10	
		Grade 11/Standard 9	11	
		Grade 12/Standard 10/Matric	12	
		Don't know	99	

C.4	In what year did you first attend Grade 1/Sub A?	Year	
		Don't know	99

C.5	Did you repeat any years in school?	Yes	1	C.6
		No	2	
		Don't know	9	

C.6	How many years did you repeat?	Number of repeated grades	
		Don't know	99

C.7	Have you successfully completed any diplomas, certificates, degrees outside of school? If yes, what is the highest level of education you have successfully completed? (Don't include any courses that you did not successfully complete.)	Undergraduate Diploma/Certificate from a Technikon with Grade12/Std 10	20	
		Undergraduate Diploma/Certificate from a University with Grade12/Std 10	21	
		Undergraduate degree from a Technikon	22	
		Undergraduate degree from a University	23	
		Postgraduate degree or diploma	24	
		Diploma/Cert that requires matric, not from University or Technikon	26	
		Diploma/Cert that does not require matric, not from University or Technikon	27	
		Other (specify):	25	
		None	95	
		Don't know	99	

Parent's education, living arrangements and vital status

The questions below presume that we will be able to match children to co-resident biological parents via the household roster and so do not need to ask the education level of co-residents parents. For example, the following question is included in the CAPS household roster.

Line #	Do biological mother and father of — live in household? If yes, put line number; if alive but not in household put 95; if deceased put 94; if don't know put 99.	
	Mother	Father
01		
02		

The danger with this approach is that there can be inconsistencies between the household questionnaire and the child's questionnaire due to differing interview dates and/or respondents. To avoid this we could either ask the education level questions of co-resident parents or put the following questions into the household roster rather than in the Child questionnaire.

			Biological Mother	Biological Father
C.8	Does your live in this household	Yes go to next.	1	1
		No	2	2
		Don't know	9	9
C.9	What is the highest grade in school that your successfully completed? (Do not count the final year your ... was in school if your ... did not successfully complete the year.)	Grade R	01	01
		Grade 1/Sub A	02	02
		Grade 2/Sub B	03	03
		Grade 3/Standard 1	04	04
		Grade 4/Standard 2	05	05
		Grade 5/Standard 3	06	06
		Grade 6/Standard 4	07	07
		Grade 7/Standard 5	08	08
		Grade 8/Standard 6	09	09
		Grade 9/Standard 7	10	10
		Grade 10/Standard 8	11	11
		Grade 11/Standard 9	12	12
		Grade 12/Standard 10/Matric	13	13
		Other (specify):	25	25
		Don't know	99	99
C.10	Has your ... successfully completed any diplomas, certificates, degrees outside of school? If yes, what is the highest level of education your successfully completed? (Don't include any courses that your ... did not successfully complete.)	Grade R	01	01
		Grade 1/Sub A	02	02
		Undergraduate Diploma/Certificate from a Technikon with Grade 12/Std 10	03	03
		Undergraduate Diploma/Certificate from a University with Grade 12/Std 10	04	04
		Undergraduate degree from a Technikon	05	05
		Undergraduate degree from a University	06	06
		Postgraduate degree or diploma	07	07
		Diploma/Cert that requires matric, not from University or Technikon	08	08
		Diploma/Cert that does not require matric, not from University or Technikon	09	09

		Other (specify):	25	25
		None	95	95
		Don't know	99	99
C.11	Is your alive now?	Yes go to C.13	1	1
		No	2	2
		Refused go to next	8	8
		Don't know go to next	9	9
C.12	Only if your ... is no longer alive (C.15=No): How many years ago did your pass away or in what year did he/she die? Go to next	Years since death go to next		
		Year of death go to next		
		More than 10 years ago go to next	-7	-7
		Refused go to next	-8	-8
		Don't know go to next	-9	-9
C.13	What is your ... currently doing?	Working	1	1
		Looking for work	2	2
		Studying	3	3
		Sick/ill	4	4
		Retired	5	5
		Nothing	6	6
		Refused	8	8
		Don't know	9	9

