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# Optimal Methodology for Addressing the Social Impact Component within Project Proposals and Curriculum Vitae

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## Abstract

The scientific and grey literature have highlighted the increasing relevance of the social impact of research. More and more, funding and evaluation agencies are using social impact as a required criterion when assessing the excellence of research proposals and researchers' CV. However, research has identified elemental confusions about what social impact is in most research proposals, CVs and consulting companies. Based on the communicative methodology which co-led the creation and elaboration of the priorities of social impact and co-creation, the study presented in this paper includes the knowledge co-created along years of dialogues with scientists and citizens and a documentary analysis of four official documents on social impact and researcher evaluation. Results identify the first scientific six guidelines to date on how to include researchers' actual or potential social impact in the research proposals and CVs: 1) To avoid confusing social impact with dissemination or transference; 2) To identify the concrete social impact of the specific scientific knowledge created by the authors; 3) To precise the concrete indicators of each social impact; 4) To specify the concrete sources; 5) To identify the interactive social impact; 6) To include the potential social impact.

## Keywords

Social impact, interactive social impact, research proposals, researchers' evaluation

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# Metodología Óptima para Abordar el Componente de Impacto Social en las Propuestas de Proyectos y el Currículum Vitae

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## Resumen

La literatura científica y gris ha puesto de relieve la creciente relevancia del impacto social de la investigación. Cada vez más, las agencias de financiación y evaluación utilizan el impacto social como criterio obligatorio a la hora de valorar la excelencia de las propuestas de investigación y el currículum de las personas investigadoras. Sin embargo, la investigación ha detectado confusiones elementales sobre lo que es el impacto social en la mayoría de las propuestas de investigación, CV y empresas consultoras. Basado en la metodología comunicativa que co-lideró la creación y elaboración de las prioridades de impacto social y co-creación, el estudio presentado en este trabajo incluye el conocimiento co-creado a lo largo de años de diálogos con personas de ciencia y ciudadanía y un análisis documental de cuatro documentos oficiales sobre impacto social y evaluación de personas investigadoras. Los resultados identifican las seis primeras directrices científicas hasta la fecha sobre cómo incluir el impacto social real o potencial de las personas investigadoras en las propuestas de investigación y los CV: 1) Evitar confundir impacto social con difusión o transferencia; 2) Identificar el impacto social concreto del conocimiento científico específico creado por las personas autoras; 3) Precisar los indicadores concretos de cada impacto social; 4) Especificar las fuentes concretas; 5) Identificar el impacto social interactivo; 6) Incluir el impacto social potencial.

## Palabras clave

Impacto social, impacto social interactivo, propuestas de investigación, evaluación de las personas investigadoras

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In the current dialogic society, more and more citizens claim their right to science, that is, to benefit from and participate in scientific progress (The United Nations, 1948). This is inevitably transforming science, as more and more research funding agencies, universities and researcher evaluation agencies are looking at how researchers are contributing to improving citizens' lives according to their own goals and desires. For example, the European Commission's (EC) framework program of research was under threat of being eliminated, as many policymakers and citizens wondered whether public investment would be better spent on actions to directly solve social problems rather than on research that could not demonstrate its contribution. However, co-authors of this paper argued that orienting research towards social impact would leverage the public investment in science. This argument not only saved the EC's research programme, but it actually achieved to provide more funding to it.

From then on, many research funding agencies require researchers to prove in the project proposal how their research will contribute to achieving social impact. The EC's Horizon Europe programme is an example, which includes a specific section on "social impact" in the research proposal template (European Commission, n.d.). Agencies that evaluate researchers' and professors' trajectory are also echoing this reality, asking them to show the social impact of both their research and their teaching experience.

In this vein, in the last decades some declarations or reports about how to evaluate research and university staff have gained importance. Here we highlight two of them: CoARA (Coalition for Advancing Research Assessment: CoARA, 2022) and DORA (DORA, 2012). Although with diverse nuances, both declarations advocate for a different use of metrics than what most research or funding agencies are carrying out up to now. They defend the elimination of inappropriate use of metrics and propose new ones other than the Journal Impact Factor, for instance. With these changes in research and researcher evaluation processes, more and more researchers are required to explain and provide evidence on how their research will promote social impact in research proposals and in their CVs.

Nonetheless, the discourse on social impact and the need for researchers to prove they have or will achieve it has generated certain confusion on what social impact actually means. The concept of social impact was co-created by co-authors of this paper in dialogue with research groups and individuals across diverse scientific fields, including Nobel laureates in medicine, physics, and peace, as well as with policymakers and citizens. Social impact refers to improvements led by the results of research which have been published and transferred into different realities and policies. It is important to note that it is not researchers who determine or define what those improvements are, but rather, it is society as a whole who decides and agrees upon the goals towards which humanity should advance in order to improve everyone's lives, like the Sustainable Development Goals (SDG).

