

# **Higher Expectations for Quality and Accessibility**

**A submission to the Postsecondary Review  
November 15, 2004**



## **EXECUTIVE SUMMARY**

There is no question that the post-secondary sector plays a crucial role in the economic and social well being of the Province of Ontario. Today's university students will become the parents, engineers, economists, public policy makers, physicians, authors, elementary school teachers, and professors of tomorrow. The university system is where the government will find the research, knowledge base, and resources to advance its vision of a stronger and more prosperous Ontario.

In general, we support the position our colleagues at the Council of Ontario Universities have put forward to the Postsecondary Review. The specific intent of this paper is to share the perspective and positive experiences of the University of Waterloo, and to make recommendations for improving the current system of higher education in Ontario. We will address three major questions as outlined in *Higher Expectations for Higher Education*. They are:

1. How should we improve the quality of higher education in Ontario?
2. How do we increase participation and success in higher education?
3. How do we pay for higher education to ensure opportunity and excellence?

The answers to these questions speak directly to improving quality and accessibility of our higher education system.

### **1. HOW SHOULD WE IMPROVE THE QUALITY OF HIGHER EDUCATION IN ONTARIO?**

To improve quality, we propose that the student experience be enhanced through experiential learning. Co-operative education is acknowledged worldwide as a leading model for higher education, one that integrates theory and practice seamlessly. It provides a significant contribution to the building of a skilled and fulfilled workforce, leading to a more healthy, engaged and prosperous citizenry.

An investment in co-operative education will bring many benefits to the province. For employers, co-op provides a steady source of flexible, talented, mindpower. It also offers them the opportunity to shape the very talent from which they will draw their long-term employees. It offers government, businesses, and not-for-profit organizations a chance to observe and assess talent before making an offer of permanent employment, and it provides ongoing contact with a post-secondary institution — a vital source of research, consulting, and advanced training expertise.

However, additional benefits are accompanied by additional costs. We urge the Postsecondary Review to recommend that the provincial funding formula fund co-operative education through a 20 percent premium as a wise investment in higher education. And as an incentive to employers to participate more fully in co-operative education programs, we further urge improvements to the co-op tax credit for employers, raising it to \$2,500 per work term.

### **2. HOW DO WE INCREASE PARTICIPATION AND SUCCESS IN HIGHER EDUCATION?**

To increase participation and success in higher education, Ontario must reform student financial assistance, denying no qualified student the opportunity to pursue higher education simply because tuition and living expenses seem to put that education out of reach. The prospect of high debt loads upon graduation need not deter qualified students from postsecondary studies.

We recommend that Ontario recast its student assistance program to include full educational costs, including actual tuition and living costs, and costs for participation in study abroad programs. It should include an improved and more realistic assessment of expected parental contributions. Further, we recommend an income contingent loan repayment program, with features such as interest relief and partial debt forgiveness dependent on income post graduation.

### **3. HOW DO WE PAY FOR HIGHER EDUCATION TO ENSURE OPPORTUNITY AND EXCELLENCE?**

We must strike a balance in paying the costs of higher education among the individuals who gain a great deal of personal benefit from their degrees, the province, which benefits economically and socially by developing an educated citizenry, and business, which reaps the benefits of educational investment. We

will find this balance by allowing institutions greater flexibility on the matter of setting tuition fees, accompanied by greater responsibility for guaranteeing financial accessibility for their students. We will also find this balance by increasing core funding for teaching and research.

The economic and social wellbeing of Ontario will depend on government taking the long view in this matter, establishing short-term and longer-term reinvestment targets to protect and sustain higher education and research investment against pressures from other quarters.

This will prevent the urgent from driving out the important — and there can be nothing more important than investment in our future social and economic prosperity as a province.

We hope that the views expressed here and the attached material will be useful to the Postsecondary Review process as it develops its recommendations to the Premier of Ontario and the Minister of Training, Colleges and Universities.

## **SUMMARY OF RECOMMENDATIONS**

**RECOMMENDATION #1:** include a 20 percent premium for co-operative education as part of the provincial funding formula to recognize the extra teaching costs and provide an incentive for growth.

