Evaluation of the Digital Social Research Programme
Executive summary

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Background

The Digital Social Research (DSR) Programme was designed to build on developments made in the ESRC's NCeSS e-Social Science Programme, which had run from 2004 to 2009. DSR's aim was to undertake a cohesive programme of research and development between 2010 and 2012 to maximize the benefit of the existing digital social research investment. It sought to develop a base for future world-class social research that would harness advances in digital technology and research practice.

The DSR Programme was a co-ordination model comprised of a national directorate, eight continuing NCeSS nodes, D&S projects, a community funding programme, a variety of workshops, and software sustainability training.

The objectives were:

- That the National Strategic Directorate would co-ordinate an e-Social Science strategy.
- To fund a programme of small strategic investments in order to maximize the benefits of existing digital social research investment.
- To assess and build knowledge from the eight node projects that were originally funded through NCeSS and that continued in the DSR Programme.

Approach and methods

This evaluation assesses the quality, achievements and impact of the DSR Programme as a whole. It focuses on the extent to which the aim of the DSR Programme and its objectives were met, and the degree to which this programme of research has fulfilled the broader strategic goals of the ESRC.

The evaluation is a mixed method approach based on a socio-technical process model. The methods used were: a document review of DSR Programme reports; semi-structured interviews with DSR Programme researchers and stakeholders; and an online survey of the Principal Investigators (PIs) of Community projects. There was also a thematic analysis of the data.

Key findings

The co-ordination model was successful in developing digital social research beyond its introductory NCeSS phase. It broadened the practitioner base, fostered sustained innovation and was influential in shaping e-infrastructure. It aligned with ESRC research priorities and is ready for further development and mainstreaming.

The DSR Programme supported community-driven innovation and it generated a wide range of research projects and methods that demonstrate the usefulness of digital social research for social research. However, there needs to be a clearer framework of principles and practices in digital social research to establish it as standard practice. This will foster confidence among researchers and will support mainstreaming.

The range of DSR research and activities has prepared the social science community well for data-driven research. However, to ensure ethical and appropriate development of digital social research enabled data, research requires a coherent approach by funders, data services, research institutions and researchers. This needs to be linked to UK Strategy for Data Resources for Social and Economic Research 2013-2018.

The DSR Programme undertook some training activities. DSR informed training should be extended across the DTCs, in both early career training and training for established researchers. The training could align with developments in open access to research data that will be relevant to all researchers.

External evaluation of projects needs to be built into the lifecycle of programmes. Researchers move on to other projects and learning and reflection is easily lost from programmes. This is especially important in understanding how digital social research mainstreams across the social science community, and the quality of that mainstreaming. Productivisation and marketisation were not strong points of the DSR Programme. A clear strategy needs to be developed to improve this, drawing on experts in these areas. A collaborative approach with InnovateUK might provide a useful mechanism for such productivisation and marketisation.

The DSR Programme has been influential in shaping policy on e-infrastructure and related provisions. To ensure that the development of e-infrastructure and related provisions for digital social research can meet increasing demand as digital social research mainstreams, RCUK should monitor the evolving needs of the digital social research community of researchers in relation to e-infrastructure capacity and the capacity of related research provisions.

The DSR Programme has identified a range of research areas that digital social research contributes to. However, some areas are underdeveloped, including the internationalisation of research questions, some qualitative research areas and more advanced statistics. These areas require more exploration and development.

The DSR Programme has identified areas of impact: conceptual, instrumental and, from a programme perspective, capacity building. In terms of academic impact, significant developments have been made in the conceptual underpinnings of digital social research including ethical issues, which has informed the development of new practice. Examples include data management and linking (DAMES) and online resources for researchers and

professionals working with young people. There are some early concrete examples of impact by non-academic users. For example the Demographic User Group (large scale users of demographic data such as Sainsburys, M&S, Serco, etc.) has made use of products from the GENeSIS node such as Maptube to support decisions including store placements. The LifeGuide web-based tool was used to design the INTRO intervention, which enabled GPs to better target the use of antibiotics and was found to significantly reduced GP prescribing rates. Most of the interview respondents pointed out that it is too early to fully understand the social and economic impacts of the DSR Programme and digital social research more generally.

There is interest in using DSR tools and services by those outside of academia. A barrier to take-up is end-users' concern about the sustainability of the tools and services they are using. It is important that resources are available, to ensure that tools and services are maintained for the end-user community.

More effort is needed for internationalisation, to address the global issues of digital social research which are relevant to specific research teams and communities. The development of digital social research raises issues that are global in character, such as ethics of data use and sharing and linking data. Uncertainty in this area is a barrier to the internationalisation of research questions and collaboration. This needs to be addressed at the global level because, if digital social research principles and practices are established worldwide, they will foster internationalisation.

Contribution of programme organisation and its management

The leadership and organisation of the programme was highly rated by participants. The National Directorate was very successful in developing a DSR strategy and in co-ordinating a range of projects and activities that broadened the research community, developed methods and influenced e-infrastructure and capacity building.

Legacy

DSR has created a sustainable legacy in three main areas: tools and methods, knowledge, and policy and e-infrastructure requirements.

The DSR developed a strand of work that focused on community driven developments, the community funding stream, and one that focused on developments in technologies that might inform new methods, this was called methods watch. Both these approaches fostered innovation and they identified emerging trends, such as big data and social media analytics. Many of the tools and services are still in use and some are continually being updated and developed. There is a growing body of digital social research knowledge created through interdisciplinary collaborations in the programme.