When an individual or a research group is required to report on their achieved or potential social impact, a typical mistake is to provide data on how many times their knowledge has appeared in the news or in social media, or how many contexts (such as hospitals or organizations) have included their research results. However, while these are relevant aspects that can contribute to social impact, they are different concepts (i.e. dissemination and transference), and they do not necessarily lead to improving citizens' lives regarding the goals they have agreed upon.

Much research has been conducted on how to achieve and improve social impact. A necessary step to achieve it is co-creation with diverse citizens (An et al., 2023; Utter et al., 2021). The communicative methodology (CM) was co-created 32 years ago with this purpose. Rather than approaching research participants from the top-down, without considering their needs and concerns, the CM engages diverse citizens in an egalitarian dialogue throughout the entire research process. This includes the very beginning of research, that is, defining citizens' priorities to which a specific project will contribute, as well as the process of co-creating knowledge and evidence, and the evaluation of whether and how social impact has been achieved through it. Under the premise that all human beings have the creative capacity for language, and that the diversity of perspectives, realities and narratives leads to excellence, this methodology has proven how valuable those voices are to achieve social impact. In fact, co-creation with citizens is now a requirement of the EC.

The CM has shown a wealth of social impact (in addition to scientific and political impact) in areas such as employment (Brown et al., 2013), quality education, the inclusion and social cohesion of vulnerable groups (Munté-Pascual et al., 2022), or the prevention of gender violence (Puigvert, 2014), among others. In addition to co-creation with diverse citizens, a key to promote such social impact has been to include the transformation of reality responding to citizens' needs and desires as a priority when conducting research. In this way, rather than focusing on existing inequalities in the world, research conducted through the communicative orientation focuses on identifying (Morlà-Folch et al., 2021) or developing successful actions that achieve social impact in diverse contexts, analyzing how they can be replicated in more contexts to promote further social impact. An example are Successful Educational Actions, implemented in more than 15.000 contexts worldwide and promoting social improvements desired by the communities themselves and in line with SDG (Ruiz-Eugenio et al., 2023).

Further, researchers who developed the CM have more recently created other methodologies framed within the CM that aim at identifying citizens' concerns, interactions with science, and social impact in social media, such as SISM-Social Impact in Social Media (Pulido et al., 2018). Social media platforms provide researchers with a live picture of citizens' main concerns, priorities and interests which researchers need to tackle. Indeed, citizens increasingly use social networks to share, discuss or demand scientific evidence, for instance on health-related issues (Francia et al., 2019; van der Tempel et al., 2016). SISM (Lopez de Aguilera et al., 2020) allows researchers to capture the voices of diverse citizens, including those who have been traditionally marginalized from research agendas, on what they have to say regarding the relevance of research goals. Researchers from different fields have used SISM to identify citizens' interests still not covered by research, the presence of scientific evidence on different relevant issues, or the social impact of research (Pulido et al., 2018), among others. It has also served researchers to identify social media activists who, when provided with scientific evidence of social impact, disseminate such evidence so that it reaches further communities and citizens (FECYT, 2021). Through this methodology, scientists are able to see the extent to which citizens are using the existing scientific evidence and whether and how the use of such evidence is improving their lives. In other words, SMA provides researchers with a mirror to see whether and how the research we have contributed is achieving potential or actual social impact.

Importantly, orienting research towards social impact not only improves society. Such orientation towards improving citizens' lives inevitably improves researchers' scientific production and scientific and academic institutions, making science more excellent. An example can be found in sexual harassment in universities. For decades, Spanish universities had been governed through a feudal system in which frequently researchers were not hired and promoted based on the quality of their scientific production, but rather on the complicity they showed with sexual harassments in the form keeping silence and attacking anyone who dared to break it (Melgar et al., 2021). However, thanks to research conducted through the CM, the Spanish parliament introduced two reforms that forced universities to recognize and tackle sexual harassment and to use scientific and meritocratic criteria to evaluate professors and researchers (Bordanoba-Gallego et al., 2023).

The need to include social impact in essential criteria to evaluate research proposals and researchers' trajectory has therefore generated important and necessary improvements in society and in science, as evidenced by the literature reviewed in this section. However, no research to date has examined in a systematic way how to demonstrate the social impact that researchers have or will achieve in their research proposals and CVs. To contribute to filling this gap, this paper presents the first scientific guidelines with specific criteria on how to write social impact in our research proposals and CVs.

## Methodology

Coauthors of this article have co-lead worldwide the elaboration of the concepts of social impact and co-creation then its development in the main research programmes such as Horizon Horizon Europe. Besides using diverse qualitative and quantitative methodologies, they have created new ones directly oriented to social impact like Social Impact of Social Media. These developments have been achieved in dialogue with various groups and individuals across diverse scientific fields, including Nobel laureates in medicine, physics, and peace. All the interviews, conversations, studies, work sessions have contributed to create the knowledge developed in this article. The concrete contribution of this paper is the meta-analysis of all publications of this knowledge in order to identify and establish the criteria on how to write social impact in research proposals and CVs. We have analyzed four documents of relevance when it comes to defining and assessing researchers' social impact:

The Social Impact chapter of the *Monitoring the impact of EU Framework Programmes* document (Flecha et al., 2018). This document has served as the guideline for monitoring social impact in research proposals from one of the most important research programmes worldwide, Horizon Europe. These key criteria of social impact have been applied in the evaluation of research projects in all sciences. The author of this chapter is the first scientist worldwide in the Social Impact category (Scholar, n.d.) and has created this concept that has later been applied in diverse contexts.