Ask respondents aged 16 to 30 (this age cutoff needs to be considered) :

			2006	2007
C.14	Did you attend any school or classes or correspondence courses of any kind at any time in [year]? Include university, technikon or any courses outside of school	Yes go to C.16	1	1
		No	2	2
		Refused go to next year	8	8
		Don't know go to next year	9	9
C.15	What was the main reason you were never enrolled in school or attending classes during [year]?	Could not afford to stay at school go to next year	01	01
		Wanted to look for a job go to next year	02	02
		Was pregnant/had a baby go to next year	03	03
		Was needed at home go to next year	04	04
		Was ill/sick go to next year	05	05
		I got married go to next year	06	06
		I got a job/work go to next year	07	07
		Grades were very poor/ was not allowed to continue go to next year	08	08
		Was suspended/expelled go to next year	09	09
		Other (specify) go to next year	10	10
		Don't know go to next year	99	99
C.16	What level were you enrolled in during [year]?	Grade R	01	01
		Grade 1/Sub A	02	02
		Grade 2/Sub B	03	03
		Grade 3/Standard 1	04	04
		Grade 4/Standard 2	05	05
		Grade 5/Standard 3	06	06
		Grade 6/Standard 4	07	07
		Grade 7/Standard 5	08	08
		Grade 8/Standard 6	09	09
		Grade 9/Standard 7	10	10
		Grade 10/Standard 8	11	11
		Grade 11/Standard 9	12	12
		Grade 12/Standard 10/Matric	13	13
		Undergraduate Diploma/Certificate from a Technikon with Grade 12/Std 10	20	20
		Undergraduate Diploma/Certificate from a University with Grade 12/Std 10	21	21
		Undergraduate degree from a Technikon	22	22
		Undergraduate degree from a University	23	23
		Postgraduate degree or diploma	24	24
		Diploma/Cert that requires matric, not from University or Technikon	26	26
		Diploma/Cert that does not require matric, not from University or Technikon	27	27
		Other (specify):	25	25
		Don't know	99	99

			2006	2007
C.17	Interviewer: Only ask if respondent is enrolled in something other than a grade at school (C.16-13): What subject or programme were you studying in [year]?	Arts / humanities	01	01
		Science	02	02
		Social science	03	03
		Law	04	04
		Theology	05	05
		Commerce / management	06	06
		Education	07	07
		Medical services (incl. dentistry)	08	08
		Engineering	09	09
		Administration / clerical	10	10
		Protection	11	11
		Building sciences	12	12
		Technical	13	13
		Computing	14	14
		Veterinary	15	15
		Tourism	16	16
		Beauty / hair / cosmetology	17	17
		Other (specify)	18	18
		Don't know	99	99
C.18	What was the result of your schooling in [year]?	Withdrew from school before completing the year	1	1
		Failed the grade or program go to C.20	2	2
		Passed the grade or program go to C.20	3	3
		Continuing in program, no grade given go to C.20	4	4
		Don't know go to C.20	9	9
C.19	Interviewer: Ask only if respondent withdrew before completing the year. (C.18=1) What is the <u>main</u> reason that you withdrew before completing the educational year? Interviewer: Do not read out options.	Could not afford to stay at school	01	01
		Wanted to look for a job	02	02
		Was pregnant/had a baby	03	03
		Was needed at home	04	04
		Was ill/sick	05	05
		I got married	06	06
		I got a job/work	07	07
		Grades were very poor/Was not allowed to continue	08	08
		Suspended/expelled	09	09
		Other (specify)	10	10
		Don't know	99	99

Interviewer: After completing the table for both years go to question C.20

C.20	Interviewer: Is the respondent currently enrolled? (See C.14 2007 column)?	Yes	1	
		No	2	C.34

