GYA Response on EU Consultation Science 2.0

Main points raised in the 'free text' sections of the consultation document

The scope of Science 2.0

The Science 2.0 concept needs to be extended and clarified so that it also serves to

(1) highlight the continuities, rather than only the discontinuities, with previous ways of doing science. While datasets size is indeed growing, and their open dissemination generates new opportunities for discovery, issues with data quality and interpretation remain central to research achievements. Fostering excellence in Science 2.0 means supporting scientists in devoting time and resources to all stages of the research process, from data production to data re-use and dissemination. Data curation in particular needs to be supported with adequate infrastructures, expertise and manpower, thus making it possible for research team to produce re-usable data as well as excellent scientific outputs.

(2) develop the scope and accountability of public bodies' involvement in research activities. For instance, public bodies should be encouraged to submit information e.g. to national or wider databases on what types of research they would commit to e.g. serving as stakeholders in, and what research knowledge they would be interested in. In addition, research funders need to themselves have identified some of the high-level national (and potentially even higher level) stakeholders for specific programs and projects they fund, and have gained commitment from these to participate e.g. in stakeholder boards. This would facilitate the work of researchers engaged in programs and projects requiring stakeholder cooperation, but where you may contact stakeholders with insufficient funding or time to participate or implement results, and where you may also lack linkages to the important national stakeholders.

(3) highlight and overcome the challenges involved in implementing 'citizen science'. The 2.0 concept should not underestimate the challenges of research brokerage and intelligibility. The expectation that citizens will have the interest, time and competence to engage in "citizen science" can only be realized if policy bodies support targeted educational programs engaging both the public and professional scientists, as well as long-term, well-funded resources and infrastructures within which these exchanges can take place.

(4) explicitly foster inclusivity of research at the national, European and global levels. Despite the new communication opportunities opened up by technology, and the clearly international nature of research in a networked, digital age, discrimination among researchers in terms of seniority, gender, religion, ethnicity and location is still strongly affecting hiring, promotion and publication decisions. Further, there are at present few opportunities for developing countries to participate in shaping key scientific endeavours in Europe, which tend to be initiated, conducted and disseminated by developed countries alone. In response to these issues, we propose to foster international collaborations both within and beyond European borders; improve transparency in promotion and career paths in academia; streamline funding applications, so that they are accessible to working parents and carers; and implement gender shares on committees and panels, so as to facilitate the inclusion of women in decision-making processes.

All disciplines have a strong potential to contribute to Science 2.0.

The humanities and social sciences, as well as branches of natural science that are currently less fashionable and thus under-funded, lack the resources and manpower to reconsider and eventually update their practices.

Open Access

A model that requires researchers to pay for having their work becoming openly accessible is to be rejected. If this route was to be followed, some research work would end up not being published at all, and younger researchers would be particularly disadvantaged, as well as researchers working in poorly funded areas and/or developing countries.

Copyright constitutes a key incentive for researchers and an important tool to monitor and avoid misuse of research results. However, and particularly for governmentally funded research, it is crucial to foster use of creative commons licenses that retain authorship rights while also enabling re-use and further innovation.

Policy development

Researchers need support and infrastructures to be able to innovate, and policy should invest in such infrastructures and funding schemes to make innovation possible.

The planning of future data storage, such as the ELIXIR initiative launched by the European Union, need to involve early career researchers as well as senior academics. Young researchers are likely to have valuable knowledge of which types of data need preserving in the long term, and how this is best realised, given (1) the high stakes that these issues have for the development of their own career; (2) their recent experiences in data gathering; and (3) their exposure to digital means of data dissemination, which is likely to be more extensive than that of academics who spent most of their career without these technologies.

Altmetrics

While there is need to discuss the reward and incentive systems in which researchers operate, many of the suggested "altmetrics" approaches do not constitute a stand-alone solution to creating incentives and quality measures. They depend too strongly on media representation and immediate appeal of research results, in a way that may not accurately reflect the significance and quality of results achieved. Nevertheless, their use alongside other measures is to be encouraged, as a variety of metrics will provide a more comprehensive view of research results than appeal to a single type of metrics. It is also important to set different metrics for different disciplines, and particularly to differentiate outputs from humanities, qualitative social sciences, quantitative social sciences and natural sciences, which can have very different characteristics and modes of impact and dissemination.

The GYA feedback was coordinated by Sabina Leonelli (UK) and submitted to the EU on 30 September 2014

About the GYA

The Global Young Academy, founded in 2010, serves as the voice of young scientists around the world. Members are chosen for their demonstrated excellence in scientific achievement and commitment to civil society. Currently there are 200 members from 58 countries.

Learn more at: http://www.globalyoungacademy.net/