

# Assessment of compliance with the Code of Practice for Official Statistics

## School-level Examination Statistics for England

*(produced by the Department for Education)*

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### **About the UK Statistics Authority**

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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# **Assessment of compliance with the Code of Practice for Official Statistics**

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## ASSESSMENT AND DESIGNATION

The *Statistics and Registration Service Act 2007* gives the UK Statistics Authority a statutory power to assess sets of statistics against the *Code of Practice for Official Statistics*. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, reports may point to such questions if the Authority believes that further research would be desirable.

Assessment reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

- i. factual evidence and assurances by senior statisticians in the producer body;
- ii. the views of users who we contact, or who contact us, and;
- iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*.

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## Foreword

The Statistics Authority fully supports the application of open data principles and advocates making data available in formats which enable re-use for the benefit of the public, society and the economy. Recently, the Public Administration Select Committee's (PASC) report on *Statistics and Open Data*<sup>1</sup> articulated its view that statisticians have an important role in achieving the ambitions of open data. DfE is a notable example of a government department making data transparent through its flagship performance tables, and statisticians have been central to this from the beginning.

DfE introduced the first version of its performance tables in 1994. The performance tables have developed over the last 20 years into a searchable, web-based tool as part of a larger repository of education statistics and information about individual schools. Originally they presented a small number of indicators, principally School-level examination statistics. These are central to DfE's education policies and remain at the core of the performance tables, alongside information on, for example, school workforce, pupil absences, financial statistics and school characteristics. It is the School-level examination statistics - presented as part of the performance tables - that are the subject of this assessment.

DfE originally conceived, and continues to view, the primary function of the performance tables as an accountability tool to support state business - in particular to help Ministers to discharge their responsibilities to raise standards in schools. The School-level examination statistics were not designed originally to be published as official statistics. They pre-date the *Code of Practice for Official Statistics*, although the involvement of DfE statisticians has ensured that statistical thinking has been central to their evolution. In participating in this assessment, DfE wanted to ensure that the primary function to support Ministers' policy objectives should be preserved. The Authority is strongly of the view that preserving Ministers' policy objectives and producing official statistics that meet the principles of the *Code of Practice* are not, and should not be, mutually exclusive.

Accountability policy drives some of the content of the performance tables, including the School-level examination statistics that are used to set minimum standards of school performance. Schools and colleges that do not meet the expected minimum standards may be subject to government intervention. The *Code of Practice* does not comment on the use of performance indicators as policy instruments. It does require that the reasons for the inclusion of particular indicators and how they were developed are explained and communicated to allow others, such as parents, and school governors, to make informed judgements and decisions. The Authority expects that the choice of indicators that are included in the performance tables should be made based on sound statistical advice as part of an evidence-based, transparent policy making process.

By working through the assessment, DfE and the Authority have come to a common view that assessment of the School-level examination statistics against the *Code of Practice* is desirable, that designation as National Statistics would be beneficial, and

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<sup>1</sup> <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmpubadm/564/56402.htm>

that it could be achieved without impeding Ministers in discharging their policy responsibilities. DfE recognises the enhanced status and assurance that designation as National Statistics would confer, carrying real weight in Parliament, among commentators, and within the UK statistical system. The Authority is pleased to have had the opportunity to develop our interpretation of the *Code of Practice*. The performance tables are an interactive, web-based tool, and the *Code of Practice* is just as relevant to this type of statistic as to more traditional statistical releases.

The Authority welcomes the constructive approach taken by DfE to this assessment. We will support DfE as it works towards meeting the requirements set out in this report to achieve full compliance with the *Code of Practice* and consequent designation of the School-level examination statistics as National Statistics.

**Ed Humpherson**  
**Head of Assessment, UK Statistics Authority**

# 1 Summary of findings

## 1.1 Introduction

- 1.1.1 This is one of a series of reports<sup>2</sup> prepared under the provisions of the *Statistics and Registration Service Act 2007*<sup>3</sup>. The Act allows an appropriate authority<sup>4</sup> to request an assessment of official statistics against the *Code of Practice for Official Statistics*<sup>5</sup> in order for them to gain National Statistics status.
- 1.1.2 The subject of the assessment is the school-level achievement and attainment results and progress measures (School-level examination statistics), that are produced by the Department for Education (DfE). The School-level examination statistics sit at the heart of the UK Government's school accountability system in England and are used in a number of different ways by Ministers in discharging their duties to raise standards in schools.
- 1.1.3 Although developed originally before the Act and the *Code of Practice* were in place and for a different purpose, the involvement of statisticians has ensured that statistical thinking has been central to their evolution. DfE and the Authority have agreed that these may be considered official statistics on the grounds that they are used publicly in support of government decisions of public interest. To understand what further actions are needed to bring the School-level examination statistics element of the performance tables up to the standards required for designation as National Statistics, they also agreed that it would be beneficial to both DfE and the Authority to assess the School-level examination statistics against the *Code of Practice*.
- 1.1.4 The following School-level examination statistics have been assessed:

### Achievement and attainment

National Curriculum Test results at end of primary (key stage 2)

GCSE and equivalent results at secondary (key stage 4)

A level and vocational results at 16-18 at school or college (key stage 5)

### Progress Measures

From key stage 1 – key stage 2

From key stage 2 – key stage 4

From key stage 4 – key stage 5

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<sup>2</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

<sup>3</sup> [http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga\\_20070018\\_en.pdf](http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf)

<sup>4</sup> Subsection 12(7) of the Act defines 'appropriate authority' as Ministers of the Crown, Scottish Ministers, Welsh Ministers, Northern Ireland departments or the National Statistician

<sup>5</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

1.1.5 The School-level examination statistics are reported in the school and college performance tables as part of a larger repository of education statistics and information for England (performance tables), through a web-based platform<sup>6</sup> under the headings Primary, Secondary and 16-18 (figure 2.2, paragraph 2.10). They are derived from data collected at three of the points at which school and college performance is assessed in England:

- Key stage 2 – primary (end of year 6)
- Key stage 4 – secondary (end of year 11)
- Key stage 5 – 16-18 (school or college)

1.1.6 This assessment of the School-level examination statistics against the *Code of Practice* relates specifically to processes involved in producing and preparing these statistics. Other school-level statistics and information presented alongside the School-level examination statistics in the performance tables are not part of this assessment. The other statistics and information include, for example, statistics on school workforce, pupil absences, financial statistics and school characteristics. Issues directly related to the presentation of the performance tables and to the web-based platform that are relevant to the School-level examination statistics, such as their functionality, supporting commentary and publicity, involvement of users in their presentation, and release practices, are all covered in this report.

1.1.7 This report was prepared by the Authority's Assessment team, and approved by the Assessment Committee on behalf of the Board of the Statistics Authority, based on the advice of the Head of Assessment. The Authority is pleased to take the opportunity to develop our interpretation of the *Code of Practice* for a set of statistics that are based on administrative data presented in the form of an interactive web-based tool and that have open data principles central to their presentation, as we recognise that this form of presentation is increasing. We are grateful to DfE for affording us the facility to contact users during the Assessment through a user survey directly via the web-based platform. This gave us a deeper insight into uses and user needs (annex 2).

## 1.2 Decision concerning designation as National Statistics

1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to any points for action in this report. The Statistics Authority confirms that the School-level examination statistics for England published in the performance tables are designated as a new National Statistics product, subject to DfE implementing the Requirements listed in section 1.5 and reporting these to the Authority by November 2014 except:

- Requirements 9b, 10a and 10b which DfE should report by January 2015 when the secondary and 16-18 performance tables are published
- Requirement 3, which DfE should report by March 2015

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<sup>6</sup> <http://www.education.gov.uk/schools/performance/>

### 1.3 Summary of strengths and weaknesses

- 1.3.1 The School-level examination statistics are used publicly in support of government decisions of public interest about school performance and accountability in England.
- 1.3.2 In its Monitoring Review *School-Level Examination Statistics*<sup>7</sup> the Authority supported DfE's decision to publish the School-level examination statistics for England. The statistics are presented in DfE's performance tables alongside other statistics and information about schools. The performance tables are widely used for a broad range of purposes by a number of different types of users. As a result of their publication and their presentation among a wider range of pertinent statistics and information, DfE has improved the public value of the School-level examination statistics.
- 1.3.3 The mixed statistical and policy team that has responsibility for producing the performance tables (the DfE team) engages effectively with internal users, academics and researchers, and groups such as teaching unions and those representing schools and colleges in England. The DfE team does not engage directly with representative parent groups or with individual users, such as parents.
- 1.3.4 The School-level examination statistics are compiled from various administrative data sources. Quality assurance processes, that are implemented after the data are received from suppliers, are long-established. It is clear from their internal documentation that these processes are thorough and extensive but they are not adequately described for users. A combination of the independent data sources for and external scrutiny of the examination results, especially by schools and local authorities, reduces the risk to the quality of the statistics. The Assessment team found few areas of concern with the quality of the data itself, although DfE has not demonstrated to users an awareness of the quality assurance activities of data suppliers and has not demonstrated that it has assessed the impact of, or taken action to address, two known risks from teacher assessment and the underlying data from the School Census. DfE told us that it will shortly be publishing a new Statement of Administrative Sources, which will cover these aspects of quality. The Authority welcomes this.
- 1.3.5 Extensive commentary is provided in the performance tables and through links to related DfE documentation, though the presentation is not designed with less-expert users in mind, and what is presented is both inconsistent across the three sets of School-level examination statistics and can be difficult to find. Adequate details of methods, contextual commentary and commentary to aid interpretation of the School-level examination statistics for England, including their strengths and limitations, are not always provided.
- 1.3.6 School floor standards are one of the ways in which the School-level examination statistics for England are used by Ministers when discharging their duties to raise standards. DfE has changed, and continues to change, the floor standards over time to reflect its intention to raise standards in schools and colleges by setting more ambitious expectations for what they should achieve.

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<sup>7</sup> <http://www.statisticsauthority.gov.uk/reports---correspondence/correspondence/letter-from-sir-andrew-dilnot-to-rt-hon--david-laws-mp.pdf>

The existing commentary does not adequately describe the floor standards and the performance tables do not include an indication of performance against the floor standard for an individual school.

- 1.3.7 A Ministerial statement<sup>8</sup> issued alongside the performance tables for key stage 4 in January 2014, highlighted changes to the numbers of pupils in schools falling below the floor standards across England as a whole. The statement was referred to as a press release and could be reached from a link to the performance tables, but was not adequately distinguished as a ministerial statement there. The analysis used in the press release was not included in an appropriate statistical report and, by not providing details of base sizes and the methods used, did not meet basic professional standards.
- 1.3.8 DfE provides pre-release access to the School-level examination statistics to journalists to allow prompt and widespread publication as part of the accountability policy. These are generally published by journalists in the form of league tables. However, DfE is not able to control access fully ahead of publication because of the way media agencies share news. There have been two breaches of the embargo on publishing data in advance of the release, in 2009 and 2014.

## 1.4 Detailed recommendations

- 1.4.1 The Assessment team identified some areas where DfE should improve the production and presentation of the School-level examination statistics. Those which are essential for DfE to address in order to strengthen its compliance with the *Code of Practice* and to enable designation as National Statistics are listed – as Requirements – in section 1.5, alongside a short summary of the key findings that led to each Requirement being made. Other recommended changes, which the Assessment team considers would improve the statistics and the service provided to users but which are not formally required for their designation as National Statistics, are listed – as Suggestions – in section 1.6.

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<sup>8</sup> <https://www.gov.uk/government/news/250000-fewer-pupils-in-underperforming-secondary-schools>

## 1.5 Requirements for designation as National Statistics

1.5.1 This section includes those improvements that DfE is required to make in respect of its School-level examination statistics published as part of the performance tables, in order to fully comply with the *Code of Practice for Official Statistics*, and to enable designation as National Statistics.

