

# What the household data say about participation in ECD institutions

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*December 2018*

## SUMMARY

The main aim of the current report is to correct what seems to be widespread misperceptions around how many children in South Africa attend some form of ECD institution, or pre-school in the sense of an institution below the level of a primary school. Many available statistics point to total ECD enrolment being in the range of 900,000 to 1.5 million. In fact, Stats SA data reliably point to a figure of around 2.4 million. The percentage of children already enrolled at the pre-Grade R level, a one-year level prioritised in the National Development Plan, was between 69% and 78% in 2016. If ECD participation is higher than what is widely believed to be the case, then this has implications for how one thinks about the future of ECD. Relatively speaking, the *quality* of ECD becomes more important, and the focus (and money) that needs to be devoted to improving basic *access* becomes less important.

## 1 Introduction

There is a growing interest in early childhood development (ECD) in the education policy debates around the world, driven in part by new evidence on how dependent a person's long-term educational prospects are on the right physical and psychological support during the years before entry into formal schooling.

South Africa's National Development Plan (NDP) describes how the state should take action to improve ECD by 2030. For example, it says the following<sup>1</sup>:

Universal access to quality early childhood development for children aged 0–3 must be made available and have a strong nutrition and educational focus.

Make 2 years of quality preschool enrolment for 4 and 5 year olds compulsory before Grade 1.

Responding to these calls obviously requires a good understanding of the baseline, both in terms of the quantity and quality of formal ECD received by children. The current report focusses almost entirely on *quantity*, specifically enrolment in ECD institutions. It seems important to clarify these matters as there seems to be some confusion, or lack of clarity, in this regard in existing reports.

## 2 What existing reports say

A key report in the government monitoring system is the 2016 version of the baseline and target values for government's Outcome 13, namely 'An inclusive and responsive social protection system'<sup>2</sup>. That report states that the baseline value for 'Number of children accessing registered ECD programmes (private and subsidised)' is **1,530,554**, the 2018/19 target being **2,179,740**. It is moreover stated that the baseline for 'Number of children

<sup>1</sup> National Planning Commission, 2012: 300.

<sup>2</sup> Department of Planning, Monitoring and Evaluation, 2016: 11.

subsidised' is **987,636**, the 2018/19 target being **1,096,824**. These figures do not make sense insofar as they suggest that most of the expansion would occur *outside* of public subsidisation, in other words on a completely private basis. This would not be in line with the clear policy message, for instance of the NDP, that the state needs to ensure that poorer households obtain better access to ECD. Moreover, as will be seen, the baseline values are lower than they should be. In this report, as in many others, the data source is not given.

An low figure also appears in President Ramaphosa's 2018 State of the Nation Address (SONA), which says the following: 'Today we have **nearly a million** children in early childhood development facilities'<sup>3</sup>. The sentence makes it seem the reference is to *all* facilities, public and private, but a comparison to the figures of the previous paragraph suggests that only public facilities were counted.

The NDP, which was released in 2012, refers to **400,000** publicly subsidised children in ECD centres<sup>4</sup>. This figure also seems rather low.

UNESCO's 2017-2018 Global Monitoring Report states that enrolment in pre-primary education was **857,000** in 2014<sup>5</sup>. As will be seen, this figure is clearly too low. This understatement is worrying, as international reports signal to investors and strategic partners around the world how seriously South Africa takes the education of its citizens.

It is possible that the values referred to above are informed by a 2014 survey of ECD centres. The report from that survey, available online, indicates that 17,846 centres were surveyed, giving a total of **832,763** 'enrolled' and **917,057** 'present' children<sup>6</sup>. The study, commissioned by the Department of Social Development, seems to have unquestioningly considered government databases of registered and 'unregistered' ECD centres complete – unregistered here presumably means existing on a government register, but without all the necessary permissions and approvals to operate. Given the informality of much of the sector – 7,892 of the surveyed 17,846 centres were unregistered – it is likely that many centres would not appear in the government databases, especially given how high ECD enrolment is according to Statistics South Africa.

Statistics South Africa (Stats SA) provides what seems to be the best statistics, statistics which can fairly easily be verified through analysis of the underlying data. The 2017 General Household Survey (GHS) report contains a table and a graph<sup>7</sup> which, when combined with population figures from the mid-year population estimates, provide total enrolment in pre-Grade 1 (not necessarily pre-school). In 2017, there were 5,866,573 children aged 0 to 4, of which 36.9% attended classes below Grade 1. This gives a total of around **2,164,000**. Moreover, if one counts children aged 5 to 8, one gets around 600,000 children enrolled in pre-school. One thus obtains a total of around **3.0 million**. However, this number would include a few children aged 0 to 4 in school attending Grade R. How one gets closer to the desired statistic, the *number of children in pre-school* is explained below.