C.21	Name of school or educational institution attended for most of this year. Interviewer: If the respondent attended more than 1 institution, write down the institution that they attended for most of the year		
C.22	What is the location of this educational institution? Interviewer: Please get street address, neighbourhood (such as Rondebosch, Macazar, Langa, Hanover Park, or Athlone) or other identifying information if in Cape Town or name of the nearest town or city (such as Worcester, Durban, Umtata, or Cofimvaba).		
C.23	Interviewer: Only ask if respondent is enrolled in something other than a grade at school (C.16 2007 Column > 13): Does this institution require you to have a matric?	Yes No Don't know Refused	1 2 3 8
C.24	Are you attending the same school as in the previous year/the last time you were in school?	Yes No Don't know Refused	1 2 3 8
C.25	What is the main reason you changed schools?	Completed level of schooling (e.g. completed primary school or completed matric) Respondent/family moved New school offers better education New school less expensive Old school too dangerous Old school closed New school in better neighbourhood New school closer to home Expelled from old school / Asked to leave Won scholarship to new school Failed at previous school Other (specify) Don't know	01 02 03 04 05 06 07 08 09 10 11 12 99
C.26	How much was/will be spent on your.... this year?	School fees Uniform Books and Stationery Transport to school	

	Allowances and other school related expenses	
C.27	Who paid/pays for your educational expenses this year?	<div>Person #1 Enter relationship code</div> <div>Person #2 Enter relationship code</div> <div>Person #3 Enter relationship code</div> <div>Refused 88</div> <div>Don't know 99</div>

C.28	Interviewer: Is the respondent currently enrolled in school (Grade 12 or lower) (See C.16 2007 column)?	<div>Yes 1</div> <div>No 2</div> <div>Don't know 9</div>	D.1
C.29	Taking everything into account, do you intend to continue at schooling until you have successfully completed matric?	<div>Yes 1</div> <div>No 2</div> <div>Don't know 9</div>	D.1
C.30	Do you expect that your marks or grades will be good enough for you to be admitted into a college, technikon, university, or other postmatric institution?	<div>Yes 1</div> <div>Perhaps 2</div> <div>No 3</div> <div>Don't know 9</div>	
C.31	Taking everything into account, do you intend to continue studying after matric, that is, after leaving school?	<div>Yes 1</div> <div>No 2</div> <div>Don't know 9</div>	C.33 D.1
C.32	For what qualification do you expect to be studying? Interviewer: Go to Section D.	<div>Degree from a university 1</div> <div>Degree from a technikon 2</div> <div>Diploma 3</div> <div>Certificate 4</div> <div>Other (specify) 5</div> <div>Don't know 9</div>	D.1
C.33	Interviewer: If not intending to study after matric (No to C.31): What is the most important reason that you do not intend to study after matric? Interviewer: One answer only. Go to Section D.	<div>I want to get a job or work 1</div> <div>My grades will not be good enough 2</div> <div>I do not have the money 3</div> <div>I am pregnant / I want to have a baby/ I have a child 4</div> <div>I am married / I want to get married 5</div> <div>I do not think that studying will help me 6</div> <div>I am / will be sick 7</div> <div>Other (specify) 8</div> <div>Don't know 9</div>	D.1

C.34	Do you think you will eventually return to school or university or college or attend classes of any kind?	Yes	1	D.1
		No	2	
		Don't know	9	

C.35	Can you read the following sentence? Interviewer: Show respondent sentence card	Yes, without errors or difficulty	1	
		Yes, but with errors or difficulty	2	
		No	3	
		Refused	8	

Simple sentence of six to eight words based on the primary school curriculum. Three or four variants to prevent people overhearing then reading same sentence. Perhaps in mother tongue and then in another language (English?)

C.36	Can you solve the following written calculation? Interviewer: Show respondent calculation card	Correct answer	1	
		Incorrect or no answer	2	
		Refused	8	

Simple addition or subtraction at a level consistent with two to three years primary education.