**RECOMMENDATION #2:** raise the Ontario employer tax credit to \$2,500 per work term to encourage employers to participate more fully in co-operative education programs.

**RECOMMENDATION #3:** recast the student assistance program to:

- include full educational costs, including actual tuition and living costs, and costs for study abroad programs
- include an improved and more realistic assessment of expected parental contributions.
- include an income contingent loan repayment program, with features such as interest relief and partial debt forgiveness dependent on income post graduation.

**RECOMMENDATION #4:** give greater flexibility to University governing bodies on the matter of setting tuition fees, accompanied by greater responsibility for institutions in guaranteeing financial accessibility for their students.

**RECOMMENDATION #5:** increase the province's investment in universities to the national average over the next three years, and to the top 10 percent of publicly funded universities in North America over the following five years to protect and sustain higher education and research investments against pressures from other quarters. Include an annual adjustment for inflation for investment in higher education.

**RECOMMENDATION #6:** use the Ontario Research Fund to enhance the infrastructure required for research and technology development, and be a magnet for attracting world-class brainpower to Ontario. This can be accomplished in part through focused priorities and sustained adequate matching funds to maximize access to federal programs.

**RECOMMENDATION #7:** fund research programs appropriately to ensure that Ontarians reap the full benefits of university research by:

- maintaining annual indirect cost funding at a level indexed to cover a minimum of 40 percent of the direct costs of provincially funded research.
- stratifying research funding to reinforce quality — a larger amount of the funds should go to the premier researchers i.e. 50 percent of the funding should go to the top 30 percent of research proposals.
- including support for the various stages of commercialization including a competitive system to foster seed, angel, and first round funding.

## 1. HOW SHOULD WE IMPROVE THE QUALITY OF HIGHER EDUCATION IN ONTARIO?

The issue of quality lies at the heart of this review process. How indeed, should we improve the quality of education in Ontario? At the University of Waterloo, we believe that quality hinges on the strength of the student experience. This means giving our students a top-notch education through exceptional classroom teaching and giving them a chance to learn from high-quality research. It also means giving them valuable out-of-classroom experiences. Universities are not just places to earn a degree. They are places to exchange viewpoints, test new ideas, and above all, to learn.

As North America's largest co-operative education institution, we know that one way to strengthen quality is by supporting experiential learning. Co-operative education is recognized worldwide as a strong model for post-secondary education. The co-op learning experience blends classroom learning with on-the-job application, giving graduates practical skills they can immediately apply in their field. Despite the acknowledged value of the co-op experience, and the recognized high quality of programs like Waterloo's — which is growing rapidly — the provincial granting formula does not provide funding for any additional costs. Offering co-operative education programs costs Waterloo 20 percent more than our counterparts in teaching and teaching-related expenses (see [http://www.adm.uwaterloo.ca/infosec/Cooperative\\_Education\\_2002.pdf](http://www.adm.uwaterloo.ca/infosec/Cooperative_Education_2002.pdf)<sup>1</sup>).

**RECOMMENDATION #1: include a 20 percent premium for co-operative education as part of the provincial funding formula to recognize the extra teaching costs and provide an incentive for growth.**

### Why provide more funding for co-operative education?

- Experiential learning directly benefits individual students, giving them a competitive edge in the workplace. At Waterloo, 11,000 students (more than 60 percent) and 3,000 employers take part in the program each year, and our six Faculties offer more than 90 co-op programs, including engineering, international trade, arts administration, and urban and regional planning.
- Co-op saves the provincial government about \$26 million because fewer co-op students take loans (about half of that of regular students) and need only 77 percent of the loans required by their regular counterparts.
- Co-op reduces the provincial capital investment requirements because more co-op students than regular students can be accommodated in the same amount of space. We estimate that Waterloo's space entitlement would be larger by about 30,000 net assignable square meters if all students were enrolled in regular programs. At current rates it would cost about \$100 million to construct this additional space.
- Co-op students offset their costs of study by earning salaries on their work terms. They also enjoy a starting salary premium after graduation, typically earning an average starting salary \$5-10,000 higher than their non-co-op colleagues. This premium, which continues through their working lives, and on which they pay taxes, enhances revenues for the provincial treasury.
- A recent survey of graduates conducted by the provincial government and universities shows that co-op graduates are more likely to be employed (97.6 percent versus 96.6 percent) and are more likely to be employed in permanent positions (91.1 percent versus 77.9 percent).
- Waterloo students have the best student loan repayment rate in the province, which we believe is a direct result of the income our students are able to earn while on co-operative work terms.
- Co-op programs, like bilingual programs, have clear additional teaching costs. Without funding recognition by government, colleges and universities will not introduce or substantially expand co-op or work experience programs.