Importantly, the calculations described in the previous paragraph (and calculations appearing below) assume that the category 'day mother', also referred to as 'gogo' by Stats SA, is *not* formal ECD participation. In 2017, 5% of children aged 0 to 4 were being looked after by a day mother, according to the GHS<sup>8</sup>. In Stats SA's system, the day mother category is distinct from that is referred to as 'Grade R, Pre-school, nursery school, crèche, edu-care centre'. It is assumed here that if the 'day mother' option is selected in the survey, the child is looked after

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<sup>3</sup> Presidency, 2018.

<sup>4</sup> National Planning Commission, 2012: 299.

<sup>5</sup> UNESCO, 2017: 333

<sup>6</sup> Department of Social Development, 2014: 104, 107.

<sup>7</sup> Table 4 and Figure 2 in Statistics South Africa (2018: 10-12).

<sup>8</sup> Statistics South Africa, 2018: 10.

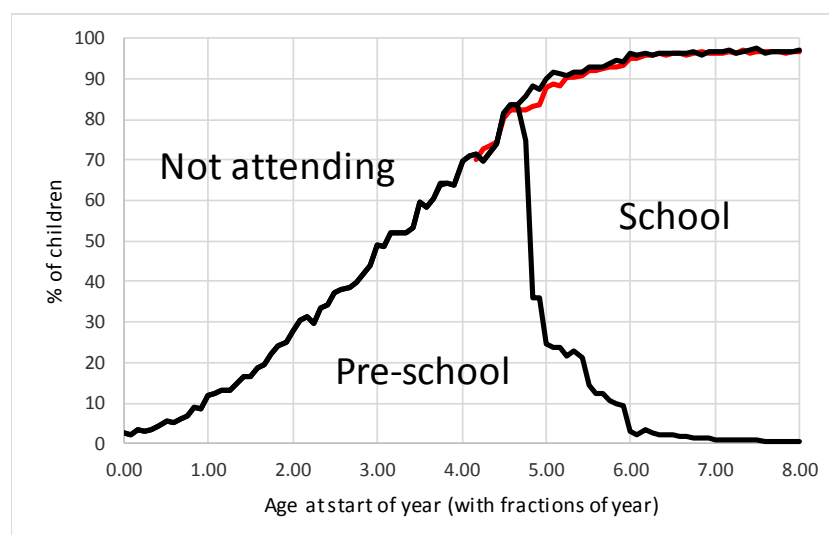
on an individual basis by, for instance, a neighbour, without arrangements such as fees and a formal set of care and educational activities.

### 3 An analysis of the microdata

#### 3.1 Participation ratios by age over the years

The 2016 Community Survey of Stats SA, which collected data from a nationally representative sample of around 985,000 households, is an excellent source for gauging participation in pre-school institutions. What is particularly valuable, is having the month and year of each child's birth. This allows one to avoid the typical problem of indicators such as 'percentage of five-year olds attending an institution', where this refers to children aged five being enrolled *on the survey date*. The problem with this is that the statistic can vary greatly depending on when in the year the survey date is. Knowing the year *and month* of the child's birth allows one to produce far more useful statistics, as in 'percentage of children *aged five at the start of the year* attending an institution'. One can go further, and have statistics such as 'children aged five-and-a-half at the start of the year, or older, attending an institution'. In Figure 1, curves are constructed using points per month. To illustrate, age 4.00 at the start of 2016 would mean the person turned four in December 2015, age 4.08 at the start of 2016 would mean the person turned four in November 2015, and so on<sup>9</sup>. The area 'Pre-school' in the graph reflects children in 'Pre-school (incl. ECD centre, e.g. day care, creche, playgroup, nursery school, Grade RR or pre-primary school)' – this is the wording of the Community Survey questionnaire. The 'day mother' category does not appear in the data. Children in 'Primary school (Grade R to 7)' would be in the area marked 'School'. There is room for confusion here. What happens if a child is in Grade R *outside* a primary school? For the purposes of the current report, we would want this child to be counted under 'Pre-school', not 'School'? As will be seen below, it seems likely that a reasonable number of such children would have been counted under 'Pre-school', not 'School', which is what is optimal for our accounting purposes.