Agreement on reforming research assessment by the Coalition for Advancing Research Assessment: CoARA (Coalition for Advancing Research Assessment: CoARA, 2022). This July 2022 agreement advocates for a responsible use of metrics in assessment of research, also including other outputs that could account for the impact or quality of research. Although in



certain contexts the agreement has been presented as being against metrics to evaluate research, no sentence against metrics can be found in the text; only criticizes the inappropriate use of metrics. Rather, the agreement calls out the inappropriate use of certain metrics, such as those based on journals, and argues for the need to include other diverse metrics.

San Francisco Declaration on Research Assessment, DORA. The DORA Declaration (DORA, 2012) presents arguments to improve research assessment, criticizing to base it on the Journal Impact Factor of the journals where the research is published. One of the main recommendations is to focus on the articles' merits instead of on the journals' metrics. Again, the DORA declaration has been presented in some contexts as being against the use of metrics in research assessment. As CoARA, not a single sentence has been found defending the elimination of metrics from such assessment in the document.

The Spanish National Agency for Evaluation and Accreditation's (ANECA) new criteria for the evaluation of university staff's six-year terms (*Accreditaciones y sexenios*, n.d.). Since 2023, the Spanish Agency has adhered to the DORA Declaration and the CoARA agreement, among others, and will include social impact as one of the parts to evaluate research outcomes of the candidates.

The main criteria for choosing the first three of those documents has been their rigor of their inclusion of the most relevant scientific knowledge in the issue of the social impact of research. The criteria to include the fourth document is to have a practical example of how agencies evaluating researchers elaborate their criteria. Besides, other criteria have been: their contribution to the dialogue on how to measure and assess the potential or actual social impact of researchers and/or their research proposals; and the relevance for the immediate and long-term future of researchers or research groups to understand them in order to successfully fulfill the newly required criteria.

Co-authors of this paper have worked in co-creation, continuously working all in the same ongoing text. They have read through each of the four documents several times in order to identify key messages and orientations related to the social impact of research. After several readings, the following categories of analysis have been established, which respond to criteria that a) help clarify what social impact is (including indicators and sources) and, therefore, what researchers should look for when demonstrating they have achieved or will potentially achieve social impact; b) help identify social impact and what evidence and sources to use to demonstrate it; and c) help gather evidence demonstrating that, although social impact has not yet been achieved, there is potential for it.

## Results

After analyzing the aforementioned documents, six general orientations or criteria have been developed to help researchers write and provide evidence on their actual or potential social impact in their research proposals and CVs.

### 1) To Avoid Confusing Social Impact with Dissemination or Transfer

After reviewing scientific and grey literature on worldwide indicators and approaches to measure the social impact of research, the *Monitoring the impact of EU Framework Programmes* document found that many researchers, agencies and organizations use social impact to refer to things other than social impact. As the document states, “some indicators are presented as if they were social impact when they are indicators which capture the dimension of dissemination or transference”. (Flecha et al., 2018, p. 52)

The document further defines the three distinct concepts in order to clarify what each of them refers to:

1. Dissemination means to spread the knowledge created by research to citizens, companies and institutions.
2. Transference refers to the use of this knowledge by citizens, companies and institutions.
3. Social impact refers to the actual improvements resulting from the use of this knowledge in relation to their own goals (like the United Nations Sustainable Development Goals). (Flecha et al., 2018, p. 52-53)

As the document states, most reports on social impact that individuals, institutions and consulting companies are making are based on this confusion. In order to clarify this confusion, we here expose a hypothetical but recurrent case that shows this mistake. A consulting company presents as an indicator of social impact the number of times that the medical products of another company have been advertised by public campaigns. However, this would only be an indicator of the dissemination of their research or products. This same company could present the number of hospitals that are using the medicines they have created as an indicator of their social impact. Again, this would only indicate the transference of their created knowledge or products. It must be taken into account that the application of their medicines could have negative consequences. Finally, if the positive outcomes stemming from the products they have created are used by patients within hospital settings, this would be a tangible indicator of their social impact.

Still, it is common for many researchers to provide evidence on how citizens have used scientific knowledge as if it were evidence of social impact. Some institutions also request the inclusion of negative effects, that is, the worsening of citizens' lives, but that is not social impact. Nonetheless, the Monitoring document clarifies that social impact can only be associated with positive effects:

A critical issue here is whether the uptake of scientific results by citizens is a guarantee for social impact or not. The use of the research findings is a transference to society, which could lead to positive, no effects or even negative effects. Social impact needs to be identified with improvements or positive effects (Flecha et al., 2018, p. 57).

