



CITIZEN ENGAGEMENT IN RESEARCH

FRQ REFERENCE FRAMEWORK

Citizen engagement in science, or the active and meaningful participation in research of individuals who do not usually engage in scientific research, is part of a broad open science movement. It integrates many existing forms of participative science, which may be referred to as citizen science, action research, collaborative research, living laboratories or knowledge co-construction. On the basis of numerous successful examples, the FRQ believe that these forms of research benefit both the research community and civic activity, and allow people unfamiliar with the research community to experience the scientific method and improve their critical thinking skills.

While it has been practiced in various ways since the early 19th century, today citizen engagement in science is taking on new forms within the broad open science movement. The adoption of these practices poses many administrative, methodological and ethical challenges that the FRQ wish to address, in collaboration with various actors from society and the scientific community.

CITIZEN ENGAGEMENT IN RESEARCH: A DEFINITION

The FRQ define citizen engagement in research as the active and meaningful participation in a research activity of individuals who are not professionally engaged in scientific research.

The FRQ recognize that there is no single definition qualifying the broad citizen science movement and that many practices coexist, such as citizen science, participative research, action research, collaborative research, living laboratories, knowledge co-construction, etc. The FRQ have based their definition on the common ability of these practices to recognize and encourage the contribution of citizens, as holders of experiential knowledge, to research.

To clarify certain aspects of this definition, the FRQ have established seven principles, which apply exclusively within the framework of specific FRQ initiatives for citizen engagement in research, such as the *Engage* pilot project.



SEVEN PRINCIPLES OF CITIZEN ENGAGEMENT IN RESEARCH

1. ENGAGEMENT

Within the context of a research project, the FRQ see citizen engagement as the active and meaningful involvement of citizens in at least one stage of the project, from its development to the dissemination of knowledge, including the production of funding applications. The citizens' level of implication ensures that the research activity is carried out *with* or *by* them, rather than *on* or *for* them.

Engagement in a research project can take various forms, depending on the citizens' interests and characteristics. For example, the owners of a garden could collect botanical data in an area that is difficult for research teams to access. People who have experienced homelessness could bring their unique perspective to bear on the definition of a research question on homelessness. A recognized community leader could contribute by mobilizing interest in the research project.

Beyond citizen participation in research projects, the FRQ envision citizen involvement in other aspects of research, such as evaluation committees and research governance activities.

2. CITIZEN STATUS

For the purposes of the Fonds de recherche du Québec, a citizen is an individual who does not conduct professional scientific research activities and is recognized for his/her experiential knowledge. In the FRQ Common General Rules, citizens are included in statuses 4c (practitioner) and 4d (individual participant). Under some FRQ programs, additional eligibility requirements may apply.

The intention of the FRQ in defining a citizen population is to provide people unfamiliar with the research community with the opportunity to develop critical thinking skills and experience the scientific method.

Some of the citizens engaged in a research activity may be assigned one of three specific roles by the FRQ:

- **Principal research project leader**: The principal leader has ethical responsibility for the research project, while his/her home organization has administrative and financial responsibility. The FRQ assess the principal leader's ability to assume these responsibilities on the basis of his/her experiential and scientific knowledge, and of the capacity of his/her home organization to support him/her in these responsibilities.



- Research project co-leader: A co-leader brings essential experiential or scientific knowledge to the research project. The co-leader's name is included in the funding application and the FRQ assess his/her ability to assume the responsibilities entrusted to him/her under the project on the basis of his/her experiential and scientific knowledge. In the FRQ Common General Rules, the role of co-leader is equivalent to the role of co-investigator.
- Collaborator: A collaborator brings scientific and/or experiential knowledge to the project. The collaborator's name is included in the funding application, but the FRQ do not evaluate his/her contribution. A collaborator has no link with the FRQ.