**Figure 1: Community Survey 2016 patterns**



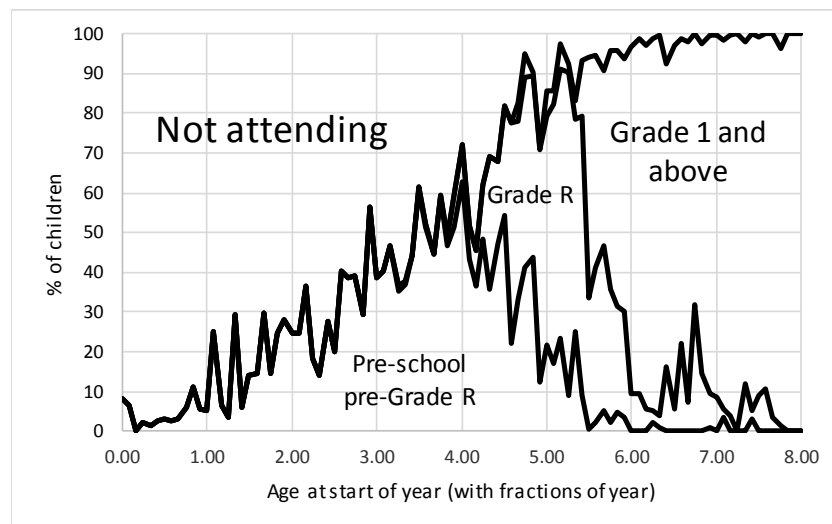
Source: Community Survey 2016 (black curves) and Census 2011 10% sample (red curve), both obtained from <https://www.datafirst.uct.ac.za>.

<sup>9</sup> The fact that the horizontal axis in the graph begins at 0.00 means very young children born between January 2016 and the reference point of the survey, which was midnight between 6 and 7 March 2016, would not be reflected.

An attempt was made to replicate the Community Survey curves using the publicly available 10% sample of the 2011 Census data. While this latter source does have birth year *and month*, unfortunately it has limited data on attendance. It only allows one to gauge attendance anywhere for children aged 4.00 at the start of the year and above. The red curve in Figure 1 is the result. Clearly, for children in this age range, participation patterns changed very little between 2011 and 2016.

Figure 2 draws from the National Income Dynamics Study (NIDS) data. These data, collected by a unit at the University of Cape Town for government’s Department of Planning, Monitoring and Evaluation (DPME), can serve to verify patterns seen in Stats SA’s data. The NIDS sample is smaller – data from around 12,000 households were collected for the 2014 to 2015 wave of NIDS. This explains the unevenness of the curves. The NIDS questionnaire permits a somewhat different breakdown where the category ‘Grade R’ stands alone, and could refer to enrolment either at a school or in some pre-school institution. The category ‘Day mother / Gogo’ is included under ‘Not attending’. To illustrate, this category for ages 3.00 to 4.50 is 10% as large as the ‘Pre-school pre-Grade R’ category.

**Figure 2: NIDS 2014-2015 patterns**

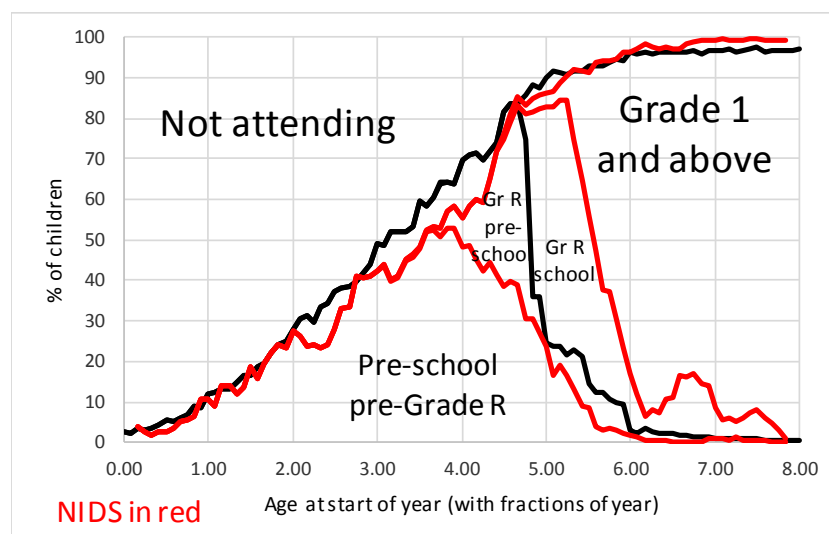


Source: National Income Dynamics Study (NIDS) Wave 4 data, obtained from <https://www.datafirst.uct.ac.za>.