Therefore, a necessary first step when writing the sections on social impact in research proposals or CVs is to distinguish whether they have evidence of their knowledge being spread or used by citizens, from whether such spread and use has contributed to improving their lives.

## **2) To Avoid Confusing the Social Impact of the Specific Scientific Knowledge Created by the Authors with the Social Impact of Actions that Have Not Used this Knowledge**

When writing about and demonstrating researchers' social impact in research proposals and CVs, it is also important to distinguish between improvements generated by their scientific knowledge or by other factors (Flecha et al., 2022). Researchers developing vaccines need to find evidence of individuals or groups who have used their vaccine and whose health has improved after using it. If such individuals' or groups' health has improved but have not used those researchers' vaccines, then they cannot claim it as a social impact of their scientific knowledge. Similarly, if researchers have developed educational actions and want to collect evidence of the social impact of such actions, they will need to look at data from the schools in which such actions have been implemented, and if they find evidence of improvements, then they can use it to demonstrate the social impact of their educational actions. However, they cannot use evidence from schools that have shown improvements and which have implemented other educational actions not developed by those researchers.

In order to understand better what to do on social impact in each concrete context and case, it is useful to take what is being done with scientific impact in this context as one of the references. Almost always, researchers' CVs include the scientific impact already obtained in the past, such as the articles and books already published and the citations they have had. In a similar manner, researchers should include the social impact already obtained in the past with the maximum of qualitative and quantitative evidence, including the voices of the target stakeholders and citizens. Increasingly, researchers' CVs also include their potential scientific impact, such as the articles and books they expect to publish in the near future. In the same manner, researchers' CVs should include the social impact they expect to obtain in the near future. In this sense, the Monitoring document provides guidance on evaluating the progress researchers are making towards potentially achieving social impact in the future:

However, to achieve the ultimate social impact, we need to monitor and evaluate the progress of the research and innovation activities towards this objective, and therefore, we have in Indicators of Progress on Social Impact of Research and innovation activities the indicators to evaluate different stages of this progress (Flecha et al., 2018, p. 44).

## **3) To Precise the Concrete Indicators of Each Social Impact**

The use of indicators to monitor and assess whether researchers have achieved social impact is essential as a way of gathering evidence of such social impact. Among others, these indicators should take into account three main bases.

On the one hand, they should refer to the SDGs and to the objectives of the particular context (country, region, institution, discipline) in which their research results have been used. Indeed, the Monitoring document emphasizes that it is not researchers who should define what improvements we ought to contribute to, but citizens themselves:



Part of the research and innovation activities should contribute to the objectives that have been democratically defined by society (e.g. missions, SDG) and not by researchers. This approach implies a major advance for science and for society: putting scientific knowledge at the very service of society. For example, United Nations Sustainable Development Goal 5 (SDG5), aiming at “Gender equality” defines what targets/indicators are needed to reach social impact to “Achieve gender equality and empower all women and girls.” Thus, the Social Impact Indicators refer to the indicators aiming at achieving this objective (Flecha et al., 2018, p. 43).

When gathering evidence, researchers need to make sure that their research is advancing in some ways to the goals that society democratically agrees on. Researchers cannot ignore those goals, nor define their own goals arguing they consider them beneficial or positive. As the Monitoring document explains, science needs to be at the service of society, and researchers’ social impact therefore responds to such service.

Once the clear goal as defined by society and by the specific context is identified, researchers should take into account the indicators that can be used to demonstrate their social impact. The indicators used should be those on which there is consensus among international organizations and the international scientific community. The Monitoring document created the Key Impact Pathways (KIP), a set of indicators to “account for both, the progress on Social Impact of research as well as the already achieved Social Impact” (p. 44). The KIP directly respond to humanity’s goals, and they help researchers present - as well as plan for - their social impact through a clear picture of how their research is making specific steps in the pathways towards achieving citizens’ shared goals.

The Monitoring document details four KIP: 1) addressing global challenges, 2) achieving R&I missions, 3) engaging citizens, and 4) supporting policymakers. The first two refer to improvements related to official shared goals among citizens. The third one refers to involving citizens in the co-creation of scientific knowledge, considering their insights and reflections throughout the entire research process as a necessary step for achieving social impact. This goes in line with CoARA’s principle of diversity, inclusiveness and collaboration, stating that “Research assessment practices should induce a research culture that recognises collaboration, openness, and engagement with society” (p. 12). The last KIP is related to policy impact, which is one of the transferences which can lead - or not - to social impact. Furthermore, the document provides a specific set of indicators for each KIP to provide supporting evidence of social impact achieved in the short-term, medium-term, and long-term.

Third, researchers should be able to identify, to the extent possible, the concrete social impact generated by their scientific knowledge, separating it from that obtained by other factors. Both quantitative and qualitative evidence that respond to the KIP indicators are valid to demonstrate social impact. Several sources can be used as data to prove social impact:

Data needed could be extracted from citizens’ and CSOs’ share in the social media, publications, project proposals and other sources about beneficiary entities and about activities, programmes, products and innovations (...) Evidence of the claimed results and achievements. Policies citing or based on research and innovation projects, independent documentary such as reports or documents produced by governmental bodies, scientific articles explaining the influence of the research and innovation activities over the changes produced, impacts reported in social impact repositories, or social networks analytics (Flecha et al., 2018, p. 73).