**RECOMMENDATION #2: raise the Ontario employer tax credit to \$2,500 per work term to encourage employers to participate more fully in co-operative education programs.**

### Why increase the employer tax credit?

<sup>1</sup> *Co-operative Education—Greater Benefits Greater Costs*, James Downey, J.G. Kalbfleisch, R.D. Truman

- Co-op programs give the business community a cost-effective way to fulfill staffing requirements with students who know about the latest developments in their fields, while simultaneously screening and recruiting potential longer term employees.
- The co-op employer tax credit introduced in 1996 is no longer large enough to provide sufficient incentive for employers.
- An increase in the Ontario tax credit may, in turn, be used to encourage federal matching contributions, thereby bringing a considerable benefit to the employer, and raising the level of participation in the co-operative education model.

## **2. HOW DO WE INCREASE PARTICIPATION AND SUCCESS IN HIGHER EDUCATION?**

Deny no qualified student the opportunity to pursue higher education simply because tuition and living expenses seem to put that education out of reach. Ensure that high debt loads upon graduation do not deter qualified students from postsecondary studies.

### **RECOMMENDATION #3: recast the student assistance program to:**

- **include full educational costs, including actual tuition and living costs, and costs for study abroad programs.**
- **include an improved and more realistic assessment of expected parental contributions.**
- **include an income contingent loan repayment program, with features such as interest relief and partial debt forgiveness dependent on income post graduation.**

### **Why recast the student assistance program?**

By improving student financial assistance, we will make it possible for every qualified student to attain a postsecondary education, regardless of personal financial circumstances. This is a responsible, enlightened vision for Ontario's youth, for Ontario's future.

- At Waterloo, we have and are taking action to improve undergraduate student financial support for our students. In 2000 our Board of Governors approved a two-step approach to tuition and student aid. Our tuition fee guidelines limit fee increases in real terms to 10 percent per year in regulated programs and 15 percent in other programs, and state that "Tuition fees should continue to be set by program rather than by course, and tuition fees should continue to be the same in all years of a program." This approach ensures a predictability of costs, allowing students and their families to plan more effectively.
- To accompany the tuition fee guidelines, our Board of Governors also approved a statement of objectives to ensure that no qualified student would be prevented from entering and completing a program at Waterloo for financial reasons. This is a reasonable responsibility to accompany the right of greater local flexibility on tuition levels. It means that every qualified student who has unmet financial need as determined by the Ontario Student Assistance Program may apply for a University of Waterloo Undergraduate Bursary to help cover remaining education-related expenses.
- This statement is now being revised to *guarantee* to meet the provincial unmet need, as calculated by OSAP, of all qualified UW undergraduate students. The revisions will be presented shortly to our Board of Governors for approval.
- In practice, the University of Waterloo seeks to continue to meet the university-defined unmet need of qualified undergraduate students, which at minimum must include actual tuition fees not recognized in the OSAP calculation of provincial unmet need.
- Our overall objectives are to advertise widely that no qualified student is denied access to university education at UW for financial reasons, and to attract highly qualified students to UW.
- The university will implement a proactive process to seek out and simplify offers to all qualified undergraduate students of the level of financial support it is prepared to provide.
- The university will use a wide range of mechanisms to ensure that all tuition fee set-aside funds generated each year are allocated to students with financial need. First priority for these funds must be the provision of bursaries to ensure accessibility for qualified students.
- Funding for post secondary education will be a mix of awards, bursaries, tuition, government grants, and loans. Dependent on the role chosen and income expected post-graduation, some further relief may be warranted.

