

# INDICATORS OF DEPRIVATION FOR USE IN SCHOOL FUNDING: SEPTEMBER DRAFT OF NOTE FOR AUTHORITIES

## 1. Introduction

1.1 Following the publication of the joint Treasury/DfES Report “Child Poverty: Fair Funding for Schools” in December 2005, the Department commissioned a technical review of indicators of deprivation. The purpose of the work was to look at the range of possible indicators which local authorities might use in allowing for social deprivation within their formulae for funding schools, with a view to producing information which would be helpful to authorities when reviewing their formulae.

1.2 This document:

- looks at the issues LAs will wish to consider when choosing deprivation indicators for use in school funding;
- presents summary information on the main indicators potentially available and the extent to which they are currently being used by authorities for this purpose.

1.3 The main focus is on social deprivation funding rather than Special Educational Needs (SEN). However there is no clear division between the two; different authorities use different definitions of SEN, Additional Educational Needs (AEN) and social deprivation; and in some authorities a single sub-formula is used to allocate resources for all three elements. The indicators in this document therefore include those commonly used for SEN funding as well as AEN and social deprivation.

## 2. General Issues in the choice of indicators

2.1 When considering indicators there are a number of general issues which can be considered:

- Whether it is possible to use a **direct** measure of need, or whether it is more appropriate to use a **proxy** measure;
- whether the measure is primarily to identify **deprivation** (eg the numbers on benefits), or looks at the full spectrum of pupils;
- where the measures used are proxies, whether they relate directly to the pupil(s) (**pupil-based**), or to the area in which the pupil lives (or the school is situated) (**area-based**) ;
- where the measures used are **proxies**, how **relevant** they are likely to be to school funding: have they been shown to correlate well with the factors giving rise to higher educational needs and extra costs for schools?

Sections 3 to 6 below look at each of these issues. Section 7 considers other criteria for choice of indicators. Section 8 presents information on the indicators currently being used or potentially available.

### **3. Direct versus Proxy measures**

3.1 It may sometimes be possible to identify costs clearly associated with particular pupils - for example because of low prior attainment, identified SEN, English language needs, costs of additional work associated with looked after children or those admitted after the normal entry point. In these cases one possibility is to use the number of these children as a direct measure in the formula. Other funding may be provided for children who have extra needs because of external characteristics rather than educational needs, eg lack of homework facilities, high absence rates, poor parental support, inability to pay for school trips, frequent changes of school etc, or for the school as a whole because of its circumstances. In these cases there are unlikely to be direct measures, and proxies will be needed.

3.2 Even where there are direct measures, there may be drawbacks in using them directly in funding if the school can have an influence over the numbers. This is particularly true of SEN numbers where direct use in funding of numbers of children statemented or assessed as School Action or School Action Plus provides incentives to statement and requires extensive moderation to ensure that schools are adopting common standards in applying the SEN code. For this and other reasons many authorities have moved away from funding most SEN based on direct measures to using proxy measures.

3.3 In deciding which indicators to use as proxies in school funding, authorities have adopted a range of approaches. Statistical analysis is often used to look at the extent to which funding based on various indicators is correlated within the authority with:

- historic funding patterns of schools;
- identified need for extra resources (eg LSA hours or additional teaching staff) in schools serving deprived pupils or areas;
- numbers of pupils identified as having SEN (through the SEN codes in PLASC or statements/authorities' own assessment systems);
- numbers of low attaining pupils in SATs or other tests;
- other indicators of high need eg high mobility or poor attendance.

For example, a common approach to SEN funding is to model historical SEN spend or numbers of identified SEN children (using numbers on the SEN code, or numbers with low attainment) against different baskets of indicators to see which achieves the best fit at local level.

### **4. Deprivation versus General Indicators**

4.1 A good deal of academic and other work has been focused on the measurement of deprivation. This work often uses measures which are designed solely to identify pupils or areas with high degrees of deprivation. Indicators based on entitlement to FSM or other low income benefits are useful in identifying the most deprived group, but cannot discriminate degrees of deprivation within or outside that group. There may, for example, be schools serving areas with predominantly low income families just above the benefit level where the level of FSM entitlement understates the needs of the pupils.

4.2 Similarly measures (like the Index of Multiple Deprivation) which are aimed primarily at identifying the most deprived areas may be less good at measuring differences above this level. Average measures such as the % eligible for free school meals at school level, or the % receiving benefits within an area, may give an indication of the relative ranking of schools and areas, but there may be occasions when alternative measures which discriminate across the full range are more appropriate. For example, an authority which has few areas of extreme deprivation may nevertheless wish to recognise differences between its schools, and the problems faced by those serving its less affluent areas.

## **5. Pupil and School-Based Indicators versus Area/Geographically-based Indicators**

5.1 Area-based measures relate to the characteristics of the area where a pupil lives or the school is situated rather than to an individual school or pupil. In the past indicators used by government (eg the low income indicator used in the SFSS) have often been area-based, using statistics for the authority as a whole, but most authorities' school funding formulae have used pupil-based data (eg FSM entitlement).

5.2 One reason why few authorities used area-based data was that prior to PLASC only geographical data related to the location (normally the ward or group of wards) of the school could be used. This was useful only if the school was situated in a fairly homogeneous area and drew a representative selection of pupils from this area - this was rarely true of secondary schools and often not true of primary schools.

5.3 The collection within PLASC of pupils' individual postcodes means that it is now possible to use geographically-based data for much smaller areas, based on where pupils live, as a proxy for the characteristics of the pupil. Whether an area-based indicator is a good proxy for the needs of the particular pupil depends on how typical the pupil is of the area for which the measure is available - this depends both on the size and the homogeneity of the areas for which data is available.

5.4 Over the last five years there has been a move to ensure that census and other data is available on a consistent basis for small areas, driven by the recognition that deprivation is often concentrated in particular areas or neighbourhoods and the need for central and local government to be able to identify those areas. Census data used to be produced based on Enumeration Districts (EDs) and wards; these have boundaries defined for other purposes and vary widely both in size and composition. However for the 2001 census a new geography of "Output Areas" and "Super Output Areas" has been developed. These are designed to improve the reporting of small areas statistics; unlike EDs and wards, the OAs and SOAs have been chosen to be roughly equivalent in size and to group together similar areas.

5.5 Postcodes can be mapped onto output areas. Output areas are in turn grouped into "Super Output Areas", at different levels. Most relevant for current purposes are the "Lower Layer Super Output Areas" (LSOAs), the level used for most neighbourhood statistics information such as the IMD. In terms of size, postcodes typically cover about 15 addresses, Output Areas about 125 households and LSOAs a population of about 1500 (comprising 4 to 6 output areas). There are 32,482 LSOAs in England, compared with about 8,000 wards. The National Statistics Postcode Directory (NSPD), available from the ONS and updated quarterly, assigns

each English postcode to a range of administrative and other areas including OAs, LSOAs and wards<sup>1</sup>.

5.6 The interest in the use of small area statistics to combat social exclusion and promote neighbourhood renewal has led to a lot of research and interest in this area. The first statistical application of Super Output Areas was the Index of Multiple Deprivation 2004<sup>2</sup>, which was developed for the ODPM to provide a measure of neighbourhood deprivation and is available down to LSOA level. A wide range of census data and other statistics is also now available at LSOA level.<sup>3</sup>

5.7 As already noted, whether or not an indicator based on an area is a good proxy for the characteristics of a pupil or group of pupils depends on how small and homogeneous the area is. Because the LSOAs are on average about one quarter of the size of wards and have been chosen to group together similar areas, it is much more likely that information based on LSOAs will be a good proxy for an individual pupil's circumstances than ward-based data. For school funding purposes, the important consideration will be whether or not an indicator averaged across the characteristics of pupils at the school is a reasonable measure of the school's population - the fact that any particular pupil may not be typical of the LSOA in which they live will not be so important. However in some areas there may still be such diversity within a relatively small area (for example small pockets of deprivation in a rural area or in a dense and varied urban area) that even the LSOA level data does not adequately differentiate schools with significant numbers of children from deprived backgrounds. For these purposes census data below SOA level or one of the geo-demographic classifications which looks at smaller geographical areas may be useful.

### **Geo-Demographic classifications**

5.8 An alternative approach to looking at the value of an individual or composite variable for each area is to classify areas into those which have similar key characteristics. This method is widely used by commercial organisations to classify consumers according to the area in which they live based on their postcode. The two main commercially available classifications are Acorn (developed by CACI) and Mosaic (developed by Experian). These use the IMD and more detailed census data at LSOA/OA level combined with information from other sources such as consumer surveys to group households into categories with similar characteristics. The types and groups are given labels, based on the most salient characteristics of their areas, to aid understanding.

5.9 The ONS produces its own area classifications using cluster analysis, to group together geographic areas (eg LAs) according to key characteristics common to the population in that grouping. Previous classifications looked at areas down to ward level, but the ONS has now produced an "Area Classification of Output Areas" based

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<sup>1</sup> Further information on Super Output Areas and the NSPD is on the ONS website <http://www.statistics.gov.uk/geography/>. Information on neighbourhood statistics including a lookup facility for individual postcodes and the Indicator Catalogue is at <http://neighbourhood.statistics.gov.uk>

<sup>2</sup> Further information on the IMD is on the DCLG website at <http://www.communities.gov.uk/>

<sup>3</sup> For more information and background see the National Statistics neighbourhood statistics website <http://www.neighbourhood.statistics.gov.uk/dissemination/Info.do?page=about.htm>

Information on a wide range of general deprivation indicators and links to data sources is on the DCLG-sponsored site "Data for Neighbourhood Renewal" <http://data4nr.net/> which signposts the datasets available for targeting, monitoring, priority setting and performance management at a neighbourhood level.

on 2001 census data at OA level. This is a new (2005) classification produced using the same principles but a different statistical methodology from that used to produce its other area classifications. For each output area it identifies those other output areas to which it is most similar, and groups output areas into a three tier hierarchy of supergroups, groups and sub-groups. There are seven clusters at super-group level, twenty one clusters at group level and fifty two clusters at sub-group level. The analysis is based on forty one selected census variables. The classification for each OA and the dataset for each of the variables (original and standardised) for each OA are available on the ONS website<sup>4</sup>.

5.10 These geo-demographic classifications are not in themselves indicators in the same way as the IMD. Rather they classify areas into one of a set of sub-groups or types (56 for Acorn, 61 for Mosaic, 52 for ONS) which in turn are part of larger groups and super-groups or categories. Some of these groups have common characteristics which may be indicative of deprivation, for example Mosaic has a group labelled "municipal dependency"; ACORN classifies its types into five categories ranging from "wealthy achievers" to "hard-pressed". They have advantages in that they are available down to small area level, look at a range of characteristics, and cover the full spectrum of pupils from the most affluent to the most deprived. There has been some recent work on the extent to which these classifications can help predict the educational performance of pupils and schools (see next section).

## **6. Relevance of Proxy Indicators for School Funding - the relationship between Pupil Attainment and Deprivation Factors**

6.1 At national level work has been done on the links between various indicators of deprivation and pupils' performance, and on the influence of "contextual factors" - pupils' backgrounds and characteristics - in the progress they make. For example, the DfES published in February 2005 SFR08/2005<sup>5</sup> which provided information on 2004 Key Stage 1 and 2 National Curriculum assessments, GCSE and equivalent achievements and post-16 attainment of young people in England by different pupil characteristics, specifically gender, ethnicity, eligibility for free school meals (FSM), special education needs (SEN) and English as an additional language (EAL). Additional analyses by the 5 main ACORN categories for pupils in each LA District were published on the web.

6.2 This was complemented by a June 2005 publication "The Characteristics of Low Attaining Pupils" which looked specifically at the characteristics of low attaining pupils (those in the bottom quartile in terms of average points at each key stage, and those below expected levels at Key Stages 1-3).<sup>6</sup> Chapter 4 of this Bulletin shows the extent to which pupils scoring on various deprivation measures (FSM, ACORN "hard-pressed" category, high IDACI area, pupils in care) tend to be over represented amongst the low attaining group. For example, a third of low attainers at KS2 were eligible for FSM compared with 13% of other pupils; 39% of low attainers lived in

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<sup>4</sup>See [http://www.statistics.gov.uk/about/methodology\\_by\\_theme/area\\_classification/oa/default.asp](http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/oa/default.asp) for information about the classification, report on methodology and datasets.