As the document states, the evidence supporting social impact and the sources to find such evidence can be diverse, from SISM to scientific articles or government reports, among others. In many cases it is difficult to determine the extent to which such improvements are a result of researchers' scientific knowledge. To clarify this, the Monitoring document refers to the replicability and sustainability of the improvements in different contexts, which would also count as evidence of social impact:

Number of contexts where improvements based on research and innovation results have been replicated and are sustainable: Specifying these contexts, their scope and people reached, if applicable (Flecha et al., 2018, p. 73).

#### **4) To Specify the Concrete Sources for Obtaining Qualitative and Quantitative Data of Each Social Impact**

But how can researchers actually collect such evidence? Currently, this is the most difficult orientation because both society and science are new in this matter. There are already diverse systematic repositories of scientific impact, such as Google Scholar and many others; this is a result of decades of advancements in this field.

To enable the development of systematization in the field of social impact similar to what has already been achieved in the realm of scientific impact, it is necessary to consider three criteria. First, it is necessary to identify the individuals or organizations that have communicated, either publicly or privately, the social impact of scientific knowledge. These communications are sometimes made without knowing who the researchers who have created such scientific knowledge are, sometimes even without being aware of the existence of scientific knowledge itself, but with knowledge of its applications.

For instance, associations of elderly people evaluate and publish on social media or on their website the health benefits they have gained from Covid vaccines without knowing who developed those vaccines and what mRNA is. Women's movements and individuals write in social media the benefits of a new law on gender violence without knowing it is based on scientific research. Individuals and groups value purified water without knowing the contribution of scientific research in the reverse osmosis process, which uses a semi-permeable membrane to remove impurities and contaminants from water. Another example from engineering is the citizens who choose to put solar panels in their homes in order to have a more sustainable house. Many of them do not know who invented them, but they do know the benefits this knowledge has had in their lives.

Regardless of their awareness that such impact comes from science, citizens' voices and narratives are necessary to collect evidence of social impact:

While scientific impact evaluation is more recently conducted by the research community, the evaluation of social and policy impact should count with active citizenship participation. It will be possible to know more precisely whether the human papillomavirus (HPV) vaccine or an annual gynecologist exam have more social impact if the voices of citizens, their experiences and narratives are considered (Flecha et al., 2018, p. 43).

There are different ways to collect such communications and narratives, which is where the second criteria comes. It is necessary to use SISM of all relevant social networks. Indeed, an increasing part of the needed information from citizens is in social networks, and it is easy and cheap to identify it through SISM. The Monitoring document provides detailed information on how SISM can be conducted to collect citizens' voices on how they are benefitting from researchers' scientific knowledge, regardless of their awareness or lack thereof:

Social media analytics (both bottom up and top down): 1) Monitoring how the societal impact evidence provided by beneficiaries are shared in social media, through monitoring page views, keywords and other identifiers related to societal impact evidence and results; 2) Monitoring the social media data of results and data analysis to identify the societal impact evidence provided by citizens, through data mining and machine learning (Flecha et al., 2018, p. 63).

The new Social Impact Science Platforms (*Sappho - Scientific evidence platform Gender*, n.d.) are a key resource where an increasing and diverse number of researchers are collecting evidence of their social impact. Researchers introduce their scientific articles in existing posts in the platforms or create new ones that respond to citizens' needs and concerns. Introducing their scientific articles in the platforms would not count as evidence of social impact, but it generates dialogues with citizens, and such dialogues include evidence of how their lives have been improved thanks to such scientific knowledge. These dialogues occur, researchers can use them as evidence for their social impact in their research proposals or CVs.

Third, it is necessary to assess the different data and sources that researchers have to determine the best ones they can use to provide evidence of their social impact. In doing so, it is necessary to significantly prioritize the most relevant data and sources. For example, a scientific publication in a journal indexed in Web of Science or Scopus, validated by the international scientific community, demonstrating the social impact of scientific knowledge is more valuable than the opinion of an individual, organization or government. Of course, this is not to be confused with the metrics of the journal in which the scientific knowledge has been published, which the CoARA document criticizes: "Growing evidence shows that current assessment processes that rely on publication- and journal-based metrics are prone to multiple biases." (CoARA, 2022, p. 10).

It is important to note that, while assessment agencies and organizations need to move away from journal-based metrics, the peer review process continues to be one of the main ways of assessing the scientific rigor and the social impact of the scientific knowledge created. This peer review in the case of social impact includes (even more than in scientific impact) not only the first peer review of a few evaluators in order to decide its publication or not, but the open peer review among readers of the publication and all citizens' views about this impact. Indeed, DORA advocates for peer-reviewed articles as the main source for research assessment: "Outputs other than research articles will grow in importance in assessing research effectiveness in the future, but the peer-reviewed research paper will remain a central research output that informs research assessment" (DORA). Unlike other types of documents, such as opinion papers, peer-reviewed articles are looked at by the international scientific community, making it easier to note mistakes and make corrections when needed.

