

Discussion Paper
Long Range Plan 2012
Mathematics and Statistics

Submitted by the Department of Mathematics and Statistics, University of Northern British Columbia

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The University of Northern British Columbia is a small (4000 undergraduate), research-intensive university in Prince George, BC. We have a minimal MSc degree program in MCPS (Mathematics, Statistics, and Computer Science) which typically admits one to three new mathematics or statistics students each year. We have no doctoral program. All of our regular faculty of six are, or have been, grant-supported, usually by NSERC. Our department is active in research. This general profile is certainly not unique in Canada.

Our concern is that our productive researchers continue to be grant-supported in the future. In this paper we will confine our comments to the specific area of Highly Qualified Personnel (HQP). In the current Discovery Grant guidelines, NSERC makes the requirement of applying "... the principle of a discipline-specific minimum Discovery Grant amount to ensure that any funded researcher receives sufficient funds to support at least one graduate student, or, in the case of institutions without graduate programs, two undergraduate students. This principle recognizes that the training of highly qualified people is an essential element of the evaluation process and an important selection criterion."

We recognize that the training of HQP is indeed important to the generation of new knowledge, but do not believe that it is in any way a prerequisite to the generation of new knowledge. It is a criterion that, for many of our faculty, is quite difficult to meet. For example, one of our members, a highly respected scholar in his field, cannot accept graduate students because, due to resource limitations, we are unable to supply the specialized courses necessary for such a student to be successful. The use of undergraduates is even more problematic in this case. More generally, high teaching loads compromise our ability to provide proper graduate student supervision and offer graduate courses while simultaneously meeting our research and service obligations.

We suggest a procedure that balances the training of HQP with the generation of new knowledge and the support of new researchers, and which weights these criteria on the basis of the applicant's institutional profile. A very simple model might employ two categories: the "top 5" and the remaining universities, or perhaps three categories of small, medium, and large universities, with size defined in some appropriate way. The criterion of training HQP would be de-emphasized for the smaller categories (with presumably correspondingly smaller grants in those cases where training HQP is absent). A program of summer undergraduate stipends (say \$4000) awarded from a separate fund would be useful for researchers without graduate students.

We fear that any granting strategy that favours larger institutions (especially a strategy focused on the top five universities) will stifle what are currently very successful and valuable research programs at the smaller universities and strongly urge NSERC not to move in this direction.