ROYAL STATISTICAL SOCIETY

DATA | EVIDENCE | DECISIONS

RSS SUBMISSION TO COMMUNICATIONS AND DIGITAL COMMITTEE INQUIRY INTO MEDIA LITERACY

11 April 2025

1. Overview

1.1. This is the submission from the Royal Statistical Society (RSS) to the Communications and Digital Committee's inquiry into Media literacy. The RSS is a professional society for statisticians and data scientists, with over 11,000 members, as well as a charity. Our vision is a world where data is at the heart of understanding and decision-making.

1.2. One of our strategic goals centres on supporting public engagement, working to ensure that people have an understanding of the data and statistics that influence their daily life decisions, their work and the world around them, and feel empowered to meaningfully engage with issues. A key aspect of this is statistical and data literacy, which enables people to interpret claims (eg those involving figures, numbers, statistics, graphs, infographics and other data visualisations) in the media.

1.3. We aim to support the public with statistical and media literacy. We have published resources, such as a guide to statistics on social media, to help individuals critically assess claims. We also publish explainers on topics frequency covered in the media, eg Covid-19, inflation, and climate change. Our statistical ambassadors work with the media to provide expert advice and comments on statistics in current topics, and our wider membership regularly supports the media with contributions via the Science Media Centre, the independent press office for science. We have also produced online resources for journalists, and we run awards for statistical excellence in journalism, to encourage statistics and data to be covered accurately and explained accessibly. We have developed briefings for the government on how to improve public understanding of statistics and data.

1.4. We also advocate for curriculum reform, calling for statistics and data education (including on statistical and data literacy) to be relevant to the real world and engaging. We expand on our recommendations for the curriculum, including on increased emphasis on the statistical investigative cycle (which includes evaluating data and claims) and statistical literacy, in our published key recommendations for the UK curriculum.

1.5. Our submission seeks to highlight the importance of statistical and data literacy as part of media literacy. Statistics and data are used widely in the media, to back up points or make claims. Figures, numbers, statistics, graphs and other data visualisations may be presented in news stories – by a range of outlets, with differing levels of credibility – or by politicians. The ability to distinguish between trustworthy information and misinformation is key, as this information influences beliefs and behaviour. People need to be able to critically evaluate claims relating to any topic in the media, for example health, climate or politics. People also need to be able to critically evaluate claims made in advertising, such as the percentage of people who though a product was good. It is also important that people understand that there are statistics that they may not recognise as 'statistics', such as inflation or the number of people who are unemployed. Media literacy, as it relates to statistical and data literacy, is

essential to allow people to navigate daily life, be informed citizens and thrive in this data-driven era.

1.6. We make the following recommendations, and expand on these below:

a) Statistical and data literacy are key to media literacy and their emphasis in the school curriculum should be increased.

b) The public should be supported with the tools to critically evaluate claims made in the media, and to identify potential misinformation. This could include bolstering the role of the UK Statistics Authority (UKSA) in identifying misleading statistics, as well as via support from a range of other credible organisations.

2. Statistical and data literacy are key in media literacy

2.1. Statistics and data are used widely in the media, from backing up political claims to measuring progress and telling stories. The ability to understand statistics and data is crucial to our ability to understand claims, and independently critically appraise and critique them to determine their trustworthiness.

2.2. Recent research by the Office for Statistics Regulation (OSR) on statistical literacy showed that 49.1% of participants surveyed had a numeracy level equivalent to attainment at ages 9-11. The use of statistics in newspapers was also evaluated: 18.8% of newspaper articles engaged with statistics (in a non-critical manner) – demonstrating the importance of statistical literacy to media literacy. However, only 0.3% of articles *critically* engaged with statistics, demonstrating the need to enable readers to understand and critically evaluate statistics for themselves, as well as the need to support journalists to increase critical engagement with statistics.

2.3. There are a range of scenarios that may result in misleading data and statistics being shared, either accidentally or due to purposeful spin (including disinformation and 'fake news'). The ability to distinguish between information and misinformation is key, as the information that we absorb shapes our views and activities, from political inclinations to daily habits and outlook on the world around us.

2.4. The risks and consequences arising from a lack of statistical and data literacy in media contexts includes the inability to make evidence-based decisions to inform personal activities and beliefs, and the risk of becoming influenced by misinformation.

2.5. Media literacy will need to evolve over the coming years, to keep up with advancements in AI and other technologies that impact the media. This includes considering how to deal with technologies that can hallucinate statistical or data-based 'facts' that might be mis-reported in the media.

3. Strategies to improve media literacy with respect to statistics and data

3.1. We believe that statistics and data are a core part of media literacy and as such should be incorporated into its definition. Good media literacy, in terms of the statistical and data aspects, includes people being able to critically evaluate claims they come across, and assess their trustworthiness. For those producing content for the media, best practice includes covering issues in a balanced manner; providing enough detail to enable readers to make judgements about the claims; not overstating issues for effect; and stating uncertainty along with headline figures, to help indicate how confident we can be in values.

3.2. Formal education is a key route to developing statistical and media literacy in the general population. We believe that the focus on media literacy within education – including on the statistical and data aspects – must be substantially strengthened. Media literacy will be relevant to a wide range of school subjects, from biology to English to sociology. Statistical literacy will help students integrate the media literacy learnings, with respect to data, that they are learning across these different subjects.

3.3. We also believe that media literacy has a key place in the teaching of maths, statistics and AI, where students can learn how to critically evaluate the data behind claims. The strengthening of media literacy within these subjects should also provide a relevant, interesting context for students, to help increase engagement and enjoyment of these subjects and to allow students to explore their benefits and relevance to the real world.

3.4. The inclusion of media literacy in school qualifications, where it feeds into assessment, could lead to a helpful indicator of students' abilities. We call for a question style that allows students to critique investigations and data. Training, to ensure teachers (eg of maths) are comfortable with teaching the media literacy aspects of maths, statistics and data, will be important.

3.5. Outside of formal education, schemes from reputable organisations could help support media literacy skills in children and young people. The RSS William Guy Lectureship scheme aims to inspire young people about the importance and relevance of statistics and data – every year we appoint three lecturers to deliver talks (in-person and online) to school children. Our current William Guy Lecturers are delivering talks on 'statistics in plain sight', which includes encouraging students to consider how to critically evaluate claims they come across in the media.

3.6. Among the general public, we believe that people need the knowledge and skills to consider several key aspects relating to claims, to help assess their trustworthiness. These include considering the source of the information, and the motives of the source, as well as considering where the underlying data has come from and how good it is likely to be. We set out these areas in our guide to assessing statistics, and also cover other areas that people should be aware of, including considering whether data has been 'cherry-picked'; whether the relationships have been overstated (correlation versus causation); and whether wording or visualisations are overemphasising differences, among other areas to look out for.

3.7. We believe that the public should be supported with further tools to critically evaluate claims made in the media. We call for a governmental role in this, to raise awareness and equip the public with the necessary skills via public-facing campaigns and resources, although we realise that a range of other organisations and agents should also be involved to ensure effective media literacy among the public. We believe that the role of the UKSA should be bolstered: increased regulation of statistics and data in the media will help members of the public navigate the array of claims being made and will help increase public confidence in the trustworthiness of claims. We expand on this in our briefing on improving public understanding of statistics and data.