##### **5) To Identify Not Only the Direct Social Impact but Also the Interactive Social Impact**

When the use of scientific knowledge improves the health or happiness of one individual (direct social impact) it frequently also improves the lives of the individuals who interact with them, such as family or friends (Flecha & Soler-Gallart, 2016). In many cases, even though the scientific knowledge researchers create is directed at a specific group of individuals, the improvements generated among them promote improvements among the individuals they interact with.

As an example, Dialogic Literary Gatherings (DLG) have been identified by the international scientific community as a Successful Action due to the social impact they have generated in diverse contexts and with diverse groups of individuals. One of such groups includes persons in a mental health unit. The implementation of the DLG in such a context aimed at providing health and wellbeing benefits to the patients, a social impact which has already been published in scientific journals. However, in addition to the social impact among the patients themselves, researchers discovered that the patients' families' lives had also improved after their loved ones started participating in the DLG. Therefore, although the DLG in this particular case has not been implemented with patients' families, such successful action has demonstrated to have interactive social impact among the people who interact with the DLG participants. In the same manner, citizens receiving benefits from one particular research generate benefits in members of their families, colleagues in the workplaces and friends, such as preventing the elderly from getting Covid, or victims becoming survivors of gender violence.

#### **6) In Case of Not Having Enough Demonstrated Social Impact, the Potential Social Impact Should be Included**

Some researchers might find it difficult to find evidence that demonstrates their social impact; in some cases they will be able to do it in a research proposal, but not when fulfilling their own CV. In such cases, they should provide evidence and arguments of the potential impact their scientific knowledge will produce in the future. Although, as stated previously, dissemination and transfer are not the same as social impact, they are necessary steps that might lead to social impact in the future. Therefore, researchers might provide evidence of how their scientific knowledge has been spread among citizens and used by them as a way to provide arguments for the potential social impact they will achieve in the medium- and long-term - always making sure, of course, they do not mistake such evidence with evidence of actual social impact. Indeed, as the CoARA document specifies, it is also important to "Recognise the contributions that advance knowledge and the (potential) impact of research results" (CoARA, 2022, p. 3).

In the case of research proposals, when the research project has not yet started, it is hard to provide specific evidence of the social impact the research will achieve. However, the potential social impact can be justified or argued by providing evidence of the social impact researchers have obtained in the past:

It is possible to evaluate the expected scientific impact of a proposal through previous publications of the members of the consortium, similar procedure is increasingly used to foresee the expected social impact. Efforts for tracing back the social impact of someone's current research and innovation activities represent an investment for being successful in future proposals, as he or she can include this information in their expected impact sections (Flecha et al., 2018, p. 44).

Furthermore, the Monitoring document mentions the concept of RESI: Research Enabling Social Impact. There are studies that have not provided solutions to social needs and problems, but which have been necessary and have given way to further studies that have found such solutions. The Monitoring document provides an example of this:

The 2008 Medicine Nobel laureate Harold zur Hausen initiated in 1960 his research on human papillomavirus causing cervical cancer. Most of his early attempts to discover the processes that affected cells to degenerate in cervical cancer failed to demonstrate how the virus was causing this type of cancer. The social impact achieved by this Nobel laureate is not only consequence of the last discoveries of his research, but also all the previous ones. Zur Hausen would have not made his discoveries without his previous research. This is what 'Research Enabling Social Impact' refers to<sup>12</sup>. 'Research Enabling Social Impact' consists of the different studies, from different researchers and topics, that have been essential to finally conduct a concrete research that has specifically achieved social impact (Flecha et al., 2018, p. 44).

Therefore, researchers, especially those who have not yet achieved social impact, should find diverse pieces of evidence that suggest that their scientific knowledge is likely to achieve social impact in the future.

## Discussion

In the current turn of research programmes in all sciences towards achieving social impact, researchers are put in front of a yet not sufficiently known nor researched task. Many researchers need guidance on how to demonstrate their achieved or potential social impact in research proposals and CVs. This article helps clarify the main criteria to report the Social Impact of research. Some readers of this article will think they still need more clarification in order to know precisely what they need. It is necessary to be aware that the scientific community is still in the first stage of this process and has not developed yet the necessary instruments to enable complete clarification. The good news is that this development depends on scientists and should be done mostly by them. For instance, they are the key ones to develop more and more the Social Impact Science Platforms as an excellent way to clarify their social impact. Meanwhile, hopefully, most readers will focus more on the contributions this publication makes to their new task than on the points that cannot be clarified in the current stage of this field.