Finding	Requirement	
<p>DfE consults colleagues and representative groups, but has not always published the results; DfE does not engage directly with some categories of users of the web-based platform. DfE should:</p>	<b>1</b>	<p>a) Publish records of the decisions and actions taken following consultations that are undertaken through its formal consultation structures, together with explanations for those decisions and actions</p> <p>b) identify and pursue ways of investigating the specific needs of categories of performance tables users, such as parents, and publish the consultation and outcomes with a view to developing an effective two-way dialogue with them</p> <p>c) examine the results of the user survey carried out among individual users as part of this assessment and implement appropriate suggestions</p> <p>(para 3.5).</p>
<p>DfE does not publish an indicator in the performance tables showing whether schools have met the required floor standard. DfE should:</p>	<b>2</b>	<p>Consult users, including parents, specifically to establish the usefulness of including an indicator in the performance tables that shows performance against the floor standards at each key stage; and document users' views and resulting actions, explaining the reasons for these actions (para 3.7)</p> <p>In undertaking this requirement, DfE should be considerate of the needs of Ministers to allow them to discharge their duties to raise standards.</p>
<p>DfE does not provide information about the size and impact of updates to the performance tables. DfE should:</p>	<b>3</b>	<p>Publish information for the benefit of users about the nature, size and impact of any updates as soon as practicable after the performance tables are published (para 3.9).</p>

<p>The information that DfE publishes on methods, procedures and classifications is not comprehensive, is inconsistent and its structure is complicated. DfE should:</p>	<p><b>4</b></p>	<p>Publish consistent and comprehensive information about quality and reliability, methods, procedures and classification that is appropriate to identified uses and is easily accessible for each set of School-level examination statistics, including prominent links to further details where necessary (para 3.12).</p>
<p>DfE does not publish an introduction to the performance tables and publishes little contextual commentary, including the floor standards, or commentary about strengths and limitations, including those arising from the floor standards. DfE should:</p>	<p><b>5</b></p>	<p>a) Publish a summary, in a prominent position, that includes a simple introduction to the performance tables and indicates how to use the tables and interpret the statistics and includes links to more detailed information</p> <p>b) publish a consistent and comprehensive set of narratives, that are appropriate to identified uses and are easily accessible, about the policy and operational context, including the floor standards, and the strengths and limitations of each of the three sets of School-level examination statistics including limitations associated with the floor standards; include prominent links to more detailed information</p> <p>(para 3.19).</p>
<p>Users suggested a number of ways in which additional analysis and presentation of statistics could be used to enhance clarity, and interpretability. DfE should:</p>	<p><b>6</b></p>	<p>Explore the possibilities for, and where possible introduce additional analysis, presentation formats and time series to the School-level examination statistics to enhance clarity and interpretability, including ways to present uncertainty, (such as demonstrating variation from the mean and over time) (para 3.22)</p> <p>As part of meeting Requirements 4 to 6, DfE should consider the remaining points detailed in annex 1 and annex 2 of this report.</p>
<p>DfE does not provide information about who users should contact about the School-level examination statistics. DfE should:</p>	<p><b>7</b></p>	<p>Include the name and contact details of the responsible statistician in a prominent place in the performance tables (para 3.23).</p>

<p>DfE does not provide information about statistics in the devolved administrations. DfE should:</p>	<p><b>8</b></p>	<p>Publish information in the performance tables about publication and measurement in the devolved administrations and signpost to the relevant statistics (para 3.24).</p>
<p>DfE has not reviewed its pre-release access practices recently and does not publish a comprehensive list of those granted pre-release access; and DfE has not published details of the additional measures taken after the 2014 breach. DfE should:</p>	<p><b>9</b></p>	<p>a) Review its current pre-release access arrangements considering these in the context of the principles and special provisions of the legislation and publish the result of this review</p> <p>b) publish a comprehensive list of those granted pre-release access and details of how DfE ensures compliance with the legislation. Publish details of actions taken to prevent, and sanctions that will be applied to, future breaches</p> <p>(para 3.31)</p> <p>As part of meeting Requirement 9, DfE should ensure that these arrangements do not obstruct Ministers' roles as they carry out their responsibilities.</p>
<p>The Ministerial statement linked to the secondary performance tables in January 2014 was not clearly distinguished from the statistics and included analysis that did not appear to be impartial or meet professional standards. DfE should:</p>	<p><b>10</b></p>	<p>a) Ensure that any future Ministerial statement issued alongside the School-level examination statistics is clearly labelled as such in the text accompanying the link within the performance tables</p> <p>b) ensure that the statistics used in future Ministerial statements that are issued alongside the School-level examination statistics are cited accurately, are impartial and meets basic professional standards</p> <p>(para 3.38).</p>

<p>DfE does not publish details of expected and actual quality assurance and audit arrangements for the administrative data. DfE has not demonstrated publicly that it has taken action in relation to known risks from data sources to the quality of the statistics. DfE should:</p>	<p><b>11</b></p>	<p>a) Determine the appropriate scale of assurance and documentation required for the administrative data used in the School-level examination statistics based on pragmatic and proportionate judgement about the quality of the data and the public interest profile of the statistics and communicate this requirement to suppliers</p> <p>b) publish an appropriate level of detail to inform users about the quality assurance and audit arrangements for the administrative data; describe the contribution and importance of each of the data sources to the School-level examination statistics</p> <p>c) in undertaking parts a) and b), include a description of how the risks associated with teacher assessments have been addressed, and specify clearly in the published information the proportion of teacher assessments to examination results used in attainment and progress measures at each relevant key stage; include a description of how the risks associated with data collection for the School Census have been addressed (para 3.45).</p>
<p>DfE does not publish information about its existing quality assurance processes and outcomes, after it receives the data from suppliers. DfE should:</p>	<p><b>12</b></p>	<p>Publish information about the quality assurance that the producer team and its contractor undertake after data are received from suppliers, including their validation and checking process, and information about the results of the validation and checking and subsequent actions (para 3.50).</p>

## 1.6 Suggestions for extracting maximum value from the statistics

1.6.1 This section includes some suggestions for improvement to DfE’s statistics on school-level examination results, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

We suggest that DfE:

1	Publish more detail about the revisions process specific to the performance tables and draw attention to the revisions policy and associated information in the performance tables (para 3.9).
2	Reference and signpost the floor standards and their definitions clearly in the user guides for all three key stages (para 3.19).
3	Include links to relevant, objective research where this helps to explain the strengths and limitations of the statistics, including but not limited to those arising as a result of the floor standards (para 3.19).
4	Consider innovative ways of identifying potential uncertainty, for example through calibration with other sources, where simple statistical methods do not apply (para 3.22).
5	Ensure that analysis cited in future Ministerial statements is i) impartial and ii) is published in an appropriate statistical vehicle, with appropriate supporting commentary (para 3.38).
6	Take into consideration the Authority’s Report <i>Quality Assurance and Audit Arrangements for Administrative Data</i> and the National Statistician’s <i>Interim Guidance</i> (para 3.45)

## 2 Subject of the assessment

### Background and scope

- 2.1 This assessment covers a number of official statistics relating to school-level examination results and progress measures (School-level examination statistics) presented as an element in the school and college performance tables for England (performance tables) that are accessed using a web-based platform. It includes three key stages of examination and testing at primary, secondary and 16-18 (school and college) levels.
- 2.2 The following School-level examination statistics element of the performance tables have been assessed:

#### Achievement and attainment

National Curriculum Test results at end of primary (key stage 2)

GCSE and equivalent results at secondary (key stage 4)

A level and vocational results at 16-18 at school or college (key stage 5)

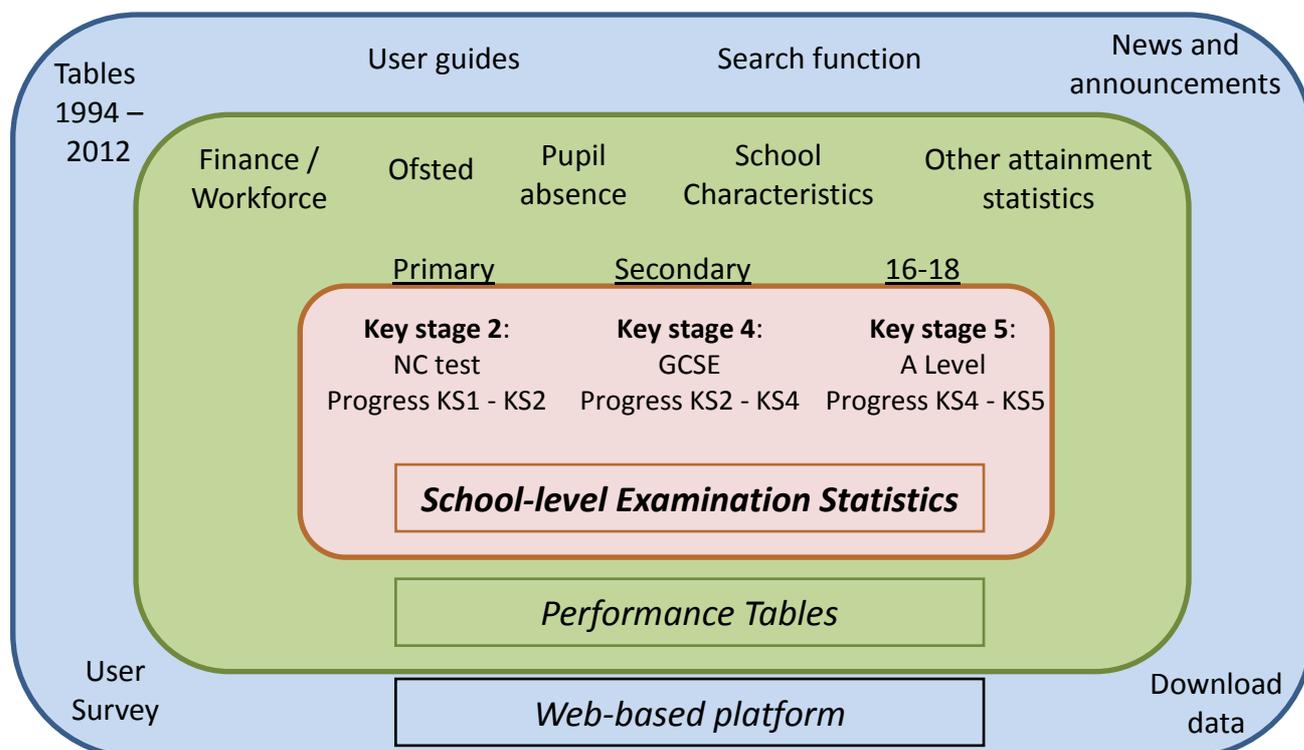
#### Progress Measures

From key stage 1 – key stage 2

From key stage 2 – key stage 4

From key stage 4 – key stage 5

**Figure 2.1: Simplified structure showing the School-level Examination Statistics element of the performance tables and the web-based platform**



- 2.3 This assessment follows a Monitoring Review of *School-Level Examination Statistics*<sup>9</sup> published by the Authority in August 2013. The review considered the accessibility and presentation of the statistics across the four UK administrations. The Authority supported DfE's publication of the School-level examination statistics for England in performance tables that allow comparisons between schools, as it increases their public value.
- 2.4 The performance tables, and the School-level examination statistics within them, were originally designed to allow Ministers to discharge their duties to raise standards in education. Nevertheless, the involvement of statisticians has ensured that sound statistical practices were followed. Although developed for a different purpose, DfE and the Authority have agreed that these may be considered official statistics as defined by the National Statistician<sup>10</sup> in particular on the grounds that they are used publicly in support of government decisions of clear public interest.
- 2.5 In a covering letter to the Monitoring Review, the Chair of the Statistics Authority wrote to the Minister of State for Schools at DfE recommending that the School-level examination statistics for England be put forward for assessment against the *Code of Practice*. The Minister agreed with the recommendation and invited the Authority to undertake the assessment of these statistics as soon as convenient for both parties<sup>11</sup>.
- 2.6 This assessment takes account of recommendations from the Monitoring Review. Its focus is on the School-level examination statistics for England. Issues covered by the *Code of Practice* directly relevant to their presentation in the performance tables using a web-based platform, such as functionality, supporting commentary and involvement of users, are also examined. The Authority has specifically considered the mode of presentation in interpreting the Principles and Protocols in the *Code of Practice* and in making its requirements.