### **3. HOW DO WE PAY FOR HIGHER EDUCATION TO ENSURE OPPORTUNITY AND EXCELLENCE?**

We must strike a balance in paying the costs of higher education, among the individuals who gain a great deal of personal benefit from their degrees, the province, which benefits economically and socially by developing an educated citizenry, and business who reap the benefits of educational investment.

#### **Tuition Fees**

We will find this balance by allowing institutions greater flexibility on the matter of setting tuition fees, accompanied by greater responsibility for guaranteeing financial accessibility for their students.

**RECOMMENDATION #4: give greater flexibility to university governing bodies on the matter of setting tuition fees, accompanied by greater responsibility for institutions in guaranteeing financial accessibility for their students.**

#### **Why give universities more flexibility?**

- Tuition cannot be separated from the rest of the university funding issue, since tuition fees account for 35 to 40 percent of the cost of educating an individual undergraduate student.
- The needs of the individual student are best addressed at the institutional level. Waterloo's tuition fee policy is designed to allow students and their families enough predictability so that they may budget accordingly, but does not unduly tie the hands of the institution.

#### **Core Funding**

We will also find flexibility by increasing core funding for universities. In terms of per-student funding of universities, Ontario stands dead last among Canadian provinces. As a group, the Canadian provinces sit well down in the bottom 25th percentile of 60 North American jurisdictions. In a recent report, TD Bank's Chief Economist, Don Drummond, captured the issue: "While Canada still allocates a relatively large portion of its resources to post-secondary education, public funding has been dramatically squeezed over the past two decades... Over the past twenty years, Canada has cut the real public funding per student by 30 percent, while the U.S. has increased its funding by 20 percent."<sup>2</sup>

Because of its relatively modest public investment in post-secondary education, Ontario trails most other jurisdictions in North America. Universities cannot maintain quality in the current climate of under-funding, and talent attracted to non-Canadian universities may be lost forever.

**RECOMMENDATION #5: increase the province's investment in universities to the national average over the next three years, and to the top 10 percent of publicly funded universities in North America over the following five years to protect and sustain higher education and research investments against pressures from other quarters. Include an annual adjustment for inflation for investment in higher education.**

Bringing Ontario's level of investment in universities up to the national average over three years is an achievable objective. Even taking into account an annual adjustment for inflation, the sums required are relatively small in the context of overall health and education spending.

#### **Why increase core funding?**

- University funding in this province declined for well over a decade. From 1987-88 to 2001-02 provincial operating grants per student have declined by 32.5 percent in constant dollar terms.
- Ontario has ranked at the bottom of the 10 provinces in terms of operating grants per capita for the last seven years, and spends half what the US does as a percentage of GDP on public and private funding for universities.
- Adequate funding has a direct impact on the quality of the student experience. UW attracts some of Canada's best young minds, but must reduce its student/faculty ratio to be able to provide an educational experience on par with comparable institutions in other North American jurisdictions.

<sup>2</sup> *Time to Wise up on Post-secondary Education in Canada*, TD Economics Special Report, March 15, 2004

Over the past decade, the student/faculty ratio at UW has increased from 22.2-to-one to 27.5-to-one. UW's ability to offer quality education is being challenged because of resource issues.

- A comparison of resources available in 2002-2003 to the University of Waterloo, the University of Michigan, and the Massachusetts Institute of Technology is striking:

<b>2002-03</b>	<b>Waterloo</b>	<b>Michigan</b>	<b>MIT</b>
Professorial rank	759	2717	966
Senior lecturers/lecturers/instructors		724	569
Undergraduate/professor ratio	24.96	9.01	4.33
Graduate student/professor ratio	2.39	4.13	6.36
Total expenditure per student (\$CDN thousands)	17,000	60,860	200,000
Expenditure per student (excluding research)	11,000	38,000	97,000
Net tuition fee per student (\$CDN thousands)	4,000	20,540	20,000
Sponsored research (\$ CDN millions)	99.5	885.6	604.6
Research \$ per professor (\$CDN thousands)	131.1	325.9	626.0
Average salary of full professors (\$CDN)			
	For 9 months	156,294	172,260
	For 12 months	113,455	229,680

- UW plans to add 200 faculty members over the next five years to bring down its student/faculty ratio to pre-1990 levels, along with 100 additional staff members, graduate teaching assistants, and related capital infrastructure additions. This will cost an estimated incremental \$169 million by 2007-08.