As the results of this article show, there is still a wide confusion around the concept of social impact and what it actually is and is not. The concept of social impact - and its distinction from other related but different concepts - has been developed in co-creation with citizens, who are the ones that should benefit from science. It is citizens who decide democratically what

improvements they want in their lives, such as the SDG, and researchers need to use such goals as a reference to demonstrate, as well as plan and advance, our social impact. Researchers should use social media, in addition to other quantitative and qualitative methods, to collect citizens' communication on how they have benefitted from their scientific knowledge. However, as a step further, researchers can also facilitate citizens' dialogues around their scientific knowledge.

Last, this article discusses two important aspects researchers should take into account when demonstrating their social impact: interactive social impact and potential social impact. The former has already been demonstrated, for instance, through the Dialogic Literary Gatherings, a Successful Action implemented in mental health units, among other contexts. Recent findings have shown that even individuals who have not participated in them have benefitted from their relatives' participation (Zubiri-Esnaola et al., 2023). Further, researchers can use evidence of their past social impact, or of citizens' use of their scientific knowledge, to argue that their research will likely achieve social impact in the future.

How those criteria improve science and society (including sexual harassment) has already been researched. The link between meritocracy and overcoming feudal relations within universities, including sexual harassment, has been established. Being subjected to objective criteria and metrics, even if these were imperfect, freed many people from submission to power relations in universities. Therefore, the elimination of metrics for assessing research represents an open door to return to when harassers in power positions hired and promoted university personnel based on their submission to them or not.

The discussion should focus on the potential social impact of scientific research. The inclusion of social impact in research proposals and researchers' CVs fit in the new priorities of the current dialogic society for science: social impact and co-creation. This shift moves science and scientists to focus more than ever on their contributions to improving the lives of citizens and to engage in dialogues with their diverse voices to evaluate and reorient their activities.

Without clear guidelines that conform to these priorities, many individual researchers and research groups consider this priority as a new trouble to develop their work. The orientations provided by this research are the first scientifically validated publication of this kind to help scientists and groups undertake this new task. This trend is not going to stop, scientists are now deciding between maintaining their activities as usual or taking on this trend for which they were not trained before. The former will be progressively replaced by others more motivated to learn how to fit this priority and the latter will contribute their scientific experience to these new developments.

The six orientations obtained with this research provide all researchers with more freedom to decide between those two different options. If they do not have positive expectations about their capacity to do so, they will have to take the second option, but not because it is the one they prefer, but the only one they believe they can take. The orientations are scientifically grounded, but at the same time they are understandable enough to make it easier for them to comply with the social impact in their proposals and CVs because they have been in dialogue with diverse scientists from different fields of sciences.



Further research in particular contexts will clarify how to proceed in specific calls, countries, disciplines and institutions. Meanwhile, these general orientations should be recreated by each individual researcher or research group taking into account the concrete context and the competence of the evaluators in social impact.

### **Conclusion**

The scientific literature has highlighted the growing relevance of the social impact of research. The guidelines offered in this study are the first scientifically validated publication with concrete orientations which help scientists and research groups undertake this new task. The six general guidelines presented here help researchers provide evidence on the past, actual or potential social impact of their research proposals and CVs. These new requirements improve science and society, in addition to overcoming feudal relationships and sexual harassment in the academia. Specifically, this change moves science and scientists to dialogue with the diverse voices of society to evaluate and reorient their activities, focusing their contributions on improving people's lives. In addition, the inclusion of social impact in research proposals and in researchers' CVs is in line with social impact and co-creation, two of the new priorities of science and society.

## References

- Acreditaciones y sexenios*. (n.d.). Aneca Web. Retrieved November 26, 2023, from <https://www.aneca.es/acreditaciones-sexenios>
- An, Q., Sandlund, M., Agnello, D., McCaffrey, L., Chastin, S., Helleday, R., & Wadell, K. (2023). A scoping review of co-creation practice in the development of non-pharmacological interventions for people with Chronic Obstructive Pulmonary Disease: A health CASCADE study. *Respiratory Medicine*, 211, 107193. <https://doi.org/10.1016/j.rmed.2023.107193>
- Bordanoba-Gallego, L., Serradell, O., Morlà-Folch, T., Ruiz-Eugenio, L., & Pulido, C. (2023). Feudalism, Meritocracy and Sexual Harassment. *Social and Education History*, 12(2). <https://doi.org/10.17583/hse.11788>
- Brown, M., Gómez González, A., & Munté Pascual, A. (2013). Procesos dialógicos de planificación de los servicios sociales: el proceso de cambio en los barrios de La Milagrosa y La Estrella (Albacete). *Scripta Nova: Revista Electrónica de Geografía y Ciencias Sociales*, 17(427(6)). <https://dialnet.unirioja.es/servlet/articulo?codigo=4817122&info=resumen&idoma=SPA>
- Coalition for Advancing Research Assessment: CoARA. (2022). *Agreement in reforming research assessment*. CoARA. <https://coara.eu/agreement/the-agreement-full-text/>
- DORA. (2012). *San Francisco Declaration on Research Assessment*. DORA; The Declaration on Research Assessment (DORA). <https://sfдора.org/read/>
- European Commission. (n.d.). *Horizon Europe*. Research and Innovation. Retrieved December 2, 2023, from [https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe\\_en](https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en)
- FECYT. Fundación Española Para la Ciencia y la Tecnología. (2021). *Towards Inclusive Science Communication: Reflection and Successful Action*. FECYT.
- Flecha, R., & Soler-Gallart, M. (2016). *Interactive Social Impact*. Creative Commons. <https://archive.org/details/interactive-social-impact>
- Flecha, R., Radauer, A., & van den Besselaar, P. (2018). *Monitoring the impact of EU Framework Programmes*. European Commission. <https://op.europa.eu/en/publication-detail/-/publication/cbb7ce39-d66d-11e8-9424-01aa75ed71a1>
- Flecha, R., Saso, C. E., Torras-Gómez, E., & Joanpere, M. (2022). The time of dialogic sociology. *International Sociology*, 37(4), 457-474. <https://doi.org/10.1177/02685809221111890>
- Francia, M., Gallinucci, E., & Golfarelli, M. (2019). Social BI to understand the debate on vaccines on the Web and social media: unraveling the anti-, free, and pro-vax communities in Italy. *Social Network Analysis and Mining*, 9(1), 46. <https://doi.org/10.1007/s13278-019-0590-x>
- López de Aguilera, G., & Torras-Gómez, E. (2020). Editorial: Contributions from Social Sciences to COVID-19 Pandemic. *International and Multidisciplinary Journal of Social Sciences*, 9(2), 102–106. <https://doi.org/10.17583/rimcis.2020.6160>