C.37	Can you read the newspaper?	Yes	1	
		No	2	
		Refused	8	
		Don't know	9	
C.38	Can you write a letter?	Yes	1	
		No	2	
		Refused	8	
		Don't know	9	
C.39	Are you computer literate?	Yes highly literate	1	
		Yes basic use	2	
		No	3	
		Refused	8	
		Don't know	9	
C.40	Do you have a driver's licence?	Yes	1	
		No	2	
		Refused	8	
		Don't know	9	
C.41	How well can you read and write in your home language?	Very well	1	
		A little	2	
		Not at all	3	
		Refused	8	
		Don't know	9	
C.42	How well can you read and write in English?	Very well	1	
		A little	2	
		Not at all	3	
		Refused	8	
		Don't know	9	

Matric Results

C.43	Have you ever written the matric (grade 12) examinations or received results for the matric examination?	Yes No	1 2	D.1
C.44	In your most recent attempt at matric, did you pass matric with university exemption, without university exemption or did you not pass?	Passed with exemption Passed without exemption Did not pass Don't know	1 2 3 9	
C.45	In what year was your most recent attempt at the matric examinations?	Year (4 digits)		

MATRIC RESULTS:

Interviewer: only complete this section if the respondent has ever received results for the grade 12 / matric examination: If the respondent has attempted the matric examination more than once then ask about the results for the most recent attempt.

I am going to read you a list of subjects. Please tell me the grade you got for each matric subject exam you took, and whether this was a higher grade, standard or lower grade.

Interviewer Circle the number for each subject the respondent took. If the respondent says that he/she wrote the exam for other subjects, record the subject under "other".

		RESULT / SYMBOL ACHIEVED:		HIGHER, STANDARD OR LOWER GRADE:
		Record number 1=A 2=B 3=C 4=D 5=E 6=F 9=Don't know		1 = Higher grade 2 = Standard grade 3 = Lower grade 9 = Don't know
		C46a	C46b	C46c
C.46.1	English 1 st language	01		
C.46.2	English 2 nd language	02		
C.46.3	Afrikaans 1 st language	03		
C.46.4	Afrikaans 2 nd language	04		
C.46.5	Mathematics	05		
C.46.6	Biology	06		
C.46.7	Geography	07		
C.46.8	Business economics	08		
C.46.9	Economics	09		
C.46.10	Home economics	10		
C.46.11	History	11		
C.46.12	IsiXhosa 1 st language	12		
C.46.13	Physical science	13		
C.46.14	Accounting	14		
C.46.15	Biblical studies	15		
C.46.16	Other (specify):	16		
C.46.17	Interviewer: please write any comments here regarding special circumstances:			

Module C: Education

Comments highlighted in yellow

Lower priority questions highlighted in blue

Ask for all children aged 5 to 15:

			2006	2007
C.1	Did [NAME] attend school at any time in [year]?	Yes go to C.3	1	1
		No	2	2
		Refused go to next year	8	8
		Don't know go to next year	9	9
C.2	What was the main reason [NAME] was never enrolled in school during [year]?	Too young to be admitted to school go to next year	01	01
		Could not afford to stay at school go to next year	02	02
		Wanted to look for a job go to next year	03	03
		Was pregnant/had a baby go to next year	04	04
		Was needed at home go to next year	05	05
		Was ill/sick go to next year	06	06
		Grades were very poor/ was not allowed to continue go to next year	07	07
		Was suspended/expelled go to next year	08	08
		Other (specify) go to next year	10	10
		Don't know go to next year	99	99
C.3	What level was [NAME] enrolled in during [year]?	Grade R	01	01
		Grade 1/Sub A	02	02
		Grade 2/Sub B	03	03
		Grade 3/Standard 1	04	04
		Grade 4/Standard 2	05	05
		Grade 5/Standard 3	06	06
		Grade 6/Standard 4	07	07
		Grade 7/Standard 5	08	08
		Grade 8/Standard 6	09	09
		Grade 9/Standard 7	10	10
		Grade 10/Standard 8	11	11
		Grade 11/Standard 9	12	12
		Grade 12/Standard 10/Matric	13	13
		Other (specify):	25	25
		Don't know	99	99
C.4	What was the result of [NAME's] schooling in [year]?	Withdrew from school before completing the year	1	1
		Failed the grade or program go to C.6	2	2
		Passed the grade or program go to C.6	3	3
		Continuing in program, no grade given go to C.6	4	4
		Don't know go to C.6	9	9

