

NSERC Discovery Grants Understanding the Expectations

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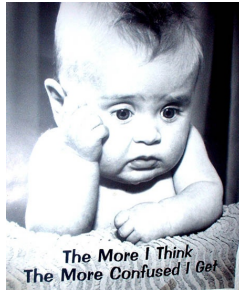
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 - Excellence of The Researcher
- 3 Merit of the Proposal
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Reading and Rating Applications



Reviewing the Applications

- Applications received by NSERC are distributed to the various committees.
- Each committee has a Program Officer who takes care of the organization and distributes applications to committee members for review (mid-December).
- Each committee member receives approximately 30-60 applications for review.
- Each application is read by exactly five internal reviewers.



The Process

- There are three and sometimes more parallel review sessions.
- Because committee members move from room to room, the committee follows a tight schedule -15 minutes per application.
- The first and second internal reviewers carry the most weight in rating each application.
- The first reviewer is the first person to speak to case - sets the tone
- The second reviewer contrasts, supports, or adds missing information to the case.

About 40 % of the applications received by each committee member are assigned as either first or second internal reviewer.

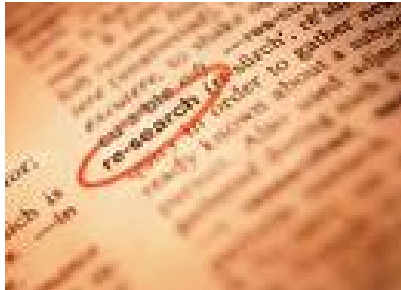


Rating Applications

Applications are rated in three equally weighted categories

- Excellence of the Researcher
- Merit of the Proposal
- Contributions to the Training of HQPs





Excellence of the Researcher



Excellence of the Researcher: Possible ratings

- I Accomplishments deemed below an acceptable level of *quality and/or impact*.
- M Accomplishments deemed of reasonable quality, impact and/or importance.
- S Accomplishments deemed solid in their *quality and impact*.
- V.S Accomplishments deemed superior in their *quality and impact*.
- O Accomplishments deemed far superior in their *quality and impact*.
- E A leader. Over the past 6 years has made influential accomplishments at *the highest level of quality, impact and/or importance* to a broad community.



Excellence of the Researcher

- Reviewer's focus is on the researchers accomplishments over the past six years.
- Ratings reflect a comparison with the rest of the applicants who hold grants awarded by the same NSERC Committee, including those awarded in previous years.



Excellence of The Researcher

Information used to be in the CCV + parts of the application.

- Sections of the application relevant to the Excellence of the Researcher are of fundamental importance.
- This is where the researcher builds credibility that will carry over to the rest of the application.



Excellence of The Researcher (cont)

#1 Evidence of Accomplishments: Most Significant Contributions

Explain!

- This is your chance to explain the importance of your work!
- Don't just list your favourite papers. Explain your contribution and importance.
- Try to be brief and quantify, whenever possible.



Excellence of The Researcher (cont)

#2 Evidence of Accomplishments: Quality and Quantity of publications

- If the number of publications is low, extreme care should be given to explaining the nature and significance of the contributions.
- Quality is more important than quantity. Focus on publishing in high quality journals.
- Some reviewers may not be familiar with the leading journals in your field.
 - If your activities are not mainstream in your broad community, then you may want to clarify the journal selection and provide impact factor, if appropriate.



Excellence of The Researcher (cont)

#3 Evidence of Accomplishments: Financial Support

- Funding history over the past 6 years.
- Multiple sources of funding, is indicative of importance/significance of the work to the community.



Excellence of The Researcher (cont)

#4 Evidence of Accomplishments: “Other” evidence of impact

- awards (over the past 6 years!)
- citations (but see later note)
- prestigious invited lectures;
- research fellowships;
- journal editorships;
- membership on committees, boards, or policy-making bodies;
- consulting activities;
- other?...



Excellence of The Researcher (cont)

Additional Points

- use common sense - read the instructions.
- Use ONLY the headings indicated by NSERC. Use ALL the headings indicated by NSERC.
- Citations can be helpful, especially if they refer to citations over the past 6 years.
- Avoid references to dated information, especially if it is of questionable relevance.

NSERC internal reviewers can only use the information that you provide in the application. Searching for additional information is not permitted, except to verify data.