### Structure, content and function

- 2.7 The School-level examination statistics for England show the achievement of pupils and students in teacher assessments, standard tests and public examinations underpinning three stages of education (key stage 2, key stage 4 and key stage 5). These are presented alongside other information in Primary, Secondary and 16-18 at school or college performance tables respectively, within the web-based platform (figure 2.1).
- 2.8 The School-level examination statistics for England are constructed from a number of pupil-level sources. For secondary schools and colleges, exam results collected by the different qualification awarding bodies are linked to characteristics data that schools and colleges provide to DfE as part of the School Census, and are subsequently linked to pupil records in the national

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<sup>9</sup> <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/index.html>

<sup>10</sup> <http://www.statisticsauthority.gov.uk/national-statistician/ns-reports--reviews-and-guidance/national-statistician-s-guidance/identifying-official-statistics.pdf&sa=U&ei=hLGNU47oPIGqPLqfgegl&ved=0CBcQFjAA&usq=AFQjCNGOTZJSmzILYIN2hIUXSL3CLijg0g>

<sup>11</sup> <http://www.statisticsauthority.gov.uk/reports---correspondence/correspondence/letter-from-david-laws-mp-to-sir-andrew-dilnot---180913.pdf>

pupil database<sup>12</sup> (NPD). For primary schools, key stage 2 assessment results for each pupil are linked to their record on the NPD. A commercial contractor matches pupil characteristics to the test examination results and prior attainment records.

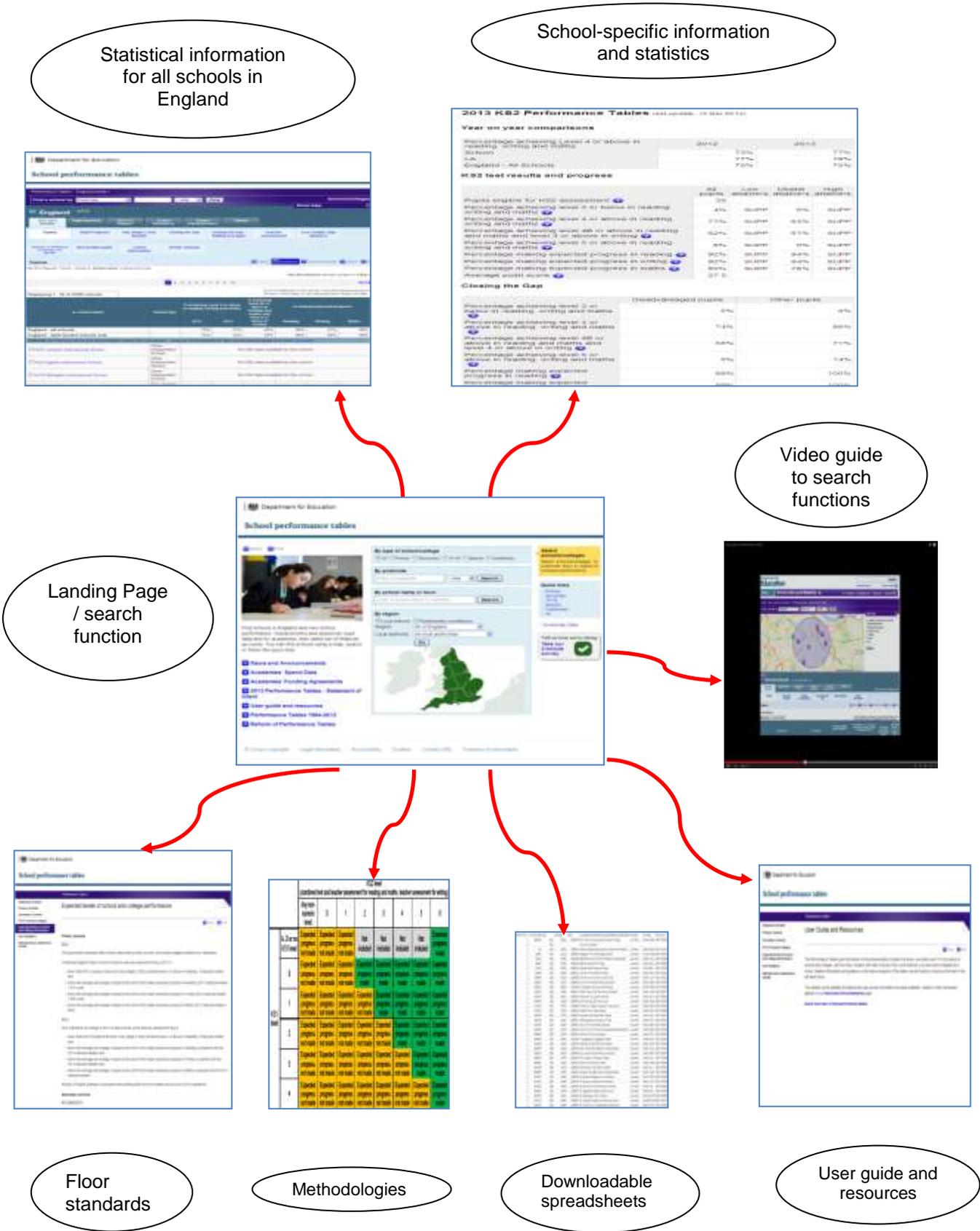
- 2.9 Schools and colleges can appeal against their results or identify pupils that should be removed from their roll for the purpose of the performance tables purposes, which may result in individual or entire cohort changes. To ensure that the performance tables take account of such changes, there are school checking exercises prior to publication, during which schools can report such amendments to DfE. This results in a 'revised' dataset, which is used to produce the initial publication of performance tables. There is also a further six week 'errata' period following initial publication, during which schools and colleges can report any amendments to DfE. This results in 'final' data, which are subsequently published in the performance tables.
- 2.10 Figure 2.2 illustrates some of the key features available through the performance tables, including those relating to School-level examination statistics. The performance tables display aggregated results, presented individually by school or group of schools. Users are able to view information for maintained schools, academies, free schools, and further education colleges with students aged 16-18 in England. At secondary level and 16-18, it is also possible to view the performance of independent schools. Results for all special schools are included in both primary and secondary performance tables. For 16-18 performance tables, special schools that have chosen to be included are listed, as are sixth-form centres or consortia<sup>13</sup>.
- 2.11 The search function enables manipulation using keyword searches, by postcode, parliamentary constituency, town, top tier local authority, and the nine English regions. Another feature allows analysis of a school against similar schools selected automatically on the basis of common prior attainment. Schools can also be found directly from an alphabetical list of all schools in England. This list can be manipulated to rank schools according to different criteria.
- 2.12 Various additional measures included in the performance tables are derived from the School-level examination statistics, including value added measures, three year averages, pupil progress measures. Other examination results such as the English Baccalaureate are also included. Alongside these the performance tables present additional information about schools, for example on absences, workforce and expenditure. User guides and resources, technical guides and documents, and methodological information are available for each set of performance tables.

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<sup>12</sup> <https://www.gov.uk/government/publications/national-pupil-database-user-guide-and-supporting-information>

<sup>13</sup> Consortia are informal and have no legal basis or single governing body. They are set up between individual institutions using their own internal arrangements for collaboration. The results of individual institutions within the consortium and the aggregated results for the consortium itself are published in the performance tables

**Figure 2.2: Selection of features and options available through the web-based platform**



## Formats, timing and accessibility

- 2.13 The primary school performance tables are usually published in December each year (reporting results from key stage 2 tests taken in May of the same year) and the secondary and 16-18 performance tables in January (reporting results of pupils at the end of key stage 4 and at the end of 16-18 study).
- 2.14 The performance tables for England, including the School-level examination statistics, are published on DfE's website and are available through a searchable web-based platform. Complementary provisional School-level examination statistics aggregated to the England-level are published in advance of the performance tables in a series of three statistical first releases (SFRs), presenting results separately at key stage 2, key stage 4 and key stage 5. A revised version of the SFRs is published at the same time as the performance tables. The SFRs were themselves subject to assessment by the Authority in 2010<sup>14</sup> and subsequently designated as National Statistics.
- 2.15 The School-level examination statistics, accompanied by metadata, date back to 1994 for secondary schools and colleges and 1996 for primary schools. DfE provides these as supplementary tables for downloading in a non-proprietary format from 2010 onwards. Earlier years are available to view online. This equates to a level of three stars under the Five Star Scheme proposed in the *Open Data White Paper: Unleashing the Potential*<sup>15</sup> and adopted as UK Government policy in November 2012<sup>16</sup>. Five stars represents the highest star rating within the Scheme.

## Known uses

- 2.16 The School-level examination statistics, along with the other statistics and information published in the performance tables for England, have widespread use. They are intended by DfE to be used by parents to assess the performance of individual schools, to hold schools to account, and to inform school choice. The user survey we conducted as part of this Assessment confirmed that the School-level examination statistics are used for these purposes by parents, children and schools. The survey also found a wider range of uses of the statistics by these, and other, users, illustrating the increased public value that publication in this format has generated. Some examples from the survey of who uses the performance tables and for what purposes include:
- Checking school performance:
    - ‘Primary school Year 6 Sats - looking at last year’s scores as concerned about my daughter’s education’ (parent)
    - ‘We use the Performance Table data to review past performance and to monitor current performance of the whole school and various cohorts’ (category unknown)

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<sup>14</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-48---achievement-and-attainment-for-schools-in-england.pdf>

<sup>15</sup> [http://data.gov.uk/sites/default/files/Open\\_data\\_White\\_Paper.pdf](http://data.gov.uk/sites/default/files/Open_data_White_Paper.pdf)

<sup>16</sup> <https://www.gov.uk/government/publications/open-standards-principles/open-standards-principles>

- Comparing performance with other schools / benchmarking:
  - ‘KS2 and GCSE/A Level results - progress measures. To see how my children's schools are doing compared to other local schools’ (parent)
  - ‘GSCE A-C in English and Maths A level and AAB results to check my son's allocated secondary school and compare with others’ (parent)
  - ‘as a benchmarking exercise’ (school governor)
- Selecting a school / sixth form college:
  - ‘to help choose which sixth forms to apply to for my A Levels’ (pupil).
  - ‘To make decisions about which school would be good to look at for my child’ (parent)
- Deciding where to move house to / comparing schools when moving:
  - ‘I will soon be relocating to a new part of the country and will use this data to select the suitable areas based on high school performance’ (parent)
  - ‘I am moving and want to compare schools in our new catchment area’ (parent)
- Job seeking interview process / selection process:
  - ‘I am in the process of applying for a job. Therefore, I wanted to see all the data related to the school that I will be applying to’ (teacher)
  - ‘...evaluating schools of candidates for headship’ (school governor)
  - ‘To identify schools with lower performance standards to use as contextual data for selecting medicine applicants for admission to [Medical School]’ (higher education (HE) provider)
- Preparing an appeal against results / pupil allocation:
  - ‘Looking for attainment over years in English, Maths and Science for high achievers, non disadvantaged in 2 schools. Preparing an appeal’ (school staff)
  - ‘exam results for a school we are appealing to get a place at’ (parent)
- Professional capacity / part of job:
  - ‘Schools performance tables - all information - to write my PP report’ (head teacher)
  - ‘...completing this term's report for the Management Committee’ (head teacher)
  - ‘to look at how the measures are constructed and to assess a reporting framework for my LA’ (local authority employee)
- Learning from English assessment system:
  - ‘...responsible for educational assessment and I'm currently learning from British system how to show the results and comparisons between schools’ (category unknown)

- Research / educational study:
    - ‘We are evaluating impact of interventions to improve performance of pupils from disadvantaged backgrounds’ (researcher)
    - ‘Secondary schools performance levels, dissertation research’ (student)
  - Marketing / school targeting:
    - ‘I am using the data to recruit students from under-performing schools to fully funded STEM activities’ (category unknown)
    - ‘Looking to target outreach work’ (HE provider)
- 2.17 Expert users involved in the supplementary user consultation we carried out as part of the assessment (annex 2) used the School-level examination statistics for research and analysis and to conduct randomised control trials. Specific research they mentioned includes the effects of policy and targets, the utility of particular measures, and conducting geographical comparisons. Organisations replying to the user consultation were using the data to support members in schools and local authorities in relation to school performance.
- 2.18 Possibly the most well-known use of the School-level examination statistics for England is by media organisations to produce school league tables. To facilitate this, DfE grants pre-release access to the underlying datasets to media organisations, including the Press Association, on request. The media use the data to rank schools according to levels of attainment, often with large separate 'league table' style supplements, which raise awareness of the statistics.
- 2.19 The Head of Profession for Statistics (HoP) at DfE told us that the performance tables, including the School-level examination statistics, perform a wide range of functions supporting Ministers in their duties to improve standards and achieve departmental objectives. In this way, they are a fundamental element of DfE’s accountability framework<sup>17</sup>. This policy is designed to give schools and colleges greater autonomy to decide the best way to teach their pupils by reducing regulation and other burdens while at the same time increasing their accountability to government.
- 2.20 School floor standards, are one of the ways in which the School-level examination statistics are used by Ministers when discharging their duties to raise standards in schools. They comprise a headline expected minimum level of attainment, with a subset of associated components. A school or college has to be below the required threshold in the headline measure and all the components before they are counted as not meeting the floor standard. Schools and colleges that do not meet the floor standard face a number of potential challenges and interventions from central or local government, depending on the perceived level of under-performance. In some cases, a school might receive a written warning from DfE. In others, it might be subject to an inspection by the Office for Standards in Education, Children’s Services and Skills (Ofsted). In the most extreme cases, the head teacher might be removed or the school faced with closure and replacement by an academy.