		2006	2007	
C.5	<u>Interviewer:</u> Ask only if [NAME] withdrew before completing the year. (C.4=1) What is the <u>main</u> reason that [NAME] withdrew before completing the educational year? <u>Interviewer:</u> Do not read out options.	Could not afford to stay at school	01	01
		Wanted to look for a job	02	02
		Was pregnant/had a baby	03	03
		Was needed at home	04	04
		Was ill/sick	05	05
		Grades were very poor/Was not allowed to continue	06	06
		Suspended/expelled	07	07
		Other (specify)	08	08
		Don't know	99	99

Interviewer: After completing the table for both years go to question C.6

C.6	Interviewer: Is [NAME] currently enrolled? (See C.1 2007 column)?	Yes	1	C.13
		No	2	
C.7	Name of school or educational institution attended for most of [year]. Interviewer: If [NAME] attended more than 1 institution, write down the institution that they attended for most of the year			
C.8	What is the location of this educational institution? Interviewer : Please get street address, neighbourhood (such as Rondebosch, Macazar, Langa, Hanover Park, or Athlone) or other identifying information if in Cape Town or name of the nearest town or city (such as Worcester, Durban, Umtata, or Cofimvaba).			
C.9	Is [NAME] attending the same school as in the previous year/the last time [NAME] was in school?	Yes	1	C.11
		No	2	C.11
		Don't know	3	
		Refused	8	
C.10	What is the main reason [NAME] changed schools?	Completed level of schooling (e.g. completed primary school or completed matric)	01	
		Respondent/family moved	02	
		New school offers better education	03	
		New school less expensive	04	
		Old school too dangerous	05	
		Old school closed	06	
		New school in better neighbourhood	07	
		New school closer to home	08	
		Expelled from old school / Asked to leave	09	
		Won scholarship to new school	10	
		Failed at previous school	11	
		Other (specify)	12	
		Don't know	99	

C.11	How much was/will be spent on [NAME's].... this year?	School fees	
		Uniform	
		Books and Stationery	
		Transport to school	
		Allowances and other school related expenses	
C.12	Who paid/pays for [NAME's] educational expenses this year?	Person #1 Enter relationship code	
		Person #2 Enter relationship code	
		Person #3 Enter relationship code	
		Refused	88
		Don't know	99

Given the table above this next question may seem odd but in our experience we have found that it is worth asking. For example, if a student was not enrolled in either year we will not know their highest level of successfully completed schooling.

C.13	What is the highest grade in school that [NAME] has successfully completed? (Do not count the final year [NAME] was in school if [NAME] did not successfully complete the year.)	Grade 1/Sub A	01
		Grade 2/Sub B	02
		Grade 3/Standard 1	03
		Grade 4/Standard 2	04
		Grade 5/Standard 3	05
		Grade 6/Standard 4	06
		Grade 7/Standard 5	07
		Grade 8/Standard 6	08
		Grade 9/Standard 7	09
		Grade 10/Standard 8	10
		Grade 11/Standard 9	11
		Grade 12/Standard10/Matric without exemption	12
		Grade 12/Standard10/Matric with exemption	13
		Other (specify):	25
		No Schooling / Grade 0 / Little Sub A	95
Don't know	99		
C.14	In what year did [NAME] first attend Grade 1/Sub A?	Year	
		Don't know	99

Ask for all children aged 0 to 15:

Parent's education, living arrangements and vital status

The questions below presume that we will be able to match children to co-resident biological parents via the household roster and so do not need to ask the education level of co-residents parents. For example, the following question is included in the CAPS household roster.