<sup>5</sup> Available at <http://www.dfes.gov.uk/rsgateway/DB/SFR/s000564>; updated tables with results for 2005 are in "National Curriculum Assessment, GCSE and Equivalent Attainment and Post-16 Attainment by Pupil Characteristics, in England 2005" SFR 09/2006 plus additional tables at <http://www.dfes.gov.uk/rsgateway/DB/SFR/s000640>.

<sup>6</sup> "The Characteristics of Low Attaining Pupils" DfES Statistics Bulletin 02/2005 June 2005 available at <http://www.dfes.gov.uk/rsgateway/DB/SBU/b000588>

ACORN “hard-pressed” areas, compared to 21% of other pupils; and the average IDACI value for low attainers at KS2 was 0.28, compared with 0.20 for other pupils;

6.3 More recently the DfES issued in June 2006 (on the web only) Bulletin Bweb 01/2006 “Trends in Attainment Gaps”<sup>7</sup> which looks at the gaps in attainment between pupils and schools with different levels of deprivation, using various deprivation measures including pupil level Free School Meals, school level FSM, IDACI and Social Class (from survey data). Particularly relevant is Chapter 5 of the Bulletin, which links survey data from the Youth Cohort Study on pupils’ social class with the deprivation measures available within the National Pupil Database (NPD) from PLASC (FSM and IDACI) to show the relevant impact of the different indicators of social class on attainment at GCSE. It confirms the significant attainment gaps between FSM and non FSM pupils, but also shows that there are wide variations between these groups (particularly within the non FSM group) related to social class or IDACI quartile. Chart 5.1 shows how the IDACI values of FSM pupils are similar across social classes, whereas for non-FSM pupils the IDACI values are related to social class which suggests that the IDACI values might serve as a proxy for social class in terms of a deprivation indicator.

### **Contextualised Value-Added Measures**

6.4 This and other research studies have all shown that prior attainment is the most important predictor of a pupil’s performance at each stage, and that deprived pupils achieve less well at each stage than their more affluent peers. Early “Value-Added” measures allowed for prior attainment by measuring the extent to which pupils made more or less progress from one stage to the next, compared with their peers who started from the same point. It was clear, however, that children from more deprived backgrounds on average make less progress at each stage of their education than those from more affluent homes, even allowing for their attainment at the end of the previous stage.

6.5 To allow for this effect “Contextualised Value Added” measures (CVA) have been developed. The DfES model incorporated in the Pupil Achievement Tracker programme for schools, and the separate estimates produced for LAs and schools by the Fischer Family Trust (FFT) use a range of background factors to help explain the differences in children’s progress. The DfES announced in June<sup>8</sup> that the Achievement and Attainment tables reporting on 2006 results will include a KS2-4 CVA measure, and will no longer include the ‘old’ KS2-4 and KS3-4 VA measures based on prior attainment only. The Department expects to publish CVA measures for KS3-4 and KS2-3 in 2007..

6.6 The primary purpose is to help those involved in school improvement to identify where children are not making the progress which might be expected of them, compared with the average for pupils with the same characteristics (prior attainment, gender, minority ethnic group etc) and socio-economic circumstances, so that they can take action to target those pupils. But these analyses also show where groups of pupils with particular characteristics, for example from particular kinds of areas, appear to be being held back by their circumstances. If there is to be a general improvement in standards, schools need to target these groups so as to improve the

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<sup>7</sup> “Trends in Attainment Gaps: 2005” DfES June 2006 available for download at <http://www.dfes.gov.uk/rsgateway/DB/SBU/b000665/index.shtml>

<sup>8</sup> See “Publication of 2006 Test and Examination Results in the School and College Achievement and Attainment Tables” June 2006 available at <http://www.teachernet.gov.uk>

average performance for the group as a whole, as well as bringing pupils up to the national average for their group, and that may well require additional targeting of resources for schools which provide for pupils from these groups. The predictive factors from CVA will therefore be very relevant to school funding.

6.7 At present DfES and the FFT models use different approaches in the CVA modelling. Both allow for a range of PLASC based factors (including FSM). The DfES measure uses in addition the Income Deprivation Affecting Children Index, (IDACI), [an income measure supplementary to the IMD measure based on the LSOA matched to the postcode where the child lives: see A2 of attached listing of indicators]. The FFT uses a Geodemographic Factor for each school, calculated from a modified Acorn measure using the postcodes of its pupils.<sup>9</sup> In analysis of the Acorn measure against FSM, the FFT found that while Acorn and FSM data often provided a similar picture, with a high correlation between the two, they sometimes provided a different view of the school's context, and it was better to use both in VA analysis than to choose between the two.

6.8 A separate study by Richard Webber and Tim Butler<sup>10</sup> has looked at how well the neighbourhood where pupils live (using the Acorn and Mosaic classifications) predicted pupils' performance at GCSE. It found that, other than the performance of the pupil at KS2, the type of neighbourhood in which the pupil lived was a more reliable predictor of the pupil's GCSE performance than other information from PLASC about the pupil (including the pupil's FSM status and the school's FSM%). The results were similar using either the Mosaic or Acorn classification. This study also found that the performance of pupils was influenced by the neighbourhoods from which the other pupils in the schools they attended were drawn, and that this was of only marginally lower significance than their own social background.

## 7. Other Criteria for Choice of Indicators

7.1 In deciding whether or not to use a particular data set in their funding calculation, authorities will also wish to consider other criteria in addition to relevance, in particular:

**Accuracy/Reliability:** whether the data source is reliable and expected to be accurate.

**Objectivity:** A measure which relies on judgements within a school will need external moderation as otherwise there will be an incentive within schools to over-report at the margin in order to increase funding.

**Perverse Incentives:** Ideally there should not be perverse incentives - eg using KS1 data to fund primary schools can mean that those which improve performance lose funding.

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<sup>9</sup> For a comparison of the DfES and FFT CVA approaches See "FFT Technical Information Brief KS2-KS4 Contextualised Value Added Measures" available on the FFT website [http://www.fischertrust.org/assets/CVA/FFT\\_Models\\_Summary](http://www.fischertrust.org/assets/CVA/FFT_Models_Summary).

<sup>10</sup> "Classifying pupils by where they live: how well does this predict variations in their GCSE results?" Richard Webber and Tim Butler, CASA Working Paper No 99 (Dec 2005) [http://www.casa.ucl.ac.uk/working\\_papers/paper99.pdf](http://www.casa.ucl.ac.uk/working_papers/paper99.pdf)

**Timeliness:** How often can the indicator be updated? PLASC data is collected every year; census data only every 10 years. (Data based on pupils' neighbourhoods can be updated to reflect changes in where pupils come from, but not changes in the composition of those areas.)

**Availability/Accessibility:** How easy is the data to obtain? Does it rely on special collection exercises? Is it free/in the public domain?

**Coverage:** Does the indicator cover all children and all schools/areas, or only some ages and phases or some other subset of children?

**Consistency over Time:** Does the data rely on definitions or external measures which may change from year to year?

**Robustness/Volatility:** Is the data reasonably stable, or does it change significantly from year to year? Indicators based on small numbers of children eg a small proportion of the cohort in a school may change rapidly from year to year.

**Nationally available/standard definitions:** Is the indicator widely available, based on national definitions and so usable across LA boundaries, or only available within a particular LA/area?

**Ease of Use/Transparency:** Will the data and the way it is used in the formula be easy for schools to understand?

7.2 No indicator will ever satisfy all of these criteria; choosing indicators will always be a compromise between the different factors. To avoid placing too much weight on a single indicator authorities may prefer to use several (while bearing in mind the need for simplicity and transparency), and to use other means, for example taking averages over several years to reduce volatility of particular indicators.

## 8. List of Potential Indicators

8.1 The attached listing gives information on the main indicators already being used by authorities, or potentially available, with a brief description and advantages and disadvantages of the indicator. For each indicator examples are also given of the way they are being used in practice<sup>11</sup>, drawing mainly on information in Section 52 Table 5 for 2005-06 and Social Deprivation statements submitted to DfES in May 2006 (information in italics relating to individual authorities is taken from these sources; quotations are from the 2006 statements ).

Judith Partington  
October 2006

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<sup>11</sup> The analysis of use by authorities is based on examining Section 52 returns for 2005-6 for half of English authorities, supplemented by some information on 2006 from deprivation statements (particularly where these showed a change in method in 2006-07) and by some follow-up enquiries with individual authorities (whose help was much appreciated). It is not intended to be exhaustive: not all Section 52 returns or Social Deprivation statements have been examined, and some are not explicit on the use of indicators.

# **INDICATORS OF DEPRIVATION FOR USE IN SCHOOL FUNDING: JUNE DRAFT OF NOTE FOR AUTHORITIES**

## **INDEX TO LISTING OF INDICATORS**

### **A. INCOME-BASED INDICATORS**

- 1. Free School Meals Entitlement (FSM)**
- 2. “Income Deprivation Affecting Children” Index (IDACI)**
- 3. Other benefits based measures:**
  - Children in households receiving IS/JSA
  - Adults in receipt of benefits
  - Households in receipt of Housing or Council Tax benefit
- 4. Estimates of average Income:**
  - ONS ward based model estimates
  - Paycheck (CACI/ACORN)
  - Wealth/Poverty Index (Experian/Mosaic)

### **B. COMPOSITE AND OTHER CENSUS (AREA-BASED) INDICATORS**

- 1. Index of Multiple Deprivation (IMD) 2004**
- 2. Commercial geodemographic classifications**
  - i. ACORN (CACI)
  - ii. Mosaic (Experian)
- 3. 2001 Census data** - ONS geodemographic classification and other indicators using census data.

### **C. ATTAINMENT BASED INDICATORS**

- 1. National Curriculum SATs Based Indicators**
  - KS1-3 levels and scores and FFT standardised scores
- 2. Foundation Stage Profile**
- 3. Other test data**
  - CATs
  - PIPs/MidYIS
  - other test data

### **D. OTHER SPECIFIC (PUPIL-BASED) INDICATORS**

- D1. Mobility/turnover
- D2. Vulnerable Children (Looked After Children and other children at risk)
- D3. EAL or other language assessments
- D4. Minority Ethnic groups
- D5. Refugees or asylum seekers/Other groups]

## A1. FREE SCHOOL MEAL ENTITLEMENT

### Description

The number (or proportion) of pupils who have been accepted as being entitled to free school meals.

Children are entitled to free school meals if their parents are on income-related benefits (Income Support, Income Based Job-Seekers Allowance or the guarantee element of State Pension Credit), receiving support under part VI of the Immigration and Asylum Act 1999, or receiving Child Tax Credit provided they are not entitled to Working Tax Credit and are on a low income (as of April 2006, annual income does not exceed £14,155 ).

Parents must apply for their children to have a school meal, and provide proof of income under the local arrangements for administration of FSM. (This has applied since 2001; prior to that schools could classify children as FSM if they had proof of entitlement, whether or not the parent wished the child to have a meal).

### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>Readily understood.</p> <p>Readily available.</p> <p>Linked to actual children in school.</p> <p>Updated yearly.</p> <p>Income based, so good indicator of economic deprivation.</p> <p>Many research studies have shown high inverse correlation of pupil performance with FSM; also some correlation with distribution of SEN pupils; studies eg PWC (2001) found FSM best available proxy at that time.</p> <p>DfES, OFSTED and other researchers have frequently used FSM as proxy for deprivation in published analyses and school comparisons, both as a measure of pupil deprivation and deprived schools.</p>	<p>Many who are entitled to FSM may not claim - because of stigma, because do not want a meal, because of complexity of claims process, lack of awareness of entitlement etc.</p> <p>May be systematic bias - parents will not register if not claiming a school meal; registration may be linked to nature/quality of school meals in each area/school (eg whether there is a hot meals service in a rural area) as well as social/cultural factors. Schools can influence by encouraging/helping parents to register entitlement.</p> <p>Changes in claiming methods linked to benefit changes may have reduced claimant rates.</p> <p>May be less reliable in high turnover schools because of time taken to register claim.</p> <p>Only picks up those with income below threshold, not low incomes just above the benefits threshold.</p> <p>If used as main proxy for both social deprivation and AEN/SEN can determine large element of funding and risk producing volatility in funding if FSM% changes significantly for an individual school; particularly true for "cliff edge" factors where schools lose significant funding when change bands.</p> <p>Not available for nursery age children; lower take up for some age groups.</p>

## Data source and further information

Data is collected annually through PLASC for each pupil. Authorities may also use their own records for administration of FSM or related benefits (eg clothing grants or vouchers for uniforms) to establish entitlement.