Note: The horizontal axis would reflect age at the start of 2014 where households were surveyed in 2014, and age at the start of 2015 where households were surveyed in 2015.

If we superimpose smoothed NIDS curves on the 2016 Community Survey curves, we obtain Figure 3. The patterns are close enough to each other to confirm each source’s general reliability. Between ages 3.00 and 4.50 enrolment anywhere is 54% in NIDS and 62% in the Community Survey. This difference could be due to improvements over the two periods, or some slipperiness in the distinction between ‘day mother’ and a formal institution. Figure 3 provides a rough picture of how Grade R is split across primary schools and pre-schools.

**Figure 3: CS 2016 and NIDS 2014-2015 compared**



Note: NIDS curves have been smoothened by using moving averages each covering five data points (so including two points either side of the reported point).

### 3.2 Calculation of recent enrolment totals

In Table 1 below, population figures are from Stats SA, specifically the suite of Excel files that come with the 2016 mid-year population estimates. These files include a tool to break down totals for five-year groups into single-age totals. The ‘% in pre-school’ draws from the same 2016 Community Survey data used for Figure 1. To illustrate, here age 2 means anyone aged 2.00 or more but less than 3.00 at the start of 2016. The figures in the final column draw from the values in the preceding two columns. The total enrolment in any type of pre-school institution comes to **2,409,953**. This is considerably higher than values existing in the various reports referred to in section 1.

**Table 1: Total participation in pre-school in 2016**

Age at start of year	Population	% in pre-school	Total in pre-school
0	1,132,851	5.0	57,187
1	1,163,076	17.4	202,287
2	1,182,345	35.5	419,906
3	1,191,848	56.5	673,019
4	1,192,776	68.6	818,148
5	1,186,322	17.3	204,782
6	1,173,677	2.2	25,545
7	1,156,031	0.8	9,077
<b>Total</b>			<b>2,409,953</b>

Some of the reasons why the 2.4 million total may be an over- or under-estimate have already been mentioned. Because of the structure of the Community Survey questionnaire, it is possible that it is an under-estimate because households could have considered anyone in Grade R to be in a school, when in reality some are in a pre-school. Insofar as some ‘day mother’ services could have been counted as pre-school, it could be a slight *over*-estimate. There have in the past been concerns with the accuracy of the population estimates, specifically a concern that they are too high<sup>10</sup>. If this is true for the population figures shown in Table 1, this would be yet another reason for the 2.4 million to be an *over*-estimate. These

<sup>10</sup> Gustafsson, 2012.

possibilities are important to keep in mind, yet it seems likely that pre-school enrolment indeed came to around 2.4 million, perhaps with a margin of error of up to 200,000 either side of the estimate. Even with such a margin of error, it is clear that commonly quoted figures for ECD participation are much too low.

### **3.3 A brief view of the trends**

The main aim of the current report is to correct widely quoted statistics on recent ECD participation. It is not the intention to describe historical trends in detail. However, a few analyses are presented here, in part to encourage further examination of the existing data. If trends have been as dramatic as seen below, this is an important change in the structure of education in South Africa. How it came about is both fascinating and important to know in terms of moving forward.

Figure 4 displays the historical trend, using the graph formats used in the earlier three graphs. The trends suggest large changes over time. The percentage of children aged 0 to 6 in a pre-school increased from 18% to 43% between 1998 and 2017. The percentage of children in this age range in *any* institution rose from 30% to 52% in the same period.

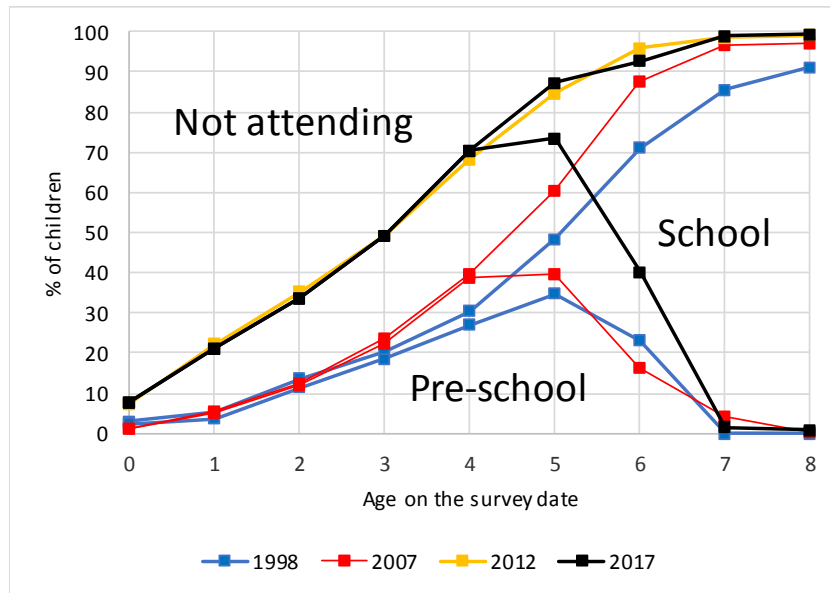
There were changes to the questionnaires over time, and the possible effects of these changes on the statistics should be considered more carefully than is done here. However, there seems to be nothing glaring in the questionnaires which might suggest that the increases seen in Figure 4 might not be real.