- Melgar, P., Geis-Carreras, G., Flecha, R., & Soler, M. (2021). Fear to Retaliation: The Most Frequent Reason for Not Helping Victims of Gender Violence. *International and Multidisciplinary Journal of Social Sciences*, 10(2), 31–50. <https://doi.org/10.17583/rimcis.2021.8305>
- Morlà-Folch, T., Aubert Simon, A., de Freitas, A. B., & Hernández-Lara, A. B. (2021). The Mondragon Case: Companies Addressing Social Impact and Dialogic Methodologies. *International Journal of Qualitative Methods*, 20, 16094069211058614. <https://doi.org/10.1177/16094069211058614>
- Munté-Pascual, A., Khalfaoui, A., Valero, D., & Redondo-Sama, G. (2022). Social Impact Indicators in the Context of the Roma Community: Contributions to the Debate on Methodological Implications. *International Journal of Qualitative Methods*, 21, 16094069211064668. <https://doi.org/10.1177/16094069211064668>
- Puigvert, L. (2014). Preventive Socialization of Gender Violence: Moving Forward Using the Communicative Methodology of Research. *Qualitative Inquiry: QI*, 20(7), 839–843. <https://doi.org/10.1177/1077800414537221>
- Pulido, C. M., Redondo-Sama, G., Sordé-Martí, T., & Flecha, R. (2018). Social impact in social media: A new method to evaluate the social impact of research. *PloS One*, 13(8), e0203117. <https://doi.org/10.1371/journal.pone.0203117>
- Ruiz-Eugenio, L., Soler-Gallart, M., Racionero-Plaza, S., & Padrós, M. (2023). Dialogic literary gatherings: A systematic review of evidence to overcome social and educational inequalities. *Educational Research Review*, 39, 100534. <https://doi.org/10.1016/j.edurev.2023.100534>
- Sappho - Scientific evidence platform Gender*. (n.d.). Sappho - Scientific Evidence Platform Gender. Retrieved June 25, 2022, from <https://socialimpactsience.org/gender/>
- Scholar, G. (n.d.). *Social Impact category*. Google Scholar. Retrieved December 2, 2023, from [https://scholar.google.com/citations?view\\_op=search\\_authors&hl=en&mauthors=label:social\\_impact](https://scholar.google.com/citations?view_op=search_authors&hl=en&mauthors=label:social_impact)
- The United Nations. (1948). *Universal Declaration of Human Rights*. Retrieved December 2, 2023, from <https://www.un.org/en/about-us/universal-declaration-of-human-rights#:~:text=Article%2027,scientific%20advancement%20and%20its%20benefits>.
- Utter, A., White, A., Méndez, V. E., & Morris, K. (2021). Co-creation of knowledge in agroecology. *Elementa: Science of the Anthropocene*, 9(1), 00026. <https://doi.org/10.1525/elementa.2021.00026>
- van der Tempel, J., Noormohamed, A., Schwartz, R., Norman, C., Malas, M., & Zawertailo, L. (2016). Vape, quit, tweet? Electronic cigarettes and smoking cessation on Twitter. *International Journal of Public Health*, 61(2), 249–256. <https://doi.org/10.1007/s00038-016-0791-2>
- Zubiri-Esnaola, H., Racionero-Plaza, S., Fernández-Villardón, A., & Carbonell, S. (2023). “It was Very Liberating”. Dialogic Literary Gatherings Supporting Mental Health Literacy. *Community Mental Health Journal*, 59(5), 869–880. <https://doi.org/10.1007/s10597-022-01071-0>