## Existing Use by Local Authorities in School Funding

FSM entitlement is the most widely used proxy for deprivation in school funding, used by most authorities for some or all of SEN, AEN and social deprivation funding.

For those using FSM in 2005-6 there were many variants in the way FSM was used:

- about one-third of LAs used a simple amount per FSM pupil (though with wide variations in amounts);
- about a third funded only above one or more threshold levels. Many authorities use bands with differing amounts per pupil for schools with FSM%*s* in each band. Thresholds/bands varied widely but were commonly related to either LA or national averages for FSM for the sector.
- most of the remaining LAs used a combination of an amount per FSM pupil plus an addition per pupil above one or more threshold(s)/in bands, to recognise higher needs of schools with a concentration of deprived pupils;
- a small number use a more complex method or give additional lump sums to high FSM schools (*Devon, Cornwall, Birmingham, Redbridge, Manchester, Hertfordshire*).

Most used FSM as the main deprivation indicator but some used it in combination with another low income or general deprivation indicator such as the IMD (*for example Coventry uses FSM for AEN but a Housing Benefit Model for SEN and social inclusion; Hampshire uses FSM and the IMD for AEN funding*).

A small number of authorities used eligibility for clothing grants or vouchers as an alternative or supplement to FSM (*Oldham - banded system based on clothing grants with FSM only for out-county pupils; N Lincs, NE Lincs supplementary to FSM*).

## Authorities known to be using FSM in their formulae (June 2006):

Analysis of 2005-6 Section 52 statements found that only 5 out of 75 LAs examined did not use FSM in school funding in 2005-6 (other than to reimburse schools for the cost of providing free school meals). These authorities preferred other indicators of deprivation (*IMD 2004: Haringey, Waltham Forest, Bury, East Riding of Yorkshire*) or other low income indicators (*Somerset - Experian Wealth/Poverty Index*).

*LAs' Social Deprivation statements suggest that a number of other authorities have moved away from FSM use from April 2006 (eg Buckinghamshire, Wokingham, Newcastle, Windsor and Maidenhead, NE Lincs have switched from using FSM to the IMD).*

## Examples of the use of FSM in school funding:

Authorities using FSM as the main indicator for deprivation funding:

**Bromley:** *“Bromley currently has one element in the funding formula to distribute funding to schools for social deprivation. Funding is distributed as a per pupil allocation based on free school meal entitlement as at PLASC date. This factor is a result of the formula funding review carried out in 2003/04, which simplified the number of elements within the funding formula. As a result, socio economic funding and school improvement funding were combined into one element for primary schools. Where there was previously no socio economic factor for secondary schools, funding previously allocated for social inclusion became funding for social deprivation.”*

**Enfield:** During 2002 the authority did extensive analyses with a view to identifying underperforming groups in its schools and targeting schools with high levels of deprivation in its funding formula. This analysis found that FSM was the best proxy indicator for deprivation related underperformance; and that there was a clear pattern of underperformance for schools with higher levels of deprivation as measured by FSM. As a result of this analysis and after consultation with schools FSM was adopted as the main proxy indicator for AEN social deprivation funding within AEN. The analysis was used to place schools into FSM bands (below 10%, 10-30% above 30%) for funding purposes. Schools receive an amount per FSM pupil and additional amounts for numbers in the higher bands.

**Rochdale** “Poverty Index: the formula which delivers funding specifically for social deprivation is the poverty index. Allocation is based on calculating a social deprivation index for each school based on the number of pupils eligible for free school meals multiplied by the % that the number represents. For example for a school with 200 pupils if 40 (20%) are eligible for free schools meals the index would be  $40 \times 20 = 800$ . This index is then multiplied by a set amount (£4.96 in 2006/07) which is uplifted for inflation each year.”

**Kirklees:** “Social deprivation is measured as the sum of free-school-meal eligibility and clothing grant eligibility. The Education Social Work Service maintains a database of pupils at each school who receive either a free school meal or a grant for clothing and footwear. The 2006/07 allocation uses data collected for the same week as the Jan 2006 PLASC return. The average rate of assistance derived from that analysis and used for 2006/07 allocations is 30.54% of Kirklees' pupils. Those schools with an assistance percentage higher than the average receive a share of the Additional Pupil Needs budget.”

## **A2. INCOME DEPRIVATION AFFECTING CHILDREN INDEX (IDACI) (Supplementary Index to the Index Of Multiple Deprivation 2004)**

### **Description**

The index measures the proportion of children under the age of 16 in an area living in low income households (defined as those in receipt of Income Support and Job Seekers Allowance, or in families in receipt of Working Families Tax Credit whose equivalised income excluding housing benefit was below 60% of median income before housing costs.). It is an area-based measure, and like the IMD 2004 is available down to Lower Layer Super Output Area. Like the IMD 2004, the income data relates to 2001-2.

### **Advantages and disadvantages in relation to use in school funding**

<b>Advantages</b>	<b>Disadvantages</b>
<p>Index has been calculated specifically to identify income deprivation amongst households with children.</p> <p>Nationally available standard measure, available across LA boundaries, can be linked to pupil postcodes at ward or LSOA level.</p> <p>Has been used in national work on pupil progress and CVA as one of the predictors of pupil performance (see section 6 of main report).</p> <p>Will be familiar to schools because used in calculation of CVA in the Pupil Achievement Tracker (PAT) programme. <i>(Downloads of data made available in November 2005 to all schools for use in the Pupil Achievement Tracker programme included an IDACI score for each of their pupils who sat KS2/KS3/GCSE in 2005, based on matching the pupil's postcode from PLASC to an LSOA. This data is therefore already readily available, and the CVA analysis identifies its power in explaining pupils' progress.)</i></p>	<p>Data currently relates to 2001-2. No current plans to update (changes in payment of benefits may make it more difficult to provide directly comparable data in future).</p> <p>Only relates to income, and to those at lowest income levels (households on ISA/JSA benefits and those in receipt of WFTC whose equivalised income is below 60% of median.)</p> <p>Area-based, lowest level LSOA. May not pick up smaller pockets of deprivation.</p>

### **Data source and further information**

The index is based on data from the DWP on benefits entitlement in 2001-2 and 2001 census data.

Further information on the index and the scores and ranks for the IDACI for every SOA in England are available free on CD or for download from the DCLG website <http://www.communities.gov.uk/index.asp?id=1128440> and the ONS neighbourhood statistics websites.

**Existing Use by Local Authorities in School Funding/Authorities known to be using IDACI in their formulae (June 2006)**

No authorities identified as using the IDACI in 2005-6.

**Southampton** has adopted it for 2006-7. The LA's social deprivation statement reports that Southampton's Schools Forum began a review of social deprivation funding in July 2004. It looked at FSM, IMD, IDAC and ACORN as possible measures. ACORN was dismissed early on, and the Forum concentrated on the three remaining measures, and whether to target funding at the bottom 10%, 20% or 25% of super output areas. Extensive modelling of the three measures was undertaken at school level, before a decision was made to use the IDAC index for measuring social deprivation from 2006/07 onwards, based on those children living in the bottom 20% of super output areas. The Schools Forum, when making its decision, considered the fact that the IDAC index will form part of the Contextual Value Added figure in the DfES's performance tables.

**Surrey** has introduced funding using IDACI alongside FSM for 2006-7 for social deprivation funding. Primary schools are ranked based on a combination of free school meals eligibility and average IDAC scores (weighted 75:25) and the highest need 20% of schools (of 319) are funded, thus:

Tier	1	2	3	4	5	6	7	8	9	10
No of schs in tier	6	6	6	6	6	6	6	6	6	11
Per pupil	0	22	29	38	51	68	91	121	152	190
+per pupil x index	0	31	45	64	91	130	186	266	332	415

Plus £6,769 per school (tiers 1-6) or £13,538 per school (tiers 7-10)  
 (Index=0.75x 3 year average FSM percentage +0.25x 8.3/9.5x average IDAC score)  
 The tier ranking is obtained by ranking schools using the FSM and IDAC index

Secondary schools are ranked separately according to free school meals eligibility, average IDAC scores, and the proportion of pupils with low screening scores above the County average incidence. These three rankings are then averaged and funding is based on the average ranking. Funding is distributed as follows:

Tier	0	1	2	3	4	5	6
No of schools	27	10	3	3	3	3	4
Funding per pupil x index £	0	184	368	566	872	1342	2067

(Index =percentage on free school meals/2+notional average IDAC score/4.5)

### A3. RECEIPT OF LOW INCOME BENEFITS (AREA-BASED)

#### Description

Number or proportion of children or adults\* in receipt of low income benefits (Income-support or income-based JSA or equivalent) from administrative records (DWP).

*\*Information on children in families in receipt of IS/JSA was available down to ward level until 2002. The change to payment of children's benefits through tax credits from April 2003 means that information is no longer available specifically on children. Information is still available on adults in receipt of benefits down to SOA level.*

A small number of authorities use entitlement to Housing Benefit or Council Tax Benefit from LA administrative records as an alternative measure of families on low income benefits.

#### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>Standard definition based on benefit eligibility, common across LA boundaries.</p> <p>Most recent area data for children (prior to April 2003 change in system) available down to ward level.</p> <p>Data on adult benefit recipients is available down to SOA level and updated regularly.</p> <p>Information on children in households in receipt of IS/JSA was used in SFSS so relates to distribution of DSG (because still based in part on uprated SFSS).</p>	<p>IS/JSA information now available only for adult claimants, because of switch to tax credits for dependent children from April 2003. Most recent SFSS data on support for families with children is based on data for three years prior to the change (2000 to 2002).</p> <p>Not clear at present whether or when equivalent information on low income families with children will be available from the tax credit system - currently only sample (5%) data available which cannot be used for small area statistics.</p> <p>If using pre-2003, child-based, data, IDACI is arguably a better measure (similar coverage and date but available down to SOA level).</p> <p>More recent adult data does not correlate well with data on families with children, particularly for some areas.</p> <p>Data on HB/CT recipients may not cover all low income families; may not be available out of area.</p> <p>Information used for SFSS was at LA level, based on pupils living in the LA (not where they attended school).</p>

#### Data source and further information

Information on benefits and DWP for data on adult claimants is on the DWP website <http://www.dwp.gov.uk/asd/statistics.asp>

National data on HB/CT benefits based on sample statistics is also on the DWP website.

## **Existing Use of low income indicators by Local Authorities in School Funding**

*Sheffield* uses income support as one of a wide basket of indicators in allocating AEN funding. Pupils receive funding based on the % of families on Income Support in the ward in which they live.

*Coventry, Dorset, and Poole* use data on Housing and Council Tax Benefit recipients in their funding formulae:

**Coventry** has developed a “Housing Benefit Model” (HBM) which was developed locally as a proxy for high incidence SEN. It is based on the number of children in each city postcode whose household is registered for JSA or other low income benefits like Housing Benefit. The information is applied to the pupil profile at each school to arrive at a relative deprivation or “Housing Benefit” index for each school. The HBM is also used to allocate social inclusion funding and funding for personalised learning. AEN funding is allocated using FSM.

**Dorset** uses its own methodology to produce an “Indicator of Likelihood” (IoL) of a pupil being the dependant of a benefit claimant which has been used since 2002. At each full postcode level a calculation is made of the number of school age pupils in that postcode, and the number of those who are dependents of people claiming Housing or Council Tax benefit. This gives the likelihood of a child being the dependant of a benefit claimant in that postcode. This is combined with PLASC data on pupils’ postcodes to calculate likelihood of a pupil in each school being the child of a benefit recipient. Statistical analysis by the authority showed that some schools with high IoL values did not score highly on FSM entitlement, possibly because the authority does not have a hot meals service in its primary schools; consequently the authority does not use FSM in its formula. The IoL is used for AEN, low complexity SEN and personalised learning funding.