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<sup>17</sup> <https://www.gov.uk/government/policies/making-schools-and-colleges-more-accountable-and-giving-them-more-control-over-their-budget>

- 2.21 The data underlying the performance tables also feed in to RAISEonline<sup>18</sup> which is used by Ofsted inspectors as background performance information to support their inspections, and by schools to examine their own performance in detail.

### History of the performance tables

- 2.22 The genesis of the performance tables was the *Education Reform Act 1988*<sup>19</sup>. This legislation primarily covered England and Wales, with some extensions to Scotland and Northern Ireland. It introduced the National Curriculum, regular national testing and performance reporting. In 1991, the first Parent's Charter was issued. It acknowledged the need for greater information to be available to parents and made reference to performance tables for the first time<sup>20</sup>.
- 2.23 DfE introduced the secondary school and 16-18 performance tables in 1994. The primary school performance tables were added two years later. For the first few years, the tables reported on a small number of key indicators, including School-level examination statistics. Over time the performance tables for England have expanded considerably, new indicators having been added to provide more details of attainment, breakdowns for different groups of pupils and measures of pupils' progress between one key stage and another. DfE told us that the performance tables for England now comprise over 1,000 indicators across the three sets of tables.
- 2.24 Figure 2.3 demonstrates the range of statistics available through the performance tables, using the example of the tables published for secondary schools. The School-level examination statistics, including the specific elements used in England to measure schools' performance against the floor standards, are highlighted.

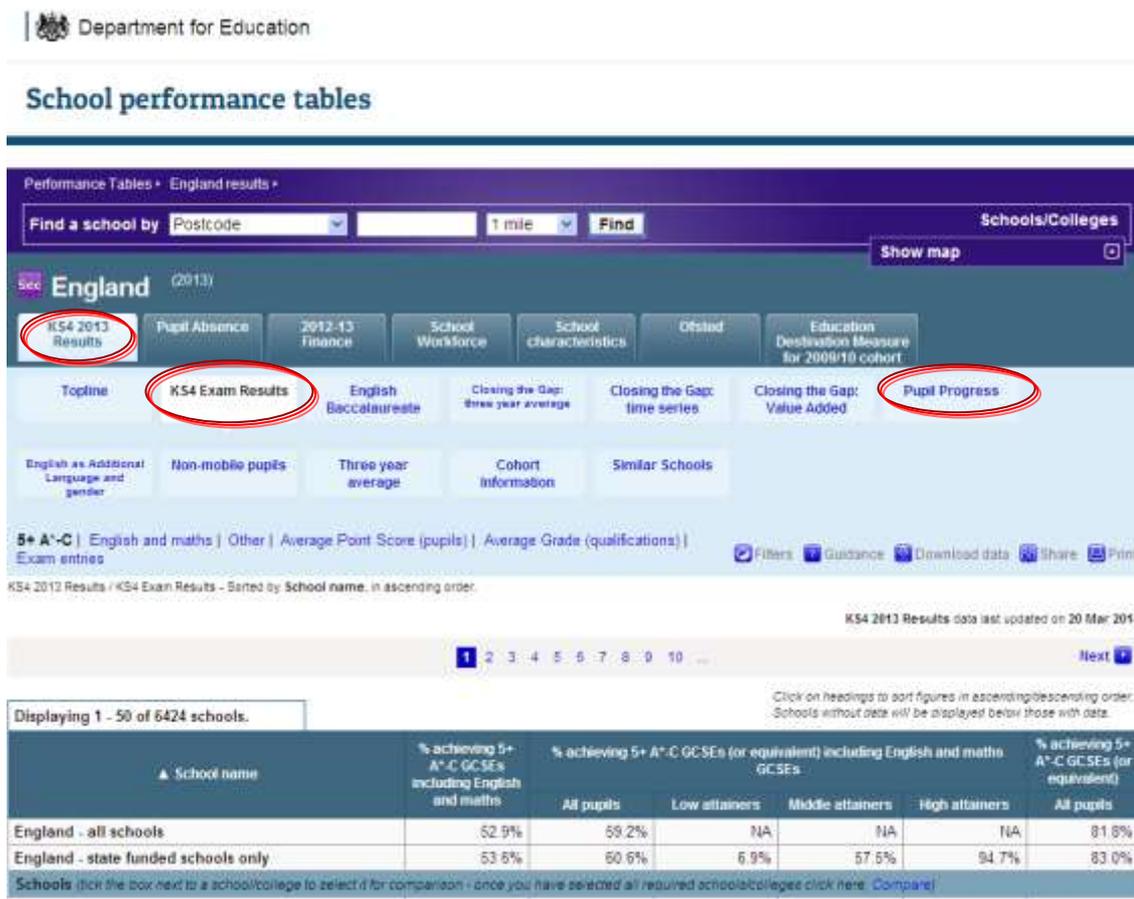
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<sup>18</sup> <https://www.raiseonline.org/login.aspx?ReturnUrl=%2f>

<sup>19</sup> <http://www.legislation.gov.uk/ukpga/1988/40/contents>

<sup>20</sup> [http://www.education.gov.uk/schools/performance/archive/schools\\_95/sec8.shtml](http://www.education.gov.uk/schools/performance/archive/schools_95/sec8.shtml)

**Figure 2.3: Statistics and information available through Secondary school performance tables for England**



Source: Department for Education

- 2.25 DfE introduced the first 'value-added' measures in England in 1998, contrasting the performance of pupils at GCSE with their key stage 3 results two years before. In 2003, the National Audit Office (NAO) recommended that performance information should also account for other influences on performance, using data which DfE already held<sup>21</sup>. This led to the development of the contextual value added measure (CVA). Introduced in 2004, the new measure used detailed information gathered by the Pupil-level Annual School Census, the predecessor of the current School Census.
- 2.26 Several reforms, which impacted on the performance tables for England, followed the 2010 General Election<sup>22</sup>. The first reform led to the publication of a much greater variety of information about schools and their performance. The second removed the CVA and the third reform introduced the raising of thresholds used in the floor standards, that draw on the School-level examination statistics at key stage 2 (Primary), key stage 4 (Secondary) and key stage 5 (16-18) (see paragraph 2.20 for more details about the floor standards).

<sup>21</sup> <http://www.nao.org.uk/wp-content/uploads/2003/11/02031332.pdf>

<sup>22</sup>

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/78977/coalition\\_programme\\_for\\_government.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/78977/coalition_programme_for_government.pdf)

- 2.27 The content of the performance tables, including the School-level examination statistics, changes regularly. The most recent catalysts for change have been the school accountability reforms<sup>23 24</sup> and Professor Alison Wolf's systematic review of vocational education for 14-19 year olds<sup>25</sup>. The impact on the 2014 School-level examination statistics will reflect recommendations set out in the reforms. Significant changes will see performance measures restricted to approved qualifications that DfE has assessed as high quality, rigorous and enable progression to a range of study and employment opportunities for the majority of pupils. Performance measures will also be restricted such that only the result of the pupil's first entry in a qualification is counted, rather than their best entry (as was the case in previous years).
- 2.28 The four UK administrations adopt different approaches to the provision of School-level examination statistics, reflecting different political attitudes towards the value of school league tables in improving school performance. Wales and Northern Ireland abolished league tables in 2001, followed by Scotland in 2003. Now the devolved administrations make the statistics for any individual school available on one or more official websites, but none of the devolved administrations bring the statistics together in an official statistics publication with tables of results and professional advice on their interpretation. In contrast, DfE publishes School-level examination statistics for England to support its commitment to transparency and to promote open data. The Authority and DfE have agreed that these may be considered as official statistics as part of this assessment.

### **Production costs**

- 2.29 DfE told us that the total cost of processing and calculating all of the information for performance tables and the costs of the web-based platform were approximately £6.5m a year. This cost also covers the delivery of performance data for wider uses, such as the NPD and for Ofsted's RAISEonline web-tool.

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<sup>23</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/298568/Primary\\_assessment\\_and\\_accountability\\_under\\_the\\_new\\_curriculum\\_consultation\\_document.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/298568/Primary_assessment_and_accountability_under_the_new_curriculum_consultation_document.pdf)

<sup>24</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/269438/update\\_progress\\_8\\_measure\\_secondary\\_school\\_accountability\\_framework\\_reforms.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/269438/update_progress_8_measure_secondary_school_accountability_framework_reforms.pdf)

<sup>25</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/180504/DFE-00031-2011.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf)

### 3 Assessment findings

#### User engagement and meeting user needs

##### User consultation

- 3.1 DfE publishes responses to any policy consultations relating to accountability and performance tables on GOV.UK as a matter of course. Members of the public are free to respond to these consultations. However DfE does not include representative parents' groups as part of its formal consultation and does not systematically publish the results of any separate user engagement on issues specific to the statistics. DfE does include intended changes to statistics in published Statements of Intent<sup>26</sup>.
- 3.2 While the formal mechanism is useful to consult representative groups, this does not capture the views of some categories of users accessing the performance tables. The published results of the user survey conducted among those accessing the performance tables showed that 44 per cent of users who completed the questionnaire between November 2012 and November 2013 were parents or guardians and 25 per cent were school staff or governors<sup>27</sup>.
- 3.3 The questionnaire appears as the performance tables are used. It obtains information about the category and characteristics of the user and purpose of visit. It also includes closed questions covering ease of use and of finding the information; clarity of the information; attractiveness of the design; recommendation to others; and overall satisfaction. The questionnaire does not include follow-up questions, which limits its usefulness in developing the web-based platform and its contents to meet user needs. Results showed that 25 per cent of those completing the questionnaire got everything they wanted from the performance tables, while a further 44 per cent of respondents said that they got most of what they wanted. In our own user survey conducted as part of this assessment, more than half of those completing it highlighted suggestions for other information they would like to see (annex 2).
- 3.4 We do recognise that not all suggestions for improvement would be feasible or appropriate to implement. Nevertheless the questionnaire the assessment team developed for our user survey demonstrated one way of gathering feedback to provide information that would be useful in developing the performance tables and improving the user experience. With respondents' knowledge, we have shared the results of the survey with DfE because it contains possible suggestions for improvements to the user experience that the DfE team may be able to introduce.
- 3.5 As part of the designation as National Statistics, DfE should:
  - a) publish records of the decisions and actions following consultations that are undertaken through its formal consultation structures, together with explanations for those decisions and actions

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<sup>26</sup> [http://www.education.gov.uk/schools/performance/download/Statement\\_of\\_Intent\\_2013.pdf](http://www.education.gov.uk/schools/performance/download/Statement_of_Intent_2013.pdf)

<sup>27</sup> <http://www.education.gov.uk/schools/performance/userfeedback.html>

- b) identify and pursue ways of investigating the specific needs of categories of performance tables users, such as parents, and publish the consultation and outcomes with a view to developing an effective two-way dialogue with them
- c) examine the results of the user survey carried out among individual users as part of this assessment and implement appropriate suggestions<sup>28</sup> (Requirement 1).