Line #	Do biological mother and father of — live in household? If yes, put line number; if alive but not in household put 95; if deceased put 94; if don't know put 99.	
	Mother	Father
01		
02		

The danger with this approach is that there can be inconsistencies between the household questionnaire and the child's questionnaire due to differing interview dates and/or respondents. To avoid this we could either ask the education level questions of co-resident parents or put the following questions into the household roster rather than in the Child questionnaire.

			Biological Mother	Biological Father
C.15	Does [NAME's] live in this household	Yes go to next.	1	1
		No	2	2
		Don't know	9	9
C.16	What is the highest grade in school that [NAME's] successfully completed? (Do not count the final year [NAME's] ... was in school if [NAME's] ... did not successfully complete the year.)	Grade R	01	01
		Grade 1/Sub A	02	02
		Grade 2/Sub B	03	03
		Grade 3/Standard 1	04	04
		Grade 4/Standard 2	05	05
		Grade 5/Standard 3	06	06
		Grade 6/Standard 4	07	07
		Grade 7/Standard 5	08	08
		Grade 8/Standard 6	09	09
		Grade 9/Standard 7	10	10
		Grade 10/Standard 8	11	11
		Grade 11/Standard 9	12	12
		Grade 12/Standard10/Matric	13	13
		Other (specify):	25	25
		Don't know	99	99
C.17	Has [NAME's] ... successfully completed any diplomas, certificates, degrees outside of school? If yes, what is the highest level of education [NAME's] successfully completed? (Don't include any courses that [NAME's] ... did not successfully complete.)	Grade R	01	01
		Grade 1/Sub A	02	02
		Undergraduate Diploma/Certificate from a Technikon with Grade12/Std 10	03	03
		Undergraduate Diploma/Certificate from a University with Grade12/Std 10	04	04
		Undergraduate degree from a Technikon	05	05
		Undergraduate degree from a University	06	06
		Postgraduate degree or diploma	07	07
		Diploma/Cert that requires matric, not from University or Technikon	08	08
		Diploma/Cert that does not require matric, not from	09	09

		University or Technikon		
		Other (specify):	25	25
		None	95	95
		Don't know	99	99
C.18	Is [NAME's] alive now?	Yes go to C.20	1	1
		No	2	2
		Refused go to next	8	8
		Don't know go to next	9	9
C.19	Only if [NAME's]... is no longer alive (C.16=No): How many years ago did [NAME's] pass away or in what year did he/she die? Go to next	Years since death go to next		
		Year of death go to next		
		More than 10 years ago go to next	-7	-7
		Refused go to next	-8	-8
		Don't know go to next	-9	-9
C.20	What is [NAME's] ... currently doing?	Working go to next	1	1
		Looking for work go to next	2	2
		Studying go to next	3	3
		Sick/ill go to next	4	4
		Retired go to next	5	5
		Nothing go to next	6	6
		Refused go to next	8	8
		Don't know go to next	9	9

Questions asked directly of children:

The following question could only be asked directly of the child. Such questions would only make sense if we were collecting anthropometrics or other information directly from the child.

C.21	Can you read the following sentence? <u>Interviewer:</u> Show respondent sentence card	Yes, without errors or difficulty	1
		Yes, but with errors or difficulty	2
		No	3
		Refused	8

Simple sentence of six to eight words based on the primary school curriculum. Three or four variants to prevent people overhearing then reading same sentence. Perhaps in mother tongue and then in another language (English?)

C.22	Can you solve the following written calculation? <u>Interviewer:</u> Show respondent calculation card	Correct answer	1
		Incorrect or no answer	2
		Refused	8

Simple addition or subtraction at a level consistent with two to three years primary education.