Evaluation of the tri-agencies' support for research training and talent development (the Talent Evaluation)

Summary

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About the evaluation

The purpose of this evaluation was to assess funding provided by SSHRC, NSERC and CIHR for graduate student training (i.e., training for master's and doctoral students). It was undertaken to support strategic decisions about talent-related funding at these agencies.

This evaluation covered the period from 2014 to 2021. Primary data were collected through key informant interviews, case studies, focus groups and two surveys. Secondary data included agency administrative data, external stakeholder reports and survey data from external organizations.

About the funding

The agencies invest in a portfolio of funding to enhance research training and Canada's future research capacity. The portfolio includes two broad streams:

1. **Direct stream**: direct support to graduate students through scholarship and fellowship awards.
2. **Indirect stream**: indirect support for training through grants to researchers (i.e., investigators/co-investigators funded through agency research grants). Researchers are expected to provide experiential training for graduate students by involving them in the implementation of agency-funded research or through other modes of research-related training. Researchers may also provide financial support to graduate students in the form of stipends or salaries.

The total amount of financial support provided to graduate students through the two streams averaged just under $460 million per year in fiscal years 2018-21. Of this, $196.1 million per year was through direct awards. Within the scope of this evaluation, the agencies provided financial support to 9,708 graduate students through active direct awards in 2020-21 and funded 25,395 active research grants within the portfolio through which participating students received experiential training.

Evaluation questions

1. Who does the portfolio reach?
2. How does this portfolio contribute to the research training environment?
3. Does this funding influence student career trajectories?
4. What should the agencies consider in the context of changes in the training environment and/or student experience due to COVID-19?

Key findings

Portfolio reach

- In some respects, participation in the portfolio reflects much of the diversity among Canada's graduate students. Some equity-deserving groups are represented at levels comparable to or above their estimated representation in the graduate student population. This includes students who identify as women, with gender identities other than man or woman, with LGBTQ2+ communities, as well as students who identify as having disabilities. This is also the case for francophone students.
- Students with disabilities and students identifying with LGBTQ2+ communities were more likely to report barriers to accessing direct awards than other groups.
- Results indicate somewhat lower representation in the direct stream than in the indirect stream for students identifying with visible minority communities[1], students with dependents and first-generation students.
- For students who identify as Indigenous, representation in SSHRC funding (3%) and CIHR funding (2%) is equal to the population estimates for graduate students in SSH-related and health-related research-based

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[1] Use of the term "visible minority" reflects the wording on the student survey instrument and in application forms during the study timeframe; the agencies have more recently adopted the term "racialized individual."

programs, respectively. For NSERC's funding, the proportion of students self-identifying as Indigenous (1%) is lower than the population estimate in NSE (2%); this small difference may be due to multiple factors.

- Most students receiving indirect financial support from NSERC (95%) and CIHR (85%) received the support from their academic supervisor or co-supervisor, compared with half (53%) receiving SSHRC indirect funding.
- Among students receiving financial support indirectly through SSHRC and CIHR grants, about one-quarter are international students (21% and 25%, respectively) as are 45% of NSERC's indirectly funded students.
- The transparency and perceived fairness of the direct funding selection process is an area of concern raised by students.