#### Reporting the floor standards

- 3.6 School floor standards are one of the ways in which the school-level examination statistics are used by Ministers when discharging their duties to raise standards. The performance tables include the statistics that make up the individual components of the floor standards at each key stage, but do not include combined information to indicate whether an individual school has met the relevant floor standard. DfE told us that it had considered doing this but rejected it because this would be unfair to the schools that had not met the floor standard. This judgement appears inconsistent with the treatment of the Ofsted information provided as part of the performance tables, where the grading from the latest report is shown regardless of how long ago an inspection was carried out. It is also inconsistent with the prominence given to the floor standards in policy objectives and in the ministerial statement released alongside the secondary school performance tables in October 2013.
- 3.7 We recognise that it would not be advisable for parents to base decisions on school choice and judge school performance against the floor standards alone, but it might be expected that this would be one factor users would want to consider, informed by appropriate guidance on interpretation. As part of the designation as National Statistics, DfE should consult users, including parents, specifically to establish the usefulness of including an indicator in the performance tables that shows performance against the floor standards at each key stage; and document users' views and resulting actions, explaining the reasons for these actions<sup>29</sup>. In undertaking this requirement, DfE should be considerate of the needs of Ministers to allow them to discharge their duties to raise standards (Requirement 2).

#### **Data revisions**

- 3.8 DfE has published a generic *Statistical Policy Statement on Revisions*<sup>30</sup>. This highlights the different stages of release (provisional, final and revised) for DfE statistics that are subject to revision. The policy statement provides examples of how these stages apply to individual statistical reports. The examples do not include the performance tables.
- 3.9 From discussions with the DfE team, the established revisions process for the performance tables is extensive and implementation appears to be well-established and ordered. Following the main revisions period DfE continues to make changes to individual school data as soon as possible after notification,

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<sup>28</sup> In relation to Principle 1, Practices 1 and 2 and Protocol 1, Practices 3 and 7 of the *Code of Practice*

<sup>29</sup> In relation to Protocol 1, Practice 3 of the *Code of Practice*

<sup>30</sup> <https://www.gov.uk/government/publications/standards-for-official-statistics-published-by-the-department-for-education>

while the full underlying dataset, available in the 'download data' section of the website, is updated less frequently. The DfE team told us that this means the two sources would be different for a short period of time, though it does inform users of changes to the data by showing a 'last updated' date for each school and the full dataset. DfE does not provide specific information about the revisions process or of the scale and impact of updates. As part of the designation as National Statistics, DfE should publish information for the benefit of users about the nature, size and impact of any updates as soon as practicable after the performance tables are published<sup>31</sup> (Requirement 3). We suggest that in meeting this Requirement DfE publish more detail about the revisions process specific to the performance tables and draw attention to the revisions policy and associated information in the performance tables.

### **Supporting information and commentary**

- 3.10 DfE provides extensive supporting information within the performance tables, including for the School-level examination statistics, under the headings of user guides and resources, technical information, and methodological information (provided within a separate document). The Assessment team considers that it is not specifically written, organised or presented with the intended uses or needs of users, particularly inexperienced ones, in mind.

#### Methods procedures and classifications

- 3.11 DfE publishes information about methods, procedures and classifications for the School-level examination statistics in the supporting documentation for the performance tables including in the user guide and resources provided separately for each set of performance tables. The main menu on the landing page includes an entry point to the three user guides. A separately published, single methodology document also includes information about methods and quality assurance for all three key stages. Process maps summarise the post-collection process of validation and quality assurance through to publication. DfE publishes these two documents outside the performance tables through GOV.UK alongside the national and local authority attainment results SFR for the national curriculum assessments at key stage 2 only (though these refer to all three key stages).
- 3.12 The information provided on methods, procedures and classifications is not comprehensive, coverage and availability is inconsistent between the three performance tables and its structure is complicated. As part of the designation as National Statistics, DfE should publish consistent and comprehensive information about quality and reliability, methods, procedures and classification that is appropriate to identified uses and is easily accessible for each set of School-level examination statistics, including prominent links to further details where necessary<sup>32</sup> (Requirement 4).

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<sup>31</sup> In relation to Principle 2, Practice 6 of the *Code of Practice*

<sup>32</sup> In relation to Principle 8, Practice 1 of the *Code of Practice*

### Introduction, context and commentary to aid interpretation

- 3.13 DfE does not provide a simple introduction to the performance tables for new or non-expert users. DfE provides a link to a video explaining the search function, although the link to the video appears on the entry page to the user guide and resources rather than on the landing page alongside the search function and so is not immediately obvious. The video may not be accessible to all users because they do not have access to the required technology.
- 3.14 DfE provides little factual commentary about the policy and operational context of the School-level examination statistics. DfE does not provide a clear statement of their purpose and expected uses. In particular DfE does not provide contextual commentary about the floor standards associated with the statistics - why they have been set and what they are intended to achieve. We have received assurance from the HoP that statisticians are embedded in policy teams and are able to provide advice to Ministers on setting indicators. The HoP also told us that Ministers are not involved in the detail of setting indicators though they do determine the need for a target to be set and might choose between options presented. The Authority would expect that any decisions about performance indicators made by Ministers, or by policy makers acting on their behalf, should be made based on sound statistical advice.
- 3.15 DfE does not provide comprehensive information about how the floor standards in particular, and other progress measures based on the School-level examination statistics, have changed over the time they have been in place.
- 3.16 DfE provides a document containing current definitions for the floor standards through the menu in the User Guide and Resources section of its web-based platform. This document uses the term floor standards within it, though a different title is used in the access menu. As well as showing what floor standards are in place in the current year, the document includes information about what definitions were in place in the previous year and highlights proposed changes in 2016. The floor standards are mentioned by name in the Primary user guide in the performance tables and are cross-referenced to the stand alone definitions document. The other two user guides do not acknowledge that the floor standards exist.
- 3.17 DfE publishes limited discussion of strengths and limitations of the School-level examination statistics and the implications these have. For example, DfE told us that it publishes cohort sizes in the performance tables alongside the various measures so that users can make their own judgements about whether to use figures based on small numbers or not. Although DfE provides this cohort information, it does not give clear guidance about the implications of cohort size on interpreting the School-level examination statistics.
- 3.18 Academics have published a wide range of research about aspects of the performance tables including the limitations of the School-level examination statistics and DfE has introduced changes that reflect some of the research. At the same time DfE provides a small amount of commentary that alludes to some aspects of research in the 'about these tables' section of the user guide that accompanies the primary performance tables; however it does not provide links to the relevant academic research to enhance and explain the commentary. DfE does not provide equivalent commentary for the secondary and 16-18 performance tables. For the floor standards associated with the

School-level examination statistics, DfE does not provide links to the research on the identified distortive or positive effects of the floor standards on the statistics. We recognise that some research outputs may reflect a particular stakeholder position and so the Authority would encourage DfE to enhance the usefulness of the performance tables by providing links to appropriate objective research.

3.19 As part of the designation as National Statistics, DfE should:

- a) publish a summary, in a prominent position, that includes a simple introduction to the performance tables and indicates how to use the tables and interpret the statistics and includes links to more detailed information
- b) publish a consistent and comprehensive set of narratives, that are appropriate to identified uses and are easily accessible, about the policy and operational context, including the floor standards, and the strengths and limitations of each of the three sets of School-level examination statistics including limitations associated with the floor standards; include prominent links to more detailed information<sup>33</sup>

(Requirement 5).

We suggest that in meeting part b) of this Requirement, DfE reference and signpost the floor standards and their definitions clearly in the user guides for all three key stages. We also suggest that in meeting part b) of this Requirement DfE include links to relevant, objective research where this helps to explain the strengths and limitations of the statistics, including but not limited to those arising as a result of the floor standards.

#### Analysis and presentation of statistics

3.20 The user survey that we carried out via the performance tables highlighted that some users would like additional graphs and formats to aid interpretation. Users also suggested providing additional historical statistics to improve their ability to analyse trends. While the Authority considers this would improve the presentation of the statistics, it also recognises the challenge this presents given the format of the performance tables.

3.21 A few expert users who contributed to our user consultation highlighted the need to present the uncertainty associated with the achievement and attainment statistics, part of the School-level examination statistics. In particular the issue of variation between annual cohorts was of concern, as was the presentation of comparative statistics for groups of schools when class sizes were small. Our attention was also drawn to the body of research that included the need to demonstrate the extent to which the School-level examination statistics truly distinguished between schools<sup>34</sup>. The Authority recognises the difficulty of presenting uncertainty for administrative data such as the examination statistics and welcomes the development and explanation of a method to allow schools to understand uncertainty in the statistics for the value added (VA) measure.

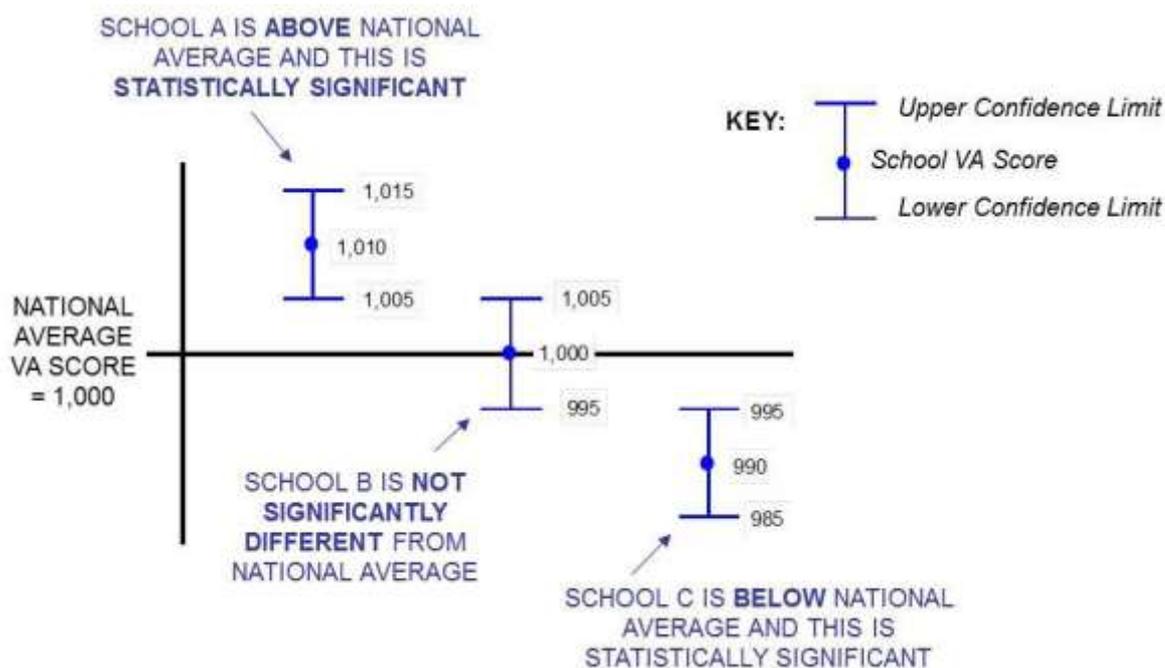
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<sup>33</sup> In relation to Principle 8, Practice 2 and Protocol 1, Practice 4 of the *Code of Practice*

<sup>34</sup> For example: <http://www.britac.ac.uk/policy/Measuring-success.cfm>

Bird S M, Cox D, Farewell V T, Goldstein H, Holt T, Smith P C (2005) 'Performance indicators: good, bad and ugly', *Journal of the Royal Statistical Society A* 168, Part 1, pp 1-27:  
[www.rss.org.uk/uploadedfiles/documentlibrary/739.pdf](http://www.rss.org.uk/uploadedfiles/documentlibrary/739.pdf)

**Figure 3.1: DfE's Illustration of how a school's VA score and confidence intervals should be interpreted**



Source: Department for Education<sup>35</sup>

- 3.22 As part of the designation as National Statistics, DfE should explore the possibilities for, and where possible introduce additional analysis, presentation formats and time series to the School-level examination statistics to enhance clarity and interpretability, including ways to present uncertainty, (such as demonstrating variation from the mean and over time)<sup>36</sup> (Requirement 6). As part of meeting Requirements 4 – 6, DfE should consider the remaining points detailed in annex 1 and annex 2 of this report. We also suggest that in meeting this Requirement DfE consider innovative ways of identifying potential uncertainty, for example through calibration with other sources, where simple statistical methods do not apply.

