

Background Quality Report: Teacher numbers and pupil:teacher ratios
(March 2018)

Dimension	Assessment by the author
Introduction	<p><i>Context for the quality report.</i></p> <p>The Department of Education (DE) adheres to the UK Statistics Authority code of practice for official statistics and the National Statistician’s guidance on quality. This document provides a summary of how the following Teacher Workforce and Teacher vacancies, sickness absence and teacher substitution costs national and official statistics publications adhere to the code in terms of quality:</p> <p>https://www.education-ni.gov.uk/articles/education-workforce</p> <p>Information on the number of teachers, the sickness absence of teachers and the costs of substitution in grant aided schools in Northern Ireland is taken annually from the Teachers’ Payroll System. The number and characteristics of teachers is then validated with schools in Northern Ireland. This data validation exercise takes place between January and May each year and includes details on the number of teachers and the characteristics of those teachers. The information collected is used by policy branches within the Department of Education to inform education workforce policy and planning.</p> <p>The data is taken from the Teachers’ Payroll System by Teachers’ Pay and Pensions Team and given to Analytical Services Unit.</p> <p>Statisticians are then responsible for validating this information with schools. This process is the main responsibility of one Deputy Principal Statistician and one Assistant Statistician with input from the administrative team. A detailed statistical bulletin based on final data is released in June.</p>
Relevance	<p><i>The degree to which the statistical product meets user needs in both coverage and content.</i></p> <p>Relevant users within DE are consulted annually about what data are collated, including any additional information to be collected or any data that is no longer required. This ensures that data meets the key users’ needs.</p> <p>In addition to this, feedback is welcomed from customers outside DE/EA via the feedback section on our website. Contact details are also provided for the relevant statistician, should a member of the public wish to offer any feedback directly or request further analysis of data.</p> <p>In liaising and engaging with other users, there are very rarely circumstances where necessary information is not collected. In these situations, consideration is made to collecting requested data in the future if it is practical and cost-effective to do so.</p>

<p>Accuracy and Reliability</p>	<p><i>The proximity between an estimate and the unknown true value.</i></p> <p>Coverage of the data is 100%.</p> <p>As the data collected are from an administrative source, used to pay teachers, there is a basis to assume that it is within each teachers benefit that the data supplied is as accurate and reliable as possible.</p> <p>Some data such as the sickness absence of teachers is input manually each month so there is a possibility of data entry error. However, since this may affect teachers' pay it is within the interest of teachers to inform Teachers' Pay and Pensions Team of any errors.</p> <p>However, statisticians will also carry out a detailed validation process on the teacher numbers including confirming each individual teacher's gender, working pattern, hours and employment type, as well as the school they work in.</p>
<p>Timeliness and Punctuality</p>	<p><i>Timeliness refers to the time gap between publication and the reference period. Punctuality refers to the gap between planned and actual publication dates.</i></p> <p>Data are requested in December each year for the last full week in November. Three excel files are received in January the following year giving the permanent teachers, the daily paid temporary teachers and the hourly paid temporary teachers. The delay between the reference week and ASU receiving the data is necessary to allow for all updates to the system before the data is extracted. Data validation takes place throughout January to May and the publication is prepared, checked and released in June. Given the workload to process and thoroughly validate the data to the standard required, there is no scope to release data any sooner.</p>
<p>Accessibility and Clarity</p>	<p><i>Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the metadata, illustrations and accompanying advice.</i></p> <p>Data tables are available for a number of teacher characteristics, teacher sickness absence and teacher substitution costs both within the publication and as Excel tables. These data tables include commonly used and requested data, examples of which include: teacher numbers by age, gender and contract type. Previous years' data is included on the website also, so time series analysis is accessible.</p> <p>Key statistics broken down by various geographies are also available via the NINIS website. Metadata explaining the process and all key terms is appended to these tables.</p> <p>If data is not available online, users are invited to request specific data via email. These data requests are routinely answered within 15 working days. All data available is provided, the only exception being any figures deemed sensitive which are suppressed to avoid the</p>

	potential identification of individuals.
Coherence and Comparability	<i>Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain.</i>
	All data is obtained either from the Teachers' Payroll System and validated with schools or directly from schools, thus guaranteeing coherence of the data.
	The variables collected have been largely stable over the last ten years, and the methods used to collect data are the same, so data is comparable over time. As education is a devolved issue the other UK administrations often have different approaches or different policies underlying data that is collected.
Trade-offs between Output Quality Components	<i>Trade-offs are the extent to which different aspects of quality are balanced against each other.</i>
	The main trade-off is timeliness against accuracy. The process is carried out by one Assistant Statistician with input from one Deputy Principal Statistician thus there are limited resources available for validation. This results in data being available in June.
	Accuracy is not comprised to meet these deadlines. A detailed range of validation checks are conducted prior to data being made available, and this list of validation checks is reviewed on an annual basis and is amended depending on user needs and common errors.
Assessment of User Needs and Perceptions	<i>The processes for finding out about users and uses, and their views on the statistical products.</i>
	The content of the data collection is defined by the Department's information needs. The relevance of this is checked each year when key users across DE are consulted for additions and amendments for the following year. DE statisticians also meet several times per year with policy officials, ETI, school principals and other groups of interested officials.
	Users of the data are surveyed annually via the NISRA Customer Satisfaction Survey. It is not possible to break down the results of the survey to those that specifically used teacher data; however, the satisfaction levels across NISRA as a whole are very high. There is scope for any comments raised in the survey to be fed back to the team that manages the teacher dataset to take onboard for improvements going forward. Users are invited in the statistical bulletins to provide feedback on the publication and to request further information if required.

Performance, Cost and Respondent Burden	<i>The effectiveness, efficiency and economy of the statistical output.</i>
	<p>As the data is already on the Teachers' Payroll System and needs to be kept up-to-date to ensure teachers' salaries can be calculated accurately, there is minimal cost each year to gathering this data.</p> <p>The validation of this data with schools also has a minimal burden for schools since the accuracy of the data is essential for the running of the Teachers' Payroll System.</p>
Confidentiality, Transparency and Security	<i>The procedures and policy used to ensure sound confidentiality, security and transparent practices.</i>
	<p>Given the potentially sensitive nature of the teacher level data collected, confidentiality is something that is taken very seriously. Data is emailed through internal secure email to Analytical Services Unit usually on an annual basis. The data are then saved to a secure server, which only statistical staff has access to. After processing, names are removed from datasets so that individual teachers cannot be identified.</p> <p>Sensitive data relating to individual teachers, or to small numbers of teachers, are not published or released externally. In this instance, sensitive data are considered as age and sickness absence. For this data, figures that are less than five are generally suppressed, and an adjacent figure in a column or row in any table with a total is counter-suppressed to avoid the potential identification of individual teachers. However, consideration is given to balancing provision of information against the risk of potential disclosive information.</p>