Merit of the Proposal



Possible Ratings (sample)

- I Proposed research program lacks clarity and/or is of limited originality and innovation. Objectives are not clearly described and/or likely not attainable. Methodology not clearly described and/or appropriate.
- S Proposed program is clearly presented, is original and innovative and likely to have impact. Long term goals and short-term objectives are clearly described. Methodology is described and appropriate.
- O Proposed program is clearly presented, is highly original and innovative and likely to have impact by contributing to groundbreaking advances in the area. Long term goals and short-term objectives are well planned.



Merit of the Proposal

- Reviewers focus is on the proposal's significance, originality, and likelihood to have impact, and appropriateness of the methodology
- A well written proposal should have clearly stated long-term goals with well planned short-term objectives. Should also be achievable.
- Should convey a sense of novelty and significance to a broad community.
- Should also convey excitement and clearly show that the applicant is an expert in the field.



Merit of the Proposal (cont)

#1 Recent progress in research activities related to the proposal:

- Use this section to build your credibility. Explain your research program and where you are at this point.
- Also build excitement and enthusiasm. Convey a sense of how important your research really is.
- Take the reviewer from where you are today to where you want to get (long term goals) and where you think that you can get in five years (short-term objectives).



Merit of the Proposal (cont)

#2 Objectives of your research program short - and long-term:

- State Long-Term Goals: Dont be afraid to be ambitious. Should build on your past work aiming to solve an important problem or developing an understanding of a relatively unexplored area. Should also be significant and innovative.
- Short-Term Goals: Define clearly. Should lead to good student topics (see HQP training)
- Avoid breaking your work into too many isolated “projects” that appear disconnected and require different background and expertise.



Merit of the Proposal (cont)

#3 Literature pertinent to the proposal:

- Demonstrate that you know your field.
- Understand the key issues addressed in the literature. Cited references should be mostly current.
- OK to cite your own work, but should include enough references to the work of others.
- There is a natural connection between this section and Methodology.



Merit of the Proposal (cont)

#4 Methodology:

- A high level description of the methodology is all that is needed, especially if confidence has been build throughout the rest of the proposal.
- Methodology should be appropriate to accomplish goals. The onus is on the applicant to build up the confidence of the reviewer.
- Capitalize on the use of existing facilities (Ex.: nanofab, etc), if appropriate.
- If your proposal is interdisciplinary, it is very important to mention collaborations that provide complementary expertise.





Training of HQPs



Training of HQPs

HQP training is the most difficult to judge of the three categories. HQP Training is also one of the main reason the NSERC Discovery program exists.

Two things are important:

- Your training “history.”
- Your plan for training HQPs.



Training of HQPs - History

Reviewers focus is on the number of students trained as well as the quality of training

- How many MSc, and PhD students have you trained over the past six years?
- How many MSc and PhD students do you currently have?
- Does it appear that your students are well funded?
- Are students contributing to journal publications?
- Do MScs and PhDs find employment consistent with their qualifications after graduation? (faculty positions at good universities, or employment in well known companies, etc).



Training of HQPs (cont)

- PDFs also count.
- Undergraduate students should also be listed, especially those who have worked on summer or other projects (NSERC undergrads, Deans awards, etc).
- Keep track of your students. Know where they are. Long list of students with “Name Withheld” does not look good, except if they are undergrads.



Training of HQPs - Training Plans

- Explain how your students will be engaged in the proposal.
- There should be a correlation between the number of students and the short term objectives.
- The student projects should be of a level of difficulty consistent with the degree (MSc or PhD).
- Overall, there should be a sense that students will receive good training and that their work will open up good opportunities after graduation.
- Mention any collaboration (especially if your research is “multidisciplinary” in nature).





Budget



Budget

- Explain how you intend to use your grant.
- The number of students should be consistent with your objectives.
- Avoid committing most of your DG to support expensive PDFs or Research Associates.
- Your budget should be reasonable by NSERC standards and should be consistent with what is needed to complete the work.





Some Final Remarks



Some Final Remarks

- External Reviewer Reports are sometimes helpful but often are not.
- External reviewers are not in the room and often their views seem to contradict the way applications are ranked.
 - Ex: contributions of an applicant seen as below par by the committee, yet receive excellent comments from a reviewer or viceversa.