Training experience and trajectory
- There was some evidence that the agencies' direct awards increase opportunities for skills development and research-related experience. However, out of 18 areas for training, a meaningful advantage for recipients over unsuccessful applicants for agency awards is indicated in only four areas related to dissemination and collaborations, mostly for SSHRC-funded students at the doctoral level.
- About one-third of master's award recipients and 41% of doctoral award recipients reported that their award resulted in a substantial increase in control or independence over their research.
- Very little difference was found between agency award recipients and unsuccessful applicants in terms of degree progression and career trajectory outcomes. Agency awards do not appear to impact the length of time to complete a graduate degree. There is no evidence of a relationship between agency awards and continuing to higher level academic study, or full-time employment post-graduation. Findings were mixed on other career-related outcomes. A meaningful advantage for award recipients was indicated in a few areas: degree completion at doctoral level (SSHRC, NSERC); academic career aspirations among first-generation students (SSHRC, NSERC); and research-intensity of employment post degree (SSHRC, CIHR).
- Where data were available for indirect stream participants, results related to academic aspirations and career-related outcomes, such as noted above, were similar or better than for agency award holders.
- There is no indication that agency funding influences likelihood to work in Canada or abroad.
- Despite increases to cost of living over the time period covered by this evaluation, the dollar values of agency awards have not increased.
- Nearly all students participating in the evaluation, including CGS D recipients, seek out and sustain income from multiple sources to finance their degrees.
- A noticeable proportion of agency award recipients reported no net gain to moderate net gain[2] in their overall funding after receiving an agency award. This includes more than one-third of the agency-specific doctoral awards (23% of SSHRC's, 43% of CIHR's and 40% of NSERC's), one-fifth of CIHR's CGS D recipients, and about one-third of NSERC and CIHR CGS M recipients. A majority of award recipients (60%) reported reduced access to at least one other source of funding after receiving their award. Among these students, 80% reported reduced access to institutional funding.
- A majority of award recipients reported increased income stability. Students described the stability of the funding as important in its own right for their ability to focus on studies and plan for the future.
- The amount of financial support per term received through the indirect stream varies widely among students, within and across disciplines and levels of studies. Average amounts are significantly higher in health and in natural sciences and engineering compared to social sciences and humanities.
- Overall, indirectly funded students report less overall funding (from agency and non-agency sources combined) than award holders and unsuccessful applicants to agency awards (with no known agency funding). Some student respondents identified the time commitment as a barrier to participation in agency-funded research projects when stipend amounts are too low.

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2 Responding "not at all" to "to a moderate extent" (1 to 4 on a 7-point Likert-type scale).

Recommendations

The recommendations focus on opportunities for the agencies to diversify their reach to graduate students and renew their contribution to research training. These are outlined below and detailed in the final report.

Empowering trainees
1. Improve agency communications and public reporting about agency investments in training for graduate students. Provide a centralized source for accurate and timely, whole-portfolio information.
2. Work with academic institutions to improve transparency and clarity of policies and practices related to funding reallocation.

Providing leadership to improve funding practices for students.
3. Work with academic institutions to reduce the impact of reallocations on students and address underlying factors driving funding reallocation practices.

Develop a whole portfolio strategy.
4. Future development of a strategy for research training should encompass the whole portfolio.
5. Take measures to increase availability and use of data about trainee support across the portfolio to enhance monitoring, evaluation and public reporting.

Indirect stream funding	Direct stream funding
6. Clarify training objectives for agency research grants, ensuring that expectations for training are clearly articulated for prospective grant applicants. 7. Continued investment in the three types of indirect funding is recommended. Consider increasing investment in indirect funding types supporting cross-sectoral and professional skills training (Type 3 and Type 4). 8. Consider raising grant levels, alongside measures to encourage increasing the proportions of grants allocated to training, and a corresponding increase in per-student stipend level.	9. Reassess direct funding and clarify its role as part of the future portfolio. It is recommended that the agencies deliberate carefully on what they want to achieve with the awards going forward, what is realistic for this type of intervention to achieve in the future, and whether the necessary investment of time, focus and money to renew the awards is feasible. In reassessing the direct awards, the agencies need to also consider the following recommendations to advance EDI and training-related outcomes, and the availability of resources to implement them: 10. Consider expanding the number of awards at earlier degree levels. 11. Extend doctoral degree stage eligibility windows or eliminate degree stage eligibility restrictions. 12. Allow part-time students to apply for agency awards without the need to justify their part-time status. 13. Address insufficiency of awards funding. 14. Work with institutions to address transparency and perceived fairness of review processes, and to protect the privacy of students with respect to self-identification / special circumstances.