### Responsible Statistician

- 3.23 DfE does not provide information about who users should contact for further information or guidance about the School-level examination statistics. As part of the designation as National Statistics, DfE should include the name and contact details of the responsible statistician in a prominent place in the performance tables<sup>37</sup> (Requirement 7).

<sup>35</sup> [http://www.education.gov.uk/schools/performance/secondary\\_13/KS2-4\\_Performance\\_Tables\\_General\\_VA\\_Guide\\_2013\\_FINAL.pdf](http://www.education.gov.uk/schools/performance/secondary_13/KS2-4_Performance_Tables_General_VA_Guide_2013_FINAL.pdf)

<sup>36</sup> In relation to Principle 8, Practices 1 and 2 of the *Code of Practice*

<sup>37</sup> In relation to Protocol 2, Practice 6 of the *Code of Practice*

## Consistency of statistical practice

- 3.24 DfE currently provides information about the publication of similar statistics and measurement practices in the devolved administrations in the equivalent SFRs, but not in the performance tables. As part of the designation as National Statistics, DfE should publish information in the performance tables about publication and measurement in the devolved administrations and signpost the relevant statistics<sup>38</sup> (Requirement 8).

## Release practices – pre-release access

- 3.25 In the past, DfE has seen the performance tables primarily as a tool for Ministers. As a result, some of the Department's release practices have not been developed with the status of official statistics in mind. This section, however, considers the performance tables from the point of view of the Authority's approach to release practices for all official statistics. We examine two cases where media organisations have breached the Department's embargos for the performance tables, and make recommendations for areas DfE can consider for improvement.
- 3.26 The Authority published a monitoring review in August 2013 on *School-Level Examination Statistics* (paragraph 2.3). It considered the existing release practices in the context of official statistics, stating that 'The access afforded to the news media in relation to these statistics by DfE, may, in our view, hinder rather than facilitate proper analysis of the data.' One of the report's conclusions was that DfE should review the arrangements it has in place for granting pre-release access to its School-level examination statistics to the media. In response, the Minister of State for Schools confirmed that DfE would undertake such a review in due course and share the findings with the Authority<sup>39</sup>. DfE has not provided evidence during the course of the assessment that this review has taken place.
- 3.27 The HoP at DfE told us that he and his predecessor have at different times written to the newly appointed Secretary of State (SoS) about pre-release access to the media, to check whether this access should continue. In each case the SoS has said that they wish to continue with the current media access arrangements. DfE told us their rationale for these arrangements is to enable media outlets time to accurately present the data in a way that helps parents, which in turn facilitates wider public interest and debate.
- 3.28 DfE publishes a list of who has been granted pre-release access, though this does not include media organisations. In advance of publication DfE asks media outlets to confirm whether or not they require pre-release access and issue a password and link to those who do. Not all individuals in media organisations issued with a password use it to access the statistics in advance. DfE told us that it is not possible using the current IT system to identify who has actually used their password directly. Some media organisations access the data through the Press Association and DfE is not able to identify who has received advanced access in this way.

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<sup>38</sup> In relation to Principle 4, Practice 6 of the *Code of Practice*

<sup>39</sup> <http://www.statisticsauthority.gov.uk/reports---correspondence/correspondence/letter-from-david-laws-mp-to-sir-andrew-dilnot---180913.pdf>

3.29 DfE reported to the National Statistician a breach, by four local news organisations, of the embargo on publishing data related to the performance tables before 9:30am that took place in January 2014<sup>40</sup>. The embargo was set out in the note that was provided to media organisations when they requested pre-release access to the performance tables. According to the breach report, DfE's press office promptly contacted the media organisations that published their stories before 9:30am, reminding them of their responsibilities when receiving pre-release access material, and informing them of the likelihood that the breach would affect future pre-release. In our discussion with DfE, the HoP told us that for the next release he intends to strengthen the wording of the note issued to media organisations along with the access arrangements to emphasise the possibility of the loss of pre-release access for up to three years if a breach occurs.

3.30 DfE reported a similar breach of the embargo in April 2009<sup>41</sup>, involving one national and seven local media organisations. The breach report suggests that it was likely that the local media organisations received their information through the Press Association. In a statement issued alongside the breach report, the Authority said:

'We note that such access, through subscription, is available to tens of thousands of media representatives. We think that, whilst allowed, this is inconsistent with the intention behind the Parliamentary Order and the Government's policy on pre-release access.

The Authority notes that with wider [pre-release] access comes an increased risk of a breach.'

3.31 Since the Authority issued this statement, DfE has made no material change to pre-release access arrangements for the School-level examination statistics, including to access granted to the Press Association. It is clear from the infringement reported this year that these arrangements, taken together, continue to increase the risk of media organisations breaching the embargo on publication. As part of the designation as National Statistics, DfE should:

- a) review its current pre-release access arrangements considering these in the context of the principles and special provisions of the legislation and publish the result of this review
- b) publish a comprehensive list of those granted pre-release access and details of how DfE ensures compliance with the legislation. Publish details of actions taken to prevent, and sanctions that will be applied to, future breaches<sup>42</sup>

(Requirement 9).

As part of meeting Requirement 9, DfE should ensure that these arrangements do not obstruct Ministers' roles as they carry out their policy responsibilities.

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<sup>40</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/breach-reports/secondary-school-and-college-performance-tables.pdf>

<sup>41</sup> [www.statisticsauthority.gov.uk/news/breach-of-code-of-practice---pre-release-access--achievement-and-attainment-tables-for-national-curriculum-assessments-at-key-stage-2-in-england-2007-08.pdf](http://www.statisticsauthority.gov.uk/news/breach-of-code-of-practice---pre-release-access--achievement-and-attainment-tables-for-national-curriculum-assessments-at-key-stage-2-in-england-2007-08.pdf)

<sup>42</sup> In relation to Principle 2, Practice 1 and Protocol 2, Practices 7 and 8 of the *Code of Practice*

## Release practices – Ministerial statement

- 3.32 The secondary schools performance tables published in January 2014 contained a direct link to a Ministerial statement that was issued alongside the latest tables for secondary schools, though the text including the link did not make it clear that this was a Ministerial statement. The link stayed in the news and announcement section of the performance tables until it was replaced by an announcement of the release of other statistics that are not part of this assessment. The press release is still available, though no longer linked directly to the performance tables.
- 3.33 Comment from the Minister does not appear until the end of the statement, following an analysis of aggregated results related to the floor standard. This analysis only appears in the statement. The DfE team told us that it developed the aggregated analysis specifically for the statement to provide useful contextual information as the performance tables do not provide national aggregate analysis. DfE publishes an SFR that provides aggregated GCSE and equivalent results for England and this could, feasibly, have included this analysis.
- 3.34 The analysis included in the statement attempts to predict performance retrospectively, based on two floor standard thresholds. For example it extrapolates the number of schools that would have failed the floor standard in 2010 and 2011 had the current threshold for GCSE passes been in place throughout the period, comparing these with results in 2012 and 2013 when the current floor standard was in place. It also extrapolates the number of schools that would have failed the floor standard in 2012 and 2013 had the threshold in place in 2010 and 2011 continued to be in place. The number of pupils taught within the schools that theoretically would have fallen, or did actually fall, below the threshold is then compared.
- 3.35 DfE does not provide any explanation of the method used to carry out the analysis, which in itself does not meet accepted professional standards, but also makes it difficult to determine other potential shortcomings clearly. The aggregated analysis does not appear to meet basic professional standards in a number of ways. For example:
- existing schools can change status to become an academy and new academies can be formed. This means individual schools' results may not be available for all four years. DfE does not provide any explanation about how these schools are treated in the analysis or any information about the base number of schools in each year
  - the analysis does not appear to take account of the uncertainty in the results brought about by the changing characteristics of each cohort year on year within a school
  - including all pupils taught in the schools in the published analysis ignores the fact that pupils from only one year would be taking exams at the point in time, and that pupils in other years would not be included in results for up to five years later, when different floor standards may be in operation and by which time school performance may have changed<sup>43</sup>

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<sup>43</sup> <http://www.britac.ac.uk/policy/Measuring-success.cfm>

- there is some evidence that targets can affect performance<sup>44</sup>, but DfE does not attempt to take this into account, and does not provide information about the likelihood that having a specific target in place would, in itself, be likely to affect the results and that this effect might be cumulative

3.36 A simpler and more understandable analysis would be to report the actual results and explain the different threshold levels applying in the different years. Table 3.1 (prepared by the Assessment Team) summarises this, including the number of schools falling below the floor standards and the number of pupils in those schools. It also provides actual differences between years.

**Table 3.1: Summary of threshold levels for GCSE passes, number of pupils in and number of schools falling below floor standards, over time<sup>1</sup>**

Year	Minimum threshold in place for required GCSE passes <sup>2</sup>	Number of pupils in schools falling below floor standards	Difference from 2010 <sup>3</sup>	Difference from previous year <sup>3</sup>	Number of schools falling below floor standards	Difference from 2010 <sup>3</sup>	Difference from previous year <sup>3</sup>
2010	35%	179,000	n/a	n/a	216	n/a	n/a
2011	35%	86,000	93,000	93,000	107	109	109
2012	40%	168,000	11,000	- 82,000	195	21	-88
2013	40%	117,000	62,000	51,000	154	62	41

Source: Department for Education

1. Base sizes are not included as these are not published
2. A component of the floor standard included at least the percentage of pupils shown achieved a minimum of five or more GCSEs or equivalent at Grade C or above, including in English and Maths
3. A minus number means that the number of pupils or schools in a particular year was higher than the previous year. A positive number means that the number of pupils in a particular year was lower than in 2010, or was lower than the previous year

Presenting the statistics in this simple way starts to overcome the limitations of the analysis described in paragraph 3.35. Presenting the number of schools, rather than pupils, would be a better measure of change as this overcomes the issue that the performance of the majority of pupils does not influence the results. Presenting the actual statistics, as shown in table 3.1, begins to illustrate what happens over time as the floor standard threshold is set and changed.

3.37 The opening sentence of the statement is:

‘Number of pupils taught in underperforming secondary schools falls by almost 250,000 in four years’.

As a ministerial statement, the press release uses the most positive result from the extrapolated analysis as its headline finding. This demonstrates why it is important to identify the press release as a Ministerial statement in the performance tables. Otherwise, in the Authority’s view, this has the potential to undermine confidence in the independence of the School-level examination statistics published in the performance tables.

<sup>44</sup> Bird S M, Cox D, Farewell V T, Goldstein H, Holt T, Smith P C (2005) ‘Performance indicators: good, bad and ugly’, *Journal of the Royal Statistical Society A* 168, Part 1, pp 1-27: [www.rss.org.uk/uploadedfiles/documentlibrary/739.pdf](http://www.rss.org.uk/uploadedfiles/documentlibrary/739.pdf)

- 3.38 As part of the designation as National Statistics, DfE should:
- a) ensure that any future Ministerial statement issued alongside the School-level examination statistics is clearly labelled as such in the text accompanying the link within the performance tables
  - b) ensure that the statistics used in future Ministerial statements that are issued alongside the School-level examination statistics are cited accurately, are impartial and meet basic professional standards<sup>45</sup> (Requirement 10).