**Poole** uses the same Indicator of Likelihood calculated by Dorset County Council to fund its schools for SEN/AEN, social inclusion (alongside FSM) and personalised learning.

## A4. AVERAGE INCOME MEASURES (AREA-BASED)

### Description

Measures which aim to capture the average income and income distribution of an area (not just those on the lowest incomes).

- ONS model-based estimates of Income for Wards 2001-2
- CACI/Acorn "Paycheck"
- Experian "Wealth/Poverty Index"

There is no publicly available data source which would allow the calculation of average income of residents or households in small areas. National data is based on sample surveys which are not valid down to small area level. However there are some sources of estimated data on average incomes at ward level or below.

The ONS model-based estimates published in November 2005 use a range of other data and a statistical model to produce estimates and confidence intervals for average weekly household income in each ward (based on 2003 Census Area Statistics ward boundaries). They are intended to provide a sound and reliable basis for comparing average income at ward level. Averages and confidence intervals are produced for four variables - total household income, net household income (net of income tax, NI, pension contributions etc), net household income equivalised for household size and family composition, and net equivalised household income after housing costs.

The CACI and Experian measures are commercial measures which attempt to estimate average income at postcode or output area level, using data from the census, market research, lifestyle surveys and other data. "Paycheck" also classifies areas according to their income profile and the distribution of income within the area. Equivalised income is one of the indicators in the "Community Insights" suite of indicators developed by CACI for the public sector.

### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>Covers the full range of income, differentiates between families above or below the benefits line;- can identify eg areas with high working population so low benefits but low incomes.</p> <p>Available at small area level (ward for ONS, OA or postcode for commercial measures).</p> <p>ONS estimates include equivalised income, likely to be better measure for families.</p> <p>Commercial data will be updated using non census-based measures.</p>	<p>Covers all households, not specific to those with children.</p> <p>Non-equivalised measures based on household income, do not allow for different size and composition of household.</p> <p>Commercial measures require payment for licence; underlying data and methods not transparent.</p> <p>ONS measure at ward level based on statistical models, not actual data; main source data is census based so cannot be updated in interim.</p>

### Data sources and further information

The methodology and data for the ONS model-based estimates of income are on the ONS neighbourhood statistics website <http://neighbourhood.statistics.gov.uk/dissemination>.

Further information on Paycheck and Community Insights on the CACI website  
<http://www.caci.co.uk>

Information on Experian Mosaic Factors including the wealth/poverty index (<http://www.business-strategies.co.uk>).

### **Existing Use of low income indicators by Local Authorities in School Funding**

No authorities have been identified as currently using the ONS model-based income estimates or CACI Paycheck data.

***Somerset** has used the Experian Wealth/Poverty index since 2004 for its “School Action” funding. An Experian index score is derived for each school, based on the index value for the postcode of each pupil. Schools in the authority are ranked and put into bands on the basis of this index score; funding is based on the index score with higher amounts for higher ranked schools. The Experian index is also used to allocate a small amount of funding for remission of fees for those who cannot afford the full costs of any residential school visits.*

## B. COMPOSITE AND OTHER CENSUS (AREA-BASED) MEASURES

### B1. THE INDEX OF MULTIPLE DEPRIVATION 2004

#### Description

The IMD 2004 is a combined indicator calculated by researchers at the request of the ODPM (now DCLG) and intended to measure the relative deprivation of small areas. It assumes that there are distinct dimensions of deprivation which can be recognised and measured separately. People may be counted in one or more domains, depending on the number of types of deprivation they experience.

The IMD 2004 has seven domains - Income, Employment, Health and Disability, Education, Housing, Living Environment and Crime. For each domain, each of the 32,482 Super Output Areas in England has a score and a rank (with 1 as the most deprived). Results for each domain for each area are then combined together (with different weightings for each domain) to produce an overall IMD score and rank.

Most of the base data to calculate the index was taken from the 2001 census, but it also incorporates other data (for example the income domain includes information from benefits records for 2001; the education domain includes average KS2, KS3 and KS4 point scores for 2002). Most of the data underlying the index relates to 2001-2.

#### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>Based on considerable amount of research and extensive consultation in development of the index as a measure of multiple deprivation at small area level, building on earlier work (eg Index of Deprivation 2000 which measured deprivation at ward level).</p> <p>Wide range of deprivation measures included within the index - takes account of deprivation across a range of different factors, not just poverty.</p> <p>Widely known and recognised; available nationally for all SOAs in England, standard across LA boundaries.</p> <p>Used in other national and local government contexts including some resourcing, eg used to inform allocations of the Neighbourhood Renewal Fund.</p> <p>Available at LSOA level, so better than ward level information (previous Index of Deprivation).</p>	<p>Some deprivation measures across the seven domains are not very relevant to education. The focus is on adults/households so some deprivation may reflect eg pensioner poverty and may not be relevant to children.</p> <p>Overall index includes some education measures (average points scores at KS2, KS3, KS4; proportions not staying at school beyond 16 or entering HE; secondary school absence rate). Risk of double counting if used alongside direct prior attainment measures.</p> <p>Most components relate to 2001-2. No current plans to update the index.</p> <p>Index is either a value or a rank for each area from which pupils are drawn; needs to be converted or weighted in some way for use in funding formula.</p> <p>LSOA level may still not be fine enough to identify small pockets of discrimination eg in rural areas or authorities where there is significant variation at street/postcode level.</p>

#### Data source and further information

Information on the IMD and the scores and ranks of every SOA in England are available free on CD or for download from the DCLG (<http://www.communities.gov.uk/index.asp?id=1128440>) and the ONS neighbourhood statistics websites.

## Existing Use by Local Authorities in School Funding

Many authorities have considered using the IMD 2004 or its predecessor (ID 2000) in school funding.

Those who considered it when only ward/school level information was available often rejected it because there was too much variation within wards in their areas. Those who adopted earlier ward-based measures have generally now moved to SOA based measures using pupils' postcodes matched to SOAs.

In the last two years there has been a significant increase in the number of authorities opting to use the IMD, including some who have adopted it from April 2006 for personalisation funding.

A common starting point is to match pupils to SOAs based on their postcodes and calculate an average IMD score for each school. Authorities then vary in whether all schools receive funding, or only those above one or more threshold(s). Alternatively, funding may be pupil based, with pupils living in SOAs above the predetermined thresholds or schools drawing from these areas receiving funding.

Most authorities use the actual postcode and corresponding SOA value for out-county pupils. Where funding is based on ranking of SOAs across an authority's area (eg Plymouth), out-county pupils may be assigned an average value.

### **Authorities known to be using IMD in their formulae (June 2006):**

*From Section 52 returns, 12 out of 75 authorities examined used the IMD 2004 in funding in 2005-06.*

*The following authorities are using IMD in 2006-7, within the main formula or for personalisation funding: Brent, Haringey, Southwark, Sutton, Sandwell, Bury, Salford, North Tyneside, Bristol, East Riding, Leicester, Plymouth, Kent, Hull, Hampshire, Dudley, Wokingham, Swindon, Sunderland, Stockport, Slough, Newcastle, NE Lincs, Norfolk, N Yorks, Doncaster, West Sussex, Waltham Forest, Windsor, West Sussex, Bucks, Lancashire.*

### **Examples of the use of IMD in school funding:**

**Southwark** introduced a new formula from 1 April 2006. Funding is now allocated 50% on the basis of free school meals and 50% on the basis of relative need as measured by the IMD. This is applied by mapping the postcode of each pupil against their relevant Super Output Area (SOA). The SOAs are grouped into four bands with each band attracting a weighting, the more deprived the band the higher the weighting. The value of these weightings then gives a total for each school, which is then used to distribute the available funds. Although not all pupils attract funding, all schools receive some funding because of the population mix within Southwark's schools. However, because of the weighting system resources are targeted at schools with a higher level of pupil social deprivation.

**Bury** decided from April 2005 to move away from funding using a FSM threshold and numbers at School Action and School Action Plus in favour of a formula which uses the average IMD score of pupils at each school, based on their postcodes. The average score of all pupils is used, so every school receives something; there are no thresholds. Since April 2005 FSM has not been used as a factor for this funding.

**East Riding of Yorkshire** also uses the IMD in preference to FSM. Each pupil has an IMD score based on postcode/SOA. Social deprivation funding uses a threshold (funding is provided only for pupils in SOAs with a deprivation score more than double the county average). Out county pupils are funded according to the score for their SOA. IMD scores are also used to allocate high incidence SEN funding; this does not use a threshold, all pupils score on a weighted basis.

**Plymouth** uses IMD (in conjunction with FSM and prior attainment). Plymouth ranks all the SOAs in its area and places SOAs in bands using this ranking. Pupils are funded according to the band into which their SOA falls (based on their postcode from PLASC). Out-county or unallocated pupils are assigned a standard ranking.

**Birmingham: “Ward Deprivation (Indices of Multiple Deprivation) Data:** The multiple deprivation index is made up from indicators derived from a range of government sources, published by (ODPM) DCLG and now available based on Super Output Area Levels. The indicators relate to Birmingham resident pupils only and divide them into 5 groups (quintiles). 06/07 consultation supported the proposal to target funding to schools with pupils in the most deprived quintile (1) by dividing the total available budget by the number of pupils to arrive at a budget per pupil.”

**Newcastle:** “The Authority uses the IMD level for every pupil to set an average IMD score for the city and measures each individual against this benchmark to determine whether they qualify for funding. There is a basic level of funding that all qualifying pupils in a school will be eligible for. In 2006-07 this is set at £104.88. In addition to this, two further thresholds have been determined to acknowledge the levels of deprivation schools work with. Where a school has a level of pupils with IMD scores higher than the city average and this exceeds 50% of the total number on roll, the school will receive £52.44 per pupil above this mark. The third threshold takes into account the number of pupils with IMD scores above the city average that exceed 65% of the total number on roll. Each pupil above this mark qualifies for an extra £52.44.”

**Sunderland:** “As part of the annual review of the funding formula relating to 2004/05, the Authority commissioned the services of a nationally recognised consultant to focus on the method of funding for deprivation, SEN and other associated social factors. The review group started from the premise that the sole use of free school meals as an indicator for deprivation was insufficiently robust to continue to be used as the only proxy to reflect deprivation. It was recognised that whilst this was the only objective data available at the time it was introduced, and had little merit and there were a number of inherent anomalies associated with its use. These include the reliance on parents to register their entitlement and the recognition that, particularly at secondary level, many pupils entitled to receive free school meals were not registered to do so by their parents, changes to benefit rules also resulted in many pupils in Sunderland being no longer entitled to free school meals. The Index of Multiple Deprivation data that had been developed was considered to be a more robust indicator to sharpen the targeting of funding. Since the initial introduction the data used has been reviewed and refined eg IMD is now measured by Super Output Areas rather than wards and now includes 188 measured areas as opposed to the 25 wards initially used. This has proved to be a very accurate measure of the deprivation in the City, being highly responsive to small pockets of deprivation within otherwise relatively affluent wards. The intention is that over time there will be a shift away from the use of FSM data to distribute funding towards a greater use of IMD data.”

**Lancashire:** “Social Deprivation: In accordance with regulations the primary and secondary schools’ formulae, and the nursery schools formula, include a social deprivation element. Allocations are made on the basis of SOA deprivation data (IMD) derived from individual pupil postcodes. This enables the calculation of an index of deprivation for all Lancashire schools. A threshold is applied to this index, with zero funding below this threshold. Within each sector, a qualifying pupil attracts a standard amount of funding to the school.”

### B3. COMMERCIAL GEODEMOGRAPHIC CLASSIFICATIONS (ACORN AND MOSAIC)

#### Description

Classification of postcodes into types based on census and other information using cluster analysis and other statistical methods:

- **ACORN (CACI)** classifies at postcode level into 56 types, which in turn are grouped into 17 groups and five categories.
- **Mosaic (Experian)** classifies all households into one of 61 types and 11 groups - available for households and postcodes.