Given the responsibilities and recognition associated with the first two roles (principal leader and co-leader), citizens assuming one of these roles must meet additional criteria set out in the program rules, where applicable, with the intention of:

- (1) fostering the establishment of relationships with active and existing communities, whether they are grouped in a structured or unstructured manner, particularly those that do not have the means to carry out research or to appropriate scientific knowledge;
- (2) ensuring that the research activity is carried out in a context of free thought, manifested by the citizens' independence and autonomy and the academic freedom of the members of the research community;
- (3) recognizing citizen engagement in aspects that current partnered research programs do not adequately cover;
- (4) respecting the requirements for the ethical and responsible management of the research project.

3. RECOGNITION

The FRQ recognize the legitimacy of experiential knowledge in the knowledge ecosystem, as being complementary to scientific knowledge. The FRQ define experiential knowledge as knowledge acquired through experience and legitimized within a specific community through tradition or the accumulation of experiences, or in professional circles, but which has not been scientifically validated. By scientific knowledge, the FRQ mean knowledge produced through the application of the scientific method and validated by peer review.



The FRQ wish to support the involvement in research of citizens with experiential knowledge, while ensuring that they are granted recognition commensurate with their intellectual contribution.

To that effect, researchers are invited to highlight and describe the contribution of their citizen partners in all scientific publications resulting from the research project. Similarly, citizens are invited to highlight and describe the contribution of their research partners in all communications referring to the research project.

Furthermore, in defining specific roles (collaborator, co-leader, principal leader, see 2.), the FRQ recognize the involvement of citizens and enable them to access the financial means to contribute to research projects under the best possible conditions.

4. MUTUAL BENEFIT

Members of the research community, as well as citizens, must anticipate benefits that meet real needs for them, for the group, or for the community to which they belong.

For example, researchers must anticipate the publication of their research findings, regardless of the results obtained, in a peer-reviewed academic journal. The research activity could allow citizens to anticipate improvements in practices or a better understanding of the impact of their actions, for example. Or, more simply still, citizens could anticipate the benefits of acquiring new knowledge or the satisfaction of taking part in a collective project.

In addition, members of the research community and citizens alike should anticipate benefits from the use of data collected during a joint research project. That is why the methods for collecting, conserving and disseminating data and knowledge must be adapted for future use by members of the research community, citizens, or the community to which they belong, provided this is permitted by ethical and legal requirements. For instance, specific requirements may apply in relation to intellectual property.

When research data contains personal information about research participants, it must be managed in such a way as to comply with applicable ethical and legal standards. In particular, this means that the necessary measures must be taken to ensure confidentiality.



5. RESEARCH QUALITY

Citizen-engaged research should have a methodological approach that enables optimal citizen participation while guaranteeing the production of scientific knowledge. For example, a methodology that allows butterfly enthusiasts to count and identify the species present in their garden, should also include a mechanism for monitoring the quality of the identification process.

6. ETHICAL AND RESPONSIBLE RESEARCH

Individuals with the role of project leader, co-leader or collaborator, whether they are citizens or researchers, must act in a responsible manner within the research project and comply with all policies, standards and rules applicable to research activities funded by the FRQ.

Consequently, any research activity made possible, in whole or in part, by funding from the Fonds de recherche du Québec must be carried out in accordance with the highest standards of research ethics, mandatory rules and regulations and applicable laws. This includes policies, standards and rules for the responsible conduct of research and for the ethics of research involving humans, applicable legislation as set out in the Civil Code of Québec, Canadian Council on Animal Care (CCAC) guidelines, laboratory biosafety and radiation protection guidelines, environmental laws and standards, professional standards and any other mandatory standards and regulations.

7. ACCESSIBILITY

As the FRQ consider research projects that foster citizen engagement to be part of the broad open science movement, they expect:

(1) Citizens and members of the research community to have equitable access to the outputs from the research project, including:

- Research benefits, such as scientific publications and any services and innovations developed during or following the research project;
- Data collected during the research project, to the extent that this respects participant confidentiality, intellectual property and the protection of traditional knowledge.

(2) Research project stakeholders to pay special attention to the involvement of under-represented or vulnerable individuals, within the means at their disposal, in keeping with the principles of equity, diversity and inclusion adopted by the FRQ. For example, researchers could produce a visual explanation of a methodological approach or a research finding.



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