We strongly suggest that in meeting this Requirement, DfE ensure that analysis cited in future Ministerial statements is published in an appropriate statistical vehicle with appropriate supporting commentary. The Authority regards this as very important and would have made this suggestion an additional requirement had it been possible within the framework of the *Code of Practice*.

## **The use of administrative data**

### Data sources

- 3.39 DfE has recently updated its Statement of Administrative Sources<sup>46</sup> (SoAS). This document includes an annex that provides a comprehensive list of administrative data sources, the publications that they are used in, and associated metadata. It does not include details of how the quality of the data collection is assured at source.
- 3.40 A number of separate data collections are used to produce the School-level examination statistics (paragraph 2.8). To date, DfE has not identified publicly the appropriate level of quality that it requires from data suppliers. DfE has not demonstrated publicly its own awareness of the procedures undertaken throughout the data supply process and of the risks that arise from the data sources to the quality of the School-level examination statistics. DfE does not publish details of the quality assurance and audit arrangements for the administrative data submitted by data suppliers. The DfE team told the Assessment team that it intends to publish information about supplier quality assurance in its revised Statement of Administrative Sources (paragraph 3.50).
- 3.41 Examinations across the three key stages are externally marked and samples of scripts are routinely moderated by peer groups, awarding bodies and the Standards and Testing Agency, an executive agency of DfE. Awarding bodies also have appeals and mal-recording procedures and clerical and automated routines to check for anomalies. The data that these organisations supply are independent of schools whose performance is being reported upon. Awarding bodies and the organisations administering tests are subject to external independent scrutiny; the entire process is overseen by the Office of Qualifications and Examinations Regulation (Ofqual) and the Joint Council for Qualifications. This mixture of independent data sources and external scrutiny together help to reduce the likelihood that the data are inaccurate.

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<sup>45</sup> In relation to Protocol 2, Practice 9 of the *Code of Practice*

<sup>46</sup> <https://www.gov.uk/government/publications/standards-for-official-statistics-published-by-the-department-for-education>

3.42 During this assessment, we identified two risks to the quality of the School-level examination statistics. DfE told us that in its view, the main data quality issue arose from the teacher assessments that are used in the progress measures from the School-level examination statistics. Teacher assessments are used in progress measures principally at key stage 2 and, to a lesser extent at key stage 4. In 2013, teacher assessments at primary key stage 1 were used in the progress measures from key stage 1 to key stage 2. Teacher assessments were also used as input to progress measures for some pupils, where a result is not available for a primary key stage 2 test, to measure progress from that stage to key stage 4. DfE told us that some level of audit of the teacher assessment data is provided by local authorities, with audits being carried out at a minimum of once every four years and more frequently where there are particular concerns. We have not identified further information about the audit process, outcomes or actions arising, nor have we received evidence that DfE has assessed the extent to which this known risk calls into question the use of teacher assessments as a data source for official statistics.

3.43 The second risk to the quality of the School-level examination statistics that we have identified involves the underlying data from the School Census. The NAO has produced a series of reports concerning the accuracy of DfE's business plan indicators. One of the reports published in 2013<sup>47</sup> reviewed the indicator drawing on the School-level examination statistics that measures the number of primary and secondary schools below the floor standard. NAO judged that this indicator's underlying data system was 'fit for purpose and cost-effectively run'.

3.44 In the 2013 report, NAO also examined the risks associated with the underlying data from the School Census which is one of three sources that are matched to compile the key stage 4 and key stage 5 datasets. NAO recommended that:

'the Department publishes, alongside the indicators that make use of data derived from the Schools' Census, how the risks associated with data collection have been addressed so that those using statistics derived from the Schools' Census are aware of the risks to data quality.'

When we discussed this during the assessment, DfE told us that they planned to carry out a risk assessment of the School Census data collection and include information on this as part of a number of enhancements to their SoAS.

3.45 As part of the designation as National Statistics, DfE should:

- a) determine the appropriate scale of assurance and documentation required for the administrative data used in the School-level examination statistics based on pragmatic and proportionate judgement about the quality of the data and the public interest profile of the statistics and communicate this requirement to suppliers
- b) publish an appropriate level of detail to inform users about the quality assurance and audit arrangements for the administrative data; describe the contribution and importance of each of the data sources to the School-level examination statistics
- c) in undertaking parts a) and b), include a description of how the risks associated with teacher assessments have been addressed and specify

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<sup>47</sup> [www.nao.org.uk/wp-content/uploads/2013/07/009877-017\\_DfE\\_Information-summary-sheet.pdf](http://www.nao.org.uk/wp-content/uploads/2013/07/009877-017_DfE_Information-summary-sheet.pdf)

clearly in the published information the proportion of teacher assessments to examination results used in attainment and progress measures at each relevant key stage; include a description of how the risks associated with data collection for the School Census have been addressed<sup>48</sup>

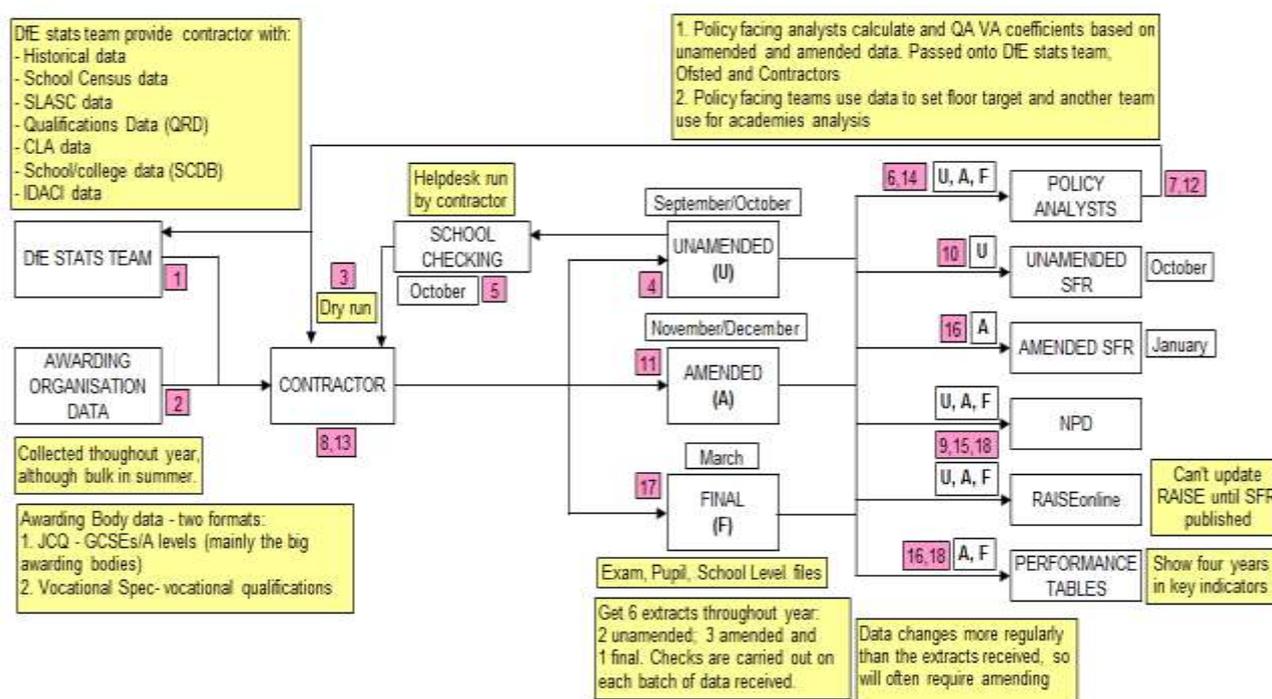
(Requirement 11).

We suggest that in meeting this requirement DfE should take into consideration the Authority's Report *Quality Assurance and Audit Arrangements for Administrative Data*<sup>49</sup> and the National Statistician's *Interim Guidance*<sup>50</sup>

### Processes for data validation and checking after the data has been received

3.46 The School-level examination statistics draw on administrative data. DfE has a validation and checking process in place for the performance tables from the point at which the data are supplied and produces a process map for each key stage showing the data flow, checking and validation steps, and revision stages post supply<sup>51</sup>. These are not easily interpreted without supporting commentary, which is not published. Figure 3.1 provides an example of the process map for the production of statistics for key stage 4.

**Figure 3.2: Example process map for key stage 4 School-level examination statistics**



Source: Department for Education

<sup>48</sup> In relation to Principle 4, Practice 2 and Protocol 3, Practices 2 and 5e of the *Code of Practice*

<sup>49</sup> <http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/quality-assurance-and-audit-arrangements-for-administrative-data---exposure-draft.pdf>

<sup>50</sup> <https://gss.civilservice.gov.uk/wp-content/uploads/2012/12/Interim-Admin-Data-guidance.pdf>

<sup>51</sup> <https://www.gov.uk/government/publications/national-curriculum-assessments-at-key-stage-2-2012-to-2013>

- 3.47 DfE described the data checking and validation process in its evidence for this assessment. The process includes individual schools checking their own performance data down to exam level before publishing. 78 per cent of primary schools logged in to view their key stage 2 data during the 2013 checking exercise. All changes made by schools are subject to validation, although, based on evidence gathered as part of our user consultation, not all data suppliers are clear about all aspects of the school's checking process.
- 3.48 DfE told us that at every stage in the data cycle shown in the process maps, checks are made on all calculations used in the production of the figures. The statisticians carry out checks on the data to ensure that the files produced by the contractor comply with the specified format and contain the correct information. All indicators at school level, local authority and national level are re-derived to ensure that the contractor's systems are programmed correctly.
- 3.49 The entire process is subject to a 'dry run' during the summer. This involves producing a dummy dataset from the previous year's data, which conforms to how the current year's data will be supplied. This dummy dataset is used to test the contractor's systems and DfE's checking processes. This allows potential problems to be resolved before the contractor receives the live data.
- 3.50 The HoP told us that the DfE team is producing, and will shortly publish, a new SoAS. The SoAS will explain the quality assurance processes after the data are supplied, as well as providing information about the data supply processes. The Authority welcomes this as it would demonstrate to users the level of quality assurance the producer team and its contractor undertakes, after they receive the data from suppliers and indicate the degree of confidence users should have in the statistics. As part of the designation as National Statistics DfE should publish information about the quality assurance the producer team and its contractor undertake after data are received from suppliers, including their validation and checking process, and information about the results of the validation and checking and subsequent actions<sup>52</sup> (Requirement 12).

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<sup>52</sup> In relation to Protocol 1, Practice 4 of the *Code of Practice*

## Annex 1: Compliance with Standards for Statistical Reports

- A1.1 In November 2012, the Statistics Authority issued a statement on *Standards for Statistical Reports*<sup>53</sup>. While this is not part of the *Code of Practice for Official Statistics*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*. In relation to the School-level examination statistics, and relevant aspects of the associated performance tables, this annex comments on compliance with the statement on standards. The comments included in this annex are based on a review of School-level examination statistics that are included in the Primary performance tables published in December 2013 and the Secondary and 16-18 performance tables published in January 2014. As the School-level examination statistics are presented in a web-based interactive platform, the Authority notes that it may not be appropriate to expect all of the features expected of more conventional statistical reports such as interpretative commentary by school. We have interpreted the standards with this in mind.
- A1.2 In implementing any Requirements of this report (at paragraph 1.5) which relate to the School-level examination statistics and the associated performance tables and web-based platform, we encourage the producer body to apply the standards as fully as possible.

### **Include an impartial narrative in plain English that draws out the main messages from the statistics**

- A1.3 The web-based platform maximises the use of visible space, using clearly labelled headings. It does not include any specific commentary explaining how to interpret the statistics and what the statistics mean in their longer term context.
- A1.4 The School-level examination statistics can be displayed in various forms. From the entry page, the platform provides a function to filter statistics at different geographical levels. Data can also be filtered according to a number of relevant themes using the buttons at the top of the screen. Data can be seen for larger numbers of schools, or 'similar' groups. Greater detail is available, including limited time series, on interrogation of individual school dashboards. The School-level examination statistics are clearly presented and the performance tables use some 'hover points' and 'hidden' charts to provide more information about indicators not included in this assessment. The information provided may not always be clear, especially to inexperienced users.
- A1.5 There is a Youtube video providing an introduction to the tables that focuses on the search functions, but access is not provided on the search page and will be restricted for some potential users due to internet streaming restrictions.
- A1.6 A generic glossary of terms and abbreviations is available in the primary, secondary and 16-18 user guides and resources areas, though this is not comprehensive.