Designed to identify groupings of households based on consumer behaviour. Postcodes are allocated to groups according to the characteristics/behaviour of residents, based on a wide range of source data. (Commercial products so precise data inputs and statistical methods are not made public; data available for use on payment of a licence fee).

#### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>Available at postcode level.</p> <p>Commercial product so external to LAs and standard across authorities.</p> <p>Based on a wider range of data, including census and commercial information, which enables discrimination below LSOA level based on allocating postcodes to one of the 56/61 types.</p> <p>Types/groupings labelled to help understanding (eg most deprived ACORN category is “hard pressed” which includes groups “Struggling Families”, “High Rise Hardship” and “Inner City Adversity”).</p> <p>Classify across the full spectrum, from the most advantaged to the most deprived. Likely to provide better discrimination for less severely deprived groups which may be missed by the indices which are based on identifying the most severe deprivation.</p> <p>Increasingly being used by and products tailored to needs of public sector as well as private sector.</p> <p>Some education analyses done using Acorn, eg analysis of SATs results, FFT use in CVA analysis. Analyses by CASA (see main paper para 6.7) suggest that the MOSAIC or ACORN types are a good predictor of performance at GCSE.</p>	<p>Classification of areas rather than a direct index.</p> <p>Although given for each postcode, most input data is based on larger areas.</p> <p>Developed primarily for business (sales and marketing) purposes - includes data from consumer surveys as well as census and other data from public bodies.</p> <p>Commercial product rather than statistics in the public domain - only limited information is published about how the index is made up because of commercial confidentiality; plus additional cost involved in using the data.</p> <p>Hierarchy of advantage/disadvantage developed for more general purposes and for adults may not match that for education/children; Fischer Family Trust found it needed to reorder the ACORN types to provide a better match to the impact of the types on pupils’ performance.</p>

## Data source and further information

For more information on geo-demographic classifications see Sections 5 and 6 of main paper.

For information on the ACORN types and other details see - <http://www.caci.co.uk/acorn>  
Further information on Mosaic on the Experian website (<http://www.business-strategies.co.uk>).

## Existing Use of Commercial Geo-Demographic Classifications by Local Authorities in School Funding

Harrow, Croydon, Wakefield, Bury, Northamptonshire, Suffolk, and Worcestershire all use ACORN data in some element of their school funding formulae.

No authority has been identified as using Mosaic (Experian), but Somerset uses the related Experian wealth/poverty index (see section A4).

### Some examples of the use of the ACORN classification in school funding:

**Croydon** has just moved (April 2006) to a new AEN formula using the ACORN classification as part of a basket of indicators for AEN/social deprivation funding. Additional funding is given for pupils whose postcodes fall into the bottom of five categories of the Acorn classification ("Hard Pressed").

**Harrow** has included an ACORN based factor in its formula since April 2005 for social deprivation and formula SEN funding. Funding is given to pupils eligible for free school meals and to those living in a ward rated as hard-pressed in the Acorn classification.

**Wakefield** has used ACORN data to take into account social deprivation in the allocation of additional funds for 2006-07. Personalised learning funding is based on the proportion of pupils in ACORN categories 4 and 5; other additional social deprivation funding has been allocated to primary schools with more than 80% of pupils on roll in categories 4/5 and secondary schools with more than 72% in these categories.

### B3. ONS GEODEMOGRAPHIC CLASSIFICATION AND OTHER CENSUS DATA (AREA-BASED)

#### Description

Measures based only on 2001 census data, either a composite (the ONS geo-demographic classification) or using individual variables from the census.

- i. The ONS has produced an “Area Classification of Output Areas” based on 2001 census data at OA level. For each output area it identifies those other output areas to which it is most similar, and groups output areas into a three tier hierarchy of supergroups, groups and sub-groups. There are seven clusters at super-group level, twenty one clusters at group level and fifty two clusters at sub-group level. The analysis is based on forty one selected census variables.
- ii. A few authorities use individual variables taken from the census, separately or in combination. A wide range of measures is potentially available, covering eg self-reported health status, unemployment, occupation/social class, parental education, housing tenure, overcrowding etc. These are available down to output area (based on population counts). The ONS website also includes data on each of the 41 variables used in the Area Classification (i), expressed as an index (raw and standardised).

#### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>Classification and census data available at output area level, so better discrimination than IMD which uses LSOA.</p> <p>Area classification covers the full spectrum of OAs, Likely to provide better discrimination for less severely deprived groups which may be missed by the indices which are based on identifying the most severe deprivation. National standard measure, comparable across authorities. Freely available from ONS at OA level (classification and data on the 41 variables).</p> <p>If using census data directly, possible to choose the particular elements (eg unemployment or housing) thought to be most relevant to local conditions.</p>	<p>Area classification is a geodemographic classification which does not have an intrinsic ranking: relative placement of different sub-groups/groups/ depends on purpose (unlike IMD where part of the methodology is in weighting/combining the different dimensions into a single index of deprivation).</p> <p>Based solely on census data, so can only be updated following new census.</p> <p>Not standard if individual LA chooses its own selection of census data and how to apply.</p>

#### Data Source and Further Information

The ONS “Area Classification of Output Areas” and the dataset for each of the 41 variables (original and standardised) for each OA are available on the ONS website - See [http://www.statistics.gov.uk/about/methodology\\_by\\_theme/area\\_classification/oa/default.asp](http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/oa/default.asp) for information about the classification, report on methodology and datasets. Extensive information on the census and counts at OA level are also available on the ONS website.

## Existing Use of Census Data by Local Authorities in School Funding

No relevant uses of the ONS Area Classification have been identified.

Three authorities were identified as using census data in 2005-6:

**Wolverhampton** uses its own deprivation index based on census data. Extract from its social deprivation statement:

*“It has traditionally been accepted that the incidence of free school meals entitlement is the best proxy indicator of social deprivation, and this factor has always been a major formula factor. More recently the Authority, in collaboration with the University of Wolverhampton, has developed a social deprivation indicator which links educational attainment with the Government’s index of need, based on 2001 Census data. This relationship is quantified via linear regression analysis and enables a deprivation score to be allocated to each enumeration district (output area). This score is attached to each individual pupil based on their home postcode, and these are aggregated to give an overall score for each school. The Authority currently uses both free school meals and the new social deprivation indicator, but is progressively decreasing the relative weighting of the former and increasing the relative weighting of the latter.”*

**North Somerset** has its own index based on a selection of census variables down to OA level designed to identify small pockets of rural deprivation. Extract from its social deprivation statement:

*“Historically funding for social deprivation was based on the number of pupils eligible for free school meals. In 2000 the schools serving areas of social deprivation were unhappy with this due to changes planned to the benefits systems and the greater range of social deprivation indicators available and therefore this element of the formula was reviewed.....The outcome of the review was that social deprivation funding should mainly be a lump sum, not dependant on the size of the school and should be based on a range of indicators from the 1991 census. The schools involved identified the social factors from the census that they felt had the most impact on their work in school and the type of additional support that schools would need to provide to lessen the impact that deprivation can have on both behaviour and standards. Each ward was compared to the English national average for the statistics selected and a sample of the home addresses of pupils from each school used to generate a deprivation score.*

*In 2004-05 the factor was updated to reflect the 2001 census. This meant that deprivation for each output area could be ascertained and therefore small, but significant, pockets of deprivation, especially in rural areas could be identified. In addition the unique pupil number (UPN) meant that the home address of every pupil could be tracked for social deprivation rather than the sample previously used.*

*Seven statistics from the 2001 census were chosen with no weightings applied to individual statistics. The seven statistics were:*

*% of homes rented from local authority, housing association or registered social landlord (tenure)*

*% of overcrowded households*

*% of households with no car/van*

*% of people aged 16 – 74 long term unemployed*

*% of lone parent households with dependent children*

*% of households with a limiting long term illness, no adults in employment and with dependent children*

*% of people aged 16 – 74 with no qualifications.*

*Each output area in North Somerset and the surrounding authorities is scored for social deprivation. A score of one is given to an output area for each of the statistics that are worse than the English national average so that the most deprived output area could have a maximum score of seven. For each school the average number of social deprivation points per pupil is determined, based on the output area of the home addresses of all its pupils, including those that live in neighbouring Authorities.”*

## C. ATTAINMENT BASED INDICATORS

### C1. NATIONAL CURRICULUM TESTS

#### Description

Indicators based on pupil assessment/performance in national standard tests/assessments or examinations taken at the end of years 2 (Key Stage 1, age 6/7), 6 (Key Stage 2, age 10/11) or 9 (Key Stage 3, age 13/14).

A wide range of possible variants may be used, depending on the selection of:

- the age/stage to which the test/assessment relates
- use of data from tests or from teacher assessments where both are available
- choice of subject or subject combinations (performance in one or more of Reading, Writing, Maths (KS1) and English, Maths, Science (KS2))
- use of level descriptors for achievement or equivalent point scores (or marks data which is available for some tests)
- levels at which any thresholds are set (eg whether based on numbers achieving at, below or well below expected levels for their age)
- whether any additional adjustments are made, eg to standardise for the month of birth and resulting variation in test scores due to age differences. (Some authorities use estimates of expected pupil performance produced by the Fischer Family Trust, which take into account prior attainment and a range of background characteristics, rather than making direct use of KS results).

Indicators may be used as measures of prior attainment (for deprivation funding) or as measures of general levels or pupil attainment and numbers achieving well below expected levels for their ages (mainly for SEN funding).

#### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>National measures, within standard framework.</p> <p>KS2 and KS3 tests externally validated - should provide nationally comparable results.</p> <p>Available for high proportion of pupils, even those moving between schools and authorities.</p> <p>Available for earlier years for previous KS for all cohorts now aged 7-16 and can be updated each year for successive cohorts.</p> <p>KS2 provides good prior attainment data for secondary school pupils where pupils transfer at age 11.</p> <p>Good measure of distribution of pupils at each school across ability range based on academic achievement, and of relative numbers of low achieving pupils.</p>	<p>Teacher assessments are done internally by schools - may not achieve comparability across schools and authorities. Allegations that some schools “teach to the test” distorting the results.</p> <p>Since 2005 (and for 2004 for pilot schools) only Teacher Assessment available for KS1.</p> <p>Not available for some pupils, eg pupils who were absent at the relevant test or have moved here from overseas. May be a particular problem for schools with high immigrant population or high turnover, which may include more deprived pupils.</p> <p>KS1 provides prior attainment data only where pupils attend separate infant and junior schools.</p> <p>In primary schools the school’s achievements in boosting KS1 results will have a perverse consequence if KS1 used in funding (and similarly for KS3 results used in secondary school funding).</p> <p>Measures only academic achievement, not eg emotional, social and behavioural problems which may affect schools’ resource needs.</p>

## Data source and further information

Schools/LEAs/National Assessment Agency (QCA) for DfES (which also holds data centrally on the National Pupil Database which links pupils' performance across key stages with PLASC information).

At KS1 schools are responsible for making assessments and passing to LA under local moderation arrangements within national framework. At KS2 and KS3 the NAA is responsible for maintaining details of pupils results and schools must submit details to the NAA. Further information about the latest reporting requirements are in booklets for each key stage on the QCA website <http://www.qca.org.uk/eara/> (eg at KS2 <http://www.qca.org.uk/eara/files/ks2ara06.pdf>).

Information about the estimates produced by the Fischer Family Trust (primarily for performance analysis/target-setting purposes) are on the FFT website <http://www.fischertrust.org/performance.htm>

## Summary of Existing Use of SATs data by Local Authorities in School Funding

Used by 40 of the 75 LEAs examined in 2005-6, most often for SEN funding.

About a quarter used SATs (normally KS2 results) as a prior attainment measure for funding of secondary schools based on KS2 results, but used proxy measures for primary because FSP and KS1 data were not regarded as suitable for use as PA measures.

Others also used KS1 data (or FSP data - see next section) as prior attainment measures for primary funding.

Some authorities preferred to use other measures, mainly PiPs and CATs, as prior attainment measures - see C3.

Where data is used for SEN a much wider range of KS data tends to be used, as a proxy for SEN needs. Most authorities use KS1 and KS2 data and a few also use KS3.