### **Research Funding**

As part of the funding issue, Ontario must embrace and support the full spectrum of university research — from basic to applied, from the cultural and creative disciplines to the scientific and mathematical — if Ontarians are to realize the full enrichment to quality of life, social benefits and economic growth that top-quality university research will bring.

Investment in the full spectrum of university research obligates support for the humanities and social sciences, and for engineering and the sciences. Opportunity and excellence necessitate investment in basic research and research infrastructure, and a focus on applied research and commercialization.

**RECOMMENDATION #6: use the Ontario Research Fund to enhance the infrastructure required for research and technology development, and be a magnet for attracting world-class brainpower to Ontario. This can be accomplished in part through focused priorities and sustained adequate matching funds to maximize access to federal programs.**

### **Why attract more talent?**

- UW generates \$1.1 billion in economic impacts in the region and \$1.6 billion in economic impacts in Ontario. One way this is achieved is by knowledge transfer broadly defined and measured i.e. start-up companies that take root in the area, technology transfer to local firms, enterprises that hire our highly qualified people. Extend this analysis province-wide and the impacts are staggering.

**RECOMMENDATION #7: fund research programs appropriately to ensure that Ontarians reap the full benefits of university research by:**

- **maintaining annual indirect cost funding at a level indexed to cover a minimum of 40 percent of the direct costs of provincially funded research.**
- **stratifying research funding to reinforce quality — a larger amount of the funds should go to the premier researchers i.e. 50 percent of the funding should go to the top 30 percent of research proposals.**
- **including support for the various stages of commercialization including a competitive system to foster seed, angel, and first round funding.**

### **Why make changes to the way research is funded?**

- Ontario investment in research infrastructure must anticipate the match of federal funds available to provincial institutions. The October announcement of \$300 million is a very good step and essential to 2008, but does not fully satisfy the 40-40-20 matching requirements of the existing Canada Foundation for Innovation envelope, nor does it anticipate increased federal support to CFI.
- Ontario has paid indirect costs of research via the Research Performance Fund: continued support of this instrument is essential so that university operating budgets are not under pressure to cover the full costs of research.
- Waterloo has a strong record of successful commercialization, but we could do more if there were adequate funds. Targeted provincial funding is needed to bridge the gap between the generation of new knowledge and the exploitation of new knowledge in the marketplace.

### **CONCLUSION**

The University of Waterloo believes that the issues of quality, accessibility, and funding for higher education in Ontario are interrelated. On the matter of improving quality of higher education, we have suggested ways to improve the student experience through the promotion and support of co-operative education.

As to accessibility, we will increase participation and success in higher education in Ontario by reforming student financial assistance. This reform will help qualified students to attain a postsecondary education irrespective of personal financial circumstances.

And finally, on the question of funding, and how best to pay for higher education so as to ensure opportunity and excellence, we will accomplish this by ensuring greater flexibility for setting tuition fees at the institutional level, by increasing core funding for universities, and by providing adequate support for university research.

While we have offered our own recommendations, we also support the position our colleagues at the Council of Ontario Universities have expressed in response to *Higher Expectations for Higher Education*.

The economic and social wellbeing of Ontario will depend on government taking the long view in this matter, establishing short-term and longer-term reinvestment targets to protect and sustain higher education and research investment against pressures from other quarters.

This will prevent the urgent from driving out the important — and there can be nothing more important than investment in our future social and economic prosperity as a province.

We trust that the views expressed here and the attached material will be useful to the Postsecondary Review process as it develops its recommendations to the Premier of Ontario and the Minister of Training, Colleges and Universities.