

Inclusiveness in research and innovation settings

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This is a draft entry. The final version will be available in Elgar Encyclopedia of Innovation Management edited by Eriksson, P., Montonen, T., Laine, P-M, & Hannula, A., forthcoming in 2025, Edward Elgar Publishing Ltd. <https://doi.org/10.4337/9781035306459>

Abstract

This entry highlights the critical transition from a quantitative pursuit of gender equality to a focus on qualitative inclusion within the research and innovation (R&I) domains. Acknowledging that according to Unesco, women occupy merely one-third of research positions globally, this entry emphasises the significance of diversifying research and innovation to mitigate societal inequalities and biases in technologies, particularly those stemming from a predominantly masculine research culture. It underscores the necessity of addressing structural and cultural barriers in the field of Science, Technology, and Innovation (STI) to create a more inclusive and diverse working culture, ensuring that women and other minorities are retained and empowered within R&I.

Keywords: inclusiveness, gender, R&I content, research funding

Outline of the topic

Gender inequalities persist in science, technology, and innovation (STI) fields, often making research and innovation content non-inclusive and biased. This entry explores the distinction between quantitative equality and qualitative inclusion in the context of research and innovation (R&I). It highlights the significance of qualitative inclusion and presents practical measures to enhance inclusiveness in R&I. It argues for the need to address these issues by promoting qualitative inclusion in R&I. The integration of qualitative equality approaches into R&I institutions and research projects is proposed as a means to identify and address exclusion and gender bias in STI.

Conceptual overview and discussion

The increasing importance of innovations and technologies in addressing global societal challenges necessitates diverse, comprehensive, and often radical or revolutionary solutions. Novel solutions are required, not only to create economic growth but also to solve vicious problems such as climate change or poverty. However, the limited perspective of STI on societal dimensions hinders its ability to effectively respond to these challenges. Gender inequalities persist in STI fields, resulting in non-inclusive and biased research and innovation content. The historical construction of science, technology, and masculinity reinforces gender insensitivity within STI, necessitating a shift in the normative culture.

Although this bias is acknowledged, previous attempts to enhance gender sensitivity in R&I content have predominantly focused on quantitative equality, neglecting social, cultural and normative aspects. The focus has been on the quantitative impact of gender for innovation efficiency or improving the number of women and female leadership in research and innovation. The prioritization

of quantitative equality over qualitative inclusion has continued the STI fields to exhibit gender bias and exclusion.

The quantitative gender equality follows the understanding of gender neutrality, which focuses on achieving equal opportunities while not considering the gendered nature of structures, organisations and institutions. In fact, Wajcman outlines that quantitative equality approaches in STI fields are insufficient, as the problem of gender inequality and insensitivity of science and technology ‘does not lie with women,’ but in fact how ‘technoscience and its institutions can be reshaped to accommodate women’.

Following the feminist critique of science, it is argued that addressing gender insensitivity in R&I requires confronting and transforming the prevailing culture of hegemonic masculinity within STI fields. This entails challenging male normativity and positionality, which not only marginalises women and other groups but also limits alternative perspectives on masculinity. This narrow perspective not only affects the recruitment and retention of female and minority research personnel but also restricts the questions asked, data collected, and societal impacts considered.

To foster inclusiveness, qualitative equality approaches should be integrated into R&I institutions and research projects. This approach involves identifying, understanding, and analysing how gender bias operates within R&I processes, outcomes, and dissemination, as well as how, for example, reviewers of research proposals assess aspects of gender equality and inclusivity. Research funding plays a pivotal role in promoting the gender dimension in R&I content.

Application: Instruments for Inclusivity

Research funding is a vital policy instrument for driving change in research and innovation practices. The European Union Horizon Europe research and innovation funding programme has aimed to incorporate gender in multiple areas since 2022, including the Gender Equality Plan (GEP) of participating organisations, integration of gender dimension in R&I content, and improving gender balance in research teams, expert groups, and evaluation committees. Among these, only the GEP is currently a mandatory criterion to access Horizon Europe funding, but its focus is primarily on quantitative equality. This mismatch demonstrates that current and past gender interventions in the EU’s research policy and framework programs (i.e., Horizon 2020 and Horizon Europe) have primarily focused on advancing quantitative gender equality within research fields.

Enhancing qualitative inclusion through formal methods has been limited. Interventions and approaches of qualitative equality, like gender mainstreaming in R&I institutions and organisations, consider broader gendered structures and cultures that contribute to gender insensitivity in organisational settings. The gender mainstreaming addresses among other things lack of a gender dimension and lack of intersectional gender understanding in R&I content. For instance, the Canadian Institute of Health Research has been at the forefront of promoting qualitative inclusivity in research funding by requiring applicants to integrate sex and gender into research design, methods, analyses, interpretation and dissemination. Training is provided to applicants and reviewers on how to achieve this, and a justification is required if sex and gender analysis is deemed inappropriate.

Similarly, the EU Horizon Europe’s voluntary requirements include addressing organisational culture and integrating the gender dimension into R&I content. These aspects offer important pathways to enhance gender and inclusiveness in research and innovation. To improve societal responsiveness of science and research, gender and inclusion requirements should be made mandatory.

Furthermore, ensuring qualitative inclusion entails making qualitative gender assessment a mandatory component of research proposals and improving the capabilities of reviewers and research personnel to assess gender, inclusivity, and intersectionality. Funding organisations can reinforce qualitative gender assessment by incorporating it as a mandatory element in research proposals and offering appropriate training for reviewers and applicants. Establishing a pool of gender and inclusion experts to assess research proposals can also ensure the quality of the review. Moreover, comprehensive guidance and capacity building should be provided at all levels of research to promote inclusivity assessments.

As part of research funding, agencies can require projects to conduct pre- and post-project assessments to ensure gender balance and encourage reflection on inclusivity and gender dimensions throughout the research process. These assessments should cover various stages, from formulating research questions and designs to analysing results and considering societal impacts. Mandatory positionality assessments (a standard practice in social science ethics) which press researchers to think critically how their socio-economic background, gender, ethnicity, race and age influence their research, can also be incorporated to enhance inclusivity.

Critical summary

While quantitative equality measures are crucial for enhancing the overall diversity of research teams, addressing qualitative inclusiveness in R&I requires additional measures. These measures include mandatory gender assessment in research proposals and funding calls, building reviewing capabilities at all levels of research and providing gender education and training for research personnel.

Challenges may arise, particularly in promoting gender education in core fields of science and technology. Research funding requirements should extend beyond gender balance in research teams to encompass assessments of qualitative inclusiveness in research and innovation content.

Further readings

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