Funding is normally based on the proportion of low attainment in each cohort, based on those not reaching given levels or on point scores; some authorities use only a subset of SATs tests eg reading or English; some weight to give more funding to very low attainers, particularly in allocating SEN funding.

## Examples of the use of SATs Key Stage Assessment data in school funding:

**Wandsworth:** *Prior Attainment: The Prior Attainment factor is distributed using Foundation Stage Profile (FSP) data and low Key Stage 1 Reading teacher assessment results for Primary schools and low Key Stage 2 English test results for Secondary schools. The FSP data used are the low scores in Personal, Social and Emotional Development and Language for Communication and Thinking. The Secondary school data takes into account the schools' intake. All of the data is averaged over two years to even out fluctuations.*

**Sunderland:** *Prior Attainment: KS1 – no funding distributed using this factor as it was considered that foundation stage data not developed sufficiently to be used as a basis for distribution of funding. KS2 – based on 3 year average of pupils achieving below level 2C in SATs for reading, writing and mathematics in KS1. KS 3 & 4 – based on 3 year average of pupils achieving below level 4 at KS2.*

**South Gloucestershire:** *Prior Attainment allocation is based on pupils not achieving a certain level in SAT tests. For the primary sector, resources are targeted using results from the Foundation Stage assessment and Key Stage 1 results for writing. For the secondary sector, Key Stage 2 results in writing*

and mathematics. Levels achieved are further weighted to ensure that schools teaching children with particularly low levels of prior attainment receive increased funding.

**Kingston - subformula for AEN which covers School Action and School Action Plus SEN includes factors**

Cognitive Abilities Tests and Foundation Stage Profile	26%	Allocated according to the results of the NFER Cognitive Ability Tests for Key Stages 2, 3 and 4 (scoring below 87), or of Foundation Stage Profile assessment for Key Stage 1 (at or below 5 <sup>th</sup> quintile)
Attainment Tests Results	22%	allocated according to factors relating to attainment on entry to each Key Stage: KS1: at or below the 5 <sup>th</sup> quintile KS2: below Level 2 at end of KS1 KS3: below Level 3 at end of KS2 KS4: below Level 4 at end of KS3 or below Level 3 at end of KS3 (latter counts double)

**Kirklees:** “New Approaches” funding for SEN (non-statemented, mainly school action and school action plus) is allocated by a combination of audit and formula. The formula for “Type C” funding for mainly school action needs in secondary schools is based on NFER year 7 reading tests and KS3 results.

**Sandwell:** The attainment allocation makes up 60% of the AEN element in primary (50% in secondary). This is measured and allocated through two measures – 90% is based on entry skills into primary and secondary schools (SATs and foundation stage profile) and 10% through value added measures

**Examples of use of Fischer Family Trust Data:**

**Stockport:** “The use of the Fischer Family Trust data as a proxy indicator for part of the Special Needs budget provides a way forward at this stage. For the future, it will be necessary to develop models that are clearly underpinned and supported by academic achievement by using evidence of attainment at the start of each key stage.....The funding for School Action Plus for both Primary and Secondary schools is based on 100% Fischer Family Trust percentile ranking. ....Funding for Special Educational Needs Statements for both Primary and Secondary schools is also based on 100% Fischer Family Trust percentile rankings for all new provision and when statements come up for review from April 2006. The effect of this will be to phase-in the changes over a period of 5 years or so. There is no suggestion that funding will be removed from the most vulnerable children, wherever they attend school. Funding for exceptionality will continue to be provided as a pupil led top up, whichever school that pupil attends.”

**Wigan: Personalised Learning –** The Schools Forum agreed that the sum identified within our DSG for personalisation should be fully allocated to schools in a manner that reflects the national distribution method, which was heavily weighted towards deprivation. 15% of the money has been distributed using pupil numbers, 35% allocated using a weighted FSM eligibility and 50% on the basis of Fischer Family Trust and Foundation Stage Profile estimates of pupils not likely to achieve the national targets in English and Mathematics. This methodology fully supports the government’s priorities.

**Bath and NE Somerset : Personalised Learning:** “The ....methodology uses Fischer Family Trust data for KS2 and KS3 predictions and uses KS1 results to fund infant aged pupils. This methodology therefore recognises social deprivation as the Fischer Family Trust data uses social deprivation in its prediction of attainment. Infant pupils do not get Fischer Family Trust data for predictions at KS1 and therefore actual attainment scores are utilised as the best alternative available.”

## C2. FOUNDATION STAGE PROFILE

### Description

Measures taken from the Foundation Stage Profile, completed towards the end of a child's Reception year in Infant or Primary school.

The FSP is a national framework for assessing children at the end of the Foundation Stage. The profile is made up of 13 scales based on the early learning goals in the foundation stage curriculum guidance.

As for KS data, FSP data may be used as a measure of prior attainment (deprivation funding) for KS1 or as measures of general levels or pupil attainment and numbers achieving well below expected levels for their ages (mainly for SEN funding).

### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>National measure based on national framework for assessment.</p> <p>Completed at end of reception year: early in child's school career, so closest to direct measure of the nature of the intake to the school; more of a prior attainment measure for primary; available also for infant/first schools.</p> <p>Should be available for high proportion of pupils, including those moving between schools and authorities (mobility is highest in early primary years).</p> <p>Provides measure of distribution of pupils between and within schools at start of primary education. Assessment covers full range of skills related to the early learning goals.</p>	<p>Still relatively new - some LAs consider that may not yet be robust enough for use in school funding.</p> <p>Assessments based on observation, done internally within schools. May not achieve comparability across schools within an authority. Danger of feedback effects if known to be used in funding. Schools with integrated nursery provision which boost achievements of otherwise low intake will get lower funding than schools which perform less well at FS - possible perverse incentives.</p> <p>Not available for some pupils, eg pupils who were absent at the relevant test or have moved here from overseas. May be a particular problem for schools with high immigrant population or high turnover, which may include more deprived pupils.</p>

### Data source and further information

Schools and LEAs (schools assess pupils in line with the national framework and pass scores to LAs which moderate and provide support to schools. Aggregate data and sample data is passed to DfES but data on individual pupil scores is not held centrally).

Further information about the latest reporting requirements are in booklets for each key stage on the QCA website <http://www.qca.org.uk/>.

### Existing Use by Local Authorities in School Funding

From Section 52 analysis, 12 of the 75 authorities were or had been using either FSP or baseline assessments in 2005-6. Some authorities had stopped using baseline data with the switch to FSP. Some said they would consider using FSP once it has become more established in schools; some have started using it from April 2006 and some say they plan to use it at a future date.

**Examples of the use of Foundation Stage Profile data in school funding:**

FSP is normally used alongside SATs or other test data for later age groups as a prior attainment measure - see examples for Wandsworth, South Gloucs, Sandwell and Kingston quoted in C1 above, and Sheffield and Surrey at C3 below.

### C3. OTHER TEST DATA

#### Description

Test data on individual pupils' performance (other than nationally required test data), using locally determined testing arrangements. Tests may be provided by national organisations or testing bodies - most commonly:

- **Cognitive Ability Test Score (CAT):** reasoning tests (NFER-Nelson)
- **Performance Indicators in Primary (PIS); MidYIS and Yellis (secondary):** Durham University Curriculum, Evaluation and Management Centre (CEM)

CAT reasoning tests are available for ages 7 years 6 months – 17+ but are most widely used on entry to secondary school. CAT and MidYIS (Middle Years Information System) are frequently used to provide an alternative baseline to KS2 tests on entry to secondary school.

PIPs on entry baseline provides an assessment of children entering first year of full-time education (alternative to FSP as prior attainment measure for primary schools).

Other tests eg reading, drawing, spelling may be used on a local basis, particularly for younger children (see final section on use by LAs).

#### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>LAs can choose measures considered most relevant to local circumstances.</p> <p>NFER-Nelson CAT tests and CEM tests externally set, data available for wide range of pupils/schools nationally (CAT taken by two-thirds of secondary pupils nationally) even though not used by all schools/LAs</p> <p>CATs are age standardised scores; intended as measure of pupil's potential - said to overcome problems with SATs of primary schools "teaching to the tests" which lead some secondary schools to question the use of KS2 data for secondary funding.</p>	<p>Requires additional tests (to SATs) across all an authority's schools for relevant phase(s). Additional costs to LAs and schools to buy and administer tests.</p> <p>Not universal. Will not be available for pupils moving from schools which do not use the relevant test.</p>

#### Data source and further information

Information on CATs from NFER-Nelson (<http://www.nfer-nelson.co.uk>)

Information on PIPs and MidYIS from Durham University Curriculum, Evaluation and Management Centre (CEM) (<http://www.cemcentre.org/>)

#### Existing Use by Local Authorities in School Funding

From Section 52s, CATs data used by 9 of the 75 authorities in 2005-6, normally for secondary school funding: *Brent, Enfield, Kingston, Knowsley, Sheffield, Calderdale, East Sussex, Herts, Lancashire*; CEM or other test data used by a small number of authorities (*Barnsley, Gateshead, Swindon (PIPs), Hounslow (MidYIS)*); *Hounslow used the "Draw a Person" Test (primary); Brighton used the BAHLAS spelling test.*

## Examples of the use of other test data in school funding:

### NFER CATs data:

**Sheffield:** “The AEN Funding Formula: The following indicators are used in the funding formula

- Free School Meals
- Income Support
- Mobility
- Foundation Stage Profiles
- NVR Scores at Year 3
- Key Stage 2 SAT Scores
- NVR / CAT Scores at Year 7

Each pupil can score up to 10 deprivation points if they meet the criteria for each factor – see over. The points each pupil scores are then used in the funding formula with both individual scores and the cumulative total for a school contributing to AEN funding received.”

**Kirklees:** “New Approaches” funding for SEN (non-statemented, mainly school action and school action plus) is allocated by a combination of audit and formula. The formula for “Type C” funding for mainly school action needs in secondary schools is based on NFER year 7 reading tests and KS3 results.

**Lancashire:** “ Secondary: Educational Disadvantage: Allocations are made to secondary schools for non-statemented SEN based on pupils’ attainment as reflected in NFER/CAT test results using a three year rolling average, to recognise the assessed learning needs of pupils. This data is standardised to identify 20% of pupils. No thresholds apply to this, so all qualifying pupils with similar needs receive the same level of funding irrespective of school attended.”

### PIPs/MidYIS:

**Barnsley:** “Early Intervention Funding delivers funding to schools based on base-line entry data (50%) and free school meals (50%). The funding replaces what was previously funded as band 1 and band 2 statements of special educational need, and is given to schools to enable them to intervene in supporting pupils to avoid them ultimately receiving statements...Baseline entry data is measured in primary schools as the number of pupils achieving below a score of 40 on a base-line entry data (currently end of reception PIPs), and in secondary schools as the number of pupils achieving an average of 21 and below across 3 core subjects at key stage 2.”

**Gateshead:** “In recognition of the extra support needed, the Social Disadvantage (AEN) formula (in consultation with schools) makes allocations on the following basis: Provision will be based upon the number of pupils in each school who are entitled to a free school meal (FSME), as recorded on the January PLASC Return date and attainment data relating to PIPs scores for primary schools (a baseline assessment score of 22 or less) and KS2 results for secondary schools (Level 3 - or below - in English, Maths or Science).....We currently use PIPs baseline assessment score of 22 or less...We will change from PIPs to Foundation Stage data by April 2008 – work has already started.”

**Surrey** “is conscious of the need to avoid, as far as possible, basing funding on data which can be influenced by schools. Therefore Surrey has never explicitly used prior attainment, as measured by national key stage test results, in its funding formula. ..**Non statemented SEN funding** is distributed in Surrey using a combination of factors:

- per pupil eligible for free school meals: £203.85 each in 2006/07;
- using Foundation Stage Profile (for key stage 1) and year 3 and 7 screening data. In 2006/07 pupils assessed at levels 1-3 in five selected Foundation Stage Profile (FSP) assessments in any one of the last three years generate £195.04 per assessment, pupils with a standardised reading score below 40 in the reading assessment in the Durham University PIPS test generate £206.63 each and pupils scoring below 85 in the reading assessment of the Durham University MIDYIS tests generate £366.46 each. Where the proportion of pupils in a school generating screening funding at years 3 and 7 exceeds the County average then those pupils in excess of the average incidence are funded at a higher rate. Additional funding is allocated for low literacy attainment based on FSP and screening data. The funding rates are historically based not activity based.”