It is clear that most of the expansion occurred between 2007 and 2012. Moreover, a separate analysis published by the Department of Basic Education indicates that during this 2007 to 2012 period there was more or less a continuous process of expansion<sup>11</sup>. What drove this expansion has not, it seems, been satisfactorily explained. To what extent did greater public funding of Grade R in schools free up household funds for ECD at lower levels? This is in fact what Education White Paper 5 of 2001 envisaged. To what extent did public funding of ECD centres play a role? To what extent did better economic situations in households drive greater utilisation of ECD services?

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<sup>11</sup> Department of Basic Education, 2016: 13.

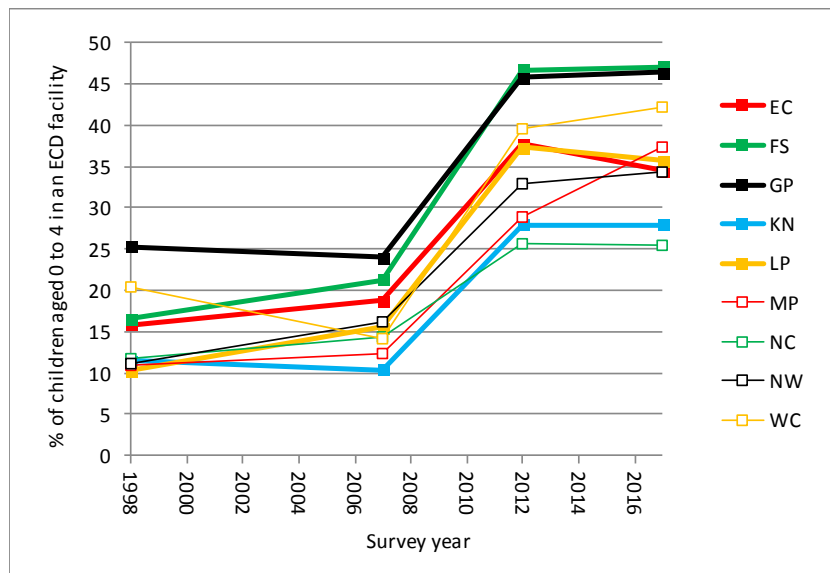
**Figure 4: 1998 to 2017 trends**



Source: October Household Survey for 1998; General Household Survey for the other three years. Microdata used are accessible through <https://www.datafirst.uct.ac.za>.

Figure 5 below breaks the trend down by province. Clearly, the general pattern of a large increase in participation during roughly the 2007 to 2012 period can be seen in all provinces, even if different provinces have different starting and ending levels. For example, KwaZulu-Natal's increase took it to roughly where Gauteng was *before* Gauteng's increase. The emergence of Free State as a province with particularly high levels of ECD participation in recent years stands out. The low levels of participation in KwaZulu-Natal are noteworthy, given that this is the country's second-most populous province.

**Figure 5: 1998 to 2017 trends by province**



## 4 Policy implications

If participation in ECD is considerably higher than what is generally believed, this has important policy implications. Above all, it means improving the *quality* of education and care offered in pre-school institutions becomes an important policy priority. *Access* is obviously still important, but if participation is already fairly high, then a key concern should be whether existing institutions do a good job of preparing children for school.

Debates around the NDP's call for an additional year of schooling, of some form or another, below Grade R, often seem premised on the assumption that participation at this level is rather low, and that access must be expanded a lot. In fact, the Stats SA data used for the current report indicate that participation here is already quite high, between 69% and 78% (in 2016). It is 78% if one assumes that children would have to be aged four at the start of the pre-Grade R year, and 69% if one assumes that children would have to be between three-and-a-half and four-and-a-half at the start of the year. Current age of entry patterns for Grade 1 suggest that for the pre-Grade R year the criteria would lie within this range.

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