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<sup>53</sup> <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html>

- A1.7 The School-level examination statistics are aggregated from pupil performance data in the national pupil database (NPD). This also applies to the England-level SFRs, designated as National Statistics in 2010<sup>54</sup>. DfE does not provide clear links from the performance tables to the SFRs on examination statistics for England, nor does it give any indication of how the various outputs link together. Furthermore, the performance tables do not provide information about publication and measurement across the four UK administrations or signpost to the relevant statistics.
- A1.8 There is a considerable body of academic research which helps to explain the School-level examination statistics. However, the supporting information in the performance tables do not signpost to relevant research.

### **Include information about the context and likely uses of the statistics**

- A1.9 DfE provides a number of user guides and resources explaining the School-level examination statistics and associated measures in detail. These are provided through links from the entry page.
- A1.10 Any commentary on the range of potential uses and users is not immediately apparent. With some navigation, a short explanation advising caution in relation to 'choosing a school' is available in the primary school section of the guidance, though not in the sections on secondary schools and 16-18.
- A1.11 DfE published results of a user feedback survey in 2013. This asked for general information about the respondent, and how the tables are being used. It did not gather information about improvements that might be made.
- A1.12 There are floor standards set at both primary and secondary level, but it is not clear where these are described. The title of the link to the document describing these is vague. The document provides detail on what the current floor standards are with an indication of future planned changes. However, the document does not state why and how the specific targets have been chosen, or how and why they have changed over time.
- A1.13 The user guides and resources section applicable to each key stage provides links to a separate methodological document and explanations, written in plain English. The methodological document is not written with the intended uses in mind and is difficult to locate directly.
- A1.14 There is no visible explanation of the wider context, for example, the relevance of the statistics to policy or operational effects that may impact on the education sector.

### **Include information about the strengths and limitations of the statistics in relation to their potential use**

- A1.15 A number of indicators in the performance tables are derived using statistical techniques and models. While the techniques are explained clearly, there is little commentary that points towards the reliability of the techniques. There is no prominent account of the strengths and limitations of the statistics or associated floor standards in the performance tables, or any references to emerging issues about quality and appropriateness of the statistics.

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<sup>54</sup> <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-48---achievement-and-attainment-for-schools-in-england.pdf>

- A1.16 Within the Technical Guides and Documents section, DfE provides a clear definition of confidence intervals for some of the modelled estimates, such as value-added, but this is not consistent across all the comparative measures. Equally, there is no explanation of the degree of error in the 'similar schools' estimates and the likely impact this would have on interpretation. The assessment team also noted evidence of an errata process, as highlighted in the 'similar schools' section of the performance tables, but found no detail of why this is required and the potential impact on the revised statistics.
- A1.17 DfE told us that the performance tables are based on revised data, with a further six week window for schools to make changes not identified through a checking exercise (in line with the England-level National Statistics), but there is no revisions statement to support this. DfE does not publish information that explains the nature of the quality assurance cycle for the performance tables, the extent and scale of revisions and frequency of updates.

### **Be professionally sound**

- A1.18 The performance tables are not accompanied by appropriate contextual commentary or commentary to aid interpretation (providing descriptive statements consistent with the statistics).
- A1.19 Charts, tables and maps that do appear in the performance tables and associated information conform to good practice examples, but these could be extended to aid interpretation of the School-level examination statistics. Tables that only appeared in the press release which accompanied the secondary performance tables in January 2014 (paragraph 3.32) do not meet basic professional standards.
- A1.20 The presentation of the user guides and other supporting documents is well organised and appropriately condensed, though the level of information and content are not always appropriate for the intended uses or for users with little or no experience of using the School-level examination statistics and the performance tables.

### **Include, or link to, appropriate metadata**

- A1.21 The performance tables give no information about the producer body, the name and contact details of the responsible statistician, or HoP.
- A1.22 Links to definitions and methods are provided within the performance tables although there is no indication of the origin and quality of the data collections from which the statistics originate.
- A1.23 Metadata files can be accessed in the 'Download Data' section from the front page. Metadata includes keys to abbreviations, details of consortia, regional and local authority codes. Data files can be viewed on screen or, for statistics from 2010, via download in csv or Excel format.

A1.24 A statement of intent, summarising changes to the 2013 performance tables, was published in July 2013. It flagged new indicators and changes in methodology from previous tables, including any indicators that were being removed or replaced. For example, at key stage 2, the statement informed users that the overall English measures were being replaced by separate reading and writing measures, as a result of the recommendations from Lord Bew's *Independent Review of Key Stage 2 Testing, Assessment and Accountability*<sup>55</sup>.

A1.25 DfE publishes a revisions policy but this does not include information specific to the performance tables.

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<sup>55</sup> <http://www.educationengland.org.uk/documents/pdfs/2011-bew-report-ks2tests.pdf>

## **Annex 2: Summary of assessment process and users' views**

- A2.1 This assessment was conducted from February to July 2014.
- A2.2 The Assessment team – Gary Gant and Pat MacLeod – agreed the scope of and timetable for this assessment with representatives of the DfE team in February. DfE provided the final version of the Written Evidence for Assessment on March 3 2014. The Assessment team subsequently met with the DfE team during June to review compliance with the *Code of Practice*, taking account of the written evidence provided and other relevant sources of evidence.

### **Summary of users contacted and issues raised**

- A2.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority's website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users obtained through these consultation methods may not be representative of wider views, and we take account of this in the way that we prepare Assessment reports.
- A2.4 The user consultation enables us to contact expert users and user and supplier organisations. On this occasion we were especially keen also to obtain the views of individual users of the School-level examination statistics and the performance tables, which would be difficult through our usual methods of contact. We wanted to contact individual users because DfE specifically targets the presentation of the performance tables at parents and others with an interest in individual school performance. In contrast, expert researchers and academics may be more likely to use the underlying data rather than the web-based platform, or at least be more familiar with the performance tables' documentation and the underlying methods, context and limitations.
- A2.5 It is, naturally, not possible to identify users from the web-based platform itself. The DfE team suggested that the Authority should exploit its existing online survey tool to capture users' views of the statistics at the point of use. We took advantage of this opportunity, as it allowed us to obtain the views of a much broader user group than would otherwise have been the case, especially for parents, and individual school governors and staff. We are grateful to DfE for allowing the Authority access to this survey tool for a two week period and enabling us to replace its standard set of questions with ones of our own. The findings below combine the results from the Authority's standard consultation exercise (the consultation) with our user survey that exploited the DfE online survey tool (the survey).

A2.6 The Assessment team received 188 useable responses to the survey from individual performance table users. The responses indicated a range from first time to experienced users completed the survey. These were grouped as follows:

Individual Performance Table users <sup>1</sup> :	188
	%
Parents	22
Teachers / other school staff	15
School governor	8
Academic / researcher	2
Local authority staff	1
Pupil	1
Unknown / other	51

<sup>1</sup>: Classified according to purpose of accessing the performance tables, though individuals could be in more than one category (for example parent and teacher)

We received an additional 11 responses from expert users and organisations to the consultation:

Academics / researchers	4
Education organisations	2
Suppliers	5

A2.7 The survey used a series of write-in questions to obtain qualitative information about experience of using the School-level examination statistics and other aspects of the performance tables and the web-based platform. Table A2.1 summarises the percentages that provided positive and negative responses about their experience. Where no improvement to navigation or no other information is required, these are included in the column headed positive responses. Suggestions for other information of improvements to navigation are included in the column headed negative responses.

**Table A2.1: Aspects of performance tables by type of response**  
**Base: All web-based platform users providing comment (188)**

Aspect of performance tables:		Positive response	Negative response	Neutral / no response / no experience
<b>Q2: Supporting information (including user guide)</b>	%	29	41	30
<b>Q3: Understanding of strengths / limitations</b>	%	59	24	17
<b>Q4: Other information required<sup>1</sup></b>	%	24	55	21
<b>Q5: Ease of finding things<sup>1</sup></b>	%	32	40	28
<b>Q6: Experience of contact with DfE</b>	%	7	2	91

<sup>1</sup>: Negative response indicates other information or improvement to navigation required

Source: UKSA: Web user survey

Responses to the survey are discussed in more detail below. While, as indicated in table A2.1, a number of positive responses were received, the discussion in this section focuses on areas where further improvements could be made in the spirit of encouraging continuous improvement in statistical reporting.

- A2.8 Responses to the survey were mixed with regard to the ease with which users could access the information they needed. Four in ten (40 per cent) users who gave feedback through the survey suggested improvements in this respect. A recurring comment, also mentioned by two expert users in our consultation, was that the performance tables were difficult to locate<sup>56</sup>:

‘... it's not easy to find through a search engine unless you know what you're looking for’ (parent)

‘...I found it by going through the BBC website rather than DfE’ (head teacher)

There was evidence that some found the search function within the performance tables difficult to use and others would have liked additional filtering options.

- A2.9 One expert user contacted through the consultation said the guidance was useful but would benefit from being simplified and this was echoed by users responding to the survey, including those who from their other comments appeared to be experienced users. Around four in ten (41 per cent) survey responses gave what were classified as negative comments, with some users suggesting how the presentation of supporting information might be improved and others being unaware of or unable to locate user guides and specific useful information such as glossary and abbreviations:

‘I haven't read the user guides, didn't realise there were some available!’ (parent)

‘...I still can't see where it is on the website. Also there does not appear to be a key to what the column headings mean. So all in all is not very easy for the lay person to understand’ (category unknown)

‘...my son is just entering the education system and so I have no idea of what KS2 etc means and the website uses these abbreviations making the assumption that parents whose children are just starting school know what it all means’ (parent)

- A2.10 Nearly 6 in 10 (59 per cent) of those responding to the survey felt they understood the strengths and limitations of the performance tables while one quarter (24 per cent) suggested further information would be useful:

‘I do not really understand the strengths and limitations of the data - perhaps there needs to be specific links called ‘Strengths and Limitations of the Data’ on this webpage’ (parent)

An expert user responding to the consultation said he was unaware of DfE providing any advice about strengths and limitations of the statistics.

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<sup>56</sup> DfE informed us that they regard the performance tables as relatively straightforward to find through search engines and evidence suggests that the tables are prominent and accessible, to varying degrees, depending on the keywords and search engines used.

A2.11 More than half suggested other information and improvements to the performance tables:

‘A longer time frame would be handy’ (parent)

‘Would be useful to see a graph or bar chart with last 3-5 years stats’ (parent)

‘More subject level data’ (school staff)

‘Could some statistical inferences be made regarding performance over time’ (category unknown)

A2.12 Expert users responding to the consultation who commented on contact with DfE were happy with the contact they had. Overall, few of those responding to the user survey had any contact at all. Suppliers had contact with DfE’s contractor rather than with DfE. One exception was the Standards and Testing Agency, who reported having an annual review with DfE. Suppliers said they have been well informed of changes by the contractor and guidance and specifications were usually clear though a follow-up request was said not to be. Suppliers do not think DfE was aware of their processes, though they do think the organisation DfE contracts to process the data they supply is aware of these.

#### Strengths and limitations of the survey of individual users

A2.13 The survey provided useful qualitative feedback from performance table users to support the Assessment. The split by type of response shown in table A2.1 is based on the judgement of the Assessment team and is therefore subjective. The survey was conducted over a short period of time and generated a limited number of responses compared to use in that time period. Response to the survey was self-selecting. The survey invitation appeared after ten clicks. Taken together, these limitations mean that the survey may not be representative of the views of all users, especially those who are using the performance tables for the first-time, or are less experienced or lighter users.