## D. OTHER SPECIFIC (PUPIL-BASED) INDICATORS

### D1. PUPIL MOBILITY OR TURNOVER

#### Description

Measures of the movement of pupils into (inward mobility) and out of (outward mobility) schools at non-standard times and related measures, eg the numbers remaining in the same school throughout a key stage.

There is currently no generally accepted definition of mobility which is used as a standard measure either for funding or research. Research by Janet Dobson<sup>12</sup> recommended a standard definition of a mobile pupil as:

*“a child joining or leaving a school at a point other than the normal age at which children start or finish their education at that school, whether or not this involves a move of home”*

Pupil mobility at the school level is the aggregate of individual movements, ie the total number of joiners plus the total number of leavers. This can be turned into an index, sometimes referred to as the Dobson Index, when expressed as a percentage of the total school roll.

A wide variety of measures are adopted by authorities of mobility, turnover or turbulence, for use in their formulae for funding purposes. A Report by Gordon Mott in 2002 following up the Dobson Report<sup>13</sup> found a wide variety of measures in use by the LEAs surveyed. Research and guidance from OfSTED and DfES in 2002 and 2003 recommended some standard terminology to be used eg referring to a non-standard admission as an “additional admission”.<sup>14</sup>

The main variants in definition centre around whether the measures cover:

- Admissions (joiners) and leavers or just admissions.
- Whether “non-standard” relates to joining (or leaving) within an academic year, at any time in a year other than the normal entry or exit year, or both. For example those joining a junior school (normal entry year 3) in September of year 4, 5 or 6 would not score as a non-standard admission under the first definition, but would under the second or third. In terms of the effects on schools, children who join within an academic year may impose higher costs than those joining at the start of the year, irrespective of the normal entry age. For performance measurement, the year may be the more important factor. The Dobson measure covers both in that any child joining at other than the start of the year at the normal entry age counts for the measure (with an equivalent definition for leavers). OFSTED data on inward mobility shows both time within year and the year of joining for each cohort within a school.
- What is regarded as the normal start or entry date. Measures need to exclude normal entrants who miss the first or last few days/weeks of term for reasons other than mobility, and therefore allow a margin around the beginning and end of the school year. The most common cut-off for admission is the end of September, so that any admissions after 1 October are counted as non-standard or additional admissions, but some authorities/definitions use other dates. (Reception pupils are normally excluded where

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<sup>12</sup> Dobson, J.M., Henthorne, K, Lynas, Z. (2000). *Pupil Mobility in Schools: Final Report*. London: Migration Unit, UCL. [http://www.geog.ucl.ac.uk/mru/docs/pupil\\_mobility.pdf](http://www.geog.ucl.ac.uk/mru/docs/pupil_mobility.pdf)

<sup>13</sup> Gordon Mott, September 2002 “*Children on the move - Helping high mobility schools and their pupils*” EMIE Report R68 available at <http://www.nfer.ac.uk/emie>

<sup>14</sup> See Appendix (ii) in DfES guidance “Managing Pupil Mobility” DfES November 2003 available at <http://www.standards.dfes.gov.uk/sie/si/SfCC/goodpractice/pmp/>

there is more than one entry point in the year). Leavers are commonly counted as non-standard if they leave before the end of June.

Most measures are based on an annual snapshot, looking eg at pupils in school on the PLASC date and when they joined the school, but some authorities use additional measures of turbulence which pick up more frequent pupil movements in and out of a school (some schools catering for particularly mobile groups may have high turbulence or turnover within year).

An alternative measure looks at stability rather than mobility, ie the proportion of pupils remaining in the school year-on-year. Recent PANDA data produced for schools by OFSTED on “inward mobility” shows the proportion of pupils in each year group who joined before 1 October of each year, and the percentage of pupils in each year group who did not join the school at the normal time compared with the national average. The DfES Achievement and Attainment tables for KS2 include a “mobility indicator” which measures the percentage of pupils eligible for KS2 assessment who were in the school for the whole of their KS2 education (Year 3 - Year 6 inclusive). The CVA analyses for secondary for 2006 will include mobility (the date and year when pupils joined the school) as factors in the analysis.

### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>High pupil turnover outside normal admissions cycle imposes extra costs on schools in itself, which LAs may wish to compensate for in funding schools.</p> <p>Research evidence shows that mobile pupils are on average lower attaining than other pupils<sup>15</sup>, so may require extra resources to close the attainment gap, and conversely that disadvantaged/lower attaining pupils are also more mobile<sup>16</sup> so mobility may act as a good proxy for socio-economic effects.</p> <p>PLASC may be less accurate re FSM status of mobile pupils because of lags in establishing FSM entitlement.</p> <p>Now straightforward to obtain data on mobility from PLASC.</p>	<p>Wide variety of definitions of mobility in use eg whether covers just joiners or joiners and leavers.</p> <p>Difficult to determine leaving dates accurately where leavers are included.</p> <p>Some mobility associated with reasons not associated with deprivation eg parents seeking to move children to better schools.</p>

<sup>15</sup> Non-standard entry shows as a factor in CVA analyses. For measures to manage mobility and support mobile pupils, see DfES guidance ref at footnote 14.

<sup>16</sup> See for example “The Mobility of English School Children” Machin, Telhaj and Wilson, Centre for the Economics of Education (CEE), London School of Economics published May 2006. Available for download at <http://cee.lse.ac.uk/cee%20dps/ceedp67.pdf>. The authors looked at all pupils in English state schools moving school between 2001/2 and 2002/3. Excluding “compulsory” moves eg from primary to secondary, they found that pupils from lower social backgrounds were more likely to switch schools, and that pupils who changed schools were more likely to have a low previous attainment record than pupils who did not change schools. (This research used a different definition of mobility, looking at pupils who had changed schools between the two years and distinguishing those which were “compulsory” ie as part of a normal educational transition eg from primary to secondary from other moves).

## **Data source and further information**

Data extracted from PLASC based on joining/leaving the school, or other local school census data on pupil numbers eg termly count data, according to locally adopted definition of what is to be counted as being outside the standard/normal admissions cycle.

## **Existing Use by Local Authorities in School Funding**

Some kind of mobility indicator is common, with about half of all authorities (from Section 52s, 38 out of 75 authorities examined) including a factor of this kind in their formula in 2005-6. It is more common in areas with high mobility eg in Inner London and in authorities with military bases within their catchment areas.

The most commonly used definition for funding purposes is similar to the Dobson index but covers only admissions, ie the number of pupils who joined in the previous academic year after the normal admissions date, expressed as a proportion of total pupils on roll. A few authorities also count leavers in their formulae. PLASC data is normally used to determine joining and leaving dates and whether these are outside the period regarded as within the normal admissions cycle.

## **Methods of allowing for mobility/Authorities known to be using mobility measures in their formulae (June 2006)**

As noted above, a wide variety of methods of measuring mobility is in use. From analysis of Section 52 returns and social deprivation returns of those which give details, just over half use a mobility factor based on non-standard admissions. A small number (eg *Westminster*, *Harrow*, *Salford*) use the Dobson Index or a similar measure based on joiners and leavers, or other variants on these measures.

The most common method of funding, used by a majority of those with a mobility factor, is to provide an amount for every non-standard admission. Amounts vary widely, from around £50 per pupil to over £500 - although these figures may not be comparable between authorities because of detailed differences in what is counted as a non-standard admission.

About a third of authorities provide additional funding only for schools with high or very high levels of mobility, with the threshold for what is regarded as high based on either local or national averages for all schools or for the particular sector (some have a single threshold for primary and secondary schools, others set different thresholds as national average mobility is much higher for primary than for secondary schools). Schools typically then receive funding for each additional admission above this threshold. For example *Enfield* funds each casual admission above a 7% threshold; in *Birmingham* schools that are above the Local Authority determined average for pupil mobility (17% primary, 8% secondary in 2005-6) attract funding for every pupil above the average; in *Southwark* and *Haverling* schools with pupil mobility in excess of 10% receive £311 and £200 per pupil respectively above this threshold. (Again these thresholds may not be comparable between authorities because of differences in the definitions of mobility used, in particular whether they include leavers as well as joiners, which effectively doubles the count.)

## Examples of the use of mobility data in school funding:

**Greenwich:** "AEN Mobility Formula (2006/07):

- Primary – number of pupils (yrs 1 to 6) having enrolled on a date other than at the normal time for enrolment during the previous academic year x £117.24
- Secondary - number of pupils (yrs 1 to 6) having enrolled on a date other than at the normal time for enrolment during the previous academic year x £181.86"

**Lambeth:** Inward Mobility: Number of inwardly mobile pupils who joined the school other than at the start of the school year.

**Haringey** has a mobility factor based on unplanned admissions, calculated on the basis of any child who starts at a school 3 months after the majority of their peers.

**Islington** uses a pupil mobility factor defined as the number of pupils admitted who were not there in reception (primary schools) or year 7 (secondary schools).

**Harrow:** "Mobility – The number of pupils starting and leaving a school at times other than normal September and July times. Approximately £0.5m was delivered by this factor in 2006-07. Each such pupil attracted an additional £158 in a primary school and £316 amount per secondary school pupil in 2006-07."

**Kingston Upon Thames** has a pupil mobility factor, defined as the number of pupils admitted to a school during the previous academic year at non-standard times.

**Surrey:** "Schools with high levels of mobility (measured by the number of joiners at abnormal times) receive additional funding. This additional funding recognises both the additional work for the school in integrating casual joiners, and the frequent occurrence of additional needs, whether educational or social, among such joiners."

**Sheffield:** Pupil mobility scores are allocated to pupils arriving in school more than a month outside standard transfer dates.

**Sunderland:** Mobility - measured by subtracting the total number of pupils on roll at the beginning of the academic year from the total number who have been on roll for at least one session throughout the year.

**Sandwell** has a "migration allocation" within its AEN funding which covers both pupils arriving in schools outside of the normal intake period and pupils who are new to the English education system. The first measure is triggered by any arrivals in excess of 6% (primary) or 2% (secondary) of the total school roll and the second is triggered by schools having more than 10 of these pupils.

**Newcastle :** "A Mobility factor was introduced [in 2006-07] to provide support to schools that suffered from high levels of pupil exchange in year groups other than the first year which the school offers. Mobility is funded on a per pupil basis at a rate of £59 per eligible pupil for 2006-07. This is a standard rate across year groups and sectors and is applied to the total number of pupils deemed to enter the school in a year other than the first year offered by the school. "

**Middlesbrough:** "Pupil mobility funding recognises that the arrival of new children at times other than normal admission dates can have a significant impact on primary schools, particularly where these are from traveller or asylum seeking families, where language can be a barrier. The factor recognises the time required to settle the child in to a class, obtain contact details and prior attainment data, and prepare an education plan. A school triggers this factor if the number of new pupils in Y1-Y6 since the last PLASC return as a percentage of total roll is above the average for all primary schools. The allowance of £100 is paid for those above the average."

**Bradford:** "We have included a measure of turbulence in the new Deprivation formula as this is a significant issue affecting attainment and behaviour in schools in Bradford, which, our modelling shows, does not fully correlate with FSM and IMD". [Turbulence: (no. of starters between 1/10/04 and 30/6/05) x £variable]

## D2. VULNERABLE/LOOKED AFTER CHILDREN

### Description

The number of children in a school who are either in the care of a local authority or otherwise thought to be vulnerable/at risk.

The measure may be limited to children who are legally in the care of a local authority (referred to below as Looked After Children or LAC) or take in a wider group, for example all those on the Child Protection Register or all those known to Social Services as being in an at risk group.

