Evaluation of the Undergraduate Student Research Awards Program (USRA)
NSERC's Management Response

Context

The USRA program was established in 1980 to provide an opportunity for students to be involved in natural science or engineering research for a 16 week period either at a university or an industrial location. NSERC's management needed an assessment of the importance of the program in the context of the federal government's S&T strategy. It was also necessary to discover how well the program met its own stated objectives which are:

- to stimulate student's interest in research in the natural sciences and engineering;
- to encourage students to undertake graduate studies and pursue a research career in these fields.

Comments:

The evaluation confirmed that the program fits very well into the federal government's S&T strategy. It also demonstrated evidence that the program fulfills its own objectives efficiently and effectively and is held in high regards by users as a valuable piece of the continuum of training of HQP at the post-secondary level.

The students who held USRAs consistently found their experience of research rewarding. The evaluation also confirmed that supervisors at both universities and industry experienced increased productivity through their interaction with USRA holders (although this is not an intended outcome of the program). Supervisors also greatly appreciated the opportunity to evaluate potential future hires or graduate students. University administrators regardless of the size of the institution, appreciate the low cost of providing excellent training opportunities to their students and the simple application processes. Companies likewise appreciate the minimum risk associated with the opportunity to hire bright students. Indeed, companies have mentioned that the USRA recipients they hire for work terms are usually stronger than students they hire though their regular means.

The evaluation also highlighted that the USRA program is appreciated equally in universities of all sizes.

Other Issues

There were a number of additional issues that were looked at by staff that were not necessarily part of the evaluation methodology. These either came up from discussions with various stakeholders or as follow-up to some of the evaluation results.

USRA and Mobility

The evaluation revealed that approximately 7% of U-USRAs are taken up at universities other than the student home university. Further analysis has revealed that this proportion is constant

irrespective of university size. Over the period 1999-2010, the proportion of awards held at a different university was 6.2%, 6.8% and 6.3% for large, medium and small institutions respectively. In the same vein, students who took up their USRA in another institution were equally from large and small universities.

Over the 1999-2010 period, 14 universities hired students from other institutions in a higher proportion than the national average (7%). Among those, there were seven large institutions and seven medium or small institutions. However, these universities tended to be in areas where several others were located close by, i.e. the Montreal and Southern Ontario areas.

Holding Multiple USRAs

Prior to the evaluation, NSERC had looked into whether the students from Québec, where BSc are normally of three years rather than four, were at a disadvantage with respect to the number of USRAs that they could hold. The analysis revealed that the percentage share of Québec students with three USRAs was slightly lower than for other regions (7% as compared to 8% and 9% for Ontario and Western Canada respectively). There was no significant difference in the percentage holding one or two USRAs. The proportion of students holding three USRAs was the largest by far in Atlantic Canada (15%).

NSERC also looked at the success rates in the PGS/CGS competitions for students who had previously held USRA awards. Not surprisingly, overall success rates in the PGS/CGS competitions increase with the number of USRAs held. The success rates were 69%, 77%, 82% and 85% for students having held 0, 1, 2 and 3 USRAs respectively. While the percentage of Québec students with three USRAs was slightly lower than for other regions (as stated above), their success rate in the PGS/CGS competition is similar. Therefore, it does not appear that the usual three-year duration of BSc studies in Québec puts Québec students at a disadvantage in the PGS/CGS competition.

Recommendation #1: Continue offering Undergraduate Student Research Awards and make adjustments to the program's objectives and expected outcomes.

Agree. The program provides a valuable training opportunity for the HQP needed for Canada's future economic prosperity. The program objectives will be reworded to emphasize the nurturing and development of a student's interest in, and potential for, a career in research and/or graduate studies in NSE, rather than a change from other aspirations towards a career in NSE.

Recommendation #2: Consider making improvements to the design and delivery of the program.

a) Ensure higher remuneration for students.

Agree in principle. Subject to availability of funds, NSERC will consider investing additional funds in the USRA program so that the award level is increased without decreasing the number of awards given. It has been noted that both universities and industry partners are, on average, providing more than the minimum contribution required by the program.

b) Adjust the timing of the award notification for university (URU) awards.