There are some early end-user communities emerging and some long-term end-user collaborations. Community funded projects have produced follow-on funding, for example A Data Topography of NGS Genomes led a larger project called Socialising Big Data. The OeSS II node's work on social shaping and ethics has created a strong legacy for considering the implementation of big data studies, RRI and the quantified self.

The DSR Programme informed requirements for e-infrastructure, cyber security, big data and real-time analytics for mainstreaming digital social research. DSR put digital social research, with the emphasis on social, firmly on the agenda in social sciences.
Tools can be downloaded at: http://www.digitalsocialresearch.net/wordpress.

Recommendations for ESRC

The ESRC should develop a model for mainstreaming digital social research.
The co-ordination model was successful in developing digital social research beyond its introductory NCeSS phase. It broadened the practitioner base, fostered sustained innovation and was influential in shaping e-infrastructure. Digital social research is ready for further development and mainstreaming.

The ESRC needs to build external evaluation into the lifecycle of research programmes.
Researchers move on to other projects and some of their learning and reflection is easily lost from programmes. This is especially important in understanding how digital social research can be mainstreamed across the social science community, and the quality of that mainstreaming. It is also important to capture non-academic users' assessments of research programmes while they are engaging with a project or programme because many users move to other positions and are difficult to access in any follow up evaluation.

The ESRC needs to consider how to develop productivisation and marketisation strategies.
These were not strong points of the DSR Programme. A clear strategy needs to be developed in this area, drawing in relevant universities and experts. A collaborative approach with InnovateUK might be one mechanism for productivisation and marketisation.

The ESRC needs to collect end user feedback during research programmes and seek consent to contact end users after the programme for feedback.
In undertaking the evaluation of DSR, the researchers found it difficult to find end users because many had moved positions and they also found that many end users were experiencing survey and interview fatigue and not willing to respond.

The ESRC in collaboration with other funding councils needs to ensure adequate e-infrastructure provision as digital social research reaches critical mass.
The DSR Programme has been influential in shaping policy on e-infrastructure and related provisions. However, there must be a monitoring of the evolving needs of digital social research and funding as well as resources in place to manage increased demand. The ESRC should work with RCUK and other agencies in this area.

Recommendations for the research community and the ESRC

The research community supported by the ESRC needs to establish a digital social research methodological framework.
The DSR Programme supported community-driven innovation and generated a wide range of research projects and methods that demonstrated the usefulness of digital social research to social research. However, there needs to be a clearer framework of principles and practices for digital social research. This will take digital social research beyond 'being joined by the digital research label' (Node director) into established practice. This will help to create confidence among researchers, which will support mainstreaming.

The research community supported by the ESRC needs to create a data eco-system approach towards developments in data-driven research.

The range of DSR research and activities has prepared the social science community well for data-driven research. Further research is needed to fully recognise the potential and limitations of big and broad data, its analysis and visualisation. Attention must be paid to accessing commercial social media data and public sector open data, as well as developments in open data. Furthermore, to ensure that digital social research and data-driven research is developed ethically and appropriately requires a coherent approach by funders, data services, research institutions and researchers. This needs to be linked to the UK Strategy for Data Resources for Social and Economic Research.

The research community supported by the ESRC needs to expand access to a more coherent programme of training in digital social research across the research community.
The DSR Programme undertook a good range of training activities. However, engagement with doctoral students was varied. Current DTC training is often specific to each DTC and more standardised training informed by DSR Programme expertise would create a more coherent approach to training. There needs to be accessible training for established researchers outside of the DSR community and who may not have the relevant digital social research skills. This may also widen the community base and, potentially, open up new areas of innovation. This training could align with developments in open access to research data that will be relevant to all researchers.

The research community supported by the ESRC needs to identify more clearly the potential of digital social research in various research areas.
The DSR Programme has identified a range of research areas that digital social research contributes to. However, some areas are underdeveloped, such as the internationalisation of research questions, some qualitative research areas and more advanced statistics. These areas require more exploration and development.

The research community supported by the ESRC needs to create indicators to measure the impact of digital social research.
The DSR Programme has identified areas of impact – conceptual, instrumental and, from a programme perspective, capacity building. There is some evidence of impact by non-academic users, but this needs to be collected in a more systematic way. However, as identified in our interviews, many felt it was too early to fully understand the social and economic impacts of digital social research.

The research community supported by the ESRC needs to address the ways that digital social research can enhance user and public engagement.
There is a real interest in using DSR tools and services by those outside the academic community. A barrier to take-up was the concern by end-users about the sustainability of the tools and services they wish to use and rely on. It is important that resources remain available, to ensure that tools and services are maintained for the end-user community.

The research community supported by the ESRC needs to make more effort in internationalisation to address the global issues of digital social research that are relevant to specific research teams and communities.
The development of digital social research raises issues that are global in character, such as the ethics of data use, sharing and linking data, and so on. Uncertainty in this area is a barrier to the internationalisation of research questions and collaboration. These need to be addressed at the global level because, if global principles and practices are established, they

will encourage internationalisation. One recommendation for this is the development of a global forum based on national Academies.

The research community supported by the ESRC needs to develop sustainability by incentivising the establishment of commercial or not-for-profit sources of software and tools for digital social research.
This should include fostering communities of practice to provide grassroots development of standards and tools and the hosting of open source software. The DSR Programme found that sustainability was difficult and researchers were concerned with sustaining their tools and services. Furthermore, end-users were concerned about the sustainability of the tools and services they were using. This concern is a barrier to take-up and sustained use and could be addressed by developing tools and resources outside the academic environment.