### Advantages and disadvantages in relation to use in school funding

Advantages	Disadvantages
<p>Direct costs imposed on schools for LAC in liaising with the authority, case conferences, working with parents or carers.</p> <p>Research evidence of poor educational performance of Looked After Children. Also high incidence of social/behavioural problems.</p>	<p>Very small numbers - may use to reflect direct costs of particular children but not be good proxy for wider disadvantage.</p> <p>Frequent school changes may it make difficult to collect/reflect up to date data within a funding formula.</p>

### Data source and further information

PLASC for Looked After Children in school at census date. LAs own records/liaison with other authorities for those moving into and out of schools between census dates, children in a more widely defined group eg children on the Child Protection Register or known to Social Services, children from another authority attending its schools.

### Existing Use by Local Authorities in School Funding/Authorities known to be using measures related to vulnerable children in their formulae (June 2006):

From Section 52s about one-fifth of LAs analysed included this factor in their formulae in 2005-06. Social Deprivation statements indicate that a number of other authorities have introduced this as a new factor in 2006-07. More may fund outside the formula, or may not have classed this factor as part of their deprivation funding.

*Authorities using this as a factor included Hammersmith and Fulham, Brent, Enfield, Haringey, Wolverhampton, Salford, Wigan, Bradford, Hull, East Riding of Yorkshire, North Lincolnshire, Derby, Dorset, Darlington, Brighton & Hove, Warrington, Kent, Hertfordshire, Norfolk, Surrey. The most common approach was an amount per looked-after child – typically £500 to £600 but could be as low as £123 (Plymouth secondary) or as high as £1500 (Warrington) in 2005-6.*

*Most LAs used numbers of LAC but Brighton & Hove used numbers on the Child Protection Register; Derby also included those known to Social Services; East Riding used LAC plus children “at risk”.; Sunderland says it uses “the number of pupils on the Child Protection Register on January PLASC.”*

### Examples of the use of this factor in school funding:

**Middlesbrough:** Schools receive an allowance of £455.97 (primary) and £663.82 (secondary) for every looked after child on roll on census day.

**Norfolk:** £843 is allocated to schools for each Looked After Child on the school roll (2006-07).

**Surrey:** *"Children in Public Care: Additional funding is allocated to schools with children in public care (£694.48 per pupil). This funding is intended to allow a senior member of staff to take a lead in promoting the interests of such children and also to fund attendance at case conferences etc."*

**Bradford:** *"..we have included funding specifically for looked after children as this is a group of pupils at risk of underachievement, whose distribution across Bradford does not fully correlate with the other indicators of need used in the formula."* Looked After Children: (no. of LAC pupils) x £variable

### **D3. ENGLISH AS AN ADDITIONAL LANGUAGE/OTHER MEASURES OF FLUENCY IN ENGLISH**

#### **Description**

Measures whether English is the child's second language and related measures based on assessments of fluency in English for these pupils.

#### **Advantages and disadvantages in relation to use in school funding**

<b>Advantages</b>	<b>Disadvantages</b>
<p>Direct costs imposed on schools for children whose first language is not English and who need extra support to acquire proficiency in English and access the curriculum taught through English.</p> <p>PLASC data: national definition, available for all pupils.</p> <p>May use alternative local measure of proficiency in English: likely to be more discriminating measure of child's command of English.</p> <p>SFSS AEN index for U5s and primary included a factor "proportion of primary pupils with mother tongue other than English" using PLASC data.</p>	<p>May be overlap with other funding sources for language needs.</p> <p>PLASC measures whether or not English is believed to be the First Language, not proficiency in English; current measure does not identify first language</p> <p>PLASC EAL status is determined by school; danger of bias if known to be used for funding purposes.</p> <p>Other externally moderated measures of language proficiency expensive to maintain; unlikely to be viable in schools/LAs with relatively small numbers of EAL pupils.</p>

#### **Data source and further information**

PLASC for whether or not English is the pupil's first language. LAs own records for other measures, in particular measures which differentiate pupils' fluency in English.

[The 2007 School Census will include a new Pupil First Language question. This will allow schools to record each pupil's first language, rather than simply recording whether or not that language is English. The more detailed language question is not compulsory but is expected to be used by schools in a majority of authorities.]

#### **Existing Use by Local Authorities in School Funding**

From Section 52s about 1 in 6 authorities had an EAL or similar factor in their formula. Use was most common in London (nearly half of all London authorities included an EAL factor). Funding may be additional to specific grant funding, or the factor may have been introduced in response to reductions in specific grant funding.

There is a mixture of direct use of the PLASC indicator (English not the pupil's first language) and indicators based on local arrangements for measuring pupils fluency in English. These are most common in areas with significant numbers of EAL pupils; pupils are typically placed in three or four bands according to fluency in English, and funding may be weighted based on the banding. A few authorities fund for EAL using a sub-formula based partly or entirely on other proxy measures, eg numbers of Minority Ethnic pupils (*Islington, Sheffield, South Tyneside, Sandwell* - see sections D4 and D5).

## **Authorities known to be using EAL/English Proficiency measures in their formulae (June 2006):**

Authorities using the PLASC indicator of EAL:

*Southampton, Liverpool, Bury, Hull, Newcastle, Sunderland, Derby, Birmingham.*

Authorities using a banded system or other measure based on assessed fluency in English:

*Lambeth, Islington, Kensington, Wandsworth, Barnet, Haringey, Harrow, Kingston, Merton, Redbridge, Wigan.*

## **Examples of the use of EAL/English Proficiency data in school funding:**

**Lambeth:** *“Fluency in English - Number of pupils not fully fluent in English (stages 1-3) as recorded in the Authority’s annual Pupil Survey (subject to any agreed moderation or updating). As cash values allocated to pupils at each of the 3 stages may differ annually relative values between the funding levels for each stage is held constant by applying a weighting factor [Weightings are: Stage 1 = Stage 3 unit value X 3; Stage 2 = Stage 3 unit value X 2; Stage 3 = Unit value]. This funding is additional to any Ethnic Minority Achievement Grant funds.”*

**Harrow:** *“English as an additional language (ESOL) - Total number of EAL pupils requiring support in each school. Each such pupil attracted an additional £316 in a primary school and double that amount per secondary school pupil in 2006-07.”*

**Hull:** *“EAL is funded on the basis of children identified on each January’s PLASC Pupil Census. Funding is weighted towards schools with EAL children in more isolated school environments. The rationale for this is that schools newly admitting EAL children need to be prioritised in order to ensure that they can provide the support required.”*

**Newcastle:** *“Additional support [in addition to IMD and mobility factors] is delivered to schools by English as an Additional Language (EAL) factor and in some instances there is a close relationship between the levels of IMD and the number of pupils deemed to have EAL. EAL numbers are taken from January PLASC data where pupils considered not to have English as their first language are identified. The total number of pupils per school is entered into the formula with a standard rate applied across the year groups and the sectors. The per pupil level of funding can fluctuate from year to year as the overall pot is ring-fenced. For 2006-07, schools receive £205.76 per eligible pupil.”*

**Sunderland:** *“EAL - A unit of resource is given for every pupil for whom English is an additional language. Information is as at the January PLASC date.”*

**Wandsworth:** *“uses English as a Second Language as an indicator of need. The factor is based on reading tests and the funding is allocated on the basis of the numbers of children that perform least well in the tests held in the October preceding the financial year.”*

**Kingston Upon Thames:** *“Bi-lingual Learners: This sub-formula was created to maintain funding for language tuition needs when grant levels were being reduced. The total to be distributed is needs-led and varies according to the number of pupils and their ability to use English. Four levels of need are identified, with different weights being applied to them”*

**Wigan:** *“English as a Second Language: Although there are relatively few minority groups in the Borough, in the past two years there has been an increase in the number of non-English speaking, asylum seeker children and children of migrant workers in our schools. To reflect the additional needs of these children a new factor, based upon a banding system of pupil numbers, was introduced in April 2005.”*

**Birmingham:** *“English as an Additional Language This allocation represents the delegated element of resources made available to support pupils with EAL and is based on schools’ average EAL numbers for the last two years.”*

#### D4. NUMBERS OF MINORITY ETHNIC PUPILS

##### Description

Measures of the number of children in the school from various specifically identified minority ethnic groups identified as under-achieving and/or imposing additional costs on schools.

These might be nationally identified groups identified as minority ethnic (using the standard national PLASC classification), or more detailed classifications to reflect the nature of the local population.

Advantages	Disadvantages
<p>National research shows underperformance by some minority ethnic groups.</p> <p>Choice of particular ME groups to include within indicator may reflect local picture of underperforming groups within schools.</p> <p>SFSS secondary AEN index included a factor "Proportion of secondary pupils in low-achieving ethnic groups" using PLASC data.</p>	<p>May be a risk of bias in reporting of ME data by schools if known to influence funding.</p> <p>Ability to identify underperforming groups depends on detailed classification - some ME groups have higher than expected achievement, allowing for other factors.</p>

##### Data source and further information

PLASC for minority ethnic data for groups included within national classification.

LAs' own records for more detailed classifications or information on other groups eg particular ethnic groups not identified by all authorities in PLASC.

##### Existing Use by Local Authorities in School Funding

From Section 52s, a measure incorporating PLASC or other data on ME groups was used by about 10% of authorities in 2005-6. Some used a wide definition, others targeted support specifically to a particular under-performing group, for example Brent had a secondary Pupil Retention Factor which included as one indicator Black Afro-Caribbean boys; Kent had an indicator based on traveller children.

In some cases authorities use a sub-formula incorporating several indicators in combination to identify the mixed needs of such groups, for example under achievement and need for language support in some minority ethnic groups.

##### Authorities known to be using ME measures (June 2006) and examples of their use:

***Enfield:** Because of the diversity of its population, Enfield has chosen to collect data on the widest possible range of ethnic categories, and has done detailed analyses of performance by its minority ethnic groups. It found significant underperformance in specific groups, for example minority White Groups (eg Turkish) which are not normally distinguished in national statistics. It now provides additional funds to schools based on the number of pupils from each of these underperforming groups.*

**Islington: “Bi-lingual Learners:** *This sub-formula was created to maintain funding for language tuition needs and the needs of under performing ethnic groups, when grant levels were being reduced. The total to be distributed is needs-led and varies according to the number of pupils in under performing ethnic groups, their EAL stage and mobility.”*

**Sheffield: “English as a Second Language:** *The Ethnic Minorities Achievement Grant in the Standards Fund Allocation along with an additional £1.3M of mainstream resource is delegated to schools through a funding formula. The factors in the formula are*

- *Numbers of black or bilingual pupils*
- *Prior achievement of black and bilingual pupils*
- *Entitlement to free school meals*

*Funding is only distributed to those schools where at least 11% of a school’s pupils are black or bilingual.”*

## D5. OTHER INDICATORS RELATING TO SPECIFIC GROUPS OR OTHER FACTORS (NOT COVERED ABOVE)

### Description

Measures of the number of children in the school from various specifically identified groups (other than those already covered above).

Categories targeted by individual LAs include refugees and asylum seekers, children resident in women's refuges, children of seasonal workers, poor attenders or children who are difficult to place in school.

Advantages	Disadvantages
Can target groups of particular importance locally.	<p>May be difficult to collect data, particularly if highly transient group.</p> <p>May be risk of perverse incentives, eg if funding poor attenders.</p>

### Data source and further information

Local data collection depending on the indicator

### Use by Local Authorities in School Funding

*Data on children from families of **refugees and asylum seekers** was used by Croydon (2005-6), Kent, Sandwell, and Hounslow.*

*Calderdale and Wiltshire provided funding for **children from local women's refuges** in their areas.*

***Sandwell** has a factor within its migration allocation for pupils **new to the English Education System**, which is triggered by schools having more than 10 of these pupils.*

***Bradford** has an indicator within its social inclusion factor for secondary schools based on **%absence** data.*

***Surrey**: "Schools admitting designated "**high needs pupils**" which experience difficulty in securing a school place, are entitled to additional funding of £500 per term in the year of admission, plus pro rata AWPU funding if they join after January count date."*

***Hull** provides additional funding for "**Hard to Place Pupils**" who "are defined against a number of qualifying criteria: permanently excluded, a series of fixed term exclusions, pupils who have previously attended a Pupil Referral Unit and pupils in refuge accommodation. This funding, allocated during the year, supports schools in re-integrating children back into mainstream settings."*