Management partially agrees with this recommendation. NSERC has no control over the timing of a university's internal selection process or announcements of the results within universities. Most universities make these announcements in February or March.

NSERC will review its own internal process and streamline where possible. It should be noted that the universities' risk is fairly limited given that the USRA competition is delegated to them. Only in very exceptional cases an award will not be confirmed by NSERC, and this is almost strictly a question of eligibility of applicants put forward by universities.

c) Provide additional guidance to liaison officers on how NSERC expects universities to operationalize the selection criteria "aptitude for research".

Agree. The aptitude for research is an important criterion of the program. The USRA program literature including the program website and the *Guidelines for USRA Liaison Officers* will be reviewed with the objective of making it clearer that universities <u>must</u> use two criteria to select USRA award winners. University Liaison Officers will be consulted on how this could be best achieved before January 2013.

d) Adopt new strategies to promote the USRA program

Agree. Staff will continue to investigate other ways to promote the USRA program, through annual regional meetings and videoconferences with university scholarships liaison officers, videos targeted at potential applicants and social media.

NSERC will consider other ideas, such as collating and publicizing best practices of participating universities.

e) Carry out formal consultations with university Liaison Officers on the newly implemented online application system.

Agree. NSERC will carry out a formal consultation on the online application system. Staff has been interacting frequently on an informal basis with the USRA Liaison Officers (LO) who administer the program at the universities and will send a short questionnaire to the LOs to collect their comments on the functionality of the system. Such feedback may also be helpful in the transition from NSERC's existing platform to the new Client Relations Management System (CRM). See below.

f) Create an online reporting system for industry host organizations as well as more comprehensive and structured information on how to complete the required paperwork.

Agree. Management considers that this recommendation is relevant for both components of the USRA program. The specifications and requirements for the new Client Relations Management System is being detailed, to cover the process end-to-end, including exit surveys and career surveys for the USRA. It might also be possible to make better links between USRA applicants and their progress through other scholarships and fellowships and possibly grants.

The establishment of the CRM will also address the need to have a more comprehensive mechanism for completion of the required paperwork by industry host organizations.

Management Response Action Plan:

Recommendation	Agree/ Disagree	Action	Responsibility	Timeline
#1: Continue offering Undergraduate Student Research Awards and make adjustments to the program's objectives and expected outcomes.	Agree	Program objectives will be reworded to emphasize the nurturing and development elements of USRAs; The logic model will be updated accordingly	Program staff with support from the Evaluation Division	Fall 2013
#2: Consider making improvements to the design and delivery of the program.				
a) Ensure higher remuneration for students	Agree	Decide on an appropriate minimum level of support. Calculate impact on program budget and # of awards	Program staff	Sept 2012
b) Adjust the timing of the award notification for university (URU) awards	Partially agree	NSERC will assess how many applications are actually declined in order to better assess the risk assumed by the Universities	Program staff	Sept 2012
c) Provide additional guidance to liaison officers on how NSERC expects universities to operationalize the selection criteria "aptitude for research."	Agree	Program literature and meeting content with university liaison officers will be updated, putting clearer emphasis on "aptitude for research	Program staff	Sept 2012
d) *Adopt new strategies to promote the USRA program*	Agree	Re-visit the promotional toolkit/strategy for the program, including on-line videos and use of technology.	Program staff in consultation with Communication	Fall 2013
e) Carry out formal consultations with university liaison officers on the newly implemented online application system.	Agree	Consultations with the LO's on the functionality of the on-line system have been ongoing.	Program staff in consultation with Information and Innovations Solutions (IIS)	Fall 2013
f) Create an online reporting system for industry host organizations as well as more comprehensive and structured information on how to complete the required paperwork.	Agree	This will require discussions with IIS concerning the feasibility of implementing this reporting tool; Establishment of on-line tools for industry host organizations.	Program staff in consultation with IIS	Fall 2012